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INTRODUCTION

On 10–11 October 2019 the 7th International Scientific Conference "IFRS: Global Rules & Local Use: Beyond the Numbers" was held at the Metropolitan University Prague, in the venue of MUP main building, Dubečská 900/10, Prague 10, Czech Republic.

Scholars, students and the public at large who wished to know more about bridging the gap between international accounting rules (IFRS) and local applications in the area of finance, accounting, and management, came to Prague and shared their knowledge and experience at this event. With the current trend towards accounting harmonization, the aim of this conference was to focus on specific accounting differences and what lies behind them. Topics have been researched both theoretically and practically, focusing on practices in emerging markets and transitional economies.

Respected personalities accepted the role of keynote speakers:

Professor David Alexander, University of Birmingham, U.K.
Professor Emeritus David Alexander is a leading theorist of accounting and financial reporting focused on methodology, classification IFRS, cultural differences and practical application of IFRS in an international context. In addition, David is the author of several key textbooks in the field, both solely and in a team.

Professor Anne Jeny, ESSEC Business School
Anne JENY is Professor of Accounting at the ESSEC Business School and former head of the accounting and management control department. She obtained her Ph.D. degree at HEC School of management in 2003 and taught at the HEC, ESCP-EAP and EDHEC business schools before joining ESSEC Business School in 2002. She stands at the EAA Management Committee and acts as its treasurer. Her fields of expertise are in financial accounting, financial analysis, value creation and firms' valuation, with a specific expertise on intangible assets and digital transformation.

Prof. Ing. Lubor Lacina, Ph.D., Mendel University Brno
Professor Lacina is Jean Monnet Chair in European Economic Studies from think tank Mendel European Centre Mendel University in Brno, Czech Republic. Professor Lacina is specializing in international economics and problems of Eurozone.

Prof. Eleftherios Thalassinos, Ph.D., MBA , University of Piraeus
DHC 2013, DHC 2015, DHC 2018, Professor at University of Piraeus, Greece, Affiliate Professor at University of Malta, visiting Professor at Neapolis University of Cyprus and Open University of Cyprus, European Chair Jean Monnet, Editor in-Chief ERSJ, IJEBA, IJ TEI, Chair M ICABE.

Prof. Ing. Luboš Smutka, Ph.D., University of Life Sciences Prague
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Head of department of capital markets of the Ministry of Finance, Czech Republic, one of the authors of new conception of development of Czech capital market.

prof. Dr. Ing. Jan Frait
Czech National Bank Prof. Frait is an Executive Director of Financial Stability Department at Czech National Bank with focus on macroeconomics, monetary theory and finance.

Reporting and IFRS

DEGREE OF COMPLIANCE OF THE ROMANIAN COMPANIES' SUSTAINABILITY REPORTS CONCERNING THE GRI CONCEPTUAL FRAMEWORK

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Abstract
Non-financial reporting has become a concern of managers because companies are evaluated not only financially, but also according to their social performance. The objective of this paper is to show the degree of observance of the items within the GRI, the understanding of the ESG dimension and the uniformity of the sustainability reports with G4 GRI Standards, of the Romanian companies indexed on the official website of the Global Reporting Initiative (GRI). Thus, to achieve this objective, the companies indexed on the official website of the Global Reporting Initiative (GRI), which are part of different sectors of activity, were analysed. The research method used is based on awarding scores for the level of compliance of the reports with a rating grid developed from the literature review. The case study highlighted two types of isomorphisation mechanisms: coercive and normative isomorphism and also the mimetic isomorphism mechanism that is presently voluntary for reporting purposes. The study demonstrates the growing tendency of companies to publish sustainability reports in line with GRI Standards every year.

Keywords: *ESG, GRI, isomorphism, non-financial reporting, Romania*

JEL Classification: *M14*

1. INTRODUCTION

The growing evidence that corporate social responsibility (CSR) initiatives play an important role is represented by the improvement of corporate reputation. This has encouraged companies around the globe to pay more attention to non-financial reporting practices.

Among the different theories regarding the business society, information flows, stakeholders, legitimacy and political economy, the theories have been proposed as being more theoretical, perspectives to explain non-financial reporting (for a discussion on the different theories of non-financial corporate disclosure and relationships see (Adams et al., 1995; Gray et al., 1995, 1996) In this context and from previous literature, Morhardt et al. (2002) identify the following reasons to explain why corporations engage in practices of non-financial reporting as a vehicle for unloading the environment and social responsibility.

Its purpose is to analyse whether the Romanian companies are focused on publishing sustainability reports, in order to obtain performance. To achieve this objective, we have proposed the following hypotheses: H1: Do the companies indexed in the GRI database comply with the applicability of GRI indicators?; H2: Do the analysed companies see an increase in performance regarding sustainability disclosure practices?; H3: Are companies presenting non-financial information obligated to publish because of the concept of institutional isomorphism?

One of the original parts of this paper is the analysis of sustainability reports from the point of view of all stakeholders and not only from the point of view of companies. Another original part is that the paper focuses on several sectors of a single country. For instance, Grougiou et al., (2014) analyse the banking sector and the analysis of Prior et al., (2008) is interindustrial while Chih et al., (2008) also study the interindustrial.

Thus the paper is structured as follows: in the next section the literature is reviewed, the research methodology is presented below. The third part analyses the GRI items, the fourth part presents a discussion section, and the fifth part analyses the compliance of the sustainability reports with the GRI indicators and CNVM regulation 1/2006. The last part contains the conclusions and limitations of this study, as well as future research directions.

2. LITERATURE REVIEW

Non-financial reporting is a strategic economic engine that paves the way for future success and sustainability (Healy and Palepu 2001; Verrecchia, 1993). Non-financial reporting frameworks better encapsulate holism and corporate significance behaviours, actions and impacts. Non-financial reporting is determined by the system of measuring organisational performance in the environment and can also be social (non-financial), like for instance the dimensions and disclosure of this information to internal and external stakeholders. Non-financial reporting determines companies to be more transparent, responsible for their overall performance and their impact on overvaluation, pursuing the goal of sustainable development (Hartman et al., 2007; Nielsen et al., 2007).

Within the non-financial reporting, six important dimensions in the literature were identified as the main factors for the corporate acceptance or refusal of the non-financial reporting framework: the basic concept or meaning, strategic objectives, leadership, focus on stakeholders, level of disclosure and integration. First, non-financial reporting is a broad topic and can have different meanings in different corporations. Therefore, the significance that corporations attach to non-financial reporting plays a vital role in the way they report their non-financial activities. Secondly, the strategic objective or competitive advantage that corporations can derive from non-financial reporting is a key driver in their need to adopt or abandon this approach (Cummings et al., 2000; Greening et al., 2000).

Over the last 20 years, a large literature on narrative reporting has appeared, along with a number of feasible frameworks for non-financial reporting and approaches. Two of the most notable are the Global Reporting Initiative (GRI). GRI has released G4 guidelines that can be applied to corporations of different sizes and locations (GRI 2018). GRI operates on a principled approach and continues the process with several stakeholders. The GRI is the reporting framework that is widely recognized as a leader in the international standardisation of sustainability reports. (Bebbington et al., 2012; Gray, 2010; Mahoney et al., 2013). It is also considered the primary example of sustainability, as it has a wide application in multinational companies operating in a variety of industries. (Joseph, 2012).

However, the authors criticize the theoretical GRI framework, because the sustainability principles seem to be dispersed (Moneva et al., 2006, Joseph, 2012). The acceptance of companies over the role of GRI guidelines has been confirmed by other studies (Mahoney et al., 2013). Companies complying with the GRI reporting framework have a higher level of commitment to an entity that does not comply with the GRI framework.

The institutional theory assumes that organisations adopt management practices that are considered legitimate by others, regardless of their real usefulness (Carpenter et al., 2001). Previous empirical evidence indicates that the institutional environment plays an important role in influencing companies to adopt new accounting and reporting practices (Hussain et al., 2002; Tsamenyi et al., 2006). From this perspective, reporting non-financial information is an important factor for a legitimation strategy as well as for managing corporate reputation (Clarke et al., 1999). It is considered an important channel for companies to communicate and persuade their multiple stakeholders that they are receptive to society, they have such concerns.

The reporting practices can be disseminated to organisations through three mechanisms:

a. coercive isomorphism;
b. normative isomorphism; and
c. mimetic isomorphism (DiMaggio and Powell, 1983).

DiMaggio et al. (1983), Jennings et al. (1995), Milstein et al. (2002) and Delmas (2002) define „coercive isomorphism" as a result of the formal and informal pressures exerted, organisations of other organisations on which they depend, such as the legal regulatory system in which the organisations operate, whereas Peng (2002) defines it as a result of informal game rules. Isomorphism is defined by DiMaggio et al. (1983) and represents the pressures exerted by the profession and the irregular organisations. Mimetic isomorphism is the company's tendency to imitate best practices, it helps entities gain legitimacy.

The communication of non-financial aspects was voluntary until the appearance of Directive 2014/95/EU, with applicability from January 1st, 2017 and through OMFP 1938/2016, which introduced the "Non-financial statement" in the annual reports. The reporting of non-financial information in Romania is characterised by an increasing global influence, and the practices of non-financial reporting are closely linked to corporate sustainability. KPMG reports (2013) showed that 14% of the 100 largest companies in the world use the term "corporate responsibility", 25% of companies use "corporate social responsibility" and 43% of companies use "sustainability".

This study will focus on the general standards related to the reporting of non-financial information, respectively those that include the three pillars of sustainable development: financial, social and environmental. Regarding the evaluation of the overall performance of the company, Friedman (1970) considers non-financial reporting as a problem of the agency and suggests that reporting non-financial information has a negative effect on the financial performance of the company, because reporting non-financial information of a company involves costs. Brown et al. (2006), invoking the agency's cost theory, it indicates that managers can benefit from the use of firm resources through corporate philanthropy, while shareholders have losses through charitable expenses. Lee et al., (2009, 2018) and Barnea et al. (2010) considers that the leading companies in the field of corporate sustainability weaken the market portfolio and cease counterparties, which implies a negative effect of reporting non-financial information on performance. On the other hand, Freeman (1994) suggests that from the stakeholder' perspective reporting non-financial information has a positive effect on the financial performance of companies. Because firms have relationships with different stakeholders, including government, competitors, consumers and environmental advocates, social spending increases can improve stakeholder relationships, which in turn lowers firms' social costs and increases market opportunities, leading to higher financial performance. Statman et al. (2009) considers that companies with a high rating in reporting non-financial information generally offer higher returns than those that do not publish non-financial information. Filbeck et al. (2009) notes that investing in the best corporate citizens results in higher market performance. Jo et al., (2011, 2012) show that the commitment to reporting non-financial information positively affects corporate financial performance because activities regarding reporting non-financial information can resolve conflicts between managers and stakeholders. Also, publishing non-financial information increases customer identification and trust (Su et al., 2017).

Kim et al. (2017) found that there is a positive relationship between the perception of publishing non-financial information and employees. Their quality and work life lead to affective commitment, organizational behaviour and workplace performance.

Sustainability reports provide an overview of the organisation in terms of its social activities and provide a supplement to the financial statements, providing information about a particular set of activities of the organization (Orhan Akisik et al., 2011).

Thus, sustainability reports reflect all ESG dimensions (see Table 1) of sustainable performance, and their reliability, objectivity and credibility are affirmed by ISO certifications and the GRI Reporting Framework. The ISO 14000 environmental standard and ISO 26000 regarding the disclosure of non-financial information provide the reports with an external assurance on the credibility and legitimacy of the management processes and the effective communication of the sustainable performance to all stakeholders. Borraz (2004) a defined four major characteristics of the standards: to work with stakeholders, to provide the necessary scientific and technical data and the resulting consensus and the voluntary nature of their application.

Also, this study shows the potential of companies indexed on the Global Reporting Initiative website to achieve performance by respecting and aligning with the principles of the GRI conceptual framework. This research contributes to a better understanding of the practices of reporting non-financial information in terms of compliance with the GRI framework, as well as demonstrating the degree of compliance of the sustainability reports of companies indexed on the Global Reporting Initiative (GRI).

Table 1. Items of GRI framework with the ESG dimension

Financial	Environmental	Social	
GRI 102 General reporting	GRI 301 Materials	GRI 401 Employees	GRI 410 Security practices
GRI 103 Management approach	GRI 302 Energy	GRI 402 Labor relations/ management	GRI 410 Security practices
GRI 201 Economic performance	GRI 303 Water	GRI 403 Health and safety at the work place	GRI 412 Human rights
GRI 202 Marketing	GRI 304 Biodiversity	GRI 404 Training and education	GRI 415 Public policies
GRI 203 Indirect economic impact	GRI 305 Emmissions	GRI 405 Equal diversity and opportunity	GRI 416 Consumer’s protection
GRI 204 Procurement practices	GRI 306 Wastes	GRI 406 Non-discrimination	GRI 417 Marketing and Labeling
GRI 205 Anti-corruption	GRI 307 Environmental		GRI 418 Customers

GRI 206	protection
Anti-competing behavior	

Source: author's processing

3. RESEARCH METHODOLOGY

The reporting practices of the Romanian companies were analysed using an initial sample of 8 companies (see Table 2) indexed in the database of the GRI Sustainability Reporting Standards (GRI Standards website).

The selection process is based on five criteria:

- companies must belong to the category of large companies;
- companies must belong to Romania and the region – Europe;
- companies must publish according to GRI 4 standards indicators;
- companies must have sustainability reports for 2016 and 2017;
- the financial and non-financial information of the companies must be made public for the interested parties.

The purpose of this study is to analyse whether the Romanian companies are oriented to publish sustainability reports, in order to obtain the performance. To achieve this objective, we have proposed the following hypotheses.

Hypotheses:
H1: Do the companies indexed in the GRI database comply with the applicability of GRI indicators?
H2: Do the analysed companies see an increase in performance regarding sustainability disclosure practices?
H3: Are companies presenting non-financial information obligated to publish because of the concept of institutional isomorphism?

Table 2. The sample of companies indexed in the database of the GRI website

Name	Size	Sector	Country	Region	Reports
Distributie Oltenia (CEZ Romania)	Large	Utilities		Europe	2017 – GRI-G4; 2016 – GRI-G4
GlaxoSmithKline Romania (GSK)	Large	Care products		Europe	2015 – GRI-G4; 2014 – GRI-G4; 2013 – GRI-G4
KMG International (KMG)	Large	Energy		Europe	2018 – GRI-G4; 2017 – GRI-G4; 2016 – GRI-G4; 2015 – GRI-G4

OMV Petrom (SNP)	Large	Energy		Europe	2017 – GRI-G4; 2015 – GRI-G4
Raiffeisen Bank Romania (RBRO16)	Large	Financial services		Europe	2016 – GRI-G4; 2015 - GRI - G4
SIVECO ROMANIA SA (SIV)	Large	Other		Europe	2016 – GRI-G4; 2014 – GRI-G4
Telekom Romania (DTE)	Large	Telecommunica-tions		Europe	2017 – GRI-G4
Ursus Breweries, a subsidiary of SABMiller plc.	Large	Food products and beverages		Europe	2016 – GRI-G4; 2015 – GRI-G4

Source: author's processing

We analysed the sustainability reports published by each company found on the GRI website. The reference years analysed are 2017 and 2016. From the initial sample of 8 companies, we selected 7 companies indexed on the GRI website. The company eliminated is GlaxoSmithKline Romania (GSK), because it does not meet one of the selection criteria listed above:

- the company has no indexed sustainability reports for 2016 and 2017.

The analysis resulted in a total of 19 sustainability reports, of which 13 sustainability reports were included in the analysis (see Appendix 1). The 5 reports excluded were not analysed because they did not represent the reference years of interest, of which the company SIVECO ROMANIA SA (SIV) did not present any report for the year 2017.

Also, in order to obtain a high quality analysis, relevant, useful, consistent and comparable, we have also used the "Guide on reporting non-financial information", which shows that the objective of entities is to publish non-financial information (environmental, social and governmental issues) and Regulation of the National Securities Commission – CNVM no. 1/2006. The publication of non-financial information leads to economic growth in a sudden and sustainable way and also ensures transparency for stakeholders. For the complete understanding by the stakeholders of the key components of an entity's value structure, the entities focused on voluntarily publishing information about non-financial reporting. Thus, the information on non-financial reporting allows the identification of the essential aspects and their evaluation.

The reference years used are 2017 and 2016. The sustainability reports were taken from the GRI website, and in order to show "the conformity of the annual reports on the ESG Dimension", we adapted the methodology used in the study of Antonis Skouloudis et al. (2010). We have created a model based on scores from 1–3, applied on GRI indicators.

The GRI indicators were adapted to the reporting conditions of the Romanian companies, eliminating:

- GRI 408 Child labour;
- GR 409 Compulsive workforce;
- GRI 419 Socio-economic respect;
- GRI 308 Environmental assessment of suppliers;
- GRI 407 Freedom of association and collective bargaining;

- GRI 414 Supplier social evaluation;
- GRI 411 Genius human rights;
- GRI 409 Compulsive workforce;
- GRI 413 Local communities.

In order to obtain a 3 score, companies must provide complete and systematic coverage of the analysed items, a 2 score is obtained by companies must partially observe the GRI items, for example, to not provide detailed information and a 1 score is obtained when one of the GRI items has not been mentioned or is presented generic statements (for example, they presented only the indicator regarding the GRI items).

4. ANALYSIS OF THE GRI ITEMS

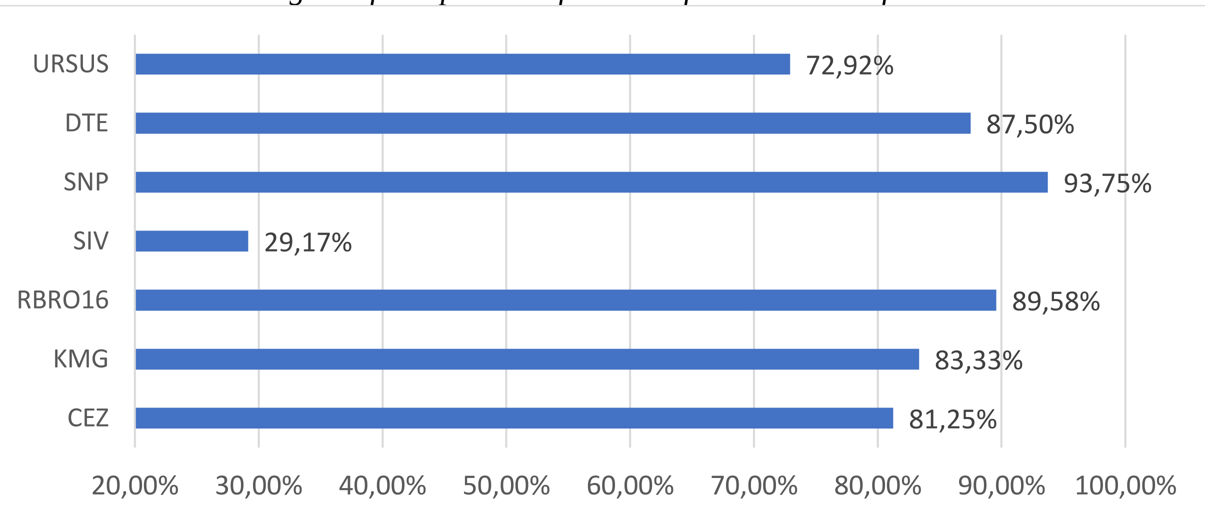
In order to determine the degree of adoption and uniformity of the GRI items, we analysed the sustainability reports of the selected companies, also the sustainability reports were selected from the official website of the GRI database.

We analysed the sustainability reports of the companies indexed in the GRI database for two years: 2016 and 2017, to observe the compliance of the reports regarding compliance with the items of the GRI. The compliance of the annual reports was measured using scores from 1 to 3, resulting in several charts. To make the charts, we calculated the scores in relative values.

Chart 1 shows the degree of compliance of the financial items reports for 2016 and 2017, the maximum score that could be obtained for the financial items is 24. We can see that in Chart 1, the highest relative score was obtained by the companies and OMV PETROM, obtaining 93.7%, followed by Raiffeisen Bank Romania with a score of 89.58%, Telekom Romania with a score of 87.50% and KMG International with 83.33%. In addition, we can note that the lowest percentage obtained, of 29.17%, was obtained by SIVECO ROMANIA SA.

Also, the company SIVECO ROMANIA SA has published sustainability reports only for the year 2016, which indicates that the company's orientation towards publishing non-financial information is not a priority.

Chart 1. The degree of compliance of the GRI financial items for 2016 and 2017



Source: author's processing

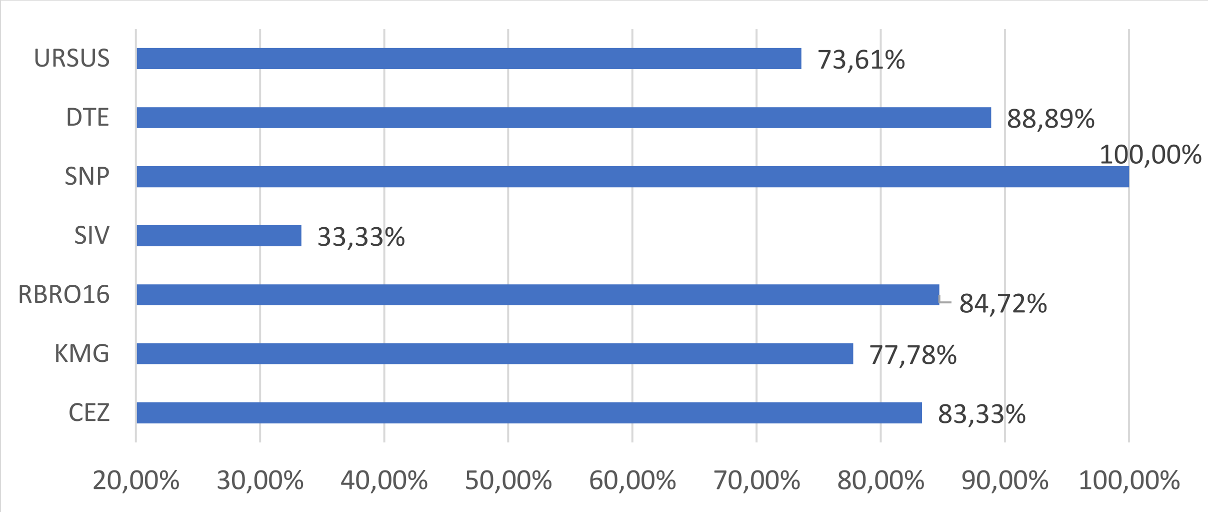
Chart 2 shows the degree of compliance of the reports on social items for 2016 and 2017, the maximum score for social items is 36. We can see that from Chart 2 the maximum score of

100% is obtained by OMV PETROM, which results that the company OMV PETROM complies fully the twelve social items.

The second score was obtained by Telekom Romania, with 88.89%, followed by Raiffeisen Bank Romania, with 84.72% and by the company Distributie Oltenia (CEZ Romania) with a score of 83.33%.

Regarding the company SIVECO ROMANIA SA we can notice that for the social element it has a low score below 50%, obtaining 33.33%.

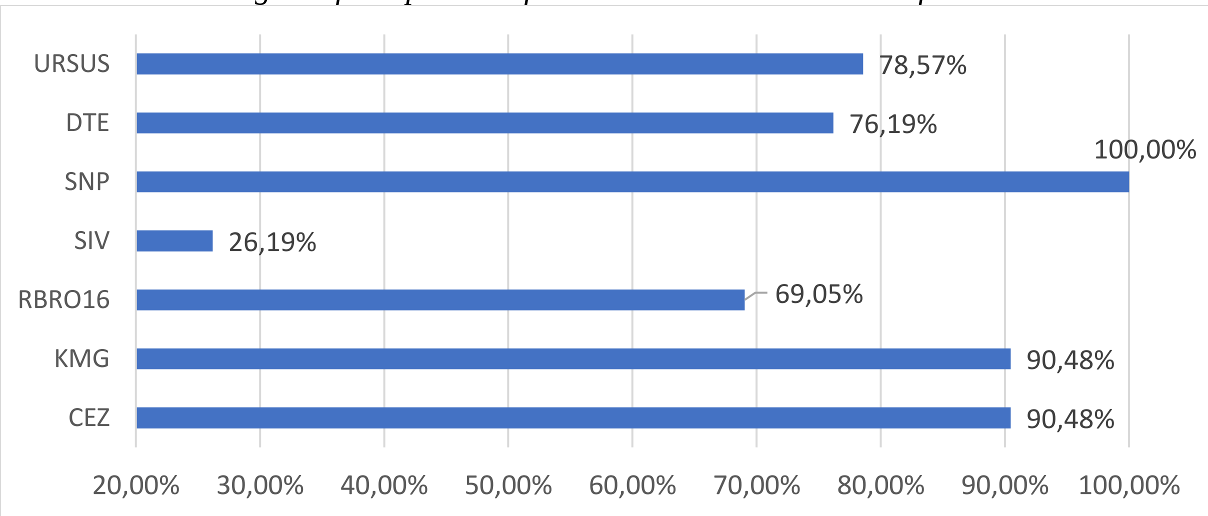
Chart 2. The degree of compliance of the GRI social items for 2016 and 2017



Source: author's processing

Chart 3 shows the degree of compliance of the reports on the environmental items for 2016 and 2017, the maximum score for the environmental element is 21. Thus, we can see that the relative maximum score of 100% regarding compliance with the seven GRI indicators is obtained by the OMV Petrom company. The second score is obtained by the companies Distributie Oltenia (CEZ) Romania and KMG International obtaining an equal score of 90.48%. The third score is obtained by Ursus Breweries, a subsidiary of SABMiller plc. with a score of 78.57%.

Chart 3. The degree of compliance of the GRI environmental items for 2016 and 2017



Source: author's processing

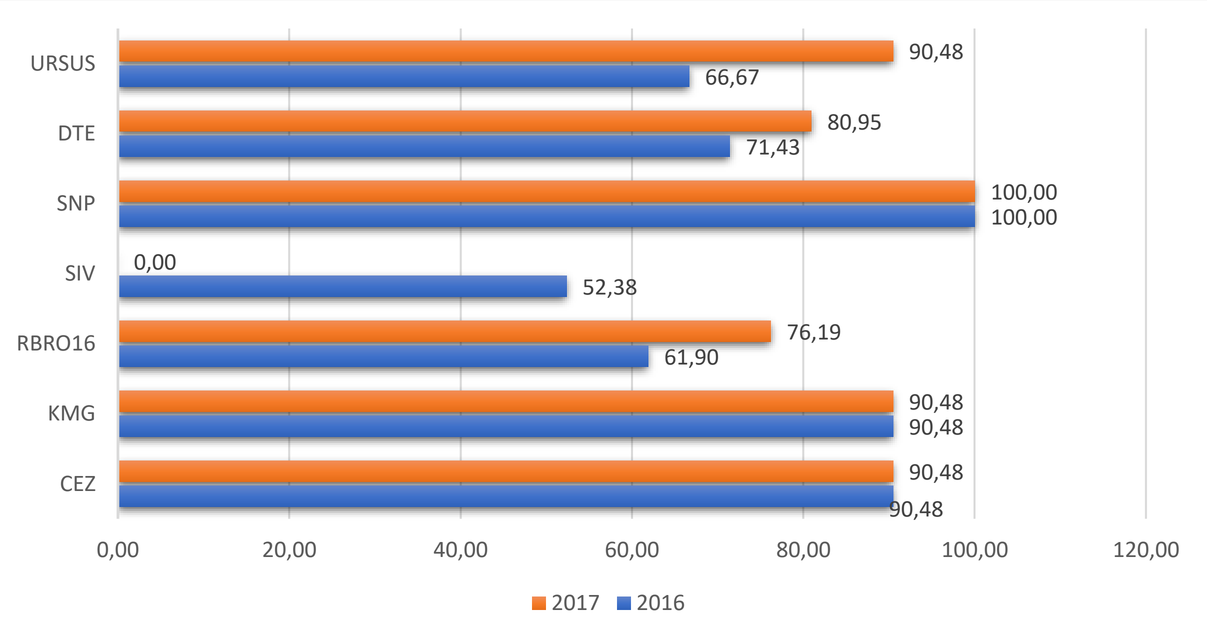
5. DISCUSSIONS

Following the analysis of the three ESG dimensions – social, environment and governance we can observe that companies are oriented to partially publish non-financial information in accordance with GRI. This phenomenon has been observed in other countries regarding the partial disclosure of non-financial information by Context (2006) for European companies, Birth et al. (2008) for Swiss companies and Chan et al. (2005) for companies listed in Hong Kong. At the same time, the disclosure of non-financial information is essential to reduce the irregularity regarding non-financial information that exists between management and important stakeholders (Narayanan et al. 2000). The provision of non-financial information allows investors to better evaluate performance and have a broader view of corporate performance (Holder-Webb et al. 2009). They need to understand the position of companies of interest to be able to make comparisons between entities in different industries (Riley et al. 2003).

Therefore, the only company that achieves a balanced comparability of reports reaching the maximum score of 96.53% on the three ESG dimensions is OMV PETROM. This degree of compliance of the reports regarding compliance with the GRI items is due to the fact that OMV Petrom has voluntarily published sustainability reports since 2011 and from 2014, OMV Petrom has a Sustainability Steering Committee and also a Department of Sustainability. This voluntary behaviour of publishing sustainability reports before the adoption of Directive 2014/94 / EU underlines the isomorphic mimetic and isomorphic coercive behaviour.

Apart from OMV Petrom which has a high degree of compliance on all three dimensions, we can remark about the dimension regarding the environmental items, that the highest score is obtained by the companies that are part of the industrial field. This high score of over 90%, even 100% obtained by OMV Petrom, is due to the fact that these companies must comply with the environmental legislative norms (see Chart 4). In Chart 4 regarding the degree of compliance of the GRI environmental items for 2016 and 2017, we calculated the average of the maximum percentage scores, the maximum score for the size of the GRI environmental items being the score 21.

Chart 4. The degree of compliance of the GRI environmental items for 2016 and 2017



Source: author's processing

Thus, each sustainability report represents a well-structured basis of the materiality of performance in terms of sustainability. Overall, the sustainability reports form a comprehensive and balanced set of information on the positive and negative aspects to be presented in the report.

6. COMPLIANCE OF SUSTAINABILITY REPORTS WITH THE GRI INDICATORS AND CNVM REGULATION 1/2006

Currently, the disclosure of non-financial information, both compulsory and voluntary, is a common practice among commercial firms, in mitigating business costs and reducing information asymmetries. Also, companies are actively oriented to meet the needs of customers and their expectations by implementing social aspects to achieve business performance.

In Chart 5 we calculated the average of the three items for each year 2016 and 2017 in relative values, because the maximum possible scores are different. The maximum possible score for the financial element is 24, for the social element the maximum possible score is 36, and for the environmental element the maximum possible score is 21. Comparing the two years we can see that the items: financial, social and environmental increase every year, each company paying more attention to these items.

As a result of the analysis, we can see that in 2017, the companies are oriented towards offering higher compliance for the three ESG dimensions. In 2016, the financial element has a score of 77.42%, compared to 2016, in 2017 the degree of compliance is higher reaching 88.92%. Analysing the two years, the year 2016 and 2017, it can be noticed that the items GRI 201 Economic performance, GRI 202 Marketing and GRI 206 Anti-competitive behaviour, begin to have a maximum score of 3, which means that companies start to pay a higher interest, to respect and publish information about the three items.

In 2016, for the social element, the score received is 78.19%, in 2017 the score of this element increases reaching 87.97%. The orientation of companies for 2017 is on the items GRI 403 Occupational health and safety and GRI 403 Occupational health and safety, reach a score higher than max. 2 or 3 according to the grid of scores.

Furthermore, the ESG compliance with the GRI standard in 2016, for the environmental element is very low, although the companies are obligated to comply with the environmental legal norms, they did not pay special attention to this element. On the other hand, starting with 2017, the orientation of companies to publish non-financial information is increasing. The highest environmental indicator compared to 2016 is GRI 303 Water and GRI 307 Environmental protection.

This phenomenon of increasing sustainability reports in providing information on the three dimensions is due to the adoption of Directive 2014/95 / EU, applicable from January 1st and through OMFP 1938/2016, where the "Non-financial statement" was introduced, which signifies that companies are required to publish information on CSR.

As regards compliance with CNVM Regulation 1/2006, the companies analysed showed a full applicability of this regulation, because compliance with this regulation implies the presentation of information regarding:

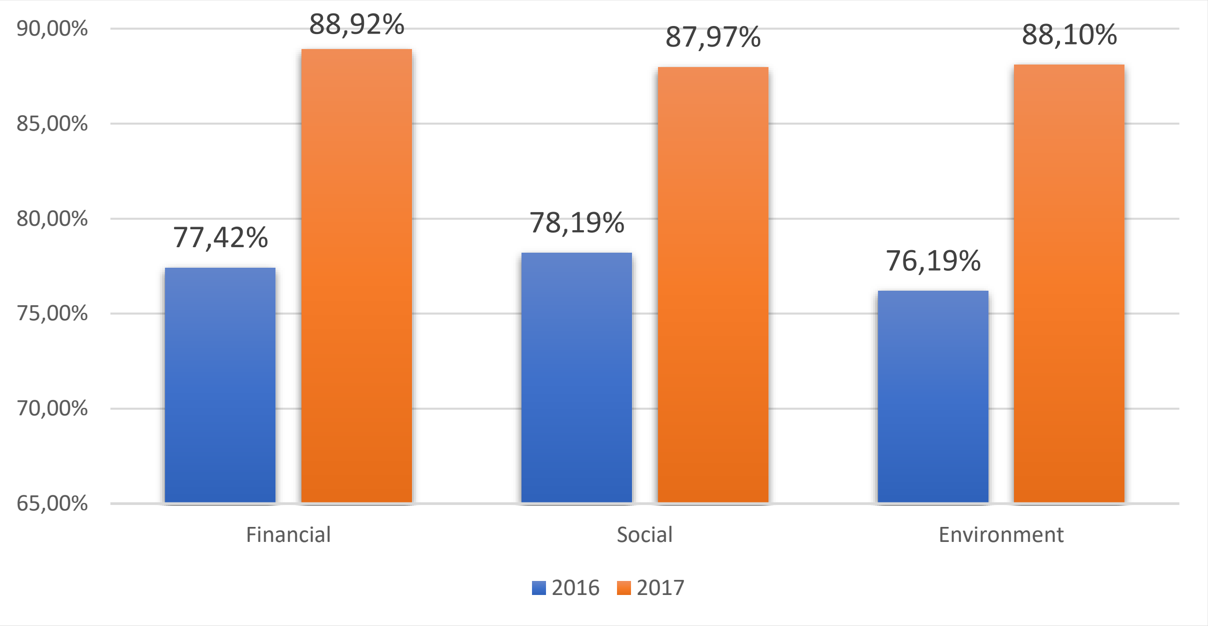
- Business patterns;
- Risk management policies;
- Risk (of financial nature);
- Environmental impact;
- Environmental litigation;
- Vocational training (structure of employees);

- Relations between management and employees;
- Disputes with employees;
- Number of union members.

All these items of the CVM regulation 1/2006 are present in the items of the GRI Standards framework, therefore the level of compliance of the items regarding the non-financial information is fully respected by the Romanian companies.

At the same time, companies realise that publishing non-financial information optimises the quality of the implementation of the principles of good corporate governance, ethics and integrity. Consequently, the entities focus on developing a sustainable process, with a positive impact on the economy, the environment and the community.

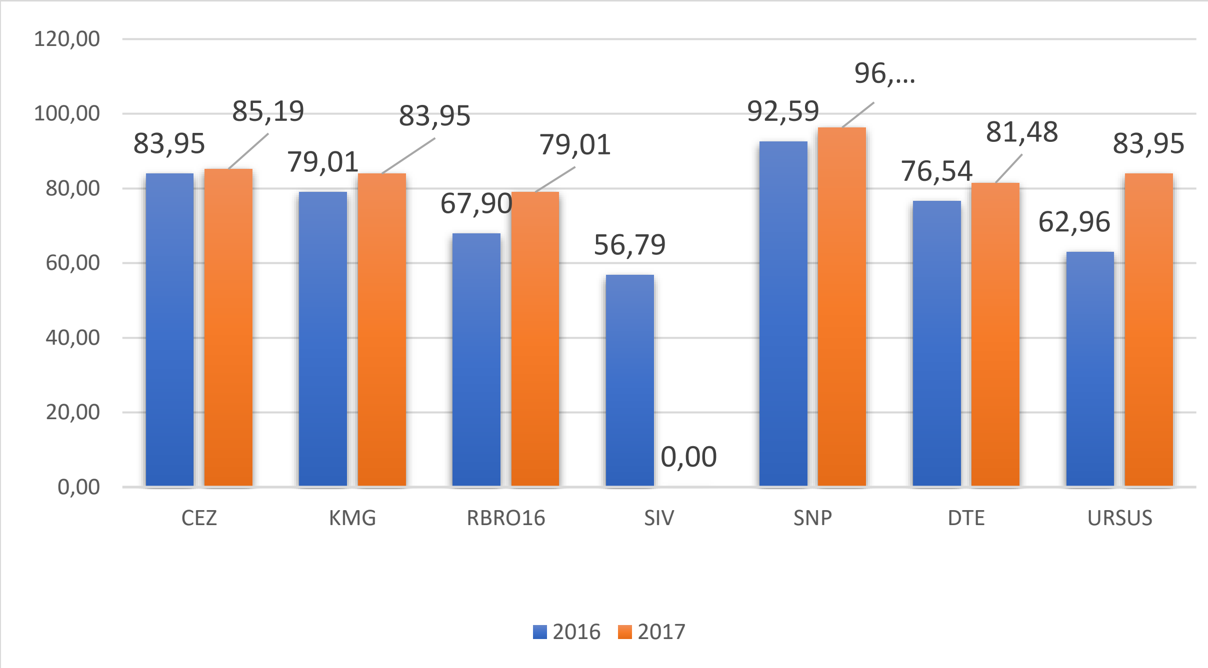
Chart 5. The compliance of the ESG Dimension with the GRI standard



Source: author's processing

From Chart 6 we can remark that companies are increasingly focused on applying the GRI reporting framework compared to 2016, in which companies generally comply with CNVM regulations. In order to plot Chart 6, we calculated the total scores in relative values of the three dimensions for 2016 and 2017. For 2016, we can observe a low inclination of companies for reporting non-financial information, the only companies that have the same degree of compliance with the GRI framework is first of all OMV PETROM with an almost constant maximum score in 2016 when it scored 92.59%, and in 2017 when it reached the score of 96.30%. The second company with the same degree of compliance with the GRI framework is Oltenia Distribution (CEZ Romania) which for the year 2016 reached the 83.95% score for the year 2017.

Chart 6. The compliance of the sustainability reports regarding the GRI items



Source: author's processing

As a result of the analysis, we can see that the reporting practices of the Romanian companies included in the sample for each analysed year are influenced by the national regulations but also by the parent company, presenting voluntary reports of the non-financial information.

However, in 2016 the companies tend to partially comply with the practices of reporting non-financial information, which suggests that the Romanian entities are in the initial stages of understanding and application, as well as the development of the Romanian reporting practices. Therefore, two mechanisms of isomorphisation of the Romanian entities for 2016 are identified:

- Coercive isomorphism;
- Mimetic isomorphism.

This indicates that for 2016 the publication of sustainability reports is influenced by a coercive isomorphism, which means that this mechanism is influenced by the CNVM regulations, the companies being parties that are not actively interested in publishing non-financial information (Gușe et al., 2016). And mimetic isomorphism is influenced by group level reporting. This mechanism shows that companies are adopting best reporting practices, and they are not required by any regulation in force to publish non-financial information.

In addition, in 2017, an increase in the applicability of non-financial reporting practices can be remarked. Sustainability reports are influenced by the entry into force of Directive 94/2014/EU with applicability from January 1, 2017 and by OMFP 1938/2016, where the "Non-Financial Statement" was introduced, which means that companies are obligated to publish information on CSR. Therefore, in 2017, we can identify two mechanisms of isomorphisation of Romanian entities:

- Mimetic isomorphism;
- Normative isomorphism.

Thus, the year 2017 represents a year in which the orientation of the companies included in the sample is focused on guiding themselves in publishing sustainability reports using the

Global Reporting Initiative (GRI) G4 Guidelines reporting framework, in the "Core" option, to reflect the impact we have in the operating area, in all 3 areas: economic, social and environmental. This high level of compliance of the sustainability reports regarding the GRI framework is due to the change and awareness of the managers that the application and uniformity of the non-financial information asymmetry, optimises the quality of the three ESG dimensions leading to the increase of the companies' performance.

7. CONCLUSIONS

In the European context and along with the rise of globalisation, companies are concerned about achieving sustainable growth objectives and, given the favourable moment created by the transposition of Directive 2014/95/EU on non-financial reporting in more than 30 countries, sustainability reports have done more than just confirm their necessity – they have become tools for planning efficient functioning of markets and creating a robust economy, on the European and national level. Also, this study examines the effect of stakeholder pressures and the isomorphism developed by DiMaggio et al., (1983), on the corporate decision to ensure sustainability reports.

Reporting non-financial information helps companies avoid, reduce or control the harmful impact of their activities on the environment and population.

Regarding the first hypothesis, we can see that the 7 companies indexed in the database of the GRI site observe the applicability of the GRI indicators. The results obtained from the analysis of the company reports show that the level of adoption of the reporting practices according to the GRI conceptual framework improves significantly every year.

The second hypothesis refers to the benefits of increased performance regarding sustainability disclosure practices. These are highlighted in the sustainability reports and supported by Vaz et al. (2016), who show that a high level of reporting according to the GRI framework leads to improving the company's image, reducing costs, attracting new potential investors. The sustainability reports of the companies analysed also show: increased transparency of the stakeholder in the employment process, reflect the opinions and needs of the partners as they appear in the company's activity, strengthening and diversifying internal and external collaboration relationships, increasing the efficiency of technological processes and decreasing their negative impact over the environment and optimizing the social responsibility policy model and granting sponsorships.

Also, reporting non-financial information aims to communicate the performance of companies to stakeholders. Kulkarni, (2014) contends that in order to gain advantages in the competitive environment, companies must convey a higher assuming degree as regards publishing non-financial information.

The results obtained by testing the third hypothesis show that the sustainability reports analysed over the two years offer a high degree of compliance with the GRI framework. In 2017, the sustainability reports were more transparent than in 2016, the high degree of application of the GRI framework being achieved by each company according to the specific items of the sector of activity, and we can remark, with a high degree of over 90%, the industrial sector which grants and is obligated to observe the rules of environmental protection. And the sustainability reports are actively influenced by three isomorphisation mechanisms: coercive, normative isomorphism and mimetic isomorphism.

A limit of the research is given by the small sample used, as after the application of the selection criteria of the sample it was made of only 7 companies. One solution to show the compliance of annual reports with the principles of non-financial reporting is to include other companies in the European region in the analysis. The second limit is represented by the absence of discussions with persons within the companies and by the analysis of the individual reports and not of the reports on the group level. Also, another limitation is the possible subjectivity of the rating and coding grid of reports. Therefore, future studies should perform an extension of initial sample analysis in future years in order to observe the effect produced by the reporting of non-financial information on reports transparency. The paper intends to broaden the reporting vision of these companies and to allow a better understanding of the ESG dimension and the disclosure of sustainability.

So as to conclude, the study shows that Romania is undergoing a continuous development process regarding the understanding of the GRI framework. Also, Romania is a potential reporting entity which can participate with other EU countries in raising awareness of the importance and maintaining a communication of information on corporate social responsibility for stakeholders. Most business managers are pragmatic and consider they must respond appropriately to the environment changes; in particular, the enhancement of awareness, concerns and expectations of their customers and other stakeholders, in order to survive in the long run.

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BIBLIOGRAPHY

Adams, C.A., Coutts, A., Harte, G., (1995), “Corporate equal opportunities (non-) disclosure”, British Accounting Review 27 (2), 87–108.

Antonis Skouloudis, Konstantinos Evangelinos, Fotis Kourmousis, (2010), “Assessing non-financial reports according to the Global Reporting Initiative guidelines: evidence from Greece”, Journal of Cleaner Production 18, 426–438.

Barnea, A., Rubin, A., (2010), “Corporate social responsibility as a conflict between shareholders”, J. Bus. Ethics 97 (1), 71–86.

Birth, G., Illia, L., Lurati, F., Zamparini, A., (2008), ”Communicating CSR: practices among Switzerland’s top 300 companies”, Corporate Communications: An International Journal 13 (2), 182–196.

Bebbington, J., Kirk, E. A., & Larrinaga, C., (2012), “The production of normativity: A comparison of reporting regimes”, Accounting, Organizations and Society, 37, 78–94.

Brown, W., Helland, E., Smith, J., (2006), “Corporate philanthropic practices”, J. Corp. Finan. 12 (5), 855–877.

Carpenter, V.L. and Feroz, E.H., (2001), “Institutional theory and accounting rule choice: an analysis of four US state governments’ decisions to adopt generally accepted accounting principles”, Accounting, Organizations and Society, Vol. 26, pp. 565–96.

Chan, J.C., Welford, R., (2005), “Assessing corporate environmental risk in China: an evaluation of reporting activities of Hong Kong listed enterprises”, Corporate Social Responsibility and Environmental Management 12, 88–104.

Chih, H. L., Shen, C. H., & Kang, F. C., (2008), “Corporate social responsibility, investor protection, and earnings management: Some international evidence”, Journal of Business Ethics, 79(1/2), pg. 179–198.

Clarke, J. and Gibson-Sweet, M. (1999), “The use of corporate social disclosure in the management of reputation and legitimacy: a cross sectoral analysis of UK top 100 companies”, Business Ethics: A European Review, Vol. 8 No. 1, pp. 5–13.

Context, (2006), "Reporting in Context: Global Corporate Responsibility Trends", Context, London.

Cummings, J., & Doh, J. (2000), "Identifying who matters: mapping key players in multiple environments", California Management Review, 42(2), 83–104.

Delmas, M., (2002) "The diffusion of environmental management standards in Europe and the United States: an institutional perspective", Policy Sciences, vol. 35: 91–119.

DiMaggio, P. J., & Powell, W. W., (1983), "The iron cage revised: institutional isomorphism and collective rationality in organizational fields", American Sociological Review, 48(2), 147–160.

Directive 2014/95/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 October 2014, Official Journal of the European Union, Available online: http://eur-lex.europa.eu/legalcontent/RO/TXT/HTML/?uri=CELEX:32014L0095&from=RO

Filbeck, G., Gorman, R., Zhao, X., (2009), "The 'best corporate citizens': are they good for their shareholders?", Financ. Rev. 44 (2), 239–262.

Freeman, R., (1994), "The politics of stakeholder theory: some future directions", Bus. Ethics.

Friedman, M., (1970), "Money and income: comment on Tobin", Q. J. Econ. 84 (2), 318–327.

Guidelines on the reporting of non-financial information, developed by the European Commission. Available online: http://eur-lex.europa.eu/legal-content/RO/TXT/HTML/?uri=CELEX:52017XC0705(01)&from=RO

Gray, R.H., Kouhy, R., Lavers, S., (1995), "Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure", Accounting, Auditing and Accountability Journal 2, 47–77.

Gray, R.H., Owen, D., Adams, C.A., (1996), "Accounting and Accountability: Changes and Challenges in Corporate Social and Environmental Reporting", Prentice Hall, Hemel Hempstead.

Gray, R., (2010), "Is accounting for sustainability actually accounting for sustainability and how would we know? An exploration of narratives of organisations and the planet", Accounting, Organizations and Society, 35, 47–62.

Greening, D., & Turban, D., (2000), "Corporate social performance as a competitive advantage in attracting a quality workforce", Business and Society, 39(3), 254–280.

GRI STANDARDS. Available online: https://www.globalreporting.org/standards/gri-standards-download-center/

Grougiou V., Leventis S., Dedoulisd E., Owusu-Ansahe S., (2014), "Corporate social responsibility and earnings management in U.S. banks", Accounting Forum 38, pg. 155–169.

Gușe, R. G., Almășan, A., Circa, C., Dumitru, M., (2016), "The role of the stakeholders in the institutionalization of the CSR reporting in Romania", Accounting and Management Information Systems, Vol. 15, No. 2, pg. 304–340.

Hartman, L. P., Rubin, R. S., & Dhanda, K. K. (2007). "The communication of corporate social responsibility: United States and European Union multinational corporations", Journal of Business Ethics, 74, 373–389.

Healy, P., & Palepu, K. (2001). "Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature", Journal of Accounting and Economics, 31, 405–440.

Holder-Webb, L., J. Cohen, L. Nath, and D. Wood., (2009), "The supply of corporate social responsibility disclosure among U. S. firms", Journal of Business Ethics (February): 497–527.

Hussain, M. M. and Hoque, Z. (2002), "Understanding non-financial performance measurement practices in Japanese banks: a new institutional sociology perspective", Accounting, Auditing & Accountability Journal, Vol. 15 No. 2, pp. 162–83.

Jennings P.D. & Zandbergen P.A. (1995), "Ecologically sustainable organizations: an institutional approach", Academy of Management Review, vol. 20: 1015–1052.

Jo, H., Harjoto, M., (2011), "Corporate governance and firm value: the impact of corporate social responsibility", J. Bus. Ethics 103 (3), 351–383.

Jo, H., Harjoto, M., (2012), "The causal effect of corporate governance on corporate social responsibility", J. Bus. Ethics 106 (1), 53–72.

Joseph, G., (2012), "Ambiguous but tethered: An accounting basis for sustainability reporting", Critical Perspectives on Accounting, 23, 93–106.

Kim, H.L., Rhou, Y., Uysal, M., Kwon, N., (2017), "An examination of the links between corporate social responsibility (CSR) and its internal consequences", Int. J. Hosp. Manage. 61, 26–34.

KPMG (2013), The KPMG survey of corporate responsibility reporting 2013. Available online: www.kpmg.com/sustainability

Kulkarni Aaishwarya R, (2014), "A Review of Concept and Reporting of Non-Financial Initiatives of Business Organisations", Procedia Economics and Finance 11, pg. 33–41.

Lee, D., Faff, R., (2009), "Corporate sustainability performance and idiosyncratic risk: a global perspective", Financ. Rev. 44 (2), 213–237.

Lee, S., Kim, B., Ham, S. (2018), "Strategic CSR in the airline industry: does materiality matter?", Int. J. Contemp. Hosp. Manage. 30 (12), 3592–3608.

Mahoney, L. S., Thorne, L., Cecil, L., & LaGore, W., (2013), "A research note on standalone corporate social responsibility reports: Signaling or greenwashing?", Critical Perspectives on Accounting, 24(4–5), 350–359.

Milstein, M. B., Hart, S. L. & York, A. S. (2002), "Coercion breeds variation: the differential impact of isomorphic pressures on environmental strategies", Organizations, Policy and the Natural Environment: Institutional and Strategic Perspectives, Hoffman A.J. & Ventresca M.J. (eds). Stanford University Press: Stanford: 151–172.

Ministry of Public Finance (2016), ORDER Nr. 1938/2016 of August 17, 2016 regarding the modification and completion of certain accounting regulations, the Official Gazette of Romania no. 680 of September 2, Available online:
https://static.anaf.ro/static/10/Anaf/legislatie/OMFP_1938_2016.pdf

Moneva, J., Archel, P., & Correa, C. (2006), "GRI and the camouflaging of corporate unsustainability", Accounting Forum, 30, 121–137.

Morhardt, J. E., Baird, S., Freeman, K., (2002), "Scoring corporate environmental and sustainability reports using GRI 2000, ISO 14031 and other criteria", Corporate Social Responsibility and Environmental Management 9, 215–233.

Narayanan, V. K., G. E. Pincus, K. M. Kelm, and D. M. Lander,(2000), "The influence of voluntarily disclosed qualitative information", Strategic Management Journal (21): 707–722.

Nielsen, A. E., & Thomsen, C., (2007), "Reporting CSR—what and how to say it?", Corporate Communications: An International Journal, 12(1), 25–40.

Orhan Akisik, Graham Gal, (2011), "Sustainability in businesses, corporate social responsibility, and accounting standards: An empirical study", International Journal of Accounting and Information Management, September, 303–324.

Peng, M. W., (2002), "Towards an institution-based view of business strategy", Asia Pacific Journal of Management, 19(2–3), 251–267.

Prior, D., Surroca, J., & Tribo, J. (2008), "Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility", Corporate Governance: An International Review, 16(3), pg. 160–177.

Riley, R. A., T. A. Pearson, and G. Trompeter, (2003), "The value relevance of nonfinancial performance variables and accounting information: The case of the airline industry", Journal of Accounting and Public Policy (May–June): 231–253.

Statman, M., Glushkov, D., (2009), "The wages of social responsibility", Financ. Anal. J. 65, 33–46.

Su, L., Swanson, S.R., Hsu, M., Chen, X., (2017), "How does perceived corporate social responsibility contribute to green consumer behavior of Chinese tourists: a hotel context", Int. J. Contemp. Hosp. Manage. 29 (12), 3157–3176.

Tsamenyi, M., Cullen, J. and Gonzalez, J. M. G. (2006), "Changes in accounting and financial information system in a Spanish electricity company: a new institutional theory analysis", Management Accounting Research, Vol. 17, pp. 409–32.

Vaz, N., Fernandez-Feijoo, B., Ruiz, S., (2016), Integrated reporting: An Inernational overview, Business Ethics: A European Review, Volume 25, Number 4, pg. 557–591.

Verrecchia, R. (1993), "How do we assess a model of price and volume?", The Accounting Review, 68(4), 870–873.

Appendix 1. List of analysed reports

Name	Size	Sector	Reports	
			2016	2017
Distributie Oltenia (CEZ Romania)	Large	Utilities	Sustainability report	Sustainability report
GlaxoSmithKline Romania (GSK)	Large	Care products	-	-
KMG International (KMG)	Large	Energy	Sustainability report- Transforming the future	People have of great achievements- Sustainability report
OMV Petrom (SNP)	Large	Energy	Sustainability report- Passion for energy. Commitment to the future	Sustainability report- Here and now energy for a better life
Raiffeisen Bank Romania (RBRO16)	Large	Financial services	Responsibility report corporate social	We put responsibility in the light- Sustainability report
SIVECO ROMANIA SA (SIV)	Large	Other	Innovative solutions for a sustainable community 2016 Annual Sustainability Report	-
Telekom Romania	Large	Telecommunications	Sustainability report	Sustainability report
Ursus Breweries, a subsidiary of SABMiller plc.	Large	Food products and beverages	Sustainability report	Sustainable Development Report

Source: author's processing

RECENT REFORMS IN THE CUSTOMS SYSTEM OF THE REPUBLIC OF UZBEKISTAN: REGULATING IMPORTS

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Abstract
In Uzbekistan, customs duties are of great importance in the development of foreign economic relations and they serve as a powerful lever which can be used to stimulate domestic production of high-tech products. The country currently pays much attention to the reform of its customs system which is of particular interest thanks to Uzbekistan's recent resumption of WTO accession negotiations. In accordance with consecutive presidential resolutions the country is liberalizing its trade policies. The most significant change is decreasing the import duties, which has caused vivid discussions in business circles. The main tasks of further liberalization of the foreign trade regime include revising customs duty requirements, eliminating complicated procedures and formalities for import, export and transit documents, and reviewing non-tariff barriers and bringing them into compliance with WTO agreements and norms. The purpose of this study is to document and characterize the on-going reforms, the features of the current customs system with regard to imports, and to evaluate the actual import costs in Uzbekistan. It further seeks to understand the role of external actors on Uzbekistan's trade policy and reviews their impact from the institutional perspective.

Keywords: *cost of imports, customs system reform, customs tariffs, institutional theory, protectionism*

JEL classification: *F13, H25*

1. INTRODUCTION

After gaining independence in 1991, Uzbekistan became quite an isolated country in terms of foreign economic relations. The country's trade policy and foreign exchange regime was rather protectionist in order to protect the domestic industries and foreign exchange reserves. As presented by Bhagwati (1964), in many developing countries, it is customary to rely on severe import and exchange control regimes which give rise to "black" markets for various prohibited or restricted uses of foreign exchange. Recently, this situation in Uzbekistan has changed. The country is currently in the process of dynamic transformations where a number of significant policy changes has been implemented since 2016, shortly after the new president, Shavkat Mirziyoev, took office. These changes concern public service, judicial, tax systems reforms as well as the liberalization of the foreign exchange regime and foreign trade policy.[1] Uzbekistan intends to further boost its foreign trade and attract foreign direct

[1] The most relevant documents concerning the foreign trade policy are the following presidential resolutions: On additional measures to ensure the further development of the economy and increase the effectiveness of economic policy (Jan 8, 2019), On the forecast of the main macroeconomic indicators and parameters of the State Budget of the Republic of Uzbekistan for 2019 and budget guidelines for 2020–2021 (Dec 26, 2018), On additional measures to improve customs administration and increase the efficiency of the state customs service

investment. In order to succeed in these efforts, the government has been changing the business and institutional environment. These changes also involve a change in accounting standards. Uzbekistan has already partially adopted international standards; companies other than banks follow the Uzbek National Accounting Standards set by the Ministry of Finance but the Central Bank requires all banks to use IFRS with some modifications (Pacter, 2014, p. 158; Ball, 2016; IFRS, 2016). Adopting internationally recognized rules and regulations is one of the key factors for better integration in the global economy.

A great challenge is the reform of the customs system, the task of which is to protect the economy from cheap imports and to support domestic businesses to produce goods for the domestic and foreign markets. Over the several past decades the role of tariffs as main instrument of trade policy has decreased; however, Uzbekistan is one of the few countries that has not become a member of the World Trade Organization (WTO) yet so the country can regulate its foreign trade with tariff measures more independently. It is important to mention that Uzbekistan is a member of the CIS Free Trade Area which comprises Russia, Belarus, Ukraine, Kazakhstan, Armenia, Moldova, Kyrgyzstan and Tajikistan; therefore, no import customs duties are applied to import of goods originating from the above-mentioned countries.

Uzbekistan has granted the most favoured nation (MFN) regime to 45 countries, mainly its most important trading partners which include members of the EU (National legislation database of the Republic of Uzbekistan, 2015). Since the EU countries are of great importance for Uzbekistan’s foreign trade, the country has developed a closer formal relationship with the Union. Not long ago, Uzbekistan has started negotiations about upgrading the current Partnership and Cooperation Agreement (PCA) with the EU and on July 16, 2018, the Council adopted the negotiation mandate for the opening of negotiations between the EU and Uzbekistan for an upgraded, Enhanced Partnership and Cooperation Agreement (EPCA). The current PCA provides for economic cooperation with a view to ensuring that Uzbekistan’s international trade is conducted in conformity with the rules of the WTO (EEAS, 2018). Uzbekistan resumed the negotiations on accession to the WTO in July 2019 (WTO, 2019).

To characterize the process of trading across Uzbekistan’s borders on the eve of the latest reforms, we can use the World Bank’s Doing business ranking provided in Table 1. Doing Business records the time and cost associated with the logistical process of exporting and importing goods and it measures the time and cost (excluding tariffs) associated with three sets of procedures – documentary compliance, border compliance and domestic transport (World Bank Group, 2019). It is evident that Uzbekistan’s performance is rather poor, it ranks 165 out of 190. The score is the simple average of the scores for the time and cost for documentary compliance and border compliance to export and import. The most recent round of data collection for Doing Business was completed in May 2018, so it may not reflect the current situation and the country’s position may to change after recent reforms.

Since Doing Business methodology excludes tariffs, it is obvious that importing goods is costly anyway and at the same time very time consuming. Reforming the system is therefore crucial for improving Uzbekistan’s foreign trade performance.

of the Republic of Uzbekistan (Nov 24, 2018), On measures to further streamline foreign economic activity and improve the system of customs and tariff regulation of the Republic of Uzbekistan (Jun 29, 2018).

Table 1. Trading across Borders – Uzbekistan

Indicator	Uzbekistan	Europe & Central Asia	Oecd High Income	Best Regulatory Performance
Time to export: border compliance (hours)	112	22.1	12.5	1 (19 Economies)
Cost to export: border compliance (usd)	278	157.5	139.1	0 (19 Economies)
Time to export: documentary compliance (hours)	96	24.3	2.4	1 (26 Economies)
Cost to export: documentary compliance (usd)	292	97.9	35.2	0 (20 Economies)
Time to import: border compliance (hours)	111	21.1	8.5	0 (25 Economies)
Cost to import: border compliance (usd)	278	162.3	100.2	0 (28 Economies)
Time to import: documentary compliance (hours)	174	24.7	3.4	1 (30 Economies)
Cost to import: documentary compliance (usd)	292	93.9	24.9	0 (30 Economies)

Source: Doing Business 2019: Training for Reform. Economy Profile: Uzbekistan. World Bank Group

In the next section the theoretical framework used to draw conclusions about the factors influencing customs system reforms is presented, as well as a detailed analysis of the changes in import regulations with regard to the actual cost of imports and customs administration.

2. MATERIALS AND METHODS

In this section we first look into the institutional theory; whether shaping the public sector policy is influenced by isomorphism as identified by DiMaggio and Powell in their institutional analysis (1983; 1991). The theory has traditionally been used at the organizational field level, for example a company or industry, but it can also be used to explain the impact that powerful institutional forces, operating at an international level, have on individual nation states (Irvine, 2008).

Institutional changes can be explained by different kind of pressures. DiMaggio and Powell (1983; 1991) have identified three forces driving institutionalization: (1) coercive isomorphism that derives from political influence or institutional pressure on actors, (2) mimetic isomorphism resulting from standard responses to uncertainty (the achievement of conformity through imitation is one of the processes through which actors change over time to become more similar to other, successful actors in their environments) and (3) normative isomorphism associated with professionalization (it emphasizes the collective values and beliefs that lead to conformity of thought and actions within institutional environments). These three mechanisms can overlap and intermingle, but they tend to stem from different conditions.

Coercive isomorphism stems from resource dependence and legitimacy concerns. Organizations gain and maintain legitimacy by conforming with these rules and regulations. States can be forced to comply with international regulations and standards due to coercive institutions outside the economy. These include, for example, the WTO.

Mimetic isomorphism refers to the tendency to imitate those other actors viewed as successful or legitimate (Judge et al., 2010). These could be, for example, neighbouring countries and successful trade partners. Governments mimic one another constantly and often quite successfully. They do not always know how to deal with a new challenge, so they search for examples. DiMaggio and Powell (1983) mention the example of Meiji Reform in Japan, when the country copied infrastructure and governing principles of industrialised Europe and America. Irvine (2008) claims that less developed economies are adopting time-proven customs and standards into their system, thus approaching the developed economies.

Normative isomorphism emphasizes the collective values and beliefs that lead to conformity of thought and actions within institutional environments. Irvine (2008) suggests that in an increasingly globalized world, powerful institutional forces operate at an international level on individual nation states, which then become a field for the transmission and adoption of acceptable institutional practices. The WTO practices and the values of free trade serve as an example of such collective values and beliefs.

Frumkin and Galaskiewicz (2004) claim that public sector organizations are the ultimate product of coercive, mimetic, and normative isomorphism, and they reflect the slow homogenization and convergence of organizational forms. We will look into the case of the customs system reform in Uzbekistan and the impact of such forces on the process.

This section further comprises analysis of the recent changes in import tariff settings and other fees that influence the eventual import costs. The analysis is based on legal documents issued in the past two years which contain the most significant measures adopted after President Mirziyoyev had taken office. In the following section, we will discuss how the institutional theory explains these changes.

The fundamental document in the field of foreign economic activity is the Customs Code, which regulates the movement of goods and vehicles across the customs border of the Republic of Uzbekistan, collection of customs payments, customs clearance, implementation of customs control, and also detection and prevention of violations of customs legislation. It was adopted on January 20, 2016 and replaced the original Customs Code from 1997 (The Customs Code, 2016).

Another change came on October 1, 2017, when the government took unprecedented measures by reducing the customs duties on 1,154 commodity items. 579 of them were reduced to zero. This step may have positively affected the dynamics of the foreign trade turnover of Uzbekistan. The total volume of imports in 2017 amounted to 107.2% compared with 2016 (The State Committee of the Republic of Uzbekistan on Statistics, 2018).

In accordance with the presidential resolution "On measures to further streamline foreign economic activity and improve the system of customs and tariff regulation of the Republic of Uzbekistan" dated June 29, 2018, the customs duty rates and excise tax on imported products were significantly reduced (National legislation database of the Republic of Uzbekistan, 2018). For example, for 72% out of 11,300 imported commodity items a zero rate of customs duty was set. Also, the customs duties have been simplified thanks to the unification of rates applied to commodities similar in type, properties and utilization (Norma.uz, 2018). The changes were to take effect on January 1, 2019. However, on December 26, 2018, another presidential resolution was issued, which abolished the zero rates for about 150 commodity items. Increase by 5–30% concerned 443 commodity items (Norma.uz, 2018). For example, concerning food, an import customs duty of 5% has been introduced for condensed milk and cream, unroasted coffee and palm oil (compared to the original rate of 0%). The rate increased by 2 times for almost all clothes (from 10 to 20%). At the same time, a minimum payment has been introduced – from 0.2 to 4 USD per piece. Similarly, shoe rates doubled (from 5 to 10%) and the minimum payment is 1.5 USD per pair. The rate for imports of eggs and chewing gum has risen to 30%. Substantial increase in customs duty rates also concern utensils, furniture, office supplies, household appliances, HVAC equipment, auto parts, etc. The reduction in tariffs affected only 8 commodities, e.g. new and used tractors, yarn from silk waste, sieve fabrics, filter fabrics, etc. For bread and confectionery bakery, the minimum duty threshold has been set at minimum 0.30 USD per kilogram of products, the tariff remained at 15% (Norma.uz, 2018).

In accordance with the resolution, from January 1, 2019, there are 8 tariff rates in Uzbekistan (in %): 0, 5, 10, 15, 20, 30, 40 and 70 (see Table 2).

Table 2. Examples of tariff rates on products imported to Uzbekistan, effective from January 1, 2019 (considering changes introduced on December 26, 2018)

No.	**Product name**	**Rate, %**	**Note**
1	Fish, rice, sunflower oil, sugar, flour, leather, pipes, rods, wood, machines, tools, oil, gas, coal	0	Production of these products is virtually absent in the country or imports are essential for economy development (imports of raw materials or machinery)
2	Milk and dairy products	5	Introduced to support domestic producers
3	Meat, honey, fruits, juices, cotton wool, bandages, fabrics, shoes, tools, confectionery, household appliances	10	Introduced to support domestic producers
4	Vegetables, cotton yarn	15	Introduced to support domestic producers
5	Coats, suits, skirts, trousers, t-shirts, children's clothing, jewellery, household refrigerators	20	Introduced to support domestic producers
6	Eggs, tomatoes (cooked and canned), mineral and sparkling water, carpets, combine harvesters, incandescent lamps	30	Introduced to support domestic producers
7	Used passenger cars	40	Introduced to support domestic producers
8	Motor vehicles for the transport of goods, used and new	70	Introduced to support domestic producers

Source: Authors' creation based on legal documents:
Tariff rates. Information retrieval and expert systems: Complete legislation of Uzbekistan, 2002 and 2018. Comparative table of tariff rates according to PP-3818 dated Jun 29, 2018, changed under PP-4086 dated Dec 26, 2018. Legal Information Portal "Norma.uz", 2018.

Cost of Imports

Let us look into other costs when importing goods to Uzbekistan. Despite efforts to decrease the tariff rates, it is important to realize that tariffs are only a part of the total cost of imports. Other costs include import excise taxes, 15% value added tax (VAT) and customs clearance fee (0.2% of declared customs value). Import excise tax rates and the list of imported excisable products have significantly changed according to the presidential resolution from June 29, 2018; for example, the rate for dairy products is now two times lower, tax rate on bread dropped from 20% to 5% and rate on ethanol has risen from 65% to 70% (Complete legislation of Uzbekistan, 2018). Excise taxes used to be applied at high rates to protect locally produced goods resulting in total charges amounting to as much as 100 or even 150% of the actual value of the product, making imported products virtually unaffordable (PricewaterhouseCoopers, 2014). It does not mean, though, that import excise taxes are not an important tool regulating imports anymore; they do cover a wide range of products and they are still an important source of budgetary revenues in Uzbekistan (Complete legislation of Uzbekistan, 2018).

On the other hand, certain kinds of technological equipment (National legislation database of the Republic of Uzbekistan, 2013), goods imported by investors for their own needs, for implementation of projects in Uzbekistan, goods imported for further export or under a temporary importation regime are exempt from customs duties. Some companies and investors may enjoy duty free importation preferences by a decision of the government (Export. gov, 2019).

Customs Revenues

Tariffs are multitarget policy instruments and in many countries, they are a source of large amounts of budgetary revenue (De Wulf, 1981; Yang, 2008a). In Uzbekistan, however, the fiscal function of customs payments plays and inferior role; in recent years, the share of custom revenues in the state budget revenues has gradually decreased: in 2015 it accounted for 4.1% budget revenues, in 2016 for 3.5%, in 2016 for 3.5%, in 2017 for 3.4% and in 2018 for 2.3%. In the first quarter of 2019, the share of customs revenues was 2.2% of the state budget revenues; in the corresponding period of 2018, it accounted for 2.8%. Forecasts of the Ministry of Finance of the Republic of Uzbekistan indicate indicates a decreasing importance of customs duties in the state budget and a reduced burden on business (Uzbekistan News, 2019). Here it is crucial to underline the importance of the excise tax on imported goods as mentioned above. Excise taxes in Uzbekistan bring significant revenues to the state budget but their structure is inadequate and they create different conditions for domestic production and for imported goods. In 2017, excise tax revenues amounted to 3.1% of GDP, which is a high indicator relative to other countries (Michielse et al., 2018). However, many goods that are normally not subject to excise taxes are excisable when they are imported in Uzbekistan (Complete legislation of Uzbekistan, 2018). In this case, the excise tax acts as a customs tariff, which may serve as one of the explanations for its high return. The customs duties, on the other hand, brought only 0.7% of GDP in 2017 (Michielse et al., 2018).

Customs Administration

Another important change is the simplified administration, especially in the light of the country's poor performance according to Doing Business ranking. On November 24, 2018, President Mirziyoyev signed the resolution "On additional measures to improve customs administration and increase the efficiency of the state customs service of the Republic of Uzbekistan" (National legislation database of the Republic of Uzbekistan, 2018) that aims to radically improve customs administration and increase the efficiency of the customs service. In accordance with this regulatory document, a system of simplified "corridors" is being introduced at customs posts in Uzbekistan. Foreign traders and passengers can now use simplified customs procedures. From December 1, 2018, "yellow" and "red" corridors were introduced with regard to the levels of risk (in relation to goods and vehicles that have either an average or high level of risk respectively or are determined by random choice). From March 1, 2019, a "green" corridor was introduced, where the customs control is not exercised with respect to goods and vehicles with a low level of risk. Under the conditions of the "blue corridor", the customs control is carried out for goods with an average level of risk or determined by random choice only after their release (Norma.uz, 2018).

The network of customs terminals is gradually expanding. At these terminals, government agencies and other organizations provide customs, banking, logistics, express laboratory, phytosanitary, veterinary, sanitary, environmental, certification and other services on the "one window principle". At the same time, entrepreneurs can use commercial services at customs terminals on a voluntary basis (National legislation database of the Republic of Uzbekistan, 2018).

3. RESULTS AND DISCUSSION

An analysis of the structure of current rates shows that they are set mainly in order to protect domestic producers. The fiscal function of customs payments plays a weak role, which generally corresponds to the current reform strategy of the customs sphere. At the same time, there is a policy of restraining the course towards the liberalization of foreign economic activity. It became obvious a few months after the June 2018 liberalization, when a step back was taken in December 2018 and many of the zero rates were abolished and higher tariffs were introduced (Norma.uz, 2018).

Georgiadis and Gräb (2016) claim that countries continue to pursue more trade-restrictive policies when they experience recessions and/or when their competitiveness deteriorates. Several other authors find that these factors increase the probability of protectionist measures (Knetter and Prusa, 2003; Bown, 2008; Bown and Crowley, 2013). Uzbekistan needs to boost the competitiveness of its economy and it is of great curiosity what path will be taken since the current rates are, once again, subject to change. New legal documents are being prepared, the proposed version of the Customs Code is up and open for public discussion online (Regulation.gov.uz, 2019).

The main methodological approach used by Uzbek customs policymakers is to protect those sectors in which domestic enterprises already have great potential and have the necessary domestic resources to produce goods with high added value and high degree of processing. With the help of the customs mechanism, the state encourages the expansion of imports of raw materials for processing in domestic enterprises (as shown in Table 2). Import taxation, especially the excise tax, also serves as a regulating tool. Keeping higher tariffs on goods produced domestically is based on the assumption that without state protection, importers supplying products to the domestic market at dumping prices may destroy local businesses. It might result in increased unemployment and in reduction in revenues to the state budget (the destruction of industrial potential in the CIS countries in the 1990s serves as an example). There are other arguments for keeping the tariffs rather higher than lower. One of the is the investment inflow. Supporters of protectionism believe that foreign companies are more likely to start investing in Uzbekistan if they know that high import duties can limit competition.

Uzbekistan obviously views the independent decision making on tariffs as a tool to protect and develop their industries. However, high tariffs are linked to some common problems. Despite the ongoing process of reforming the customs administration system over the past years, the customs authorities are facing a set of problems, most of which are systemic in nature. Among the main ones are the under-invoicing or inaccurate declaring of the customs value, misreporting of goods classifications and low efficiency of customs control.

Most commonly, an importer underreports the value of a shipment in order to pay lower import duties (under-invoicing), and customs officials may agree to overlook the discrepancy between the stated and actual value in return for bribes (Yang, 2008a). Restrictive trade regime can therefore act as incentives for the international traders to report fabricated trade values (Biswas, 2012). Bhagwati explains that under-invoicing may arise characteristically in two cases: when the imported product carries a tariff duty; and when the imports of the product are strictly controlled, resulting in a premium on it in the domestic market. He studied the discrepancies between the import data of Turkey and the export data of its trading partner countries and concluded that that import duties higher than the black market premium (the difference between the market and official domestic exchange rate) of foreign exchange serves as an incentive for under-invoicing imports with high import duty burden (Bhagwati, 1964). Biswas and Marjit (2007) argue that a low tariff regime takes care of both illegal capital outflow and black market for foreign exchange. De Wulf (1981) further investigated this problem but did not confirm the effect of tariffs on under-invoicing, however, this may have been due to low import tariffs of the studied trade partner countries. In line with these conclusions, Uzbekistan has embarked on a path of reducing the tariffs and possibly scaling down the problem of fabricating trade values, which is one of the problems mentioned in the presidential resolutions. To increase the efficiency of customs controls and to evade corruption activities, Yang (2008b) suggests pre-shipment inspection programmes (PSI); he examined the impact of such programmes in a number of developing countries in which governments hire private firms to conduct PSIs of imports and to generate data that higher authorities can use to prevent importers from evading import duty payments or to identify corrupt customs officers.

Our previous discussion highlights the internal factors that have affected import regulation in Uzbekistan. Under an institutional framework, we can identify the external factors that have affected the recent reforms. The Uzbekistani government faces coercive power from actors such as the WTO. Uzbekistan applied for the membership in December 1994 but since 2005, the negotiations had been at a standstill. Uzbekistan has resumed the accession negotiations in July 2019 and its accession to the WTO will depend on the country willingness to open up its economy and transform its foreign policy to a more liberal one. Another coercive pressure on Uzbekistan is performed by the World Customs Organization (WCO) through The Global Trade Facilitation Programme. It is a four-year comprehensive programme (2018–2022) which overall objective is to contribute to fostering and facilitating international trade of four selected beneficiary countries, in particular customs administrations, through the implementation and application of international standards and best practices for international trade (WCO, 2018).

Mimetic isomorphism has become stronger after president Mirziyoyev had taken office. Uzbekistan set on a path of becoming an integral part of the global economic community. States tend to mimic the successful neighbouring countries and trade partners; Kazakhstan, Russia, China and the EU, major exporters, serve as a source of inspiration. The more states that exhibit particular forms of behaviour (such as WTO accession), the more pressure there will be on others to copy that behaviour (Irvine, 2008). A number of states in the Central Asian region have already become WTO members, including Kyrgyzstan, Tajikistan and Kazakhstan. Countries that are not WTO members are more likely to miss out on valuable trading opportunities. However, there are also cases where mimetic isomorphism does not always generate the expected result; the environment and settings are crucial for eventual success of any copy-paste actions; Uzbekistan's specific model of economy has to be considered.

Normative pressures refer to collective values that bring about conformity of thought and deed within institutional environments. The WTO and other international organizations promote values of liberal and fair trade policy. The importance of "fitting in" is significant if the country is to benefit from trade partnerships with neighbouring countries (Hassan et al., 2014). Another example is the World Bank's Doing Business ranking which demonstrates the desirable values concerning the ease of trading across borders via comparing the individual economies and group of countries. Since such powerful institutional forces operate at a global level, it is obvious that Uzbekistan will, sooner or later, adopt globally accepted practices in the field of foreign trade which will be expressed by its WTO accession status.

4. CONCLUSIONS

Uzbekistan has set on a journey to liberalize and modernize its customs system. The first measures, adopted shortly after Shavkat Mirziyoyev had taken office, have been vigorous, but they do not present a stable basis for foreign trade activities due to their impermanence and frequency. One resolution provides for decreasing the customs duties followed by another one introducing nearly the opposite. Considering these ongoing changes, joining the WTO could have a beneficial influence on the stability of the foreign trade policy in Uzbekistan.

To sum up the positive impact of the latest reforms, a substantial shift to more liberal trade policy (despite the December 2018 changes) is evident, compared to the previous tariff barriers and import taxation. The actual import costs have decreased and with the simplified administration, and trading across borders may become easier in the near future. For businesses, the provided insight can help to predict the direction of Uzbekistan's trade policy.

It is obvious that the reform of the customs system does not consist of mere tariff changes. It is also necessary to eliminate the existing problems (under-invoicing, illegal imports, low efficiency of customs controls, etc.), improve import taxation and to minimize other potential risks for the domestic economy. It is not possible to protect local producers only by raising import customs duties because business always depends on a huge number of factors that have to be considered.

Since external actors have a significant impact on Uzbekistan's trade policy formulation, this paper reviews the recent reforms from the institutional perspective. For policy makers, our findings suggest that the institutional pressures are among the principal driving forces in adopting the internationally recognized rules and regulations. Their adoption has been and will be a result of coercive, mimetic and normative forces; most pronounced are the values of fair trade practices and liberal trade regime promoted by international organizations, and the influence of Uzbekistan's major trade partners. Future research should study both the adoption as well as the utilization and enforcement of these rules and regulations.

BIBLIOGRAPHY

Ball, R. (2016). IFRS – 10 years later. *Accounting and Business Research*, *46*(5), 545–571.

Bhagwati, J. (1964). On the Underinvoicing of Imports. *Bulletin of the Oxford University Institute of Economics & Statistics*, *27*(4), 389–397.

Biswas, A. K. (2012). Import tariff led export under-invoicing: A paradox. *The Journal of International Trade & Economic Development*, *21*(3), 347–360.

Biswas, A. K., and Marjit, S. (2007). Preferential trade and mis-invoicing: Some analytical implications. *International Review of Economics & Finance*, *16*(1), 130–138.

Bown, C. (2008). The WTO and Antidumping in Developing Countries. *Economics and Politics*, *20*, 255–88.

Bown, C. and Crowley, M. (2013). Import Protection, Business Cycles, and Exchange Rates: Evidence from the Great Recession. *Journal of International Economics*. *90*, 50–64.

Comparative table of tariff rates according to PP-3818 dated Jun 29, 2018, changed under PP-4086 dated Dec 26, 2018. (2018). *Legal Information Portal "Norma.uz"*. [online] [cit. 2019-08-08] Available at: https://www.norma.uz/raznoe/sravnitelnaya_tablica_stavok_importnyh_tamojennyh_poshlin_izmenivshihsya_soglasno_pp-4086_ot_26_12_2018_goda

De Wulf, L. (1981). Statistical analysis of under- and overinvoicing of imports. *Journal of Development Economics*, *8*(3), 303–323.

DiMaggio, P. and Powell, W. (1983). The iron cage revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*, 147–160.

DiMaggio, P. and Powell, W. (1991). *The New Institutionalism in Organizational Analysis*. Chicago: University of Chicago Press.

Doing Business 2019: Training for Reform. (2019). Economy Profile: Uzbekistan. *World Bank Group*. Available at: https://www.doingbusiness.org/content/dam/doingBusiness/country/u/uzbekistan/UZB.pdf

EU-Uzbekistan relations (2018). *The European External Action Service (EEAS).* [online] Brussels. [cit. 2019-08-10]. Available at: https://eeas.europa.eu/headquarters/headquarters-homepage_en/11047/EU-Uzbekistan%20relations

Excise tax rates on excisable goods imported into the territory of the Republic of Uzbekistan. (2018). *Information retrieval and expert systems: Complete legislation of Uzbekistan*. [online] [cit. 2019-08-08] Available at: https://nrm.uz/contentf?doc=548595_stavki_akciznogo_naloga_na_podakciznye_tovary_zavozimye_na_territoriyu_respubliki_uzbekistan_(prilojenie_n_2_k_postanovleniyu_prezidenta_ruz_ot_29_06_2018_g_n_pp-3818)&products=1_vse_zakonodatelstvo_uzbekistana

For customs control – four corridors. (2018). *Legal Information Portal "Norma.uz".* [online] [cit. 2019-08-08] Available at: https://www.norma.uz/novoe_v_zakonodatelstve/dlya_tamojennogo_kontrolya_-_chetyre_koridora

Frumkin, P. and Galaskiewicz, J. (2004). Institutional Isomorphism and Public Sector Organizations. *Journal of Public Administration Research and Theory*, *14*(3), 283–307.

Georgiadis, G. and Gräb, J. (2016). Growth, Real Exchange Rates and Trade Protectionism since the Financial Crisis. *Review of International Economics*, *24*(5), 1050–1080.

Guide to doing business and investing in Uzbekistan. (2014). *PricewaterhouseCoopers*. Available at: https://www.pwc.com/uz/en/assets/pdf/dbg_2014.pdf

Hassan, E.A., Rankin, M. and Lu, W. (2014). The Development of Accounting Regulation in Iraq and the IFRS Adoption Decision: An Institutional Perspective. *The International Journal of Accounting*, *49*, 371–390

Irvine, H. (2008). The global institutionalization of financial reporting: The case of the United Arab Emirates. *Accounting Forum*, *32*(2), 125–142.

Judge, W., Li, S. and Pinsker, R. (2010). National Adoption of International Accounting Standards: An Institutional Perspective. *Corporate Governance: An International Review*. *18*(3), 161–174.

Jurisdictional Profile: Uzbekistan: IFRS Application Around the World. (2016). *IFRS* [online]. London: IFRS Foundation [cit. 2019-09-13]. Available at: https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/uzbekistan/

Knetter, M. and Prusa, T. (2003). Macroeconomic Factors and Antidumping Filings: Evidence from Four Countries. *Journal of International Economics*, *61*, 1–17.

List of countries granted the MFN regime (2015). *National legislation database of the Republic of Uzbekistan*. 1998, last amended 2015. [online] [cit. 2019-08-08] Available at: http://lex.uz/docs/665136

List of technological equipment exempted from import to the territory of the Republic of Uzbekistan from import customs duty and value added tax. (2013). *National legislation database of the Republic of Uzbekistan*. [online] [cit. 2019-08-08] Available at: http://lex.uz/docs/2144911#2145stat

Michielse, G., Krelove, R., Nersesyan, N. and Wen, J.-F. (2018). *Uzbekistan: Review of the Tax System*. Washington DC: International Monetary Fund. Available at: https://www.mf.uz/media/file/state-budget/obzori/obzor_nalor_rus.pdf

Nearly 45% of import fees to be reduced. (2018). *Legal Information Portal "Norma.uz"*. [online] [cit. 2019-08-08] Available at: https://www.norma.uz/nashi_obzori/pochti_45_procentov_stavok_importnyh_poshlin_predlagaetsya_snizit

On additional measures to ensure the further development of the economy and increase the effectiveness of economic policy. (2019). *National legislation database of the Republic of Uzbekistan*. [online] [cit. 2019-08-08] Available at: http://lex.uz/ru/docs/4147303

On additional measures to improve customs administration and increase the efficiency of the state customs service of the Republic of Uzbekistan. (2018). *National legislation database of the Republic of Uzbekistan*. [online] [cit. 2019-08-08] Available at: http://lex.uz/docs/4076902

On measures to further streamline foreign economic activity and improve the system of customs and tariff regulation of the Republic of Uzbekistan. (2018). *National legislation database of the Republic of Uzbekistan*. [online] [cit. 2019-08-08] Available at: http://lex.uz/docs/3802366#3805829

On the forecast of the main macroeconomic indicators and parameters of the State Budget of the Republic of Uzbekistan for 2019 and budget guidelines for 2020-2021. (2018). *National legislation database of the Republic of Uzbekistan*. [online] [cit. 2019-08-08]. Available at: http://lex.uz/docs/4131693

Pacter, P. (2014). *IFRS as global standards: a pocket guide*. London: IFRS Foundation.

SECO-WCO Global Trade Facilitation Programme (GTFP). (2018). *World Customs Organization* [online]. Brussels [cit. 2019-09-14]. Available at: http://www.wcoomd.org/en/topics/capacity-building/activities-and-programmes/cooperation-programmes/seco_wco-gtfp.aspx

Tariff rates. (2002). *Information retrieval and expert systems: Complete legislation of Uzbekistan*. [online] [cit. 2019-08-08]. Available at: https://nrm.uz/contentf?doc=24899_stavki_importnyh_tamojennyh_poshlin_(prilojenie_n_1_k_postanovleniyu_km_ruz_ot_31_05_2002_g_n_189)&products=1_zakonodatelstvo_respubliki_uzbekistan

Tariff rates. (2018). *Information retrieval and expert systems: Complete legislation of Uzbekistan*. [online] [cit. 2019-08-08]. Available at: https://nrm.uz/contentf?doc=548669_stavki_importnyh_tamojennyh_poshlin_(prilojenie_n_1_k_postanovleniyu_prezidenta_ruz_ot_29_06_2018_g_n_pp-3818)&products=1_vse_zakonodatelstvo_uzbekistana

The Customs Code of the Republic of Uzbekistan (new edition) ID-6485. (2019). *Regulation.gov.uz: Discussion of draft laws in the Republic of Uzbekistan*. [online] [cit. 2019-08-12]. Available at: https://regulation.gov.uz/ru/document/6485

The Tax Code of the Republic of Uzbekistan. (2007). *National legislation database of the Republic of Uzbekistan*. [online] [cit. 2019-08-08]. Available at: http://lex.uz/docs/1286689#4131480

Uzbekistan - Import Tariffs. (2019). *Export.gov: Helping U.S. Companies Export*. [online] [cit. 2019-08-12]. Available at: https://www.export.gov/article?id=Uzbekistan-Import-Tariffs

XIII. Foreign economic activity. Socio-economic situation of the Republic of Uzbekistan. (2018). *The State Committee of the Republic of Uzbekistan on Statistics*. [online] [cit. 2019-08-02]. Available at: https://stat.uz/uploads/doklad/2017/yanvar-dekabr/ru/tashqi-faoliyat-yanvar-dekabr-ru.pdfm

Yang, D. (2008a). Can Enforcement Backfire? Crime Displacement in the Context of Customs Reform in the Philippines. *Review of Economics and Statistics*, *90*(1), 1–14.

Yang, D. (2008b). Integrity for Hire: An Analysis of a Widespread Customs Reform. *The Journal of Law and Economics*, *51*(1), 25–57.

SUSTAINABILITY REPORTING IN AGRO-FOOD SEGMENT – CASE-STUDY USING CONTENT ANALYSIS

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Abstract
Idea: Agricultural and food sector is socially and environmentally exposed. Sustainability in agro-food segments is connected with two major issues social and environmental issues. In this paper we explore Sustainability CSR issues in one of the oldest food and agriculture companies: US multinational Cargill.
Data: In this study we analyse narrative information in Sustainability reports of Cargill, from years 2014 and 2018 to see whether there are any imminent issues with direct impact on natural environment, society and local community. We also assess whether there are any changes in sustainability issues over the years.
Tools: Our principal method is content analysis using predefined CSR keywords for food and agriculture sector. The analysis is performed at two different time periods, 2014 and 2018, allowing time comparison.
What's New: We analyse the specific approach of companies towards sustainability and the way the company deals with the traditional three CSR dimensions in agro-food industry. We can expect also some issues in local community and issues in environmental problem concerning the whole planet.
So, what: As a private company Cargill does not have to publish sustainability reports for their shareholders, however it has become its practice quite early. This company started its involvement in ethical and CSR related activities very early, already in 1934.
Contribution: Through this research we establish that dominant companies in agro-food business react to challenges of outside environment and change their attitude using innovations and new technology to keep up with current development. Sustainability reporting is elaborated and covering all aspects of company's activity in sufficient detail. Accents are given on burning issues in particular context in order to maintain it's their leading position in the respective segment. This attitude is not always appreciated by all stakeholders, but the company tries to find the ways how to satisfy them.

Keywords: *Sustainability report; CSR; content analysis, agriculture, food industry, local community*

JEL Classification: Q18 Q56, M14, L66

1. INTRODUCTION

In general, sustainability has grown from ideas of corporate social responsibility, e.g., Gray, Owen and Maunders (1988), Kolk and Van Tulder (2010), Baumgartner (2014) and Bebbington and Larrinaga (2014). From a business perspective, researchers frequently argue that Corporate Social Responsibility (CSR) can enhance the competitiveness of an organisation (see, e.g., Burke and Logsdon, 1996). In the long-term, this indicates an actual relationship between the CSR involvement of a company and its financial benefit, suggesting that there is a business case for Corporate Social Responsibility and sustainable fair competition (MacGregor Pelikánová, 2017 and 2019). Previously, various researchers have investigated the relationship between CSR and financial performance (see, e.g., Margolis and Walsh 2003 for an overview); they produced mixed results and do not seem to support the further development of CSR in business practice.

In this study we deal with CSR and sustainability issues in a multinational agro-food firm. We concentrate on recent years and we compare the sustainability reporting of a major agro-food company with a history of more than 150 years. The first well-known concept of corporate social responsibility was discussed in 1953 starting with the ideas of H.R. Bowen, who introduced the idea of the 'social responsibilities' of business people, who need to take into consideration more than just the current financial profit of a company, see Bowen (2013). However, sustainability reporting came to the forefront of academic attention towards the end of millennium; the early authors exploring this issue include Gray, Bebbington, Schaltegger, Burritt, Guthrie, Kolk and others.

This paper is organized as follows: Part One provides an introduction to CSR and sustainability reporting, while Part Two summarizes recent literature in the field of agro-food. Part Three explains the methodology used and is followed by an empirical analysis and findings in Part Four. Part Five provides a discussion. The final part provides a conclusion and limitations and suggests future research avenues.

2. RECENT LITERATURE ON CSR AND SUSTAINABILITY IN AGRO-FOOD SEGMENT

Many authors have recently dealt with issues in the agro-food segment from different perspectives.

In a detailed and thoroughly elaborated literature review Pretty (2007) provides an overall critique of sustainability approaches in the agro-food segment from the wide societal point of view and argues that "Despite great progress in agricultural productivity in the past half-century…it would be over-optimistic to assume that these relationships will remain linear in the future" (p 447). However, he remains optimistic despite this critique. "…as evidence indicates that productivity can grow over time if natural, social and human assets are accumulated" (p 460). Henson and Humphrey, (2010) deal with the heterogeneity of standards of CSR in the agro-food segment, especially in developing countries, and find that: "In contrast to much of the existing literature, we see close relations between the efforts of private entities to establish and adopt standards and the reform of regulations, predominantly for food safety, suggesting that we should not consider private standards and regulations as distinct entities. In many agro-food value chains, regulations and private standards operate side-by-side" p. 645.

Furthermore, Sojamo and Larson (2012) in their paper on agro-business corporations show that a small "group of Western agribusiness corporations, notably ADM, Bunge, Cargill and Louis Dreyfus, with close ties to political and economic elites in the main agricultural production regions of the world have become the biggest traders" (page 620). In respect to Cargill, the authors claim that "Cargill's CSR activities on water thus far appear to fall mostly on the promotional and profit-driven side of the CSR. More importantly, its activities and awareness on water do not scale up to its influence and power in the global agro-food political economy. Accordingly, Cargill remains an 'invisible giant' Kneen (2002) not only in the world agro-food system but also as an agent of managing and governing global water security" page 628. Similarly, Ross, Pandey and Ross (2015) analyse the CSR practices of major US agro-food firms from the perspective of their involvement in supply chains. The paper argues that the adoption of specific sustainability initiatives depends on the context in which the firms operate within their supply chain. Therefore, the particular sustainability initiatives are context-dependent when companies seek to gain a greater outcome of a complex nature in their company strategy.

Ortega et al 2016 researched the working conditions of migrant workers in the agro-food segment in Mexico and find that to understand the relationship between CSR, poverty reduction, health, and the nutritional status of migrant farmworkers, conceptual and interdisciplinary social justice frameworks are necessary. Owners understand and practice of CSR from a broad, modern view; however, the effects are not reflected in the lives, living conditions, and physical health of their workforce Ortega et al 2016, pp. 8-9. Josling (2017), in his three-volume book, deals with the aims and implementation of food and farm policies throughout the world. The book discusses the ways of international trade organization including those dealing with food safety and food quality. It also explains the steps that countries take in international trade to meet the needs of developing and low-income countries.

Topp-Becker and Ellis (2017) analysed the sustainability reports of agro-food companies to examine the role of sustainability reporting from agro-food supply chain companies using quantitative methods. The authors found that sustainability reporting is limited among companies involved in the agro-food segment and reports focus primarily on the environmental aspects of sustainability. Agribusinesses need to align their sustainability report content more closely towards information in all three areas (economic, environmental, and social) (page 27). García-Álvarez de Perea, García-Ramírez and Cubo-Molina (2019) researched the opportunities for innovations in the food sector to establish the linkage of R&D with CSR. The authors conclude that there are new opportunities for both MNEs and SMEs due to recent innovations in information technology and strategic reorientation of technological change. Their findings suggest that organizational engagement with the position and paradigm of innovation is not affected by either age or size (p. 126). Recently, Takalandze and Mohammad (2019) deal with the urgent issues of the agro-food segment and conclude that: "The challenge remains the urgent need to develop new social technologies capable of incorporating the informal sectors of the economy so that they can benefit from economic globalization processes…. This is in clear contradiction with the current hegemonic development model. … It will join societies and cultures, change community values, and widen the gap between the rich and the poor. But it will also create opportunities and challenges for companies and organizations" (p. 219).

3. SAMPLE COMPANY AND USED METHODOLOGY

Cargill, Incorporated, based in Minneapolis, is the largest American privately held company. The company was founded, in 1865, by William Cargill. Its activities were concentrated on the production and trading of grain. The company has grown over the years, but it is still a private company. Cargill is one of the world's top producers and distributors of agricultural products. Its major business is the production, trading, processing and distributing of grain and oilseeds. The company also operates in animal nutrition and the production and sale of food. It provides financial industrial services, too, such as mitigating trade-related risks and offering financial solutions.

The company has over 154 years of experience and operates in 70 countries, on every continent except the Antarctic. It has over 160,000 employees. According to its annual and sustainability reports, the company cares about the safety of its workplaces and does many CSR related activities Wilkins (1988), Broehl (2008).

Its customers are farmers, manufacturers, distributors, and retailers. Cargill is also a supplier of multinational corporations in the industry, for example, McDonald's, shipping industry and trading partners, etc. Cargill timeline © 2019. In 2018, the company had a net income of US$3.103 billion, an operating income of US$3.204 billion and revenues of US$114.695 billion, see Cargill Annual Report (2018). However, from the CSR and sustainability standpoint, there is also some criticism of Cargill, e.g., Cromer (1990), Bond (2008), Mustapha, K. (2009), and Gumbert and Fuchs (2018).

The major research method of this paper is the content analysis of publicly available sustainability reports of the company. The analysis was performed using the identified sustainability reports of Cargill from 2014 and 2018.

In 2014, the company presented its sustainability report online as one document of 20 pages, entitled Cargill 2004 Corporate responsibility report, summarizing the main features in all categories.

In 2018 the sustainability reporting changed fundamentally. The company, therefore, produced several documents representing sustainability reports according to its supply chain segments – in particular, its Cargill Aqua Nutrition Sustainability Report 2018 containing 16 pages. Furthermore, there is the 2017/2018 Cargill Cocoa & Chocolate Sustainability Report containing 74 pages, and the Corporate Responsibility Report Cargill ocean transportation with 53 pages. Each of these reports deals with relevant issues in their respective segment or supply chain.

Furthermore, in 2018, there are also regional reports on Corporate Responsibility and Sustainable Development 2017–18 for three Asian regions: China, India and Indonesia. Each regional report contains 20 pages. Obviously, as Cargill operates worldwide, other regions need also to be represented but they are usually characterized by newsletters with reports related to a particular problem or a paragraph in an annual report or ethical code.

Sustainability reporting in Cargill has grown very significantly between 2014 and 2018. One of the reasons, apart from developing industry practices, is a new EP directive: Directive 2013/34/EU, which regulates the disclosure of non-financial and diversity information by certain large undertakings and groups, the directive starting to be applied from 2016. In particular, it was the Directive 2014/95/EU of the European Parliament and of The Council of 22 October, 2014 amending Directive 2013/34/EU as regards to the disclosure of non-financial and diversity information by certain large undertakings, see (DIRECTIVE 2014/95/EU). Voluntary reporting is growing in the agro-food sector, see e.g., Ioannis, George and Socrates (2019), and Gold, Kunz and Reiner (2017) and, in line with these official and implied rules, Cargill has produced sustainability reports concentrating on its supply chains in previous years as well – 2015, 2016 and 2017. The attention concentrates on selected issues or countries.

For the analysis of qualitative information, we have used Clatworthy and Jones (2006), Osma and Guillamón-Saorín (2011), Jindrichovska, Kubickova and Stratulat (2019), Jindrichovska and Purcarea (2011) and Roman, Mocanu and Hoinaru (2019). In our analysis, we have used a list of keywords for each CSR category. The basis of this list was supported by the work of Cohen (2010) supplemented by keywords for the agro-food industry. We have used the scale of 0 or 1 for the classification of the presence of each particular keyword. Subsequently, we have counted the presence of relevant keywords in each aspect of the three researched areas of the particular sustainability report – economic, social and environmental.

The initial choice of keywords was based on the 39 CSR keywords identified by the Business Civic Leadership Center of the US Chamber of Commerce Link (Cohen, 2010). Furthermore, we have explored the keywords from international academic literature, and keywords based on the Global Reporting Initiative G3 framework. The frequency of keywords was measured manually.

From academic papers, the major inspiration for the proposed qualitative methodology was based on methodology created by Horuckova and Baudasse (2017), which highlights the industry specificity of the approach. The framework of CSR keywords was suggested by Carroll (1991), Pretty (2007), Ross, Pandey and Ross (2015), Henson and Humphrey (2010). Authors Topp-Becker and Ellis (2017), and Josling (Ed.) (2017) were also consulted.

In line with the previous literature papers on sustainability in the agro-food industry, we use content analysis and assess the most frequent keywords related to the three aspects of CSR and Sustainability. The biggest emphasis is on the social and environmental aspects of responsibility. After the analysis of the keywords, we have added relevant phrases to illustrate the context of the particular keywords identified. The frequency of keywords was measured, manually, using MS Word keyword with the help of a research assistant. Phrases were selected individually, and their inclusion was discussed within the research team. Illustrative coding examples were included. Here we have used the five most frequent words in each report with the purpose to bring in the context of the identified statement.

As with any style of qualitative methodology working with narratives, we need to stress that we are aware of the shortcomings this qualitative approach may bring and, therefore, we performed a double-check of the coding by two independent scholars and consulted the outcome to arrive at the most appropriate statement.

4. EMPIRICAL ANALYSIS AND RESULTS

In the analysis of the Cargill sustainability reports, we perform content analysis using the relevant CSR keywords, as explained in the methodology part, from the years 2014 and 2018. The aim is to compare the given periods and analyse the results. The challenge is the change of methodology between the periods because of the growing attention to sustainability in corporate social responsibility and on sustainability reporting, in general.

4.1 Sustainability reporting in 2014

In the first table, we present the keywords organized from the most frequent to the least frequent in all three areas of CSR.

Table 1. CSR Keywords in the Cargill Sustainability Report 2014

No	Economic Responsibility	Count of words	Social Responsibility	Count of words	Environmental Responsibility	Count of words
1	Global	31	Food/s	96	Sustainable/ability	24
2	Business	26	Farmer/s	64	Environment/al	21
3	Agriculture	16	Employee/s	42	Animal/s	15
4	Produce/product/s	14	Community/ies	29	Water	15
5	Customer/s	11	Safety/safe	26	Responsible/ibility	10
6	Process/ing	9	Local	15	Resource/s	7
7	Plant	6	Health	11	Waste	4
8	Progress	4	Partnership	10	Green/house	3
9	Trade/s	3	Fatality/ies	2	Planet	2
10	Growth	1	Labour	0	Climate	1
Totall		121		295		102

Source: Cargill 2014 Corporate Responsibility Report and authors' own elaboration

The report is available at https://www.rspo.org/acop/2014b/cargill-incorporated/P-Policies-to-PNC-waterland.pdf

In this report, comprising 20 pages in total, social aspects were the most frequently mentioned keywords with 295 codings. The most frequent keyword in Cargill's 2014 Corporate Responsibility Report was Food – 96 codings in total. This is in line with the major concentration of the company in the food sector and food production. Its goal is "being the global leader in nourishing people" page 1. Indeed, the company is concentrating on food production and distribution. The second most frequent keyword is "farmer" (64 codings). The workforce is directly linked to company activities. The third most frequent keyword is "employee" (42 codings). Cargill shows an overall positive attitude towards farmers and employees, in general. The company treats them as crucial stakeholders in its business, together with its partners.

Examples of representative sentences in this report are in Table 2. The third example is delving into negative events that happened in the workplace – fatalities. Such sensitive issues are difficult to hide, or neglect and the company do not even attempt this. Instead, it shows a commitment to improvement and provides a time scale.

Table 2. Example of sentences, Cargill Sustainability Report 2014

SOCIAL RESPONSIBILITY ***Social aspects*** *are by far the most often mentioned issues in 2014 with 295 codings.*	**food** – "We need it to provide safe, nutritious and affordable food for everyone, and we want confidence that food is grown, processed and distributed responsibly" (page 1) **farmers** – "We promote the best, most responsible agricultural practices, including working closely with farmers to increase yields sustainably and treat animals humanely" (page 2) **employee** – "In fiscal 2014, we lost six people in workplace incidents (four employees and two contractors). These painful losses reinforce our commitment to achieving our goal of zero fatalities" (page 5)
ECONOMIC RESPONSIBILITY	**global** – "Our minority share in a deep sea port terminal on the Black Sea in southwest Russia provides Russian farmers with reliable access to global markets for their crops, including the Middle East and Africa" (page 9)
ENVIRONMENTAL RESPONSIBILITY	**sustainable** – "We support projects that promote sustainable agricultural practices, provide environmental conservation education, and protect and improve accessibility to water" (page 10)

Source: Cargill Sustainability Report 2014 and authors' own elaboration

Illustrative sentences for the area of economic and environmental responsibility show that the company cooperates with its stakeholders to achieve the goals and reach a sustainable state of farming. Cargill also provides education in environmental sustainability – e.g., in terms of accessibility to water (page 10), which is becoming important over the years (see environmental responsibility column).

To sum up the report: the company wants to be seen as a real contributor to its economic sector – food and agriculture, whilst not damaging the environment. However, environmental issues have been a real problem over the years as we will see, later, in subsequent reports.

4.2 Sustainability Reporting in 2018

In contrast to 2014, when the sustainability report had "just" 20 pages the reporting has grown substantially. The reporting in 2018 is more complete and more structured. According to the company website, the main pages devoted to company sustainability at https://www.cargill.com/sustainability, Cargill is operating eleven sustainable supply chains, namely: 1. Sustainable Animal nutrition and feed, 2. Sustainable Aquaculture, 3. Sustainable Beef. 4. Sustainable Cocoa. 5, Sustainable Corn., 6. Sustainable Cotton, 7. Sustainable Palm Oil. 8. Sustainable Poultry. 9. Sustainable Seaweed, 10. Sustainable Soy, and 11. Sustainable Shipping, see https://www.cargill.com/sustainability

Each section contains details on the product or service. There are also three complete sustainability reports:

1. Cargill Aqua Nutrition Sustainability Report 2018 https://www.cargill.com/doc/1432142322239/cargill-aqua-nutrition-sustainability-report.pdf linked to sustainable aquaculture.
2. The 2017/2018 Cargill Cocoa & Chocolate Sustainability Report https://cocoainitiative.org/news-media-post/cargill-published-its-cocoa-chocolate-sustainability-report-2017-2018/
3. And Cargill Sustainable Shipping 2018 https://www.cargill.com/doc/1432142299705/cargill-sustainable-shipping-2018.pdf

Other supply-chains are briefly covered by newsletters or internet news.

Analysis of segmental reports of 2018 (resp. 2017/2018)

In this paper we provide content analysis of the two longer reports – chocolate, and ocean transportation. The first analysis is performed on the text of the 2017/2018 Cargill Cocoa & Chocolate Sustainability Report.

2017/2018 Cargill Cocoa and Chocolate Sustainability Report

The content analysis of the report is summarized in Table 3. The CSR keywords are organized from the most frequent to the least frequent.

Table 3. CSR Keywords at the 2017/2018 Cargill Cocoa and Chocolate Sustainability Report

No	Economic Responsibility	Count of words	Social Responsibility	Count of words	Environmental Responsibility	Count of words
1	Business	116	Farmers	302	Sustainable/ability	111
2	Produce/product/s	45	Community/ies	201	Planet	91
3	Progress	39	Food	27	Responsible	87
4	Global	28	Local	27	Resource/s	26
5	Agriculture/al	22	Employee/s	24	Environment/al	23
6	Process/ing	20	Partnership/s	19	Climate	21
7	Plant	7	Health	11	Water/ing	13
8	Trade	5	Safety	7	Green	4
9	Customer	0	Fatality/ies	1	Animal/s	3
10	Growth	0	Labour	1	Waste	1
	TOTAL	282	TOTAL	620	TOTAL	380

Source: 2017/2018 Cargill Cocoa and Chocolate Sustainability Report, and authors' own elaboration

The report is available at https://cocoainitiative.org/news-media-post/cargill-published-its-cocoa-chocolate-sustainability-report-2017-2018/

There are many important topics in the Cocoa and Chocolate report explaining how Cargill contributes to farming communities ranging from interest in farmer livelihoods and the wellbeing of communities, fighting against child labour, protecting the planet and promoting the best environmental practices: e.g., fighting against deforestation and/or promoting sustainable agriculture procedures.

In building communities Cargill helps farmers to become entrepreneurs and maximize their outcome and profitability. Cargill helps farmers implement Farm Development Plans (FDPs) that contribute to higher yields on their farms over the long term (page 12).

Cargill takes care of communities and works with local leaders to conduct Community Needs Assessments (CNAs) and then develop Community Action Plans (CAPs) to accelerate community wellbeing. CAPs focusing on child protection, education, health and nutrition, as well as women's empowerment, and opportunities for young adults (page 28).

Representative statements to illustrate the context are in Table 4.

Table 4. Example of sentences, 2017/2018 Cargill Cocoa and Chocolate Sustainability Report

SOCIAL RESPONSIBILITY ***Social aspects** are the most often mentioned in the Cocoa and chocolate report 2017–2018 with 620 codings.*	**Farmer/s** – "We empower farmers through farmer organizations to become entrepreneurs and run their farms as businesses" (page 2) **Community/ies** – "We believe that to improve farmer livelihoods and farming communities' wellbeing in a tangible, lasting way, we must look at all factors that contribute to increased incomes and improved outcomes." (page 8)
ECONOMIC RESPONSIBILITY	**Business** – "We provide our customers with opportunities to grow their business across a wide range of cocoa and chocolate products and applications" (page 9)
ENVIRONMENTAL RESPONSIBILITY	**Sustainable/ability** – "Cargill promotes and respects human rights as outlined in the Universal Declaration of Human Rights and the UN Sustainable Development Goals" (page 31) Planet – "We joined the Cocoa & Forests Initiative (CFI) in 2017, and in 2018 we published our own CFI action plans for Côte d'Ivoire and Ghana as part of our Protect our Planet strategic action plan" (page 16)

Source: Cargill Sustainability Report 2017/2018 and authors' own elaboration

Many issues in the Cocoa and chocolate report 2017–2018 are problems with child labour, and problems with deforestation. Cargill takes an active share in fighting these problems and engaging in community actions, e.g., the monitoring and identification of child labour: the company strives to improve access to quality education through school infrastructure investments.

Another activity stressed in the Cargill report is combating deforestation and helping cocoa growers to adopt sustainable practices. Because of weak legislative systems, however, there are "burning" issues in cocoa farming including the previously mentioned child labour and the continuing damage to nature.

<u>Corporate Responsibility Report on Cargill ocean transportation 2018</u>

The second content analysis is performed on the text of the Corporate Responsibility Report Cargill ocean transportation 2018. Cargill's ocean transportation business was formed in 1965 in response to growing demand for shipping services from the parent company. In 1990, Cargill successfully expanded its customer portfolio to serve companies other than itself (Page 4).

Transportation consumes a lot of resources in trade and it also negatively impacts the environment; however, the environmental impact of ocean transport is lower than that of land-based activities, while the majority of marine pollution worldwide comes from land-based sources (Corporate Responsibility Report Cargill Ocean transportation 2018, page 37).

The content analysis of the report is summarized in Table 5. CSR keywords are organized from the most frequent to the least frequent.

Table 5. CSR Keywords in the Corporate Responsibility Report Cargill ocean transportation 2018

	Economic		Social		Environmental	
1	Business/es	85	Safety	62	Responsible/ility	74
2	Global	63	Health	40	Environment/al	35
3	Progress	36	Employee/s	35	Sustainable/ability	30
4	Trade	28	Partnership/s	14	Climate	22
5	Process/ing	12	Food	8	Water	16
6	Produce/product/s	10	Farmer/s	2	Resource/s	12
7	Agriculture/al	7	Fatality/ies	2	Waste	9
8	Growth	5	Local	2	Planet	2
9	Customer	0	Labour	1	Animal	1
10	Plant	0	Community	0	Green	0
	TOTAL	246		166		201

Source: Corporate Responsibility Report Cargill ocean transportation 2018, and authors' own elaboration

The report is available at https://www.cargill.com/doc/1432142299705/cargill-sustainable-shipping-2018.pdf

"While the company has specialized services that enable us to lead in our industry, we benefit from the global reach, diversification and expert capabilities of our broader parent company" Page 4.

In 2018, Cargill has transited Iron Ore: 70 million tons per year, Coal: 40 million tons per year, Grains: 45 million tons per year and Sugar: 8 million tons per year (Page 6). Cargill characterises 2018 as a turbulent year in its operating environment, with disruptions and regulatory uncertainty. There were also less favourite macroeconomic conditions due to trade conflicts.

"As a leading global organization with a strong sense of responsibility toward people and the environment, the company strives to influence all of the material aspects, e.g., greenhouse emissions; safety and well-being; anticorruption; diversity and inclusion; and, to a lesser extent, ship recycling" (Page 12).

To reduce emissions Cargill's operates a "parcelling" service to load cargoes for two customers and this provides opportunities for customers to reduce their emissions by up to 40% (page 15).

Table 6. Example of sentences, Corporate Responsibility Report Cargill ocean transportation 2018

ECONOMIC RESPONSIBILITY ***Economic aspects*** *are the most frequent issues in the Responsibility Report Cargill ocean transportation: 246 codings.*	**Business/es –** "We are proud to operate a leading freight-handling and trading business that provides first-class bulk shipping services to customers around the globe" (page 4) **Global** – "While we possess specialized services that enable us to lead in our industry, we benefit from the global reach, diversification and expert capabilities of our broader parent company" (page 4)
ENVIRONMENTAL RESPONSIBILITY	**Responsible/ility** – "We encourage our partners to join the Ship Recycling Transparency Initiative to advance responsible ship recycling through voluntary disclosure" (Page 49)
SOCIAL RESPONSIBILITY	**Safety** – "Across the company, we have engaged all employees and contractors to identify potential safety risks so we can take preventative action before injuries occur" (Page 23) **Health** – "Wellness: In addition to providing a safe work environment, we offer health and wellness services to employees to help them live a full and balanced life" (page 29)

Source: Cargill Sustainability Report 2014 and authors' own elaboration

With regards to health and safety aspects, Cargill cares about the safety and well-being of its seafarers. Cargill's ocean transportation business charters an average of 600 vessels at any given time. Although manpower is not directly within the control of Cargill, the safety and well-being of the crews and maintenance of the vessels are priorities for Cargill (page 23). (In 2018, there were nearly 1.65 million seafarers serving on its merchant ships. While most of those workers come from developing economies, the list of leading seafarer countries of origin includes China, Indonesia, the Philippines, Russia and Ukraine (page 23).)

In this context Cargill prepares rules on how to work with ethical issues especially with the use of Cargill's Code of Conduct, that outlines the company's ethical and compliance standards for conducting business (see Corporate Responsibility Report – Cargill ocean transportation 2018, page 43).

The code deals with obedience to laws, conducting business with integrity, keeping accurate and honest records, honouring business obligations and treating people with dignity and respect. Cargill is committed to be a responsible global citizen. Cargill is also using measures to follow these principles and solve potential ethical problems (page 43).

<u>Analysis of regional reports of 2018</u>

Furthermore, in 2018, Cargill prepared three regional reports on its activities in China, India and Indonesia. These reports are all written in a similar fashion because they are the product of one department. Nevertheless, we can see that the stress was varying slightly between the countries. Environmental responsibility was the most highlighted in the report on China, whilst in India and in Indonesia, social responsibility gained the most attention. See details in Table 7.

Table 7. CSR Keywords in Corporate responsibility and Sustainable development Reports 2017–2018 in regions

	Economic	Social	Environmental
Corporate Responsibility and Sustainable Development 2017–18 China	36	136	149
Corporate Responsibility and Sustainable Development 2017–18 India	68	149	126
Corporate Responsibility and Sustainable Development 2017–18 Indonesia	34	125	117

Source: Corporate Responsibility and Sustainable Development 2017–18 China, India and Indonesia, and authors' own elaboration

Furthermore, we list the corresponding most frequent keywords of the three regional reports in Table 8. As we can observe, the term sustainability is in the first place in all three reports. Next, we can see the words responsible and community.

Table 8. Five most frequent keywords in the Corporate responsibility and Sustainable development Reports 2017–2018 in regions

	China		India		Indonesia
Sustainable/ability	47	Sustainable/ability	47	Sustainable/ability	47
Responsibility –	36	Community/ies	37	Responsible/ility	29
Community/ies –	31	Responsible/ility	30	Farmer/s	28
Environment/al –	28	Employee/s	22	Community/ies	24
Farmer/s	25	Food/s	22	Employee/s	20

Source: Corporate Responsibility and Sustainable Development 2017–18 China, India and Indonesia, and authors' own elaboration

We can see that in the "regional reports" the identified keywords are identical as we have found in the segment reports, even though they are at the first glance very different – chocolate *versus* ocean transport.
In the "regional" reports, the most attention is paid to social and environmental areas.

5. DISCUSSION AND SUMMARY OF ALL SUSTAINABILITY REPORTS

The final Table 9 summarizes the most frequent keywords across all reports from 2018.

Table 9. Comparison of five most frequent keywords in all Corporate responsibility and Sustainability reports of Cargill 2014 and in 2017–2018

YEAR 2014		YEAR 2018	
Food/s	96	Farmer	380
Farmer/s	64	Sustainable	313
Employee/s	42	Community	293
Global	31	Business	201
Community/ies	29	Responsible/ility	169

It is not surprising that the most frequent keyword is the word "farmer"; it is in first place in 2018 and in second place in 2014.

The second keyword occurring in both lists is the word "community". This underlines that Cargill is aware of the fact that communities are important, and it wants to support healthy and functioning communities. The whole section deals with community wellbeing in the Cocoa and chocolate report 2017–2018 pages 11–14. Representative sentences for both reports are here:

"Around the world, Cargill works with **farmers** to increase yields while reducing environmental impact." (Sustainability Report 2014, page 2)
"We recognize that **farmers** will be much more resilient when their **communities** are too." (2017–2018 Chocolate report, page 8)
"Cargill's partnership with CARE is helping improve access to education for children in cocoa growing **communities**, including the construction and rehabilitation of school buildings and water wells, and providing school supplies and books benefiting more than 30,000 children in Ghana and Côte d'Ivoire." (Sustainability Report 2014, page 10)
"Together with our partners, we are implementing **community** driven initiatives to help prevent child labour while also enhancing women's economic opportunities, increasing access to education, and improving health and nutrition." (Cocoa and chocolate report 2017–2018, page 12).

Obviously, sustainability reporting is more voluminous in 2018 due to changes in requirements and to it being more complex. As a dominant and rational company with many resources, Cargill is also using its sustainability reporting as a promotional tool. This is not to say that the company does not believe in ethical behaviour and principles.

This company started its involvement in ethical and CSR related activities very early, already in 1934.

> *"1934 Cargill adopts a retirement program for employees, considered one of the best in the industry. Furthermore John MacMillan, Jr., sends James Ringwald, sent to head Cargill's new office in Buenos Aires, with instructions to decline to do any business by bribery or any other irregular practice." See Cargill timeline https://www.cargill.com/doc/1432078093613/pdf-cargill-timeline.pdf, page 6.*

6. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

In this paper, we have focused on sustainability and related corporate social responsibility issues in one of the oldest US multinational agro-food companies – Cargill. We have performed a content analysis of sustainability reports from 2014 and the whole portfolio of sustainability and responsibility reports from 2018. We have analysed and assessed how Cargill deals with social and environmental issues and how it cares for human resources in the context of continuing social economic and political pressures over the long period of its existence.

In this context, Cargill's owners and management recognized quite early that sustainability and CSR can work to the benefit of the company. Cargill understands the importance of communities and appreciates that farmers are not only employees, but they can be treated as partners, especially if they are understood as whole communities. In line with

Porter and Kramer (2006), CSR can be understood as an opportunity and lead to the creation of win-win situations in a broader context.

Sustainability reporting in Cargill has grown very significantly between 2014 and 2018. One of the reasons, apart for developing industry practices, is the new EP directive: Directive 2013/34/EU, which regulates the disclosure of non-financial and diversity information by certain large undertakings and groups – the directive starting to be applied from 2016.

A significant role is also played by the nonfinancial reporting prepared by Cargill in various forms and it has been part of its annual reports for decades. Cargill, as a complex and growing organization, operates a very diversified portfolio of supply chains, requiring modified approaches and understanding innovations and exploring opportunities in different production lines – although these lines are always linked to the basic business, which is agriculture.

One of the limitations of this study is the method used for exploring narrative information. We are aware of the shortcomings of this qualitative approach. On the other hand, narrative information allows several interpretations. We, therefore, performed a double-check of the coding by two independent scholars to limit the bias, as explained above. Right now, the analysis is very simple and the results cannot be generalized.

The study presented here is only the first step toward understanding one of the oldest food and agriculture companies, Cargill, on a long road to better understanding company CSR strategies. Future research should be based on a larger sample from a variety of countries so that they are more representative of the European agribusiness sector. Moreover, more in-depth analyses of the contingency factors that determine firms like Cargill’s CSR strategies could provide valuable insights into how company strategies are shaped and what influences they actually have on CSR social and environmental issues. The same as other major multinational companies, Cargill is also using its market power. In connection with other agro-food multinationals, the authors Sojamo and Larson, 2012, mention:

“Due to their vast infrastructural and major role in the global agro-food political economy, food and agribusiness corporations cannot avoid increasingly engaging, for endogenous and exogenous reasons, in multi-stakeholder initiatives and partnerships to devise methods of managing the agro-food value chains.” page 626.

Arising from this is the question of legitimacy seeking behaviour, which could be a topic for future research.

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BIBLIOGRAPHY

Baumgartner, R. J. (2014). Managing corporate sustainability and CSR: A conceptual framework combining values, strategies and instruments contributing to sustainable development. *Corporate Social Responsibility and Environmental Management*, *21*(5), 258–271.

Bebbington, J., & Larrinaga, C. (2014). Accounting and sustainable development: An exploration. *Accounting, Organizations and Society*, *39*(6), 395–413.

Bond, P. (2008). Social movements and corporate social responsibility in South Africa. *Development and Change*, *39*(6), 1037–1052.

Bowen, H. R. (2013). *Social responsibilities of the businessman*. University of Iowa Press. Reprint of 1953)

Broehl, W. G. (2008). Cargill. *University of Chicago Press Economics Books*., Cromer, L. (1990). Plucking Cargill: The RWDSU in Georgia. *Labor Research Review*, *1*(16), 10.

Burke, L., & Logsdon, J. M. (1996). How corporate social responsibility pays off. *Long range planning*, *29*(4), 495–502.

Cargill 2004 Corporate responsibility report available at https://www.rspo.org/acop/2014b/cargill-incorporated/P-Policies-to-PNC-waterland.pdf accessed on 8.8.2019

Cargill_2017–2018, available at https://www.cargill.com/static/cocoa-sustainability/Cargill_2017-2018_Cocoa_&_ChocolateSustainability_Report.pdf accessed on 8.8.2019.

Cargill annual report 2018 available at https://www.cargill.com/doc/1432124831909 /2018-annual-report.pdf accessed on 25.7.2019.

Cargill Aqua Nutrition Sustainability Report 2018 https://www.cargill.com/doc/1432142322239/cargill-aqua-nutrition-sustainability-report.pdf

Cargill sustainability available at https://www.cargill.com/sustainability accessed on 8.8.2019

Cargill Sustainable Shipping 2018 available at https://www.cargill.com/doc/1432142299705/cargill-sustainable-shipping-2018.pdf accessed on 8.8.2019.

Cargill timeline © 2019 Cargill, Incorporated available at https://www.cargill.com/doc/1432078093613/pdf-cargill-timeline.pdf accessed on 25.7.2019.

Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business horizons*, *34*(4), 39–48.

china-sustainability-and-corporate-responsibility-report.pdf available at https://www.cargill.com/doc/1432124825579/china-sustainability-and-corporate-responsibility-report.pdf accessed on 8.8.2019.

Clatworthy, M. A., & Jones, M. J. (2006). Differential patterns of textual characteristics and company performance in the chairman's statement. *Accounting, Auditing & Accountability Journal*, *19*(4), 493–511.

Cohen, E. (2010). “39 CSR reporting keywords”, available at http://csr-reporting.blogspot.com/2010/08/39-csr-reporting-keywords.html, accessed on 15. 4. 2019.

Cromer, L. (1990). Plucking Cargill: The RWDSU in Georgia. *Labor Research Review*, *1*(16), 10.

Gold, S., Kunz, N., & Reiner, G. (2017). Sustainable global agrifood supply chains: exploring the barriers. *Journal of Industrial Ecology*, *21*(2), 249–260.

Gumbert, T., & Fuchs, D. (2018). The power of corporations in global food sector governance. In *Handbook of the International Political Economy of the Corporation*. Edward Elgar Publishing.

DIRECTIVE 2014/95/EU OF THE EUROPEAN PARLIAMENT available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX: 32014L0095 &from=EN accessed on 15. 7. 2019

García-Álvarez de Perea, J., García-Ramírez, C., & Cubo-Molina, D. (2019). Internationalization Business Models and Patterns of SMEs and MNEs: A Qualitative Multi-Case Study in the Agrifood Sector. *Sustainability*, *11*(10), 2755.

Gray, R., Owen, D. and Maunders, K. (1988), Social Reporting: Emerging Trends in Accountability and the Social Contract, *Accounting, Auditing & Accountability Journal*, Vol. 1 No. 1, pp. 6–20.

Henson, S., & Humphrey, J. (2010). Understanding the complexities of private standards in global agro-food chains as they impact developing countries. *The journal of development studies*, *46*(9), 1628–1646.

Horuckova, M., & Baudasse, T. (2017). Content analysis applied to social and environmental reporting. *Acta academica karviniensia*, 32–45.

Ioannis, M., George, M., & Socrates, M. (2019). A Community-Based Agro-Food Hub Model for Sustainable Farming. *Sustainability*, *11*(4), 1017.

india-sustainability-and-corporate-responsibility-report.pdf available at https://www.cargill.com/doc/1432124826325/india-sustainability-and-corporate-responsibility-report.pdf accessed on 8.8.2019.

indonesia-sustainability-and-corporate-responsibility-report.pdf available at https://www.cargill.com/doc/1432124826827/indonesia-sustainability-and-corporate-responsibility-report.pdf accessed on 8.8.2019.

Jindrichovska, I., & Purcarea, I. (2011). CSR and environmental reporting in the Czech Republic and Romania: country comparison of rules and practices. *Accounting and Management Information Systems*, *10*(2), 202.

Jindrichovska I., Kubickova, D and Stratulat, M. (2019). Early Stage of Sustainability Reporting: Case Study from the Czech Tobacco Industry, *European Research Studies Journal*, 0(1), 128–142.

Josling, T. (Ed.). (2017). *Handbook of international food and agricultural policies*. World Scientific.

Kolk, A., & Van Tulder, R. (2010). International business, corporate social responsibility and sustainable development. *International business review*, *19*(2), 119–125.

Kneen, B. (2002). *Invisible giant: Cargill and its transnational strategies* (No. Ed. 2). Pluto Press.

MacGregor Pelikánová, R. (2017). European Myriad of Approaches to Parasitic Commercial Practices. *Oeconomia Copernicana*, *8*(2): 167–180, doi: 10.24136/oc.v8i2.11.

MacGregor Pelikánová, R. (2019). Radka. Harmonization of the protection against misleading commercial practices: ongoing divergences in Central European countries. *Oeconomia Copernicana*, *10*(2), 239–252, doi: 10.24136/oc.2019.012.

Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative science quarterly*, *48*(2), 268–305.

Mustapha, K. (2009). Taste of child labor not so sweet: a critique of regulatory approaches to combating child labor abuses by the US chocolate industry. *Wash. UL Rev.*, *87*, 1163.

Nelson, V., & Phillips, D. (2018). Sector, landscape or rural transformations? Exploring the limits and potential of agricultural sustainability initiatives through a cocoa case study. *Business Strategy and the Environment*, *27*(2), 252–262.

Ortega, M. I., Sabo, S., Aranda Gallegos, P., Zapien, D., Guernsey, J. E., Zapien, A., ... & Rosales, C. (2016). agribusiness, corporate social responsibility, and health of agricultural Migrant Workers. *Frontiers in Public Health*, *4*, 54.

Osma, B.G. & Guillamón-Saorín, E. (2011). "Corporate governance and impression management in annual results press releases", *Accounting, Organizations and Society*, 36(4–5), 187–208.

Porter, M. E., & Kramer, M. R. (2006). The link between competitive advantage and corporate social responsibility. *Harvard business review*, *84*(12), 78–92.

Pretty, J. (2007). Agricultural sustainability: concepts, principles and evidence. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *363*(1491), 447–465.

https://www.reuters.com/article/us-carg-brazil-environment/cargill-says-food-industry-will-miss-zero-deforestation-goal-idUSKCN1TE345 accessed on 6.8.2019.

Roman, A. G., Mocanu, M., & Hoinaru, R. (2019). Disclosure Style and Its Determinants in Integrated Reports. *Sustainability*, *11*(7), 1960.

Ross, R. B., Pandey, V., & Ross, K. L. (2015). Sustainability and strategy in US agro-food firms: An assessment of current practices. *International Food and Agribusiness Management Review*, *18*(1030-2016-83052), 17–47.

Sanogo, T. (2019). Does fiscal decentralization enhance citizens' access to public services and reduce poverty? Evidence from Côte d'Ivoire municipalities in a conflict setting. *World Development*, *113*, 204–221.

Takalandze, L., & Mohammad, R. N. (2019). Implementing corporate social responsibility as a dynamic capability in recent modern agri-business SMES' concerns. *Fundamental and applied researches in practice of leading scientific schools*, *31*(1), 217–219.

Topp-Becker, J., & Ellis, J. D. (2017). The role of sustainability reporting in the agro-food supply chain. *Journal of Agriculture and Environmental Sciences*, *6*(1), 17–29.

Tsiboe, F., Luckstead, J., Dixon, B. L., Nalley, L. L., & Popp, J. S. (2018). Analyzing Labor Heterogeneity In Ghanaian Cocoa Production And Its Implications For Separability In Household Decisions And Policy Assessment. *Journal of Agricultural and Applied Economics*, *50*(4), 602–627.

Wilkins, M. (1988). The free-standing company, 1870–1914: an important type of British foreign direct investment. *Economic History Review*, 259–282.

Legal Aspects

TRANSPOSITION OF DIRECTIVE 2013/34/EU ON FINANCIAL STATEMENTS IN THE LIGHT OF THE CJ EU CASE LAW

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Abstract
Directive 2013/34/EU is a critical piece of EU legislation harmonizing the regime of financial and non-financial reporting in the entire EU, including reporting about Corporate Social Responsibility. Since its transposition deadline expired in 2015, it is feasible and highly illustrative to holistically study its transposition. The legislative and literature review constitutes a solid foundation for research in the Eur-Lex and Curia database. This allows for the extraction of data about whether and how EU member states transposed the Directive 2013/34/EU, in particular about the quantity and quality of national legislative measures that were used, and what critical issues emerged and led up to the top interpretation and application authority, the Court of Justice of EU. There are many questions about the effectiveness and efficiency of Directive 2013/34/EU its transpositions. Their common intersection represents the hypothesis that national transposition strategies along with the case law of the Court of Justice of EU conveys a message. This message not only testifies about already emerged issues and leads to suggestions for improvements, but in addition offers a very interesting perspective about various shades of modern European integration. Indeed, the comparative and critical Meta-Analysis of national transposition measures and issues, refreshed by Socratic questioning, centred around such a hypothesis brings pioneering results in the form of a very colourful picture worthy of further studies.

Keywords: *Corporate Social Responsibility (CSR), EU, financial and non-financial reporting, Directive 2013/34/EU, Transposition*

1. INTRODUCTION

Modern European integration combines supranational and intergovernment approaches and aims to create the single internal market with the famous four freedoms of movement (MacGregor Pelikánová & MacGregor, 2018a), while overcoming global challenges for organizations (Piekarczyk, 2016). Its last stage, the post-Lisbon EU, is dominated by ten year strategies and currently applicable is the strategy Europe 2020. Under the auspices of a drive for smart, sustainable and inclusive growth of Europe 2020 (EC, 2010), the EU demonstrates a set of commitments. Indeed, Europe 2020 is a reference framework for activities at EU and at national and regional levels which entail one or more of the stated five targets: 75% employment, 3% of GDP for R&D, a 20% reduction in gas emissions, less than 10% school dropouts and at least 20 million fewer people in or at risk of poverty and social exclusion. These targets should help the EU and Europeans to be more aware about sustainability, become better suited for competition and more unified about common values. These ambitous endeavors require the active participation of all stakeholders and the EU law, along with EU member state's laws, should create an effective and efficient law framework for attainment thereof.

Specifically, legislative activities in the wave of Europe 2020 should motivate, if not outright order, European enterprises to embrace fair and vigorous competition standards, healthy financial planning and the sustainability concept. European enterprises should prepare and publish their annual reports with both financial and non-financial statements. This is done in order to foment some self-reflection and to offer a transparent compendium about their situation from the strictly accounting perspective as well as from their Corporate Social Responsibility ("CSR") perspective (MacGregor Pelikánová & MacGregor, 2018c). CSR is a reflection of the modern concept of sustainability which emerged in the 1960's in the USA, was incorporated in the United Nations Brundtland Report 1987 and ultimately led to the merger of the systematic and visionary soft law self-regulation of businesses with normatively and moraly regulated corporate responsibility (Bansal & Song, 2017; Hahn et al., 2018).

The EU decided to cross the Rubicon and enacted Directive 2013/34/EU of 26 June, 2013 on annual financial statements, consolidated financial statements and related reports of certain types of undertakings as amended by Directive 2014/95/EU aka Accounting Directive ("Directive 2013/34"). Directive 2013/34 imposes an obligation on certain large businesses (accounting units pursuant to accounting legislation) to publish information in their annual reports about environmental, social and employment issues, respect for human rights and the fight against corruption and bribery. Publication of non-financial information should create an understanding of the effects of an enterprise's operations on society. This information is intended for business management and a wide range of stakeholders, especially investors and customers. The broader intention of Directive 2013/34 is to contribute to the transformation to a sustainable economy. The framework of Directive 2013/34 was created with the intention of minimizing red-tape burdens. Namely, the Directive 2013/34 defines the types of information that should be made public, but leaves it up to the discretion of businesses, regarding how, and how detailed, this information should be provided. An essential criterion of Directive 2013/34 is businesses each providing information to understand the development, position, performance of their company and the impact of their activities. Thanks to this approach, the Directive's framework is also applicable to medium and small businesses.

Directive 2013/34/EU offers a full range of alternative solutions and has led to various efforts of EU member states, but the resulting harmonization is not totally successful (Mejzlík, 2016). Directive 2013/34 took effect on 19 July, 2013 and the deadline for transposition expired on 20 July, 2015. Due to amendments, the consolidated versions of Directive 2013/34 was issued on 11 December, 2014. EU member states complied and used a multitude of strategies to transpose Directive 2013/34 – starting with the enactament of one special Act, lex specialis, over a few legislative changes and ending with massive changes of many national Acts and statutes. Truth be told, the manner and method of transposition is secondary, while of primary concern is whether the mechanism and regime envisaged by Directive 2013/34 is truly an applicable and enforceable part of EU law as well as EU member state's laws. The ultimate assessment of the transposition of Directive 2013/34 and its realization in the real world is in the hands of the judges of the Court of Justice of EU ("CJ EU") to whom subjects can turn with direct actions based on Directive 2013/34, or within national courts with indirect actions for preliminary rulings about the interpretation of Directive 2013/34.

The transposed Directive 2013/34 is a critical piece of legislation for financial and even non-financial reporting throughout the entire EU. However, is this effective and efficient? Namely, what message about the effectiveness and efficiency of Directive 2013/34 and its transposition can be extracted from the legislation and case law? What critical issues have already emerged and how have they been addressed by the ultimate judiciary authority, the CJ EU? How can we take any advantage of that and improve the awareness and commitment regarding the harmonized financial and non financial reporting in the EU? Can we confirm the hypothesis that a message can be extracted? And what is this message?

So as to properly address these research questions and hypothesis, a legislative and literature review regarding Directive 2013/34 needs to be done (2.) and appropriate resources, research techniques and methods have to be identified (3.). Thereafter, a closer scrutiny of the transposition strategies should be analysed along with the top case law of the CJ EU regarding Directive 2013/34 (4.). The yielded results and related discussion (5.) propose answers, or at least indications for answers, to the research questions, confirm the hypothesis and offer an interesting perspective about the harmonization of financial and non financial reporting in the EU and about modern European integration in general (6.).

2. LEGISLATIVE AND LITERATURE REVIEW

In the EU, the majority of jurisdictions share the continental law tradition focusing on formalism (MacGregor Pelikánová, 2017), while the minority of jurisdictions share the common law tradition, oriented towards pragmatism (MacGregor Pelikánová & MacGregor, 2018a). Despite the blurred distinction between historical truth and reality (Chirita, 2014), one can state that the EU and the EU law and system mix both these traditions (Rogalska, 2018) as testified to by the three foundation documents belonging in the EU primary law and representing the current EU constitutional setting (MacGregor Pelikánová & MacGregor, 2019).

The first of them is the follow-up to the original Maastricht Treaty creating the EU in 1991, which has been revised and reformed and its post-Lisbon consolidated version is labelled as the Treaty on EU ("TEU"). The TEU has 55 articles and underlines the key features of the EU and EU law, such as the establishment of the internal market and the work for the sustainable development of Europe based on balanced economic growth and a highly competitive social market economy (Art. 3). Doubtless, the TEU targets a highly competitive social market economy while promoting scientific and technological advances (MacGregor Pelikánová & MacGregor, 2018a). Further, the TEU provides clear competence borderlines. This is done by explicitly stating that competences not conferred upon the EU remain with EU member states (Art.4) and that competences conferred upon the EU are to be exercised in compliance with the principles of proportionality and subsidiarity (Art. 5). Under the principle of proportionality, the content and form of EU actions shall not exceed what is necessary to achieve the objectives of the Treaties (Art. 5). Plus, under the principles of subsidiarity, conferred share competence (i.e. not conferred exclusive competences) can be exercised by the EU only if the proposed aim cannot be sufficiently achieved by EU member states (Art. 5).

The second foundation document is the revamping of the original Rome Treaty creating the European Economic Community in 1957, which has been revised and reformed and its post-Lisbon consolidated version is labelled as the Treaty on the functioning of EU ("TFEU"). The TFEU has 358 Articles and further develops the TEU. The TFEU defines areas for which the EU has conferred exclusive competencies (Art. 3) and for which the EU has conferred shared competences (Art. 4). The principal areas of shared competences include, among others, internal market, environmental, and consumer protection (Art. 4). The TFEU focusses in detail on the internal market, including provisions covering the right of establishment (Art. 49 et foll.) and consumer protection (Art. 169) (MacGregor Pelikánová & MacGregor, 2018a), as well as on economic, social and territorial cohesion (Art.174 et foll.). Naturally, the TFEU deals as well with all seven key EU institutions, including the CJ EU, and defines direct and indirect actions (Art. 251 et foll.). Direct actions include actions demanding the review of the legality of legislative acts, including Directives, which can be brought by EU member states within two months of their publication (Art. 263). Far more common are indirect actions asking the CJ EU to give preliminary rulings concerning the interpretation of the Treaties or Acts, such as a Directive, which can be brought by any court or tribunal from the EU member states (Art. 267).

Last, but not least, is the Charter of fundamental rights of the EU ("Charter") which proclaims and codifies personal, civic, political, economic and social rights enjoyed by people within the EU in a single text. The Charter was prepared by the European Convention and proclaimed by three EU institutions – the European Parliament, Council of ministers and the European Commission in 2000, and became legally binding by the operation of the Treaty of Lisbon in 2009. The Charter has 54 Articles and codifies the freedom to conduct a business in accordance with EU law, EU member state's laws and practices (Art.16), as well as a high level of environmental protection (Art.37) and a high level of consumer protection (Art. 38). Often omitted, yet important in the extreme, is the explicit provision about the right to good administration pursuant to which every person has their own right to have his or her affairs handled impartially, fairly and within a reasonable time by the institutions, bodies, offices and agencies of the EU (Art. 41).

The EU primary law is the foundation for the EU secondary law represented by Regulations and Directives, including two Directives with a pivotal importance for financial and non-financial reporting. The first is, of course, Directive 2013/34 and the second is Directive 2014/95/EU, regarding disclosure of non-financial and diversity information by certain large undertakings and groups ("Directive 2014/95") which updated Directive 2013/34 and added to it, among other items, the famous Art.19a about non-financial statements (MacGregor Pelikánová, 2019a). This amendment was clearly motivated by a desire to boost the CSR of enterprises, especially the category of the environment and R&D, perhaps ultimately rewards business' ethics and their interaction with CSR (Sroka & Szanto, 2018). As a matter of fact, Directive 2013/34 was amended by two Directives, Directive 2014/95 and Directive 2014/102/EU adapting Directive 2013/34 and addressing the access of Croatia ("Directive 2014/102"). However, since Directive 2014/102 merely extended the reach of Directive 2013/34 to Croatia and set the transposition deadline as of 20 July, 2015, it is often forgotten. In order to avoid any misunderstandings, in December, 2014, the EU issued a consolidated version of the Directive 2013/34, i.e. the version as updated by Directive 2014/95 and Directive 2014/102. Consequently, any further analysis and references regarding Directive 2013/34 in this contribution means, in short, reference to its consolidated version.

Inasmuch as Directive 2013/34 attempts to consolidate and combine several concepts and priorities, the terminology, definitions and foundations used are partially ambiguous and/or vague. For example, Directive 2013/34 deals with undertakings (Art. 1), which are private limited companies, AKA limited liability companies, and public limited companies, AKA shareholder companies (Annex I). However, it imposes the duty to include non-financial statements in the management report upon large undertakings which are public-interest entities on their balance sheet dates as the criterion of the average number of 500 employees (Art. 19a). However, the threshold is clearly set only for the large undertakings, i.e. undertakings exceeding the maximum limits for the small and medium sized undertakings AKA Small and Medium Sized Enterprises („SMEs") – a balance sheet total of EUR 20 million, net turnover EUR 40 million, 250 employees (Art. 3). This leads to the burning question about who these public interest entities are, which is only partially answered (Art. 2) and to the question regarding what exactly should be included in these statements. This is only vaguely answered by reference to an undertaking's development, performance, position and impact of its activity, relating to, at a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters (Art. 19a) (MacGregor Pelikánová & MacGregor, 2018c).

Further, with respect to reporting and especially regarding its form and publication, one should mention Directive (EU) 2017/1132 of 14 June, 2017, relating to certain aspects of company law ("Directive 2017/1132"). Directive 2017/1132 requires compulsory disclosures, by companies, of a set of documents, including the instrument of its constitution and accounting documents (Art. 14). In the national register this disclosure is to be done, i.e. each EU member state has to have a central, commercial or company register where, for each company, is kept a file with such documents (Art.16) (MacGregor Pelikánová & MacGregor, 2018b). Obtained data is migrated to the central EU portal, eJustice.europe (MacGregor Pelikánová & MacGregor, 2017).

Each and every judge in the EU member states has to interpret and apply the EU law along with national laws, except the CJ EU, where the judges deal exclusively with the EU law and are top authorities for its interpretation. As stated above, it is done either based on direct actions, which are extremely rare, or based on indirect actions asking for preliminary rulings, which are very common. All these judgements and other decisions of the CJ EU constitute a case law often called the EU supplementary law. This further demonstrates the above mentioned mixed nature of the EU and EU law, i.e. the CJ EU case law is partially precedential.

EU strategies and policies, which are not, per se, sources of law, since they are extremely influential should not be overlooked and this especially considering the political setting of the EU and the coordinated and mutually supporting work of the pro-integration internal tandem, the Europan Commission and CJ EU (MacGregor Pelikánová, 2012). Currently, one fundamental strategy is ending, Europe 2020, and a new one is about to emerge. Europe 2020 has been shaped by both formal and informal institutions (Pasimeni & Pasimeni, 2016) and ultimately prepared by the European Commission hoping-believing in the upcoming economic dominance of the EU in the global market (Stec & Grzebyk, 2017). Europe 2020 was an extremely ambitious strategy expecting the growth of competitiveness, innovations (Balcerzak, 2016a et 2016b; Świadek et al, 2019; MacGregor Pelikánová & MacGregor, 2019) as well as cohesion and solidarity (MacGregor Pelikánová, 2019c; Pohulak-Żołędowska, 2016; Polcyn, 2018). Europe 2020 is another example of European thinking in economic terms (MacGregor Pelikánová, 2019b), hoping that economic solutions will fix all current problems at once (Staníčková, 2017; Melecký, 2018) in a unified manner across the entire EU (Lajtkepova, 2016). Boldly, a study of Directive 2013/34 and its transposition, and their assessment, is akin to observing the EU ship-of-state in stormy waters of globalization during foggy weather. Poseiden adventure, anyone?

3. DATA AND RESEARCH METHOD

This contribution addresses the transposition of Directive 2013/34 in the light of the CJ EU case law. Namely it analyses both its transposition strategies and challenges, as witnessed by national transposition legislative measures and especially the interpretation and application authority, the CJ EU and its case law specifically dealing with Directive 2013/34. This represents a battery of research sub-questions and should lead to an extraction of a message conveyed on both the national level as well as EU level, indicating perceptions and preliminary opinions about the effectiveness and efficiency of Directive 2013/34 as well as about critical issues unveiled by it. Naturally, such an understanding could be instrumental for future discussions about possible improvements and can lead to an increase of the effectiveness and efficiency of financial and non-financial reporting in the EU.

These ambitious targets cannot be hit merely by one study. This contribution should be, in other words, a pioneering first step in this direction, the first step on a longer journey. The keystone of this contribution is to review and appreciate various transposition strategies regarding Directive 2013/34 by EU member states (4.1) and to engage in a research and analysis of the CJ EU case law dealing specifically with Directive 2013/34 (4.2). The combined understanding of the transposition strategies and of the CJ EU case should facilitate the confirmation or rejection of the expectation (hypothesis) that a message can be drawn. And if the hypothesis is confirmed, then naturally it should be holistically and plainly stated what exactly this message says and what it means. Or, to put it another way, how can we take advantage of the established knowledge and thus improve the awareness and commitment regarding the harmonized financial and non-financial reporting in the EU?

In order to properly address these research sub-questions and hypothesis, the already accomplished legislative and literature review regarding Directive 2013/34 (2.) needs to be expanded in two directions by using a holistic, open minded Meta-Analysis able to address the heterogeneous nature of the sources (Silverman, 2013) and enhanced by Socratic questioning (Areeda, 1996). The legislative, judiciary, economic and technical aspects shape the focus, targeting both qualitative and quantitative data and entailing deductive and inductive aspects of legal thinking (MacGregor Pelikánová, 2019a) and certainly building upon the text analysis, especially content and qualitative text analysis (Kuckartz, 2014).

First off, a legislative research and comparative critical analysis needs to be done regarding the transposition in EU member states. The Eur-Lex database and Aspi database are a prime source of information which can be further expanded by making national legislative searches (4.1). Secondly, a complex research of the CJ EU case law via Curia database needs to be done while focusing both on direct and indirect actions and the extracted cases have to be mined and explored while using a teleological and purposive approach (4.2). The yielded results and related discussion (5.) propose answers, or at least indications for answers, to the research sub-questions, confirm the hypothesis and offer an interesting perspective about the harmonization of financial and non-financial reporting in the EU and about the modern European integration in general (6.).

4. TRANSPOSITION OF DIRECTIVE 2013/34 – NATIONAL LEGISLATIVE STRATEGIES AND THE CJ EU CASE LAW

Directive 2013/34 is a typical EU Directive requiring national transposition via legal Acts and statutes of each EU member state law within a deadline. Since the transposition deadline for Directive 2013/34 expired on 20 July, 2015 (Art. 53) and was observed by EU member states, we benefit from a sufficiently long period to appreciate the transposition techniques and decisions about issues linked to the transposed Directive 2013/34 which are made by the top authority for that, the CJ EU.

4.1 National transposition strategies with respect to Directive 2013/34

The data offered by Eur-Lex indicated that Directive 2013/34 was transposed across the EU member states while respecting the deadline and while using dramatically different techniques. Tables 1 and 2, below, show the extent of quantitative differences, i.e. the number of legislative measures, typically national legal Acts and statutes, enacted in order to transpose Directive 2013/34 and/or to make the prior national legislation conform with Directive 2013/34.

Table 1. EU member states enacting 1–10 legislative measures to transpose Directive 2013/34

BE	BG	EE	GR	FR	HR	IT	CY	LV	LX	MT	NL	PL	PT	RO	SL	FI	UK
2	5	5	3	7	3	2	3	4	2	2	4	8	3	10	6	6	5

Source: Processing by the authors based on Eur-Lex

Table 1 indicates that the majority of EU member states opted for more than one and less than 11 legislative measures, as a matter of fact 5 EU member states (Denmark, Germany, Ireland, Spain and Austria) have managed to adjust their national law to the regime brought out by Directive 2013/34 by enacting one single legal Act – statute. However, as indicated in Table 2, five other EU member states (the Czech Republic, Lithuania, Hungary, the Slovak Republic and Sweden) needed many more national legislative measures. As a matter of fact, leading the van is the Czech Republic with an unbelievable 66 legal Acts – statutes.

Table 2. EU member states enacting 1 legislative measure or more than 20 legislative measures to transpose the Directive 2013/34

DK	GE	IR	ES	AT		CZ	LT	HU	SK	SW
1	1	1	1	1		66	62	29	17	21

Source: Prepared by the authors based on Eur-Lex

This rather surprising quantitative data about national transposition strategies needs to be complemented by qualitative data about the nature and type of such transposition measures. Table 3 reveals what was the single transposition act in the 5 EU member states which used this lean strategy.

Table 3. EU member states enacting with 1 legislative measure the transposition of Directive 2013/34

DK	Act No 738 of 1 June 2015 amending the Financial Statements Act and various other Acts
GE	Act transposing Directive 2013/34/EU (Implementation Act — BilRUG) of 17 July 2015
IR	Companies (Accounting) Act 2017
ES	Act on auditors and accountant 2015
AT	Act amending Commercial Code, Act on shares, Act on Ltd, Act on cooperatives, SE Act, Tax Act

Source: Prepared by the authors based on Eur-Lex

As implied by Table 3, EU member states with a lean transposition strategy either amended one critical statute, such as an Accounting Act, or enacted one statute which modified a large number of other statutes in order to become compliant with Directive 2013/34. This can be contrasted with those EU member states with an ‘average’ number of transposition legislative measures – for example, Estonia with five, see Table 4.

Table 4. Estonia – 5 legislative measures to transpose Directive 2013/34

Accounting Act	Official publication: *Riigi Teataja* ; Number: *RT I, 30.12.2015, 65*
Act amending the Accounting Act and other related Acts	Official publication: *Elektrooniline Riigi Teataja* ; Number: *RT I, 30.12.2015, 4*
Law of Auditors Activities 1	Official publication: *Riigi Teataja* ; Number: *RT I, 30.12.2015, 8*
Credit Institutions Act	Official publication: *Riigi Teataja* ; Number: *RT I, 31.12.2015, 43*
Commercial Code	Official publication: *Elektrooniline Riigi Teataja* ; Number: *RT I, 30.12.2015, 73*

Source: Prepared by the authors based on Eur-Lex

However, the most puzzling is the number of Czech legislative measures taken in order to achieve the transposition of Directive 2013/34. Indeed, the amazing number 66 calls for an explanation, which naturally should start by figuring out what exactly these legislative measures are, see Table 5 with a selection of these measures.

Table 5. Czech Republic – selected Czech legislative measures to transpose Directive 2013/34

Accounting Act	*Zákon č. 563/199 Sb., o účetnictví*
Act on Banks	*Zákon č. 21/1992 Sb., o bankách*
Act amending Income Tax Act	*Zákon č. 492/2000 Sb., kterým se mění zákon č. 586/1992 Sb., o daních z příjmů*
Act amending Accounting Act	*Zákon č. 353/2001 Sb., kterým se mění zákon č. 563/1991 Sb., o účetnictví*
Ordinances to implement Accounting Act	*Vyhlášky č. 500-503/2002 Sb., kterými se provádějí některá ustanovení zákona č. 563/1991 Sb., o účetnictví*
Act amending Accounting Act	*Zákon č. 437/2003 Sb., kterým se mění zákon č. 563/1991 Sb., o účetnictví*
Ordinances amending Ordinance	*Vyhlášky č. 473/2003 Sb., č. 545/2004 a 350/2007 Sb., kterými se mění vyhláška č. 501/2002 Sb.*
Act on Capital Market	*Zákon č. 256/2004 Sb., o podnikání na kapitálovém trhu*
Ordinances amending Ordinance	*Vyhláška č. 546/2004 a č. 399/2005 Sb. a 351/2007 a č. 411/2009 Sb., kterými se mění vyhláška č. 502/2002 Sb.*
Ordinances amending Ordinance	*Vyhlášky č. 397/2005 Sb., č. 349/2007 Sb. a 469/2008 Sb., kterými se mění vyhláška č. 500/2002 Sb.*
Act amending Act on Information Systems	*Zákon č. 81/2006 Sb., kterým se mění zákon č. 365/2000 Sb., o informačních systémech veřejné správy*
Act amending Accounting Act	*Zákon č. 69/2007 Sb., kterým se mění zákon č. 563/1991 Sb., o účetnictví*
Act amending Accounting Act	*Zákon č. 304/2008 Sb., kterým se mění zákon č. 563/1991 Sb., o účetnictví*
Act on Auditors	*Zákon č. 93/2009 Sb., o auditorech a o změně některých zákonů*
Act amending Accounting Act	*Zákon č. 410/2010 Sb., kterým se mění zákon č. 563/1991 Sb., o účetnictví*
Civil Code	*Zákon č. 89/2012 Sb., občanský zákoník*
Act on Business Corporations	*Zákon č. 90/2012 Sb., o obchodních společnostech a družstvech (zákon o obchodních korporacích)*
Act amending Accounting Act	*Zákon č. 239/2012 Sb., kterým se mění zákon č. 563/1991 Sb., o účetnictví*
Etc.	*Etc.*

Source: Prepared by the authors based on Eur-Lex and Aspi

Table 5 proves out that these legislative measures represent both direct legislation and delegated legislation, from the field of accounting as well as from other fields, i.e. the transposition of the Directive 2013/34 entailed, among other items, changes in the Act on Income Tax, Act on Reserves, Act on Auditors, or Czech Accounting Standards for entrepreneurs (Mejzlík, 2016). Nevertheless, the most important are the amendment of the Czech Act No 563/1991 Coll. on accounting ("Accounting Act"), or Ordinances implementing the Accounting Act. The search in the Aspi database reveals that the Accounting Act has been amended 44 times, i.e. 44 statutes have been enacted to amend it during its three decades-long existence. This means that at least once per year the Czech Accounting Act is amended and, as a matter of fact, since 2013 it has been amended by six statutes and the majority of them for transposing Directive 2013/34. This beggars the question why this could not have been done via one statute, as for example in EU member states having the lean transposition strategy (Denmark, Germany, Ireland, Spain, Austria). The Czech atrophic and fragmented strategy ultimately led to the last version of the Accounting Act, which sets out a legal duty for certain enterprises to have their final accounts verified by an auditor (Art. 20). The group of enterprises, to which this legal duty applies, include enterprises hitting at least one of the following three thresholds: (i) assets of CZK 40 million, (ii) a turnover of CZK 80 million, and (iii) 50 employees (Art. 20). In addition, the subjects of this "auditing" legal duty have another duty – to prepare as well an annual report with financial and non-financial information, including the information about R&D, environmental protection activities and employment relationships (Art. 21). This legal duty needs to be understood in the light of the Czech Act No 304/2013 Coll., on public registers, which regulates the Czech Commercial Register and its records (Art. 42 et foll.) and specifically states that the Collection of documents kept by the Czech Commercial Register includes annual reports (Art.66).

4.2 The CJ EU case law about Directive 2013/34

Regardless of the transposition strategies and quantity and quality of national legislative measures for the transposition of Directive 2013/34, ever since 2015 there has been a harmonized regime regarding financial and non-financial reporting in the EU and all interpretation and application issues and challenges regarding it are to be ultimately resolved and decided by the top judiciary authority in this respect, the CJ EU. Indeed, the validity of this regime via direct actions, and the understanding of this regime via indirect actions, are to be decided by the CJ EU. Typically, after the enactment and/or the expiration of the transposition deadline, Directives are the foundation for many indirect actions by which judges from the entire EU ask the CJ EU for preliminary rulings in re how to interpret and apply the provisions of the Directives, while seldom is seen direct action challenging the validity of Directives.

Surprisingly, the search via Curia brought a totally unexpected result. Namely, so far, there have not been any indirect actions asking for preliminary rulings about any Directive 2013/34 interpretation or application issue, but there were two direct action cases involving Directive 2013/34. The newer one was T-630/16 Dehtochema Bitumat v. ECHA and it dealt with the reduction of fees payable in the case of SMEs and therefore has only a marginal bearing for Directive 2013/34, i.e. the only common point is the definition of a SME as a vehicle to use a special regime. Critically important, in contrast to this, is the 2nd case, i.e. the older case. It is C-508/13 Republic of Estonia v European Parliament and Council of the EU, which was launched by the action on annulment on 23 September, 2013 and it was decided by the 2nd Chamber of the CJ EU on 18 June, 2015. Case C-508/13 addresses the obligations on some forms of undertakings in relation to financial statements in the light of the famous principles of subsidiary and proportionality. Specifically, Estonia demanded the annulment of Art.4(6), Art.4(8), Art.6(3) and Art.16(3) of the Directive 2013/34 targeting the legal duty of small undertakings (SMEs) and the possibility of national exceptions. Alternatively, if these provisions could not be annulled, then Estonia asked for the annulment of the whole of Directive 2013/34.

Table 6. C-508/13 provisions targeted to be annulled, i.e. contested provisions of Directive 2013/34

Art.4(6)	6. By way of derogation from paragraph 5, Member States may require small undertakings to prepare, disclose and publish information in the financial statements which goes beyond the requirements of this Directive, provided that any such information is gathered under a single filing system and the disclosure requirement is contained in the national tax legislation for the strict purposes of tax collection.
Art.4(8)	8. Member States using electronic solutions for filing and publishing annual financial statements shall ensure that small undertakings are not required to publish, in accordance with Chapter 7, the additional disclosures required by national tax legislation, as referred to in paragraph 6.
Art.6(3)	3. Member States may exempt undertakings from the requirements of point (h) of paragraph 1.
Art.16(3)	3. Member States shall not require disclosure for small undertakings beyond what is required or permitted by this Article

Source: Prepared by authors based on Eur-Lex

Firstly, the CJ EU in C-508/13 found that the requirement of severability is not satisfied because the annulment of the contested provisions would necessarily affect the substance of Directive 2013/34 and would impair the balance between undertakings and addressees of financial information, and between large and small undertakings. Secondly, the CJ EU in C-508/13 had to scrutinize the entire Directive 2013/34 in the light of the principle of proportionality, the principle of subsidiarity and the obligation to state reasons.

Regarding the principle of proportionality, Estonia ranked as wrong those provisions limiting the option to derogate from the prohibition on imposing requirements on small undertakings, see Art.5 TFEU. Namely, Estonia had already previously enacted national rules based on IFRS which require additional information to that required by Directive 2013/34 and such an increase of the legal duty for small undertakings goes beyond the permission given by Directive 2013/34. In addition, Estonia did not agree with the quantitative indicators for small undertakings. The CJ EU rejected this argument by stating that the contested provisions are appropriate for achieving the objectives of Directive 2013/34 and that Estonia did not show that the new regime would create an excessive harm to addressees of financial information.

Regarding the principle of subsidiarity, Estonia claimed that it had already implemented a national policy on reducing the administrative burden by means of an electronic reporting system AKA “one-stop-shop”, see Art.5 TFEU. However, the CJ EU ruled that the subsidiarity principle is not intended to limit the EU´s competence on the basis of a particular situation in one EU member state, and this even if the national setting is more advanced.

As far as the lack of explanation, Estonia argued that the EU legislature, in the Directive 2013/34, did not set out the reasons for the limitations it imposed, see Art.296 TFEU. However, the CJ EU stated that, although EU authorities must provide reasoning for their measures, they do not need to go into every detail. In addition, Estonia participated in the legislative procedure leading to the adoption of Directive 2013/34. Since all their pleas failed, the action was dismissed.

5. RESULTS AND DISCUSSION

The EU drive for global competitiveness, digital readiness and accounting standardization is a current phenomena. As a matter of fact, already the Regulation (EC) No 1606/2002 on the application of international accounting standards is geared towards the achievement of a harmonized, if not unified, financial information regime in the entire EU, in the hope that this would support the transparency and comparability of financial statements (Art. 1). Indeed, the use of international accounting standards, such as IAS and IFRS (Art. 2), should enhance the efficiency of the functioning of the single internal market (Art. 1). One milestone in this EU legislative endeavour is Directive 2013/34, which targets financial statements along with both financial and non-financial information. The deadline for the transposition of Directive 2013/34 was observed and expired in 2015. There are extrinsic and intrinsic indicators about its effectiveness and efficiency worthy of exploration and able to convey a pioneering message, or even messages, about Directive 2013/34 and its transposition. Indeed, the performed analysis of transposition strategies and top case law confirmed the underlying hypothesis about the feasibility to extract such a message. As a matter of fact, it led to the identification and description of the following messages.

Leading off, although the transposition strategies seem to achieve the desired end, i.e. the harmonization of the financial system regime, including CSR reporting, throughout the entire EU, they exhibit dramatic quantitative and qualitative differences and therefore emphasize the legislative diversification of EU member state's jurisdictions. Quantitatively, certain EU member states merely changed one national statute, such as an accounting act or company act, or enacted a „transposition" statute amending several national statutes. This can be contrasted with a confused and fragmented transposition entailing dozens and dozens of legislative changes. The 66 Czech legislative measures suggest an atrophy of the legal system and a lack of legislative vision, clouding the issue. Qualitatively, the enacted transposed measures across the EU hit different fields and areas. This testifies about the ongoing differences in the approach to accounting, financial statement reporting and CSR. Boldly, each EU member state jurisdiction has embraced a different approach and the readiness and drive towards the harmonization is rather arguable, to put it mildly. Further, the holistic Meta-Analysis of the qualitative aspects of the transposition of Directive 2013/34 indicates that in certain jurisdictions, such as the Czech jurisdiction, the ongoing amendment upon amendment strategy is deeply embedded and seems to be accepted as an inevitable fatality.

Secondly, top case law offers a unique perspective due to the exceptional opportunity of the direct action for the annulling of a part of, and alternately the entire, Directive 2013/34. This holistic Meta-Analysis of C-508/13 leads to the conclusion that the CJ EU is very reluctant to go into the severability field and, in the case of Directive 2013/34, as well as in the case of probably other EU legislation, it appears extremely unlikely to achieve the annulling of some provisions. Pursuant to C-508/13, perhaps, the action for the annulling of the entire EU instrument has a slightly better chance. However, the CJ EU seems to grant a very large margin of discretion to the European Commission, the Council of EU and European Parliament in their understanding and application of top TEU and TFEU principles, such as the principle of subsidiarity and principle of proportionality (Art.3). The use of the requirement for stating reasons (Art.296) appears totally futile, i.e. it unfortunately does not come off as any firm support for actions for annulment.

Further, it can be added that C-508/13 has a touch of absurdity, because it can be, with but slight exaggeration, concluded that Estonia's drive to pursue vigorously IFRS, CSR reporting, etc. was stopped by Directive 2013/34 which, contrary-wise, one would have thought, should have supported financial reporting, CSR and indirectly the implementation for IFRS. The case C-508/13 basically upgraded the Directive 2013/34 to the status of a full harmonization instrument. Bodly, Estonia was "too good" and the CJ EU ruled against it. This is an extremely deleterious, serious proposition deserving future studies entailing transpositions of many other Directives. The suspicion of pushing for lower standards in the name of integration and competitiveness and underplaying the objective nature of key EU principles needs to be removed.

6. CONCLUSIONS

Prima facia, the harmonization of financial and even non financial reporting via Directive 2013/34 in the entire EU appears to be a step in the right direction, i.e. effective, and its transposition seems to be done properly and within deadlines, i.e. efficiently. However, a deeper study of national transposition strategies and of top case law provides a different picture and confirms the hypotheses that there is an underlying message to be extracted. Indeed, several messages can be extracted and they provide danger signals not only pertaining to Directive 2013/34 and its transposition, but even about modern European integration.

The quantitative and qualitative analysis of transposition strategies reveals dramatic differences in member state's attitudes and commitment to legislation on financial reporting and its manner. Some EU member states takes a lean approach while others throw in dozens and dozens of amendments. The case law further indicated that the top judiciary authority for Directive 2013/34 and its interpretation, the CJ EU, perceives this Directive as a full harmonization measure and rejects any attempts to annul it partially or in full. The severability, principle of proportionality, principle of subsidiarity and even the duty to state reasons along with the willingness to go to higher IFSR standards cannot challenge or even modify the EU's vision projected into Directive 2013/34. In sum, key EU institutions appear to be patently unanimous in endorsing Directive 2013/34 and its regime, and this despite serious challenges and strong arguments referring to the TEU and TFEU, while EU member states differ dramatically in their attitude, manner and commitment regarding the transposition of Directive 2013/34. Indeed, Directive 2013/34 and its transposition provides a set of messages showing a more colourful picture of the EU and EU law, regarding financial reporting, and even in general. It leads to serious questions and raises important concerns. If nothing else, the EU and EU institutions should recognize that and engage in a deeper discussion about regimes to be harmonized and respect already previously achieved enhancements. As well, EU member states should use the transposition of EU directives as a positive opportunity to consolidate their law systems.

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BIBLIOGRAPHY

Areeda, P.E. (1996). The Socratic Method. *Harvard Law Review*, 109, 911–922.

Balcerzak, A.P. (2016a). Technological Potential of European Economy. Proposition of Measurement with Application of Multiple Criteria Decision Analysis. *Montenegrin Journal of Economics*, 12(3): 7–17. Doi: 10.14254/1800-5845.2016/12-3/1.

Balcerzak, A. (2016b). Multiple-Criteria Evaluation of Quality of Human Capital in the European Union Countries. *Economics & Sociology*, 9(2), 11–26.

Bansal, P. & Song, H.C. (2017). Similar But Not the Same: Differentiating Corporate Sustainability from Corporate Responsibility. *Academy of Management Annals*, *11*(1), 105–149. DOI: 10.5465/annals.2015.0095

Chirita, A. D. (2014). A legal-historical review of the EU competition rules. *International and comparative law quarterly*, 63 (2): 281–316. Doi: 10.1017/S0020589314000037.

Europen Commission (2010). Europe 2020. Retrieved on 13th July 2019 from http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf

Hahn, T. et al. (2018). A Paradox Perspective on Corporate Sustainability: Descriptive, Instrumental, and Normative Aspects. *Journal of Business Ethics 148*, 235–248. DOI: https://doi.org/10.1007/s10551-017-3587-2

Kuckartz, U. (2014). *Qualitative Text Analysis – A Guide to Methods, Practice and Using Software*. Sage Publications Ltd. ISBN 978-1-446-26775-2.

Lajtkepova, E. (2016). Differences and Similarities in the Indebtedness of EU Member States after Last Financial Crisis. *Oeconomia Copernicana*, 7(4): 551–563.

MacGregor Pelikánová, R. (2019a). Corporate Social Responsibility Information in Annual Reports in the EU – Czech Case Study. *Sustainability*, 11, 237.

MacGregor Pelikánová, R. (2019b). R&D expenditure and innovation in the EU and selected member states *Journal of Entrepreneurship, Management and Innovation (JEMI)*, 15(1): 13–33.

MacGregor Pelikánová, R. (2019c). Harmonization of the protection against misleading commercial practices: ongoing divergences in Central European countries. *Oeconomia Copernicana*, 10(2): 239–252.

MacGregor Pelikánová, R. (2017). European Myriad of Approaches to Parasitic Commercial Practices. *Oeconomia Copernicana*, 8(2): 167–180. Doi: 10.24136/oc.v8i2.11.

MacGregor Pelikánová, R. (2012). And the best top level domain for European enterprises is ... *International And Comparative Law Review*, 12(2): 41–57.

MacGregor Pelikánová, R. & MacGregor, R. (2019). The Impact of the New EU Trademark Regime on Entrepreneurial Competitiveness. *Forum Scientiae Oeconomia*, 7(2): 59–70. DOI:10.23762/FSO_VOL7_NO2_4.

MacGregor Pelikánová, R. & MacGregor, R. (2018a) Reality of e-Reporting of Annual Accounts of SMEs in the EU – McDonald's, BurgerKing, KFC and Subway Case Study. In: Jindřichovská, Irena; Kubíčková, Dana. Conference: *6th International Scientific Conference on IFRS - Global Rules and Local Use Location*: Anglo Amer Univ, Prague, Czech Republic, October 11–12, 2018. IFRS: GLOBAL RULES & LOCAL USE, p. 142–157.

MacGregor Pelikánová, R. & MacGregor, R.(2018b). The Ephemeral Corporate Social Responsibility Commitment Pursuant to Annual Reports – A Czech Case Study. In: 6th *International Conference on Innovation, Management, Entrepreneurship and Sustainability (IMES)* Univ Ecn, Prague, 614–623.

MacGregor Pelikánová, R. & MacGregor, R. (2018c). Corporate Social Responsibility e-Reporting as a tool for (Un)fair competition in the EU. In *Conference Proceedings. The 12th International Days of Statistics and Economics*. Prague, VŠE, 1112–1122.

MacGregor Pelikánová, R. & MacGregor, R. (2017). European e-Justice Portal – Reality of Electronic One-Stop-Shop for Publication of Financial Statements in the EU. *In:* Jindřichovská, Irena; Kubíčková, Dana. *Conference: 5th International Scientific Conference on IFRS – Global Rules and Local Use*.Anglo Amer Univ, Prague, 20.10. 2017, pp. 98–111.

Mejzlík, L. (2016). Přehled a podstata hlavních změn v zákonu o účetnictví od 1. ledna 2016. Auditor. Komora auditorů České republiky, 23 (1): 13. ISSN 1210-9096.

Melecký, L. (2018). The main achievements of the EU structural funds 2007–2013 in the EU member states: efficiency analysis of transport sector. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 13(2): 285–306. DOI: 10.24136/eq.2018.015

Pasimeni, F. & Pasimeni, P. (2016). An Institutional Analysis of the Europe 2020 Strategy. *Social Indicator Research*, 127(3): 1021–1038. Doi: 10.1007/s11205-015-1013-7.

Piekarczyk, A. (2016). Contemporary organization and a perspective on integration and development. *Oeconomia Copernicana,* 7(3): 467–483. DOI: 10.12775/OeC.2016.027.

Pohulak-Żoledowska, E. (2016). Innovation in Contemporary Economies. *Oeconomia Copernicana*, 7(3), 451–466. DOI: http://dx.doi.org/10.12775/OeC.2016.026.

Polcyn, J. (2018). Human development level as a modifier of education efficiency. *Management-Poland*, 22(2), 171–186.

Rogalska, E. (2018). Multiple-criteria analysis of regional entrepreneurship conditions in Poland. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 13(4), 707–723.

Silverman, D. (2013). *Doing Qualitative Research—A Practical Handbook*, 4th ed.; SAGE: London, UK.

Sroka, W. & Szanto, R. (2018). Corporate Social Responsibility and Business Ethics in Controversial Sectors: Analysis of Research Results. *Journal of Entrepreneurship, Management and Innovation (JEMI)*, 14(3), 111–126. DOI: 10.7341/20181435

Staníčková, M. (2017). Can the implementation of the Europe 2020 Strategy goals be efficient? The challenge for achieving social equality in the European Union. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 12(3): 383–398. Doi:10.24136/eq.v12i3.20

Stec, M. & Grzebyk, M. (2017). The implementation of the Strategy Europe 2020 objectives in European Union countries: the concept analysis and statistical evaluation. *Quality & Quantity*, 52(1): 119–133. Doi: 10.1007/s11135-016-0454-7

Świadek, A., Dzikowski, P., Tomaszewski, M., & Gorączkowska, J. (2019). Sectoral patterns of innovation cooperation in Polish industry. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 14(1), 183–200.

CORPORATE INTERNAL CODES TO PREVENT BRIBING AND SIMILAR UNETHICAL PRACTICES: DOES IT REALLY WORK?

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Abstract
This paper is studying the emergence of corporate internal codes aiming at preventing bribing and equivalent unethical practices (generally classified as Corruption) and attempts at evaluating their usefulness. The growth in importance of the concept of Corporate Social Responsibility has encouraged companies towards taking initiatives in order to comply with this type of social expectations. In addition, the emergence of specific national and international legislation criminalizing companies and citizens even when certain unethical practices are performed abroad has further contributed to the emergence of specific corporate internal rules aiming at guaranteeing transparency and ethical conducts in terms of avoiding paying bribes. Many (Multi-National) Companies have passed appropriate internal rules. Nonetheless, there are doubts regarding the efficacy of this type of instruments. Corruption, at various levels, continues to happen and there are often loopholes which the various actors involved exploit. This paper studies the topic and develops some ideas regarding the effectiveness of the initiatives taken by (Multi National) Companies in order to respect ethical principles of integrity.

Keywords: Bribing, Corporate Social Responsibility, Internal Codes, Case Studies

1. INTRODUCTION

The paper is focused on studying 1) the emergence of internal corporate codes aiming at guaranteeing integrity, preventing Bribing and equivalent forms of Corruption and on 2) their efficacy. The persistence of Corruption in Business is a phenomenon which has been researched by generations of scholars (Rose Ackermann 2007; Habib and Zuravicky 2001; Podda, 2016). Corruption is intended here as the Abuse of entrusted power for personal gain. It can take many forms and here we concentrate on the payment of bribes, or the award of other types of advantages to public officials in order to obtain advantages for the company awarding the specific benefit. These benefits, in turn, can take a monetary form but can also take a non monetary connotation (i.e. appointment to prestigious positions once the mandate of the public official terminates). Business Companies can be victims of Corruption, when for example public officials are really in a position to blackmail the company. In other cases, especially cases involving large Multi-National Companies, the Business Company is able to resist pressure from Public Officials and may itself turn into a capturing agent (“State Capture”). Corruption, under its various forms, is considered as detrimental to a fair competitive process, is illegal, distorts the allocation of resources and slows down economic growth and investment. Overall, it is considered as an evil.

Corruption, especially in the form of bribing, is considered illegal in virtually all countries in the world, regardless of the fact that it might turn out to be tolerated *de facto*. Nonetheless, several countries have adopted rules which punish citizens or locally based companies even when bribing happens abroad. This type of rules represents an exception to the principle of territoriality of criminal action. The first country to devise such rules has been the United States, which introduced the Foreign Corrupt Practice Act (FCPA) in 1977. The example, also following US' requests, has been followed by other Western countries. There are specific conventions of the OECD and of the United Nations which engage states into introducing national legislation sanctioning/criminalizing bribing abroad. Hence, Western business agents are exposed to home prosecution when they bribe in countries where this form of Corruption is normal/ *de facto* tolerated. In addition, the Western company may be heavily fined in its home country. This, obviously. represents a serious risk for MNEs and their agents.

Apart from the legal risk, Companies suffer from reputational and image hurdles when they become involved in bribing. The last decades have witnessed the emergence of the concept of Corporate Social Responsibility. Companies are expected to respect ethical standards when performing business, this amounts to be part of social expectations. Companies involved in bribing and other forms of Corruption may risk losing in terms of reputation, with negative consequences for their business.

The two factors mentioned above, have most probably contributed to the emergence of corporate internal codes aiming at preventing and sanctioning (with internal disciplinary actions) bribing or equivalent forms of Corruption. Many (Multi-National) Companies are taking steps to demonstrate seriousness as for the refusal of illegal and unethical ways of running business. Nevertheless, one may discuss the genuity and eventual efficacy of these internal codes. The pages below discuss the issue.

The next section will discuss the emergence of the internal codes, the further one will discuss the problem of their genuinity and efficacy, moving from specific cases. Conclusion and references will follow.

2. THE EMERGENCE OF THE CODES

Companies exposed to Business, especially Multi-National Companies, have started introducing internal codes of conduct in order to comply with ethical standards, which are increasingly important in our contemporary business environment. There has also been some action from the side of International bodies aimed at encouraging the introduction of specific internal rules. It is felt that the existence of codes of behaviours may motivate the addressees to comply with them and establish a system of rewards/sanctions. The action of these specific international organisations may only take the form of recommendations, as these types of bodies cannot pass rules which are binding on private companies. These types of suggested practices go far beyond the simple request that companies explicitly forbid direct bribing and equivalent behaviours. This is because there are many possible ways to escape a simple prohibition of bribing. Multiple loopholes exist. One of the most common is the use of service of local intermediators. These latter would officially act as facilitators and offer consulting services of various types (market research, interpreting). At the end, the intermediator/ consultant would issue a regular and apparently clean invoice for its lawful services, but in reality the invoice will count also for the bribes that the intermediators has paid without necessarily informing the client. Often, this mechanism works as a sort of a tacit agreement. The Multi-National Company feels safe because it is not directly involved in any illicit activity, while its managers may well understand that the intermediators take care of the "dirty task".

Apke (2001) moving from the OECD Anti-Bribery Convention has formulated a set of recommendations for Multi-National Companies interested in respecting the letter and the spirit of the law. These companies should, for example, 1) check the reputation of any intermediator, 2) ask for directions to their diplomatic representations abroad, 3) make clear that they follow an anti-bribery policy, 4) ask any intermediator to declare respecting the anti-bribery policy of the company. Some of these recommendations (i.e. 4) appear naïf or just formalities a company may follow to call itself out of troubles (i.e. 3). However, many Multi-National Companies have started implementing internal codes aiming at showing compliance with legal obligations when operating abroad.

In some cases, companies have created standards where also business partners are expected to respect an anti-bribing policy. As an example, the company Bharti Airtel requests also partners to follow standards of integrity. The code of conduct states

"Partners will adopt appropriate processes to prevent offering any illegal gratification in the form of bribes or kickback either in cash or in kind in the course of all dealings with us. Any instances of such violations will be viewed in a serious manner and Bharti Airtel reserves the right to take all appropriate actions or remedies as may be required under the circumstances."

And also

"All partners are required to confirm their compliance to ethical dealings on an annual basis by signing a certificate to this effect as per Bharti Airtel' standard annual certificate."

A further example of a company internal code is given by Air Liquide (https://www.engineering-airliquide.com/value-proposal-responsible-business/anti-corruption-code-conduct), for example, the code specifies how.

Typically payments involve cash but also include anything that may be of value for the receiving party, for example, excessively-priced gifts, trips, meals etc. The simple act of offering or promising something of value is improper if it is done with the intention of obtaining or retaining an undue business advantage.

> An undue business advantage means anything that improperly favours the company's business activity (improperly obtaining or retaining a contract, payments to a tax or customs official to avoid complying with laws or to avoid penalties, etc.).

It would not be possible to mention the names of all companies which have developed similar standards. However, we only feel to mention Vinci, Ultimaco and many others. Standards can be detailed and provide extensive guidance and information regarding the appropriateness/not appropriateness of multiple types of behaviours. These various codes, as said, aim at responsibilizing both internal agents as well as outsiders developing business relationships with the company.

Companies have also developed internal procedures regarding the investigation process and eventual reactions to proven misbehaviour. Internal employees may be fired and eventually reported to the competent State authorities, whereas business relationships with external partners may be cut. In this case, the existence of internal procedures for the determination of facts which might also have an external criminal relevance raises some issues because of possible overlapping and eventually also usurpation of official authorities.

Company investigating agents do not have instruments equivalent to those of the official State authorities. They cannot compel the accused party nor witnesses to show up, and have practically no authority at all on parties external to the company. Hence, the very investigating process presents some difficulties. For this reason, many companies (i.e. Ultimaco) encourage "whistle blowing". Witnesses may report episodes of corruption and be guaranteed confidentiality and, if directly involved with the banned activity, also some sort of leniency. This is done in order to motivate witnesses to speak up and bring evidence which would eventually be hardly retrievable. The protection of "whistleblowers" is of paramount importance. Nonetheless, a system of detection based on whistleblowers presents also some drawbacks. First of all, it may lead to false allegations motivated by conflicts between employees or opportunistic attempts to block the career of internal competitors for the same position. In addition, the company has a limited capacity to guarantee confidentiality of information. Any employee object of an internal investigation and considering him/herself as slandered may activate the competent official State bodies, whose authority clearly overrides any internal code of the Company guaranteeing confidentiality to the internal informant. In other words, the Company running an internal investigation would normally not be able to oppose confidentiality to any official State representative in turn running their own investigation following a complaint from the alleged slandered party.

Overall, the emergence of internal codes as described in this section seems to indicate the growth of awareness from the side of Multi-National Companies regarding the importance to fight the unethical phenomenon of bribing. The next section will discuss the efficacy of the codes and the genuinity of intentions of the Company' representatives introducing them.

The existence of detailed and ambitious anti-bribing internal codes and related investigative procedures does not necessarily indicate that the phenomenon of bribing public officials has been eradicated. This is due to the already well researched phenomenon of imperfect enforcement of rules, be them rules issued by State authority of internal company codes (North, 1990, 2005). This may be due to several reasons. Shareholders, top managers and Investigators act in a context of limited information, they cannot monitor the behavior of all internal agents and external parties acting far away from the headquarter of the company. In addition, bribing practices are secret because parties involved have often an interest in hiding the illicit transactions. Consequently, the top managers of the company have limited information regarding the behavior of their agents and these latter may act in ways which are not consonant to the values the company declare to respect. This pattern represents a manifestation of the Principal-Agent problem. The Agent may act opportunistically in his/her own interest, achieve the results expected by the Company and benefit from career advancements. Still this is done fraudulently, exposing the company to all the reputational risks that an eventual discovery of the full picture would entail. A similar logic may apply in the case of external partners of the Multi-National Company. Those shareholders and, to a certain extent, also those top managers genuinely interested in preserving integrity would hardly be able to control the behaviours of internal agents and external partners, hence the very enforcement of the internal codes would be in jeopardy. In particular, and contrary to top managers, shareholders are often not directly involved in the management of the company, thus losing the possibility to exercise any real supervision.

The arguments presented in the previous paragraph indicate how a Multi-National Company genuinely interested in preserving integrity may still be involved in cases involving bribing. However, the picture is broader. It may even be that the very (controlling) shareholders as well as the top managers, while devising internal codes and manifesting deference to the principles of integrity, may in reality tacitly understand and tolerate that certain internal agents as well as external partners recur to bribing and/or equivalent practices. Finally, the company may still obtain advantages and, in case a public scandal starts, the company would fire the agent involved, declare not having been aware of his/her behavior and try to distance itself from all that the supposedly "unfaithful" agent has done. This behavior would represent a further manifestation of Opportunism and could represent a neglected aspect of the Principal-Agent problem. In this case, the Principal would exploit its limited knowledge of the activities of the agents in order to distance itself from his behavior when convenient. This particular situation would see the Principal benefiting from its practical incapacity to control the Agent. The Principal, while reasonably aware of the real behavior of the Agent, would invoke Bounded Rationality and Asymmetric information.

Clearly, this particular type of Opportunism would not necessarily be of benefit for the Company. Reputational consequences may accrue irrespective of the attempt of the shareholders/top managers to manifest surprise, run an internal investigation and fire the "unfaithful" manager. Hence, the outcome for the company may still be negative. Controlling shareholders and top managers are probably aware of this, still, within a game-theory logic, they may balance the advantages of tacit tolerance ("I do not to see, I do not want to know") with the risks it entails.

The next section will present some case-studies which will offer the basis for reinforcing the discussion.

Case studies

The Case Study is a method used to shed light into specific phenomena happening in a circumscribed context (Denzin and Lincoln, 2000; De Vaus, 2002; Remenyi et.al., 2015; Bryman, 2016). Case studies are used to reconstruct stories, identify mechanisms and patterns of interaction, decisions, and the application of standards. A case study should not be expected to generalize (as case studies are qualitative and not a quantitative method of research). Indeed expecting generalization would reveal fundamental misunderstandings regarding the scope and aims of research based on a case-study. Actually, case studies are used as a basis for clarifying relationships emergent following a quantitatively – based study or, alternatively, can be used within a strategy of exploratory research perspectives; the emergent patterns can then be operationalised into statistical variables and used in further quantitative studies to help promote the generalization of results. Our paper makes use of case studies in view of highlighting the mechanisms of the decision-making processes, not to imply any form of generalization to the processes noted. The information outlined in the case studies presented herein was obtained exclusively from open media reports. The sources used were not academic in nature. However, the information reported herein is considered to reflect the reasonable, extractive veracity of any reporting to the public as a whole. The case studies are those of Juventus and Siemens. Among the many available, these two cases represent companies which,while officially declaring to comply with ethical values of integrity, were in reality acting unethically (or illegally). The case of Juventus is interesting also because it represent a controlling shareholder which has completely distance itself from the behaviour of the "unfaithful" managers, whereas he should have been aware of these particular behaviours.

Case study of Juventus The first case study is that one of Juventus F.C. The details of the case are described in the decision of the Panel created by the Italian Football Association (http://download.ju29ro.com/sentenze/Calciopoli_-_Sentenza_Caf_(14_luglio_2006).pdf). In 2006, some phone conversation'records revealed that three top managers (Moggi, Giraudo, Bettega) of the the football club (also listed in the Italian stock exchange) were behaving in order to put pressure on referees and , directly and indirectly, secure advantages to Juventus itself during the national football tournament. The controlling shareholders were not involved in these actions. These latter decided that the actions of the three top managers were in strong dissonance with those ethical values which were a major component of the company' identity. The controlling shareholders, the Elkann-Agnelli family, dismissed the three top managers and replaced the whole Board of the company, because the members had not been able to exercise due diligence and had not properly supervised the actions of Moggi, Giraudo and Bettega. Furthermore, the Shareholders highlighted that only the President of Juventus, Mister Stevens, had, according to the Article of Association, the power to act on behalf of Juventus. Hence the actions of the three top managers were personal initiatives not imputable to Juventus itself. It is evident that the controlling shareholders were trying to disconfess the actions of the three top managers and try to argue that the company should not be responsible for their behaviour. The immediate dismissal of the Board of Trustees and of the three managers was presented as proof of integrity from the side of the controlling shareholders and, consequently, of the very Juventus F.C. Eventually, Juventus F.C. was itself a victim of unfaithful internal Agents, with the Principal unable to exercise control because of asymmetric information and Bounded Rationality.

Moving on to comment on the case, it seems that the genuity of the actions of the Controlling Shareholders is questionable. There had always been rumours regarding the behaviour of the three managers involved in the scandal, some media were highlighting that certain referees' decisions were questionable and often in favour of Juventus. Moreover, Moggi had often been object of rumours even before he started cooperating with Juventus F.C. Rumours and manifestations of suspicion do not represent evidence. Nonetheless, the Elkann'Agnelli family as well as the whole Board of Juventus F.C. did not take any official action to clarify whether the rumours might be grounded. In addition, controlling shareholders (like Juventus F.C. is) genuinely interested in preventing integrity would have exercised a special care before hiring a manager with a controversial reputation as Moggi had and would have exercised direct and strict supervision on his actions. These precautionary steps have not been taken. Moggi, despite formally not endowed with the power to officially act in the name of Juventus F.C., was *de facto* given a free hand with little or no supervision. The person officially holding the representational authority, Mr Stevens, was basically not exercising any visible action externally. Therefore, invoking a defect as for the capacity of the three managers to represent Juventus appears to be an opportunistic behaviour, based on a pure formalism contradicted by a *de facto* tolerance of the actual substantial representative authority that the three managers had gained. By combining the existence of strong rumours regarding the integrity of the behaviour of the three managers and their substantial representative authority, it is possible to infer that the controlling Shareholders had most probably adopted a sort of "I do not want to see, I do not want to know" attitude towards behaviours that they could easily perceive as at least worthy of strict supervision. The Principal has allowed, if not encouraged, the Agent towards actions contrary to the official internal codes, actions entailing benefits for Juventus, and has also opportunistically tried to disconfess these actions once these became officially known. This whole mechanism reveals a reversed effect of the Principal-Agent problem, when the former tries to opportunistically benefit from officially not approved actions of the latter.

Incidentally, it is added here that the Authorities in charge of the case did not accept the arguments presented by the Controlling Shareholders and decided that Juventus F.C. would be sanctioned and *ex officio* relegated to the Second Division (http://download.ju29ro.com/sentenze/Calciopoli_-_Sentenza_Caf_(14_luglio_2006).pdf).

Case study of Siemens Siemens, a major multi-national company had developed anti-corruption internal codes since 1991 (http://theconversation.com/lessons-from-the-massive-siemens-corruption-scandal-one-decade-later-108694). It had even been among the corporate members of Transparency International, a well known NGO monitoring and fighting corruption all over the world. Nonetheless, the Company became involved in one of the largest bribery-related scandals. The practice of bribing was so diffused that it has been labelled as "organised irresponsibility" (Berghoff, 2017). Bribing was organised smartly, through a set of anonymous bank accounts and intermediaries, in order to conceal the real nature of the illicit transaction. Beneficiaries were foreign officials supposed to award contracts to the company. The benefits for Siemens were increased market share and market value. Another segment of the bribing practices was to buy the favours of labour representatives supposed to serve the interests of the workers. Official Police investigations were run in many countries, including Germany, Italy and the US. In this latter country, Siemens pleaded guilty to the violation of the Foreign Corrupt Practice Act. The CEO and the Chairman of the Board had to resign.

The case of Siemens, present similarities and differences in comparison with the case of Juventus. The controlling shareholders were not involved in the facts. They could officially manifest surprise and irritation and claim in their favour Asymmetric Information and Bounded Rationality as typical elements of the Pricnipal-Agent Relationship. However, the Ownership of Siemens is quite dispersed, whereas the Ownership of Juventus F.C. is clearly concentrated in one major controlling shareholder. Hence, the Siemens' Principal would be unaware of the behaviour of the Agent, behaviour contrary to the official guidelines of the Company. Another important difference is the (far) higher complexity of the hierarchical pyramid. While Juventus had only a few employees and there was a direct contact between the top managers and the rest of them, Siemens counts hundreds of thousands of employees. The top managers are absolutely not able to control the behaviour of single employees. On the other side, the system of bribing was so diffused and "institutionalised" inside the company, that the top managers had most probably a direct knowledge of it. Indeed, a common connotation of both Siemens and Juventus' case is that the Company (hence, its shareholders) have benefited from the behaviour of their agents. Hence, they are hardly credible when they present themselves as victims of unfaithful behaviour.

3. CONCLUSION

The paper has discussed the emergence of internal codes aiming at preventing Corruption and equivalent forms of misbehaviour. It has emerged that these codes does not necessarily represent a deterrent against such type of behaviours. In addition, it has also emerged that companies may eventually benefit from behaviours of their Agents, with the Principal eventually opportunistically invoking Asymmetric Information and Bounded Rationality to distance themselves from the Agent' behaviour. Indeed, this may represent an aspect of the Principal-Agent relationship which is not expounded in the literature, namely the possibility that the former benefits from illicit behaviours of their Agents and distance itself once the behaviour becomes known to the public. This would represent a form of convenient and opportunistic behaviour which, if not regulated, could be useful to bypass various types of national and international rules aiming at preventing Corruption and equivalent/similar forms of illicit behaviours. The case of Juventus (especially) and also Siemens indicate how a Company may benefit, for a certain period of time, from the illicit behaviours of their agents and, only after this particular behaviour becomes known to the public, may dismiss the agents and start a process of "internal cleaning". Those Agencies in charge of examining the cases have, reasonably, sanctioned also the companies, not only the agents. This is because, otherwise, Controlling Shareholders would be almost immune from the consequences that the discovery of illicit behaviours of those agents they are supposed to monitor would entail.

BIBLIOGRAPHY

Apke, M.T. 2001, "Impact of OECD Anti-Bribery Convention on International Companies", Managerial Auditing Journal, vol. 16, no. 2, pp. 58–62.

Bryman, A. 2016, *Social Research Methods*, Oxford University Press, Oxford.

Denzin, N. K. and Lincoln, Y. S. 2000, "Introduction: the discipline and practice of qualitative research", in *Handbook of Qualitative Research,* ed. Denzin, N.K. and Lincoln, Y.S., Sage, London, pp. 1–28.

De Vaus, D. 2002, *Social Surveys*, SAGE publications, London.

Habib, M. and Zuravicky, L. 2001, "Country-level Investment and the effect of corruption- some empirical evidence", International Business Review, vol. 10, no.6 , pp. 687–700.

North, D. C. 1990, *Institutions, Institutional Change and Economic Development*, Cambridge University Press, Cambridge.

North, D. C. 2005, *Understanding the process of Economic Change*, Joel Mokyr Editor, Princeton.

Podda, P. A. 2016, The impact of Institutional Distance on FDI inflows in the Czech Republic, *Acta Oeconomica Pragensia*, University of Economics, Prague, vol. 2016, no. 1, pp. 3–14.

Rose-Ackerman, S. (Ed.). 2007, *International handbook on the economics of corruption*, Edward Elgar Publishing.

https://www.engineering-airliquide.com/value-proposal-responsible-business/anti-corruption-code-conduct as retrieved on the 20th August 2019.

http://theconversation.com/lessons-from-the-massive-siemens-corruption-scandal-one-decade-later-108694 as retrieved on the 20th August 2019.

Testo sentenza CAF http://download.ju29ro.com/sentenze/Calciopoli_-_Sentenza_Caf_(14_luglio_2006).pdf as retrieved on the 20th August 2019.

INFUENCING FACTORS OF ADOPTING INTEGRATED REPORTING PRACTICES. A FTSE 100 PERSPECTIVE

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Abstract
Integrated reporting (IR) was introduced by the IIRC (International Integrated Reporting Council) as an innovative corporate reporting practice which combines financial and non-financial information in a single publication. This practice has been advocated by its' proponents to be the answer for all the shortcomings of traditional reporting. However, integrated reporting has faced its' share of criticism from academics, with companies being hesitant in applying these voluntary practices on a larger scale.
The main objective of this paper is to study integrated reporting adoption by analyzing determinants related to industry and organization level that influence a company's decision to apply IR concepts.
This research employs a logistic regression methodology in order to evaluate impact of the influencing factors previously identified in academic literature (company size, growth opportunities, profitability and industry appurtenance) on IR adoption, on a six year period.
The results of this study show that the company size and appurtenance to an industrial sector have a great influence on the decision to implement integrated reporting practices in the corporate reporting policy. The research uncovers that for the FTSE 100 companies, growth opportunities and profitability do not have a significant influence regarding the adoption of integrated reporting. This study aims to provide a better understanding of integrated reporting as a practice and provides insights on the past and current manner of implementation. This research contributes to relevant literature by analyzing the translation in practice of integrated reporting.

Keywords: *Integrated reporting, International Integrated Reporting Council, FTSE 100, Sustainability reporting*

1. INTRODUCTION

Traditional financial reporting is mainly established on disclosing past financial information, which provides a rather static and limited depiction of a company's value creation process (Esch et al., 2019). In order to meet the demands of stakeholders, nonfinancial information must also play an essential role in the company's corporate reporting practices. Such disclosure is especially important because decisions at the executive level are not only high in scale and risk but also of major importance for the company's future success (Cheng, et al., 2014a). In order to improve the decision making process, the International Integrated Reporting Council (IIRC), formed in 2010, proposed the production of a separate report that will integrate financial and non-financial information (Cheng et al., 2014b).

Therefore, integrated reporting has emerged as a new reporting paradigm which provides a comprehensive view of the company by combining the financial and non-financial dimensions of corporate performance (Brown and Dillard, 2014). Integrated reports would contain, in an organized and connected form, information regarding financial performance, the organization's strategy, the corporate governance, the social and environmental context in which it operates and its long-term outlook (Adams and Simnett, 2011; Garcia-Sánchez et al., 2013; van Bommel, 2014).

In addition, integrated reporting presents various advantages, which have been identified by IIRC: information adapted to the investor's needs; improved decision making on resource allocation issues, including cost reduction and improved risk management; greater precision in the non-financial information disclosed; higher levels of confidence for key users; better identification of opportunities; including current and future employees, thus facilitating skills attraction and retention; enhanced public image; greater commitment to investors and other stakeholders, lower costs of capital and better access to it (IIRC, 2011). All of these aspects generate greater disclosure to the public, the development of common voluntary reporting rules and greater collaboration between different functional areas of the organization (Frias et al., 2014).

Although the adoption of IR results in companies benefiting from increased transparency and improved business models, this concept has caused heated debates and controversy in the academic literature, with many companies unsure of the modality to apply these newly developed practices (Flower, 2015). Still, as the IIRC presents on its' IR Example Database, many companies choose to issue an integrated report as their main corporate disclosure or to include in their annual reports some of the IIRC Framework's (2013) suggestions regarding integrated reporting practices. Still, IR adoption cannot be simply explained using its' benefits as the main determinant for applying the IIRC Framework's (2013) recommendations. Empirical evidence from various researches show that larger firms are more likely to voluntarily disclose information, as they encounter higher costs and information asymmetry issues (Frias-Aceituno et al., 2014). Moreover, large companies are more politically and environmentally visible and the effects their activity are more significant. Also, a company's growth opportunities and its management bodies, together with gender diversity, are demonstrated to be important factors in issuing an integrated report (Frias-Aceituno et al., 2013a).

Also, a research by García-Sánchez et al. (2013) regarding the influence of a country's cultural system based on Hofstede's (1980) cultural dimensions, showed that a high level of collectivism and femininity increased the probability of a company using integrated reporting practices. The authors argue that in collectivist countries companies have a stronger commitment to society and are inclined to disclose information about the impact on society. Another factor that has been studied in previous literature is the political system of the country in which a company is located (Frías-Aceituno et al., 2013b). In this case, a distinction between common law or civil law countries is usually used. Based on the fact that companies in civil law political systems are more tend to disclose more information in order to meet the stakeholders interests, two previous papers found a positive relation between such law system and the adoption of integrated reporting practices (Jensen and Berg, 2012; Frías-Aceituno et al., 2013b).

This study was motivated by the goal of contributing to the existing knowledge, by identifying and analyzing determinants of integrated reporting adoption. The research sought to answer three related questions to understand the role of the identified influencing factors in integrated reports disclosure:

RQ1: Does the appurtenance to a business sector influence the production of an integrated report?

RQ2: Does company size and profitability influence the probability of implementing integrated reporting practices?

RQ3: Do growth opportunities determine a company to adopt integrated reporting in its' corporate reporting practices?

The paper analyzes a sample of companies belonging to the FTSE 100, for the years 2013–2018. The analysis of these companies' accountability is based on an encoding of the disclosure of economic, social, and environmental information, and its coherent consolidation into a single document: the integrated report. The characteristics analyzed are company size,

growth opportunities, profitability and industry appurtenance. The methodology employed in this analysis is based on testing for dependence in panel data models. This approach represents an advance of previous research such as Frias-Aceituno et al. (2013a), Lai et al. (2016), Frias-Aceituno et al. (2014), using empirical data from a larger period of time.
This research contributes to academic literature by analyzing the translation from theory to practice of integrated reporting. The paper provides original insights on the current manner of integrated reporting implementation, by analyzing fundamental factors that explain the adoption of IR practices. The remainder of the paper is structured as follows: Section 2 explains the theoretical determinants identified in the academic literature as well as the research hypotheses; Section 3 summarizes the research design and Section 4 presents and discusses the results. Finally, in Section 5 are included the concluding remarks of the paper and the limitations of the research.

2. RESEARCH HYPOTHESES DEVELOPMENT

Integrated reporting achieved great popularity in both academic bodies and international organizations as it promised to become the solution to the evident disassociation of financial and non-financial reporting. The integrated report combines the most important elements of distinct reporting components an organization should disclose in a coherent manner. Moreover, the integrated report presents the most strategically relevant information, essential to the stakeholders' decision-making process (Cheng et al., 2014b)

Integrated reporting is meant to solve the shortcomings of financial and sustainability reporting and has emerged as a new corporate reporting practice. Still, various researchers have started to question this new reporting policy, as companies are unsure on the modality to produce an integrated report. (Oll and Rommerskirchen, 2018). The IIRC advocates the integrated report, as it allows providing the necessary information to the stakeholders, using minimal resources. The integrated report offers insights on various topics, such as corporate governance, strategy and performance in an organized manner, focusing on the context in which the company operates (García-Sánchez et al., 2013; IIRC, 2013). However, it appears that only few firms adopted this practice and most organizations do not provide financial information and non-financial information in an integrated and concise manner (Lee and Yeo, 2016).

A purpose of this paper is to identify influencing factors of IR adoption, therefore a literature review was carried out. Kannenberg and Schreck (2018) state that the country-level characteristics of companies, such as cultural values, national laws and economic conditions, have an effect on corporate culture, governance structures and, lastly, the extent and quality of corporate reporting. As country level determinants were extensively analyzed in previous literature (Lai et al., 2016; Vaz et al., 2016; Sierra-García et al., 2015; Jensen and Berg, 2012; Frias-Aceituno et al., 2014), the focus of the research shifted on industry and organizational level IR influencing factors. Industry-level determinates, particularly business sector appurtenance, are likely to explain the absorption of integrated reporting into organizations' reporting practices, as certain industries are pressured to publish more information than others. Organizational characteristics, such as profitability, directly influence the decision to adopt integrated reporting within the company (Kannenberg and Schreck, 2018).

2.1 Company size

In the academic literature, profitability is an influencing factor in adopting certain reporting practices, as profitable firms can allocate more resources to produce information in various report formats. The disclosure theory suggests that profitability is positively related to an increased voluntary disclosure of information. Also, according to the agency theory, managers of profitable companies might use external information for personal gains, such as increasing their level of remuneration or securing a stable position in the company (Frías-Aceituno et al., 2013a). Four studies have been found a positive relationship between profitability and integrated reporting (Frías-Aceituno et al., 2013a, b; García-Sánchez et al., 2013; Frias-Aceituno et al., 2014). Considering the results obtained in previous studies, a positive relationship between company size and the implementation of integrated reporting practices is expected, as reflected in the following hypothesis:

H1: There is a positive relation between the company size and the adoption of integrated reporting practices.

2.2 Growth Opportunities and Profitability

The organization's growth opportunities, measured as the market to book value ratio, is another factor influencing the adoption of integrated reporting. High values of the indicator require more detailed voluntary reporting to decrease information asymmetry (Frías-Aceituno et al., 2013a). The authors found a positive relationship, suggesting that there is a direct dependence between activity growth and a high responsibility demanded by stakeholders. In contrast, García-Sánchez et al. (2013) identified a negative relationship. Although the authors analyzed a longer period (2008–2011 compared to 2008–2010), the sample was constructed using only the information available in the GRI database, in which the companies self-declare whether they apply integrated reporting concepts or not.

Another studies (i.e. García-Sánchez et al., 2013; Frias-Aceituno et al., 2014) identified another factor influencing the application of integrated reporting principles, namely the size of the firm. The size of the company is of particular importance in establishing strategies for publishing ESG information, as larger companies tend to interact more with the society, attracting stronger political pressure. Therefore, these companies tend to engage more in the voluntary publication of information (Kannenberg and Schreck, 2018). Considering the previous arguments, the research proposes following hypothesis

H2: There is a positive relation between firms' growth opportunities and profitability and the implementation of integrated reporting.

2.3 Industry

The business sector or the appurtenance in certain industry is a variable that has often been used to measure the information provided by companies (Frias-Aceituno et al., 2014). Industry appurtenance influences the decision to adopt integrated reporting as some industries are more exposed to the public interest than others (Cho et al., 2012). Companies in industries that affect the environment, such as the energy or oil sector, must provide information to various stakeholders and regulatory bodies, unlike organizations from industries with low environmental impact, such as the service sector (Kannenberg and Schreck, 2018).

Companies in the same industry might adopt similar rules and behaviors, such as publishing an integrated report, as a form of mimetic isomorphism (Gușe et al., 2016). Two studies found such an implication (García-Sánchez et al., 2013 and Lai et al., 2016). According to Lai et al. (2016) found that organizations in industries like 'industrial materials' and 'financial services' have a higher probability of IR implementation than other industries. Moreover, membership in a certain business sector can influence a company's political vulnerability, in the sense that firms operating in more industries politically sensitive may voluntary apply IR practice in order to reduce possible political costs (Frias-Aceituno et al., 2013b). Industry might influence the greater or lesser use of voluntary information disclosure, therefore the research proposes and tests the following hypothesis:

H3: There is a positive relation between the industry in which a firm operates and the production of an integrated report.

3. RESEARCH METHODOLOGY

3.1 Sample

The sample of this paper is composed of the companies belonging to the FTSE 100 and the period analyzed is 2013–2018. These years were chosen as 2013 is the year the IIRC Framework was finalized and published and few companies provided the necessary data for previous years. The database used to extract the financial data used in the study is Thomson Reuters. The sample is composed of companies belonging to 13 industries, as shown in Table 1 and consists of 606 year – observations (as the FTSE 100 includes 101 companies). The most numerous contribution was from the Financial sector, with almost 21% of the companies, followed by organization operating in the Industrial sector (14.85%). Low contributions are noticed from Healthcare and Airlines industries with only 2, respectively 3 companies.

Table 1. Sample distribution by activity sector

INDUSTRY	FREQUENCIES	
	ABSOLUTE	RELATIVE
AIRLINES	3	2.97%
BUSINESS SUPPORT	5	4.95%
CONSUMER GOODS	12	11.88%
CONSUMER SERVICES	10	9.90%
FINANCIAL SERVICES	21	20.79%
HEALTHCARE	2	1.98%
INDUSTRIALS	15	14.85%
MEDIA AGENCIES/PUBLISHING	6	5.94%
MINING	6	5.94%
OIL & GAS	4	3.96%
REAL ESTATE	8	7.92%
TECHNOLOGY/ TELECOMMUNICATIONS	5	4.95%
UTILITIES	4	3.96%
TOTAL	101	100%

3.2 Variables

This paper examines whether the companies in the sample publish on their web sites integrated reports or disclosures that incorporate IIRC Framework's (2013) suggestions and recommendations. Thus, the dependent variable Integrated Report (IR) is numerical, taking the value 1 if the company uses integrated reporting practices and the value 0 corresponds to the opposite case. A challenge of the research was to identify whether the analyzed companies apply or not IR concepts. Previous researchers checked the web sites of their respective sampled companies in order to identify whether integrated reports were disclosed or not (Frias-Aceituno et al., 2013a, b; Frias-Aceituno et al., 2014; Garcia-Sanchez and Noguera-Gamez, 2017). Usually, the authors used a set of key performance indicators that the supposed "integrated report" had to contain and compared that list with the contents of the companies' reports. A similar approach was also applied in this study by using an item list (developed based on the IIRC Framework) that an integrated report should contain (Appendix 1).

In regard to business size, the variable SIZE is used, measured by the logarithm of total assets. The variable PROFITABILITY represents corporate profitability, measured by the return on assets ratio. Growth opportunities are measured by MTB, the market to book value ratio of corporate assets. Regarding industry, the ordinal variable SECTOR is used. There are also various dummy variables that identify the time period.

3.3 Econometric Model

The econometric model used in this study is based on panel data dependence techniques. Models that use these kind of techniques are designed to predict the impact of a set of independent or explanatory variables with the purpose of incorporating information on the relationships established between them. One of the advantages of this method is that it allows the level of significance of each particular variable to be established (Frias-Aceituno et al., 2013b). Because the dependent variable in this study is binary, a logistic regression appropriate for panel data with his type of variable must be used. The logistic model for estimating the probability of a firm using IR practices (IR) is represented in the following equation:

$$Log\ \frac{\mathrm{Prob(IR}it=1)}{\mathrm{Prob(IR}it=0)} = \beta 0 + \beta 1\ \mathrm{SIZE}it + \ \beta 2\ \mathrm{PROFITABILITY}it + \ \beta 3\ \mathrm{MTB}it + \\ \beta 4\ \mathrm{SECTOR}it + \ + \sum_{i=6} \beta \mathrm{i}\ \mathrm{YEAR}it + \eta i + \ \mu it,$$

where all variables are indexed by *i* for the individual cross-sectional unit (i = 1,., n) and t for the time period (t = 1,., k).

SIZE is a numerical control variable representing company size by the logarithm of its total assets.

PROFITABILITY is a numerical variable representing business profitability by the company's return on assets.

MTB is a numerical variable representing business growth opportunities by the company's market to book value ratio.

SECTOR is a numerical variable representing the 13 business activity sectors used.

YEAR is a dummy control variable representing the years analyzed.

4. EMPIRICAL RESULTS

Table 2 presents the descriptive statistics, the mean and the standard deviation for the numerical variables, together with the frequencies observed for the dichotomous variable. This table shows that 71.3% of the sample does not use IR concepts and only 28.7% present financial and non-financial information considering the IIRC Framework's (2013) suggestions and recommendations.

Table 2. Frequencies and descriptive statistics

Variable	Mean	Std. Deviation
Sector	6.4653	3.2040
Company Size	16.4267	1.9252
Profitability	0.1231	0.3040
Growth opportunities	0.0018	0.0064
	Frequencies	
	Absolute	Relative (%)
IR Value 1 (applies IR practices)	174	28.7%
IR Value 0 (does not apply IR practices)	432	71.3%

Table 3 summarizes the bivariate correlations between the variables selected for analysis. The coefficients obtained show that the independent variables Profitability and Growth opportunities are not highly correlated with the dependent variable, but the variable Size has a higher correlation with the implementation of integrated reporting. In relation to the dependent variable IR, the most significant explanatory factors are, in this order, Size, Growth opportunities and Profitability.

Table 3. Bivariate correlations

	INTEGRATED REPORTING	**SIZE**	**PROFITABILITY**
INTEGRATED REPORTING			
SIZE	0.221		
PROFITABILITY	0.081	-0.435	
GROWTH OPPORTUNITIES	0.086	-0.422	0.984

Table 4 shows the results obtained for the proposed analytical model. It is statistically significant for a confidence level of 99% (log likelihood = 53.712; p = 0.000).

The variable Size has a positive effect on the level of integrated reporting, for a 99% confidence level (coefficient = 0.256; p = 0.000). Therefore, hypothesis H1 is accepted. Similarly to most previous studies, the results show a positive influence of the company size in implementing integrated reporting practices (Frias-Aceituno et al., 2014; Frías-Aceituno et al., 2013b; García-Sánchez et al., 2013). The result suggests that larger companies have greater visibility politically wise and in in society as a whole. Large companies receive greater attention by analysts and their public image is highly sensitive (Frias-Aceituno et al., 2014). Therefore, these companies have an increased number of potential users of their financial information, which might generate greater requirements for voluntary disclosure of material issues.

The relation observed for MTB, the variable representing growth opportunities, is negative (coefficient = - 0.033; p = 0.489), although its effect is not statistically significant. Also, the variable Profitability (coefficient = 0.331; p =0.651) has a positive effect on IR adoption, but not one that is statistically significant. Therefore, hypothesis H2 is rejected. The results in previous literature are ambiguous, as this growth opportunities has obtained mixed results. Frías-Aceituno et al. (2013b) and Frías-Aceituno et al. (2014) found a positive relationship, suggesting that integrated reporting might be implemented as a form of increased responsibility towards the stakeholders, but García-Sánchez et al. (2013) identified a negative relationship, statistically insignificant, confirming the results obtained by this study. Although profitability has a positive influence on integrated reporting adoption, the results do not show high significance and two other studies partially confirm this (Frías-Aceituno et al., 2013b; Lai et al., 2016).

Table 4. Determinant factors in integrated reporting

	COEFFICIENT	STD. ERROR	P
SECTOR	0.143	0.030	0.000
SIZE	0.256	0.055	0.000
PROFITABILITY	0.331	0.732	0.651
GROWTH OPPORTUNITIES	- 0.033	0.047	0.489
CONSTANT	6.132	0.997	0.000
LOG LIKELIHOOD	663.902		
CHI-SQUARE	53.712		
P-VALUE	0.000		

SECTOR, the variable representing the area of business in which each firm operates, presents a positive effect, statistically significant coefficient = 0.256; p = 0.000), on integrated reporting adoption. Therefore, hypothesis H3 is accepted. These results indicate that companies have similar corporate reporting policies depending on the industrial sector they belong to, as a form of mimetic isomorphism. The previous literature also confirm this result, as two studies found such an implication (García-Sánchez et al., 2013 and Lai et al., 2016). Furthermore, Frias-Aceituno et al., (2013b) state that appurtenance in a certain industry can influence a company's corporate reporting practices, as they might apply integrated reporting concepts in order to align themselves to the sector's disclosure practices.

In order to determine whether there are differences in the distribution by business sector of the companies that apply integrated reporting, various tests were carried out. This was done because companies active in the fields of consumer goods, utilities and consumer services are more likely to produce integrated reports (Frias-Aceituno et al., 2014). The statistical analysis regarding the publication of integrated company reports (see Table 5) reveals significant differences by business activity sector.

Table 5. Test statistics for differences in applying integrated reporting by business sector

	SECTOR
KRUSKAL-WALLIS H	20.207
ASYMPTOTIC SIGNIFICANCE	0.000

5. CONCLUSIONS AND STUDY LIMITATIONS

Recently, corporate reporting practices grew in complexity, as organizations have to disclose extensive information in order to meet the stakeholders' needs. Companies developed their reporting practices, focusing on voluntary disclosures regarding the transparency and corporate responsibility policies. Hence, organizations started to integrate financial and non-financial information, producing integrated reports with the purpose of achieving sustainable development. The integrated report offers insights on various topics, such as corporate governance, strategy and performance in an organized manner, focusing on the context in which the company operates

The aim of this research has been to identify and assess the influencing factors of integrated reporting as an emerging practice in corporate reporting. In order to give insights regarding the determinants of this practice, a logistic regression methodology was carried out on a sample of 100 organizations belonging to FTSE 100, on a six year period.

The results of this study show that the company size and appurtenance to an industrial sector have a great influence on the decision to implement integrated reporting practices in the corporate reporting policy. The research uncovers that for the FTSE 100 companies, growth opportunities and profitability do not have a significant influence regarding the adoption of integrated reporting. These results are extremely important and useful and they could be taken into consideration by the IIRC in the documents and recommendations it issues in this respect.

This study makes contributions to the academic literature in several ways. Most empirical studies have focused mainly upon the first stage of integrated reporting, analyzing the first 2-3 years of the practice. This research, although using a smaller sample, analyses the practice on a six year period. Furthermore, this study contributes to the current literature by adding empirical findings on the association between company size and industry membership and the adoption of integrated reporting practices.

Finally, this paper presents several limitations, particularly the fact that at present companies are in different stages regarding the implementation of integrated reporting, therefore making the coding for the dependent variable difficult. Although the study used a list of content elements that a report should present in order to be categorized as integrated report, only one researcher carried out the coding procedure and this could induce a dose of subjectivity in the obtained results. Therefore, future studies should perform a similar analysis in future years using an improved measure for integrated reporting practices. In addition, it would be interesting to identify and study other influencing factors related to the integrated reporting adoption process.

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BIBLIOGRAPHY

Adams, S. & Simmet, R. (2011) “Integrated Reporting: An Opportunity for Australia’s Non-for-Profit Sector”, *Australian Accounting Review*, vol. 21, no. 3: 292–301.

Brown, J. & Dillard, J. (2014) “Integrated reporting: On the need for broadening out and opening up”, *Accounting, Auditing &Accountability Journal*, vol. 27, no. 7: 1120–1156.

Cheng, M. M., Green, W. J., & Ko, J. C. W. (2014a). “The impact of strategic relevance and assurance of sustainability indicators on investors' decisions”. Auditing: A Journal of Practice & Theory, vol. 34, no 1: 131–162.

Cheng, M., Green, W., Conradie, P., Konishi, N. & Romi, A. (2014b) “The International Integrated Reporting Framework: Key Issues and Future Research Opportunities”, Journal of International Financial Management & Accounting, vol. 25, no. 1: 90–119.

Cho CH, Freedman M, Patten DM (2012) “Corporate disclosure of environmental capital expenditures.” Account Audit Account Journal, vol. 25: 486–507.

Esch, M.; Schnellbacher, B. and Wald, A. (2019) "Does integrated reporting information influence internal decision making? An experimental study of investment behavior". Business, Strategy and the Environment, vol. 28, no 4: 1–12.

Flower, J. (2015) "The International Integrated Reporting Council: A story of failure", Critical Perspectives on Accounting, vol. 27: 1–17.

Frias-Aceituno, J. V., Rodriguez-Ariza, L. & Garcia-Sanchez, I. M. (2014) "Explanatory Factors of Integrated Sustainability and Financial Reporting", *Business Strategy and the Environment*, vol. 23: 56–72.

Frias-Aceituno, J. V., Rodriguez-Ariza, L. & Garcia-Sanchez, I. M. (2013a) "The Role of the Board in the Dissemination of Integrated Corporate Social Reporting", *Corporate Social Responsibility and Environmental Management*, vol. 20: 219–233.

Frias-Aceituno, J. V., Rodriguez-Ariza, L. & Garcia-Sanchez, I. M. (2013b) "Is integrated reporting determined by a country's legal system? An exploratory study", *Journal of Cleaner Production*, vol. 44: 45–55.

Garcia-Sánchez, I. M., Rodriguez-Ariza, L. & Frias-Aceituno, J. V. (2013) "The cultural system and integrated reporting", *International Business Review*, vol. 22: 828–838.

Garcia-Sánchez, I.M. & Noguera-Gámez, L. (2017) "Integrated information and the cost of capital", *International Business Review*, vol. 26: 959–975.

Gușe, R. G., Almășan, A., Circa, C., Dumitru, M., (2016), " The role of the stakeholders in the institutionalization of the CSR reporting in Romania", Accounting and Management Information Systems, Vol. 15, No. 2, pg. 304–340.

IIRC (2011) "Towards Integrated Reporting. Communicating Value in the 21st Century", available at http://integratedreporting.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf retrieved on 02.28.2017.

IIRC (2013) "The International <IR> Framework", available at http://integratedreporting.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf retrieved on 03.01.2017.

Jensen JC, Berg N (2012) "Determinants of traditional sustainability reporting versus integrated reporting. An institutionalist approach". Bus Strategy Environ 21: 299–316.

Kannenberg, L and Schreck, P. (2019) "Integrated reporting: boon or bane? A review of empirical research on its determinants and implications", Journal of Business Economics, vol. 89(5), pg. 515–567.

Lai A, Melloni G, Stacchezzini R (2016) Corporate sustainable development: is 'integrated reporting' a legitimation strategy? Bus Strategy Environ 25:165–177.

Lee, K.W. & Yeo, G.H.H. (2016),"The association between integrated reporting and firm valuation", Review of Quantitative Finance and Accounting, vol. 47:1221–1250.

Oll, J. & Rommerskirchen, S. (2018) "What's wrong with integrated reporting? A systematic review"; Sustainability Management Forum; vol. 26: 19–34.

Sierra-García, L.; Zorio-Grima, A.; García-Benau, M.A. (2015) Stakeholder engagement, corporate social responsibility and integrated reporting: An exploratory study. Corp. Soc. Responsib. Environ. Manag. Vol. 22, 286–304.

van Bommel, K. (2014) "Towards a legitimate compromise?: An exploration of Integrated Reporting in the Netherlands", *Accounting, Auditing & Accountability Journal*, vol. 27, no. 7: 1157–1189.

Vaz, N., Fernandez-Feijoo, B. & Ruiz, S. (2016) "Integrated reporting: an international overview", *Business Ethics:* A European Review, vol. 25, no. 4: 577–591.

Appendix 1. Integrated report content

Content Element	Item	IIRC Framework reference
Organizational overview and external environment	Operating context	Section 4.5
	External environment	Section 4.7
Governance	The leadership structure, including skills and diversity	Section 4.9
	Attitude to risk, integrity and ethical issues	
	Remuneration policies (linked to value creation)	
Business Model	Is presented, preferably with a diagram	Section 4.13
	Narrative explanation of the Business Model	Section 4.13
	Presents Inputs, Business activities, Outputs, Outcomes	Section 4.12
	Presents information connected to the strategy, risks, opportunities and performance	Section 4.13
Risks and opportunities	Risks, sources of risks and probability	Section 4.25
	Opportunities, sources of opportunities	
	Explanation on how key risks are managed	
	Explanation on how to create value from key opportunities	
Strategy and resource allocation	Statement of strategic objectives	Section 4.28
	Strategies or actions implemented in order to accomplish the strategic objectives	
	Resource allocation plans	
	Measurement of achievements	
Performance	KPI's and narrative explanations	Section 4.32
	Connectivity of financial and non-financial performance	Section 4.32
	Linkages between past and current performance correlated with the organization's outlook	Section 4.31
	Effects on the Six Capitals	Section 4.31
Outlook	Changes in the external environment	Section 4.35
	Potential implication for the organization	Section 4.37
	Explanation on how the organization is equipped to respond to critical challenges	Section 4.35
Basis of preparation and presentation	Summary of materiality determination process	Section 4.42
	Reporting boundary	Sections 4.43–4.46
	Summary of Frameworks used	Sections 4.47–4.48.

IFRS and EU

GEOPOLITICS AND GEOECONOMICS OF TRADE RELATIONS BETWEEN RUSSIA AND THE EUROPEAN UNION DURING THE SECOND DECADE OF THE 21ST CENTURY

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Abstract
The paper deals with trade embargos as an instrument of geoeconomics, which has been reborn in recent world economic development. Its purpose is to identify the impact of selected geoeconomic tools on the development of trade relations of EU countries with the Russian Federation (hereafter RF) since their application. The exchange of economic sanctions by Western countries and counter-measures by the RF focused on agri-food trade is a typical case of the geoeconomic praxis in the recent global economy. The method used in the study was a comparative analysis of consequences on both sides of this conflict. The result of this analysis documents asymmetry of measures from the point of view of their character, focus, impacts, and time-space results. The impact of an agri-food import ban by the RF had a shorter and differentiated effect on EU member countries, while the western embargo affected the economic and political situation in the RF in the long term. The agri-food embargo has led to a reduction of imports from the EU, their partial replacement by imports from Asian countries and an increase in self-sufficiency. However, the recession of the Russian economy in 2015 and the subsequent economic stagnation and weak recovery in the next years were also influenced by the collapse of the crude oil price and depreciation of the rouble exchange rate, not just by embargos.

Keywords: *Geoeconomics, trade, sanctions, foreign policy, embargo*

1. INTRODUCTION

In the second decade of the 21st century, the world economy is undergoing significant changes in its overall picture, which we were accustomed to seeing during the period of so-called hyper-globalization. It is the result of fundamental changes in the economic and geopolitical framework of global development and the transformation process that globalization processes have brought about as a result of profound structural changes.

The essential factors that have emerged in international relations include the slowing down of globalization processes, or even in certain areas, the opposite process of de-globalization, both at the global and regional level. Other features include changes in the production base of the world economy represented by the launch of the 4th Industrial Revolution (known as Industry 4.0), gradual but relatively rapid changes in the balance of power between individual players in international relations, and efforts to stop this change with both geopolitical and geoeconomic tools. In this context, professional literature has understood geopolitics and geoeconomics in wider context as a part of political relations (Sharples, 2016; Jones, Taussig, 2019; Luttwak, 1999; Sølberg Silen, 2012; Blackwell and Harris, 2017).

Included under the term, **"geoeconomics"** is the use of economic tools of power to achieve political goals, which became common practice in international relations. One particularly visible impact has been a shift in international trade relations, as large economies use what advantage they can to protect politically important industries while hampering those of rivals. However, the increased strategic use of economic tools by states, or state-owned enterprises, promises to have even broader consequences. Increasingly they have become the instrument of so called “hybrid wars”, like directed cyberattacks, devastating economic sanctions, and government investment in strategic infrastructure abroad, which is dominating the recent global agenda more and more.

Under the influence of these old-new tendencies (already known during the so-called Cold War between East and West, in the long period after WWII), the practice of economic wars and other political interventions in the sphere of international economic relations returns. At the end of the Cold War, American president R. Nixon predicted that geoeconomic considerations could eventually supersede classical geopolitics amongst US policy makers, a trend he viewed as problematic. The participants, on the one hand, are countries grouped in military-political blocks (NATO and its other so-called Western Allies) or economic-political (EU) groupings with varying degrees of unification in accordance with their differentiated economic and political interests. On the other hand, there are countries seeking to gain or regain dominance in the global or regional areas by both economic and power-political instruments (especially China, Russia, Iran and Turkey).

Typical examples of the application of the above tendencies are partial or complete political trade restrictions in the form of customs and currency wars, or their blocking in the form of a trade embargo, freezing of personal and state assets of a counterpart and its economic and political elites, etc. that use both groups. Very often, both sides use asymmetric measures, more specifically targeted to certain social groups of the population, with the aim of provoking certain internal political responses. Their purpose is to change the internal political or economic situation and to exert pressure on the ruling elites to change their strategic geopolitical intentions in the global framework by internal pressure. These actions have various short and long-term impacts in target countries, often unexpected in terms of active participants. In the following text, we will try to analyze some context of the application of selected geoeconomic instruments to a specific segment of relations between EU member states and the RF after 2014, which represent a specific example of differentiated approach, impacts and consequences on both sides.

One of the trade policy key tools traditionally used in geoeconomics is a trade embargo on selected groups of goods. The specificity of these instruments is their differentiated application, which aims to generate differentiated impacts on particular areas of the economy and different social groups of the population with different sensitivity to the perception of their influences. The differentiated and targeted approach to the individual spheres of economic relations also reflects the fact that the differentiated approach also takes into account global economic interests, and does not touch the embargoes of certain (or sensitive) sectors or groups of countries only.

Another peculiarity of geoeconomic application is that certain states are taking advantage of the consequences of the embargo for their own expansion, filling the free space in international trade. Thus, they can eliminate the negative effects of the embargo on certain spheres of the economies of the targeted countries, or even trigger longer-term structural changes in trade and political relations between states, which are alternatives to the original model of the international division of labour and trade.

A trade-political frame of mutual relationship between the EU and the RF had been established by the Partnership and Cooperation Agreement (PCA) signed in 1997. Its main objective was the promotion of trade and investment between both parties as well as the development of harmonious economic relations. The PCA was supposed to be upgraded through the new round of New EU-Russia Agreement negotiations, providing a new comprehensive framework for bilateral relations. This document was expected to be built on the basis of WTO rules (because of parallel running negotiations of the RF membership in this international institution) and was expected to include stable, predictable and balanced rules for bilateral trade and investment relations. Negotiations were interrupted in 2010 because no progress was made in the field of trade and investment. A new potential for development of mutual relationships consequently emerged with the RF membership in the WTO in 2012. Nevertheless, this potential was not used due to some critical political developments between Russia and Ukraine in 2014 and the activities in the original PCA and follow up negotiations, including a summit between the EU and the RF, were suspended in 2014 after the start of the Ukrainian crisis.

In response to the annexation of the Crimean peninsula and the deliberate destabilization of Eastern Ukraine, the restrictive measures by the EU and some other Western countries (USA, Canada, Australia, Japan) were gradually adopted from March 2014. They included diplomatic measures (suspension of mutual political negotiations and contacts), individual restrictive measures (assets freeze and travel restrictions), restrictions on economic relations with Crimea and Sevastopol, economic sanctions (restricted access to capital markets for Russian state-owned banks, an embargo on trade in arms, and restricted exports of dual-use goods and sensitive technologies, especially in the oil sector). and restrictions on economic cooperation (stopped financing of the projects of the EIB, EBRD and their financing operations in the RF, suspension of the implementation of EU bilateral and regional cooperation programs with Russia (EU Delegation to Russia, 2017).

All EU restrictive measures in force are kept under **constant review** by the European Council to ensure that they continue to contribute towards achieving their stated objectives. Council decisions imposing EU autonomous restrictive measures apply for 12 months, while the corresponding Council regulations are open-ended. Before deciding to extend such a Council decision, the Council will review the restrictive measures. Depending on how the situation develops, the Council can decide at any time to amend, extend or temporarily suspend them. The restrictive measures have been prolonged each year since 2014. On 20 June 2019, the Council again prolonged the restrictive measures until 23 June 2020.

As an immediate retaliatory reaction in August 2014, the Russian government introduced a ban originally for a period of one year, but later actually prolonged several times (in February 2019 until the end of 2019), on the import of agricultural products, raw materials and food originating in countries that have imposed sanctions against Russia. A reason mentioned for these counter-sanctions was the **security** of the RF. On the list of products to be banned were agricultural products as follows: live animals, fruits and vegetables, milk and dairy products, meat and fish of corresponding HS nomenclature (some items of HS 01, 02, 03, 04, 07, 08, 15, 16, 19, 21). (Указ Президента РФ, 2014).

There was an assumption that only more than a 10% share in exports of goods and services could have a substantially negative effect on economic growth of participating EU countries. In reality, there were only 3 small EU member countries with such a share of Russia on their total merchandise export: Lithuania, Estonia, and Latvia with around 10% and more, the second group consisted of Slovakia, Finland, Slovenia and the Czech Republic with around a 5% share of Russia in their exports. So the total impact on the GDP growth had been estimated as fairly limited i.e. approx. 0.4% for Lithuania and Estonia, and less than 0.1% for Austria. (see Havlik, 2014).

2. METHODOLOGY

The aim of this paper is to identify the impact of selected geoeconomic tools on the development of trade relations of EU countries with the Russian Federation (hereafter RF) since their application. Specifically, these are Western sanctions applied in the year 2014 after the Ukrainian crisis and exposure of the RF to them, and counter-measures by the RF against countries participating in this embargo. The method used by the authors is a statistical analysis of the dynamics of trade relations, focusing mainly on the agri-food sector in RF imports (within the scope of the Harmonized System of trade statistics, hereinafter HS groups 01 to 24). A brief description of the content of the particular HS nomenclature groups is given in Table 3 of this paper. The work uses both dynamic indicators (AAGR) of development between 2013 and 2018 as well as absolute values of trade. 2013 was chosen as it is the last year without the impact of the above-mentioned sanction instruments, and thus serves as a reference variable value for estimating potential losses in the volume and dynamics of trade and overall economic development documented by the GDP of the analyzed countries. The paper uses statistical and other analytical data from the Eurostat (comext), European Commission, Rosstat, the Vienna Institute for International Economic Studies (wiiw), IMF and WTO databases for the relevant periods. Comparison of data from different sources gives rise to certain value differences, which are due to different calculations of annual average USD / EUR exchange rate as well as a different methodology of reporting trade statistics in the RF and EU.

The format of this paper does not allow focus on a comprehensive analysis of the new situation arising from the implementation of geoeconomic instruments in the world trade sphere. Therefore, in the next analysis, we focus on certain segments of global economic and political relations only, namely relations that are closer to us from the perspective of the Czech economy and have a greater impact on our economic development. Specifically, it concerns the impact of the embargo of selected parts of the EU trade relations with the RF and the counter-sanctions by the RF on the EU Member States with a specific focus on the area of agri-food trade.

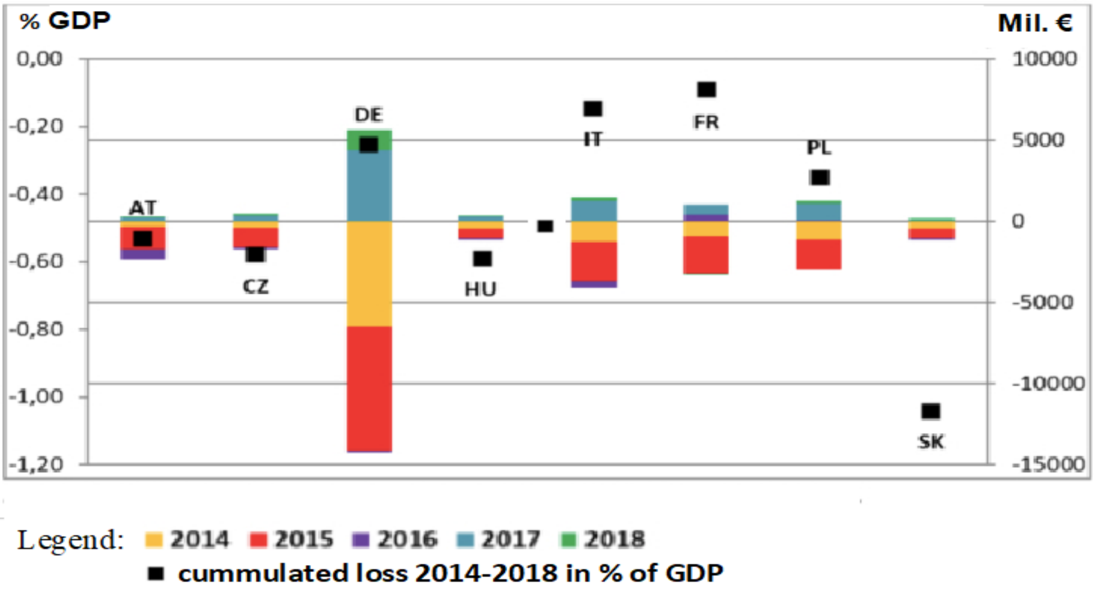
3. ANALYSIS

The RF selected their geoeconomic counter-measures to the Western embargo in the asymmetric form of focusing on the agri-food sector. In this context, it should be noted that the Russian counter-measures aimed at the agri-food sector were not just motivated by a direct pursuit of the sector, but were linked to earlier economic policy intentions aimed at increasing food independence defined as early as 2010 (Smutka et al., 2019).

Trade political measures on both sides have had negative impact on the mutual trade of the RF with the EU and other countries participating in the original embargo, but on the other hand, they supported the import growth from countries non-associated with the original embargo (typically China, Iran, Turkey etc.)

While on aggregate the impact of an export ban on the EU has been limited, some individual countries have been negatively affected by the sanctions in a different way. The economic effects on individual EU countries vary according to their exposure to the Russian market, with the Baltics and several Central and East European EU member states being influenced more than West European. Original estimates of negative consequences of a trade ban from the EU to Russia prepared by The Vienna Institute for International Economic Studies – wiiw in the next) were relatively modest and dependent on their export exposure. It was expected that Baltic states like Finland, Lithuania, Latvia and Estonia and several other new EU Member States would be most affected. The impact on other EU countries like Austria and Germany was expected to be relatively modest, even if relatively large in absolute terms. Following these assumptions, Germany might lose around € 3 billion, followed by Italy (€ 1.4 billion), France, Great Britain and Poland (€ 0.8 billion each). Austria could lose close to € 300 million in this scenario (Havlik, 2014).

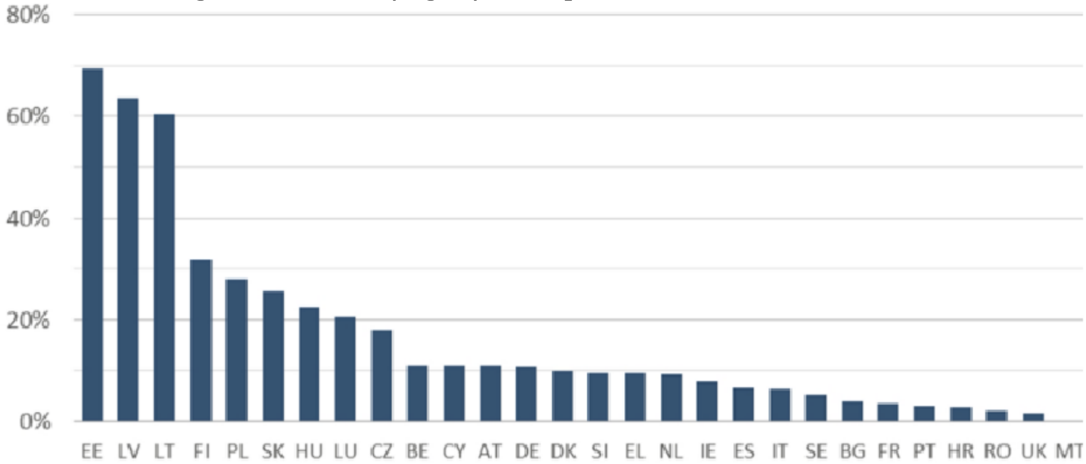
Figure 1. Losses due to export sanctions from EU to Russian Federation during 2014–2018



Source: Havlik, 2019

The sensitivity of the agri-food sector to an import embargo for many EU countries in 2013 was substantially higher and moved between 70% and 10% dependency for half of the Member countries, as proved in Figure 1 below.

Figure 2. Share of agri-food exports to Russian Federation in 2013



Source: Eurostat Comext database, 2013

In absolute terms, however, the biggest loss was incurred by Germany (export loss of more than € 14 billion during 2014-2016), with a subsequent export recovery in 2017 and 2018. Italy, France and Poland incurred large absolute export losses in their trade with Russia as well (Figure 2). As far as the EU as a whole is concerned, the cumulated export loss to Russia during 2014–2018 is estimated at € 30 billion (about -0.2% of EU's GDP in 2018), again incurred largely during 2014–2016, as EU exports to Russia recovered in 2017 and 2018.

Despite embargos the EU still remains a key trading partner for Russia, representing in 2018 € 253.6 billion, and 37.1% of Russia's import and 45.5 % of export (see Chart No. 3 below). The RF maintained a positive trade balance both as a whole as well as in relation to the EU. This was achieved through the dominance of its exports of raw energy materials and other mining products and the ability to keep the positive trade balance in agro-trade as well.

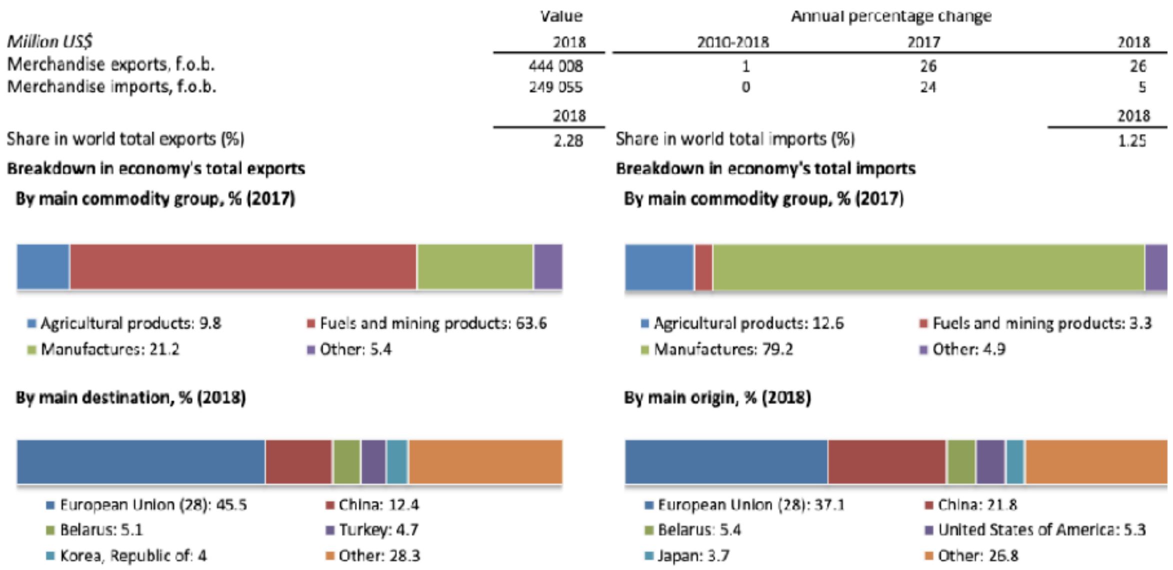
Moreover, there is a recovery in mutual trade in the last two years (the rate of growth in agro export between 2017–2018 reached +8.4%).

The RF is now the 4th largest trading partner of the EU for trade in goods, representing 6.4% of overall EU trade. Russia is also the 4th export destination of EU goods (USD 100.7 billion in 2018) and the 3rd largest source of goods imports (USD 198.6 billion in 2018). Imports from Russia to the EU increased by 16.7% in the period from 2017 to 2018 and were driven by the growth of imports of energy products from Russia that account for approx. 70% of imports from Russia to the EU.

The economic losses incurred by Russia in 2014 were estimated at approximately 1% of annual GDP during 2014–2015 (cumulated about € 100 billion), or at approximately 0.5%–1.5% of foregone GDP growth after the latest round of US financial sanctions introduced in August 2018 elevated investment risks (Havlik 2014).

The impact to Russia of the counter-sanctions from Russia in agri-food imports provides a different picture and consequently their negative effects on EU exporters in particular goods groups were larger. If in the last year before the trade embargo introduction in 2013, total food exports from the EU to Russia were worth around USD 15.2 billion, or 10% of the total EU exports to Russia, then in the year 2018 the volume of food imports to Russia from the EU reached USD 7.3 billion, i.e. it represented in total 52 % (mean of individual countries -50%) decrease in comparison to the year 2013 (by confidence interval at 95% CI=11). Total cumulated loss of the import volume of these categories (HS 01–24) represented approx. USD 44.6 billion representing 0.43% share on global GDP of EU (28) in between 2013 and 2018.

Figure 3. Trade profile of the Russian Federation in 2018

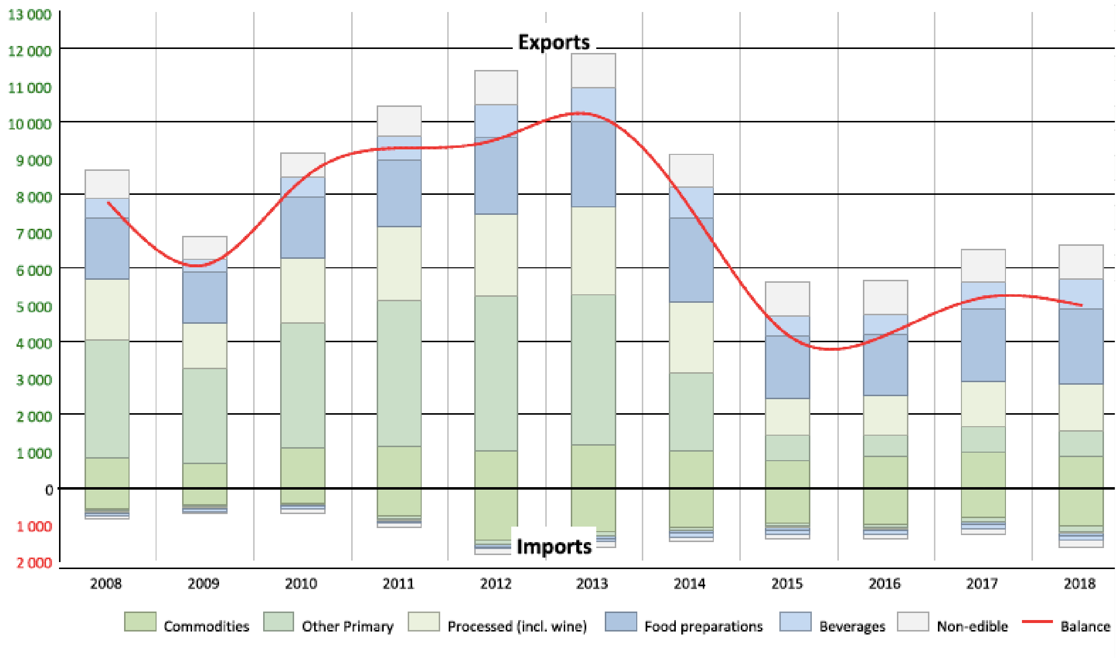


Source: WTO, 2019

An interesting point arises from a closer look at the impact of import sanctions in the period 2013–2018 in the territorial breakdown (see Table 1). Here we can see evident differences in both absolute values as well as dynamics between individual Member countries. It is evident that within the EU there are countries where the impact of the import embargo is much higher than for others. While the rate of total import volume decline was -52.1% for the whole group of the EU over the period (or annual average decrease rate of -10.4%), it was much higher in some countries (13 countries in total i.e. 46% of the group). While this may also be partly explained by the nature of export articles and the already mentioned higher sensitivity of some countries, a relatively strong political aspect can also be observed. In the group there are EU countries that hold more aggressive critical political positions on RF foreign policy and reached more than a 70% decrease (Lithuania, Latvia, Finland, Estonia, Poland).

Figure 4. Indicators of agri-food trade between the EU and the Russian Federation

	Unit	Exports	Imports	Balance
EU28 Agri-food trade with Russia				
Agri-food trade value	Mio €	6 624	1 630	4 994
- as share of EU28 total Agri-food trade	(%)	4.8	1.4	
- as share of EU28 total trade with Russia	(%)	7.8	1.0	



Source: EC 2019 adopted by authors

This suggests differentiation of the importer's approach towards individual countries, which can be explained by geopolitical interests of the RF. It is a significantly higher decrease (16%) than the EU average and also in comparison with countries that are more conciliatory to RF foreign and domestic policy (France, Belgium, Germany, Portugal, Slovakia, Romania). An interesting feature from the Czech Republic's point of view is that it is the only country in the EU where the agri-food imports to Russia in 2018 were higher than in 2013, by 16.5%.

In terms of commodity structure, the impact of sanctions is differentiated too. It ranges from 99.9% decrease (HS 02, 03, 08 in individual aggregated HS 2 digits groups) to an increase of more than 60% (HS 01 and 24). These two groups of increasing import were important for the start of anti-import measures aimed at supporting their national agri-food sector (live animals and tobacco). Imports of commodities with the most significant decline were partially replaced by the dynamic development of domestic production, partly re-oriented to countries that had not joined the export embargo of the EU, the USA and other Western countries. China, Iran, Turkey benefited most from the import ban imposed by the RF government. This fact can also be considered as geopolitical motivation by the RF government, as all these partners are in the focus of its foreign policy orientation.

Table 1. The changes in territorial structure of EU imports to RF between 2013–2018 in nominal USD

	2013	2014	2015	2016	2017	2018	Diference	Growth rate 2013-2018
Russian Federation	**22 162 013 746**	**18 037 494 572**	**9 769 653 704**	**9 741 782 569**	**11 639 917 160**	**12 423 911 974**	-9 738 101 772	-43,9%
Austria	233 899 483	191 001 466	102 338 400	126 923 472	144 728 949	160 282 825	-73 616 658	-31,5%
Belgium	574 996 455	453 598 460	172 292 685	175 470 533	203 911 996	236 538 868	-338 457 587	-58,9%
Bulgaria	72 587 574	71 370 632	55 021 981	45 042 303	35 451 732	44 537 873	-28 049 701	-38,6%
Croatia	20 906 934	27 569 630	14 194 525	31 881 579	36 081 784	8 741 270	-12 165 664	-58,2%
Cyprus	24 111 066	12 306 681	872 118	1 248 347	1 064 164	1 035 386	-23 075 680	-95,7%
Czechia	134 960 815	155 334 542	100 735 318	109 347 412	125 883 808	157 192 377	22 231 562	16,473%
Denmark	945 239 604	387 224 376	129 843 777	132 197 751	172 979 392	178 464 953	-766 774 651	-81,1%
Estonia	119 225 892	66 775 181	22 064 192	19 381 839	22 500 852	25 477 991	-93 747 901	-78,6%
Finland	559 203 476	413 487 512	115 986 537	104 877 243	121 156 751	111 484 228	-447 719 248	-80,1%
France	1 585 567 997	1 290 681 672	668 047 025	647 742 656	799 196 218	848 891 581	-736 676 416	-46,5%
Germany	1 997 934 109	1 519 860 087	960 534 918	1 004 265 598	1 225 221 484	1 405 739 523	-592 194 586	-29,6%
Greece	325 848 781	238 087 663	46 141 468	43 290 674	41 489 875	64 066 234	-261 782 547	-80,3%
Hungary	369 609 583	309 971 918	177 937 208	193 664 332	259 224 329	261 773 281	-107 836 302	-29,2%
Ireland	336 790 355	258 440 188	111 370 498	126 275 629	158 204 923	172 616 040	-164 174 315	-48,7%
Italy	1 440 134 440	1 300 661 805	706 026 719	763 681 132	970 244 236	1 113 919 117	-326 215 323	-22,7%
Latvia	159 669 717	156 782 726	60 379 055	28 762 210	34 055 363	42 741 067	-116 928 650	-73,2%
Lithuania	413 815 271	310 076 597	72 964 271	72 749 176	84 517 009	90 735 896	-323 079 375	-78,1%
Luxembourg	559 769	514 686	272 462	189 549	214 514	290 002	-269 767	-48,2%
Malta	30 894	7 832	17 458	2 653	15 562		-30 894	-100,0%
Netherlands	1 972 222 014	1 551 370 819	773 465 676	603 199 122	613 887 813	650 325 920	-1 321 896 094	-67,0%
Poland	1 624 620 228	1 158 550 894	403 477 507	379 666 074	419 928 007	454 084 312	-1 170 535 916	-72,0%
Portugal	75 737 765	69 804 791	37 802 776	42 996 609	58 606 538	68 781 690	-6 956 075	-9,2%
Romania	51 593 615	79 747 715	52 428 770	70 614 630	92 363 056	48 913 820	-2 679 795	-5,2%
Slovakia	35 630 640	24 627 314	19 201 976	17 497 295	18 563 363	28 639 330	-6 991 310	-19,6%
Slovenia	52 173 798	40 921 062	31 025 766	27 118 645	29 638 782	25 009 096	-27 164 702	-52,1%
Spain	1 294 117 627	959 598 291	408 258 387	444 707 244	525 740 430	535 810 476	-758 307 151	-58,6%
Sweden	154 152 711	151 545 295	88 445 025	97 485 776	122 393 471	121 858 514	-32 294 197	-20,9%
United Kingdom	621 460 758	564 279 206	329 762 327	322 013 335	398 228 711	420 431 881	-201 028 877	-32,3%
TOTAL EU	**15 196 801 371**	**11 764 199 041**	**5 660 908 825**	**5 632 292 818**	**6 715 493 112**	**7 278 383 551**	-7 918 417 820	-52,1%

Source: authors' own calculations based on Comext data 2019

In terms of commodity structure, the impact of sanctions is differentiated too. It ranges from 99.9% decrease (HS 02, 03, 08 in individual aggregated HS 2 digits groups) to an increase of more than 60% (HS 01 and 24). These two groups of increasing import were important for the start of anti-import measures aimed at supporting their national agri-food sector (live animals and tobacco). In terms of commodity structure, the impact of sanctions is differentiated too. It ranges from 99.9% decrease (HS 02, 03, 08 in individual aggregated HS 2 digits groups) to an increase of more than 60% (HS 01 and 24). These two groups of increasing import were important for the start of anti-import measures aimed at supporting their national agri-food sector (live animals and tobacco). Imports of commodities with the most significant decline were partially replaced by the dynamic development of domestic production, partly re-oriented to countries that hadn't joined the export embargo of the EU, the USA and other Western countries. China, Iran, Turkey benefited most from the import ban imposed by the RF government (see Table 2). This fact can also be considered as a geopolitical motivation of the RF government as all these three partners are in the focus of its foreign policy orientation.

Table 2. The agri-food imports of the RF from selected Asian countries (in nominal USD)

	2013	2014	2015	2016	2 017	2018	GR	AAGR
China	1 133 101 444	1 095 013 406	1 381 390 173	1 620 520 187	1 773 998 356	2 521 565 649	223%	17,3%
Iran	360 816 597	598 708 243	480 874 588	428 409 469	550 726 124	791 365 590	219%	17,0%
Turkey	1 721 412 765	2 369 204 398	1 799 495 763	1 659 886 086	1 779 028 969	1 860 613 590	108%	1,6%

Source: authors' own calculations based on Comext data 2019

The agri-food imports from China grew with the average annual rate of growth (AAGR) of 17.3%, and increased between the 2013-2018 period totally by 223%. In some HS groups, the embargoed items replaced by imports from China grew during the analyzed period in total from 47% (HS 03) to 9271% (HS 19) or by AAGR 8% up to 147%, which represents abnormal dynamics of trading relations between two countries in the global framework. In the case of Iran, it was a notable 17%.

Table 3. Differentiated evolution of the agri-food exports from EU to RF between 2014–2018 (in USD)

HS	AGRI-FOOD	2013	2014	2015	2016	2017	2018	difference 2013-2018	growth rate 2013-2018	AAGR
01	Live Animals	125 381 987	141 869 107	119 318 185	109 601 005	185 467 379	212 208 902	86 826 915	69,2%	13,8%
02	Meat and eadible meat offal	2 125 260 330	363 356 108	9 714 040	12 721 147	11 651 673	2 055 156	-2 123 205 174	-99,9%	-20,0%
03	Fish, crustaceans and other aquatic invertebrates.	216 144 488	128 585 519	467 968	2 024 571	1 714 514	2 126 247	-214 018 241	-99,0%	-19,8%
04	Dairy products	1 897 186 107	1 250 549 921	226 861 805	174 297 380	166 774 941	204 419 818	-1 692 766 289	-89,2%	-17,8%
05	Products of animal origin	43 484 960	25 754 536	19 273 707	20 414 719	28 262 372	31 519 869	-11 965 091	-27,5%	-5,5%
0ž	Live trees and other plants	496 862 503	434 477 639	365 608 947	287 682 485	307 105 931	309 694 616	-187 167 887	-37,7%	-7,5%
07	Edible vegetables , roots & tubers	935 177 966	631 148 605	41 317 472	26 885 872	31 355 706	32 335 994	-902 841 972	-96,5%	-19,3%
08	Edible fruits & nuts	1 519 588 320	1 015 872 327	332 578	282 555	528 167	692 888	-1 518 895 432	-100,0%	-20,0%
09	Coffee, tea, mate & spices	176 047 228	183 858 892	137 019 182	140 861 689	172 875 981	196 098 135	20 050 907	11,4%	2,3%
10	Cereals	208 018 413	202 247 675	131 502 314	138 671 887	190 567 992	143 272 873	-64 745 540	-31,1%	-6,2%
11	Products of the milking industrz	110 110 603	119 109 772	77 474 036	71 207 596	80 091 654	84 411 095	-25 699 508	-23,3%	-4,7%
12	Oil seeds & oleaginous fruits	263 936 095	273 211 137	195 611 490	281 737 657	374 213 651	345 736 364	81 800 269	31,0%	6,2%
13	Lacs, gums, resins & other veg.saps	61 477 795	66 946 574	75 841 896	83 263 631	79 762 846	93 957 224	32 479 429	52,8%	10,6%
14	Vegetable products n.o.s.	515 240	475 012	394 103	397 387	559 790	501 639	-13 601	-2,6%	-0,5%
15	Animal or vegetable fats & oils	382 773 765	415 182 887	270 542 542	302 347 002	-326 262 238	344 231 499	-38 542 266	-10,1%	-2,0%
16	Preparations of meat	260 572 277	172 648 390	57 010 114	33 551 885	31 865 799	33 999 762	-226 572 515	-87,0%	-17,4%
17	Sugar & sugar confectionerz	168 823 982	176 514 631	132 745 337	141 225 108	166 631 061	167 234 016	-1 589 966	-0,9%	-0,2%
18	Cocoa &cocoa preparations	521 939 663	586 519 240	380 735 409	377 787 334	427 603 032	500 468 046	-21 471 617	-4,1%	-0,8%
19	Preps. of cereals, flour, starch etc.	815 390 096	898 405 639	511 153 985	446 721 831	520 095 359	605 590 459	-209 799 637	-25,7%	-5,1%
20	Prepss. Of vegetables, fruits, nuts & plants	648 681 860	732 819 107	474 257 564	488 555 928	516 674 392	550 675 354	-98 006 506	-15,1%	-3,0%
21	Miscelaneous edible preparations	1 038 942 701	957 952 648	578 078 221	587 673 350	713 702 102	750 388 855	-288 553 846	-27,8%	-5,6%
22	Beverages, spiritis & vinegar	2 223 385 320	2 029 614 130	1 160 052 986	1 175 156 846	1 592 195 291	1 763 755 169	-459 630 151	-20,7%	-4,1%
23	Residues and waste from food industrz	763 255 899	723 519 805	512 272 114	487 234 708	606 433 479	588 623 505	-174 632 394	-22,9%	-4,6%
24	Tobacco & tobacco products	193 843 773	233 559 740	183 322 830	241 989 245	183 097 762	314 386 066	120 542 293	62,2%	12,4%
		15 196 801 371	11 764 199 041	5 660 908 825	5 632 292 818	6 715 493 112	7 278 383 551	-7 918 417 820	-52,1%	-10,4%

Legend:

Embargoed item

Positive growth

Negative growth

Source: authors' own calculations based on Comext data 2019

Although another beneficiary country, Turkey does not show high dynamics, its relatively large and stable volume (AAGR 1.6% only) is significant in view of contradictions in certain areas of foreign policy, especially in the Middle East, and confirms special focus from the RF to this NATO member country. A comparison of the difference between the sum of agri-food imports for these 3 countries in 2018 and the decrease of EU imports in the same year (-2.106 billion USD) shows that approximately 71% of imports were replaced by imports from these three Asian countries. These figures indicate the relative massive restructuring of trade, which confirms a significant geoeconomic change in the position of the RF in world trade and indicates the direction of the future geopolitical orientation of its foreign policy.

In terms of commodity structure, the impact of sanctions is differentiated too (See table 3). It ranges from 99.9% decrease (HS 02, 03, 08 in individual aggregated HS 2 digits groups) to an increase of more than 60% (HS 01 and 24). Only 3 non-embargoed groups (HS 09, 12, 13) recorded moderate growth. These five groups of increasing import were important for the start of anti-import measures aimed at supporting their national agri-food sector

Imports of commodities with the most significant decline were partially replaced by the dynamic development of domestic production, partly re-oriented to countries that hadn't joined the export embargo of the EU, the USA and other Western countries. China, Iran and Turkey benefited most from the import ban imposed by the RF government (compare Table 2 and Table 3). This fact can also be considered as geopolitical motivation of the RF government as all these partners are in the focus of its foreign policy orientation.

Figure 5. Development of exchange rate of RUB/USD (2013–2019)

Source: https://tradingeconomics.com/russia/currency

It is necessary to state that the effect of the retaliatory sanctions is not the only one factor explaining the decrease of EU agri-food imports to the RF. While effects of western sanctions had been diminished by the consequences of localization and import substitution policies implemented by Russia, import sanctions supported these policies. Another important position in the whole process was the recession of the Russian economy in 2015 and the subsequent economic stagnation and weak recovery in the following years, negatively influencing the internal consumption of foodstuffs. An important role had also been played by the collapse of oil prices in world markets and depreciation of the rouble (see Figures No. 5 and 6).

Figure 6. Crude oil world market price development in USD/barrel (2013–2019)

Source: IMF, 2019

4. CONCLUSIONS

Russian agricultural policy is interested in growth of food self-sufficiency and independency. Russian government implemented legislation and set up the ambitious plan to encourage national agricultural production performance. As was already mentioned, some experts for Russian agriculture, trade and policy are convinced that the applied import ban is one of several instruments applied to support national production capacities and to increase national food self-sufficiency. The applied ban significantly changed both the territorial and commodity structure of Russian agricultural trade (especially the structure of imports).

If our interest is to get a better overview of the real impact of the applied agricultural import ban in relation to several Western countries, it is necessary to understand some basic features related to the role of agriculture within the Russian society and economy. First of all, agriculture represents a significant pillar for development of Russian rural areas. Nearly 25% of the population live in rural areas, and nearly 7% of the economically active population work in agriculture. Agricultural population represents about 10–15% in total population. Agriculture is also extremely important for development of local infrastructure and some other externalities.

An important feature of Russian agricultural policy is its development in relation to national security policy. Russians must be considered as a strong and proud nation, they do not want to be dependent on imports of such a strategical commodity as foodstuff products. The significant effort devoted to the growth of agricultural capacities significantly increased especially the production volume of grain, vegetables, fruits and berries, meat and meat products.

On the other hand, both export and import sanctions have brought some remarkable changes in geopolitical and geoeconomical trends within the global economy. The RF as an object and at the same time a subject of geoeconomics had to adapt to the new situation in the form of import substitution implementation and foreign trade relations restructuring. These measures partially helped to react to it, but confirmed the need for much deeper changes and reforms in its economic policy, which, however, did not occur. The character of some embargoed imports allowed them to be substituted by imports from other countries who consequently benefited from the new political situation, and also led to some political consequences, which are represented by deeper cooperation of the RF with China and Iran, and stabilized trade relations with Turkey. Another asymmetric reaction of the RF is in the financial sphere, based on the sale of US government bonds from the RF's and China's forex reserves. This can bring many unwanted consequences, not just for the USA, but also for the EU and the entire global economy.

On the other side, it is clear that the RF has been negatively impacted by the EU and USA sanctions, even in the long-term. The recession of 2015 and the subsequent economic stagnation of 2016, as well as a weak recovery afterwards, have been attributed at least partly, but not exclusively, to Western sanctions (the collapse of the crude oil price in 2015 and a depreciation of the rouble played an important role as well). 2019 is the first year when the negative economic consequences of recession and slow growth are also reflected in the internal political situation of the country.

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BIBLIOGRAPHY

Bělín M., Hanousek J. (2019), Making sanctions bite: The EU–Russian sanctions of 2014.VOX CEPR Policy Portal (29 April 2019). URL: https://voxeu.org/article/making-sanctions-bite-eu-russian-sanctions-2014

Bělin, M., Hanousek, J. (2019a) Which Sanctions Matter? Analysis of the EU/Russian Sanctions of 2014. London, Centre for Economic Policy Research. URL: https://cepr.org/active/publications/discussion_papers/dp.php?dpno=13549

Blackwill Robert.D., Harris, Jennifer M., (2017), War by Other Means: Geoeconomics and Statecraft. Harvard University Press.

Bruce Jones, Torrey Taussig (2019,) Democracy and Disorder. The struggle for influence in the new geopolitics. Brookings. N.Y.

Dreger, C., Kholodilin, K. A. Ulbricht, D., and Fidrmuc J., (2016), "Between the hammer and the anvil: The impact of economic sanctions and oil prices on Russia's ruble", *Journal of Comparative Economics* 44(2).

Delegation EU to Russia. (2017), EU restrictive measures in response to the crisis in Ukraine. URL: http://eueuropaeeas.fpfis.slb.ec.europa.eu:8084/delegations/russia/30963/eu-restrictive-measures-response-crisis-ukraine_en

European Parliament, (2017) Russia's and the EU's sanctions: economic and trade effects, compliance and the way forward. EP Directorate-general for external policies, policy department.

European Commission (2019) Agri-food trade statistical factsheet: European union – Russia. EC DG for Agriculture and Rural Development,. Bruxelles. 2019. URL: https://ec.europa.eu/agriculture/sites/agriculture/files/trade-analysis/statistics/outside-eu/countries/agrifood-russia_en.pdf

Eurostat (2019) Focus on Comext. International trade in goods.
URL: https://ec.europa.eu/eurostat/web/international-trade-in-goods/data/

Havlik P., (2014), Economic Consequences of the Ukraine Conflict. The Vienna Institute for International Economic Studies – (wiiw) Policy Note/Policy Report No. 14, Vienna.

Havlik P., (2019) EU-Russia sanctions exchange has had important economic and political consequences. The Vienna Institute for International Economic Studies (wiiw) Vienna.

Luttwak, E. N. (1999). "Theory and Practise of Geo-Economics" from Turbo-Capitalism: Winners and Losers in the Global Economy. New York: Harper Collins Publishers.

Sharples, J.D. , (2016) The shifting geopolitics of Russia's natural gas exports and the impact on EU-Russia gas relations, Geopolitics 21.

Smutka, L., Maitah,M., & Svatoš, M. (2019). Policy impacts on the EU-Russian trade performance: The case of agri-food trade. Journal of International Studies, 12(2), 82–98. doi:10.14254/2071-8330.2019/12-2/5

Solberg Soilen . K. (2012). Geoeconomics. Bookboon, London

World Trade Organization – Trade Profiles 2019. WTO. Geneva 2019.

WTO International Trade Statistics 2019. WTO. Geneva 2019a

Указ Президента РФ от 6 августа 2014 г. N 560 "О применении отдельных специальных экономических мер в целях обеспечения безопасности Российской Федерации", URL: http://www.garant.ru/hotlaw/federal/558039/

CREATION OF THE EU CAPITAL MARKET UNION AND THE ROLE OF IFRS

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Abstract
IDEA: finalization of EU Capital Markets Union depends on the possibility of removing the barriers to the creation of a capital union by positive regulatory measures of EU Authorities. The EU Capital Markets are not yet fully integrated. Up to 2018, EU Authorities evaluated the IFRS implementation as a factor supporting the Plan of the EU capital market union; however, the IFRS positive role is not a permanent one: it depends on the changes of economic, political factors and social factors as well. At presents, the IFRS positive role in CMU creation probably is changing into its revers. DATA: EU documents; IFRS documents; statistics; experts´ opinions from academic literature. TOOLS: Classification of positive and negative factors (i.e. barriers to the capital market union) and preliminary qualitative evaluation of their strength. What is new: In 2018, EU Authorities claimed that 80% of barriers (defined in 2015) already were set aside. However, the enumeration and definition of "barriers" was not satisfactory; in the Paper, many formerly neglected negative factors have been added. Under the influence of unexpected events (such as migration, Brexit, climatic changes, etc.) new barriers such as discriminatory use of duties, administrative obstacles, bank accounts´ freezing, visa policy etc. are more and more used; they are undermining timely EU capital market creation by the end of 2019. So what? During 2019, the strength of negative factors has been growing to such an extent that the implementation of the EU Capital Market Union is becoming not probable by the end of this year. Contribution: The paper may be of interest for policy-makers and regulators as a case study of EU CMU creation. The result of political decisions and regulatory measures depend on correct evaluation of the strength of IFRS and other barriers to the CMU creation. However, quantitative research is necessary to validate the result of preliminary qualitative findings.

Keywords: *International financial standards (IFRS), mutual interaction of IFRS and Capital Markets; implementation of EU Capital Markets Union; barriers of the CMU Implementation*

1. INTRODUCTION

International Financial Standards (IFRS) are of high importance for financial markets (FM), as they - through financial reporting, principles, rules and instruments - support the trading of financial products (Ball, 2005). IFRS is one of the important parts of FM infrastructure (defined in a broad sense); without the IFRS correct working, financial markets cannot efficiently work.

After the World Economic Crisis, the EU Authorities decided to set up its Investment Plan (known as the Juncker Plan) that should stimulate massive investment in all EU member states in the future. The first measure of this project consisted of creating an EU Common Capital Market (CMU) during the years 2015–2019. The main task of this action was to accelerate the rate of economic growth by supporting capital investment through strong regulatory measures. During the world crisis, the EU financial market declined and mutual investment between the EU member states was weaker than before. The degree of EU financial integration (its depth) declined and it had increased to be able to meet the investment need of all member countries. Without a special action, it was almost impossible to stop the general recession. However, the plan for CMU creation was implied different risks and impediments that had to be set away.

The purpose of this paper is to study the role of the IFRS that was supposed to support the goal of the Plan and its timely implementation. However, from a theoretical point of view, the final positive result and timely fulfilling of the Plan were not certain before. From the practical point of view, any unexpected political, economic, social etc. factors would be able to undermine the desired result.

Relations between IFRS and capital markets (CM) have the form of mutual interaction: capital markets´ development – connected with a competition – bring new financial products with new qualities to CMs that leads to the development of IFRS. IFRS development (as an instrument of financial regulation) creates feedback with a better working of capital markets and their safety, transparency and higher quality. (These approaches are sometimes under-valued or neglected in academic discussions and/or quantitative research papers.)

Majority of potential findings presented in the Paper have a *qualitative* nature. This paper does not include analysis of legislative questions.

2. LITERATURE

This paragraph contains selected sources, written by individual authors or groups of authors after the global financial crisis and selected official documents as well. Without any doubt, the study of the historical development (both - of capital markets and IFRS) is necessary for a correct understanding of topical changes and probable development in future on this field.

One of the basic sources is a study written by Procházka in 2017; the author – inter alia – describes the research of IFRS adoption in the world before and after the global financial crisis. The tendency to adopt the IFRS reflects the endogenous origin of financial reporting standards; the growing scope of IFRS in the world adoption (144 states in 2018) corresponds to the needs of better customers and investor protection. The accounting quality is a function of the institutional framework. IFRS was developed primarily to satisfy the informational needs of investors in capital markets (Procházka, 2017, p. 61), however, "capital markets in the CEE region do not usually play an important role in local economies" (Procházka, p. 61). This is the main reason, why results of empirical research of IFRS use in the developed countries are not relevant for use in the CEE region. Procházka continues: "*empirical studies* (in developed countries – VP) pre-dominantly investigate the samples of companies adopting the IFRS in their statutory accounts. All data are thus publicly available. However, there are a lot of economically important companies in the region, adopting the IFRS, which do not publish the IFRS statements, as these are not used in statutory filings, but "only" for consolidation purposes of the parent company. The subsidiaries of the parents´ reporting under IFRS regime are the most frequent group of IFRS adopters." (ibidem, p. 61). This is still a serious problem in the CEE region. The remaining 4 sections of the cited paper deal with the following problems: "Section 2 outlines the main economic and capital market data, which support the conjecture about the specific characteristics of the CEE region, which may have an impact on the outcomes of the IFRS adoption. Section 3 analyses the literature on the IFRS adoption in the selected countries, indexed in Thomson Reuters' Web of Science. Based on the literature review, potential topics for future research are considered in Section 4. Concluding remarks are presented in Section 5." (Procházka, 2017, p. 61)

The research study on economic and political implications of IFRS adoption in the Czech Republic evaluates the changes of basic conditions for further IFRS use in the specific Czech environment, (Jindřichovská and Kubíčková, 2016). Adoption of IFRS has contributed to greater cultivation of the economic environment and facilitated international operations. IFRS adoption is not prevalent, but it is gradually increasing. This is apparent mainly in

Czech companies with foreign parents that are in any event required to report in IFRS. A study of the comparability and reliability of financial IFRS in the sector of Czech SMEs represents a fundamental contribution in the Czech literature on SMEs (Kubíčková and Jindřichovská, 2016).

One of the very important and influential theoretical papers is a comparison of the positive and negative qualities (the “Pros” and “Cons”) written by Ball in 2005 which is an attempt to identify and evaluate potential ways of IFRS adoption. Let us cite the Ball´s interesting conclusions: “On the “pro” side of the ledger, I conclude that extraordinary success has been achieved in developing a comprehensive set of “high quality” IFRS standards, in persuading almost 100 countries to adopt them, and in obtaining convergence in standards with important non-adopters (notably, the U.S.). On the “con” side, I envisage problems with the current fascination of the IASB (and the FASB) with “fair value accounting.” A deeper concern is that there inevitably will be substantial differences among countries in the implementation of IFRS, which now risk being concealed by a veneer of uniformity. The notion that uniform standards alone will produce uniform financial reporting seems naive. Besides, I express several longer-run concerns. Time will tell” (Ball, 2005).

Another relevant question is the problem of barriers to the creation and use of reporting standards. According to the pre-crisis research, infrastructure requirements for an economically efficient system of public financial reporting and disclosure are very important. For example, it is necessary to separate “as far as possible the systems of public financial reporting and corporate income taxation, so that tax objectives do not distort financial information” (Ball, 2001, p.128.) The reasons for IFRS adoption in different countries were different (Saucke, 2009). According to some authors, for the IFRS adoption capital markets are more important than bond markets (Ball, Robin, Sadka, 2008).

In Poland, the response of capital markets to the mandatory adoption was examined; the response was: “slight”. The impact of quantity and quality of accounting information determined by the market institution was different for various users (Klimczak, 2011). In Poland, benefits from the adoption of IFRS for firms “increased the comparability and usefulness of financial statements and also enhanced the protection of their interests, but it has not contributed to their investment decisions or the possibility to make profit forecasts. The switch to IFRS – in the perception of the respondents – failed to reduce the information asymmetry between the external and internal users of accounting information. The impact of changing accounting standards on capital market liquidity failed to be unequivocally assessed” (Klimczak-Wachowitz, 2017).

The impact of IFRS adoption on financial analysts´ forecasts of capital market development in Jordan (during the period 2002–2013) was researched by Massoud: in general, the impact was positive: the research findings improved; improvements in the ability of analysts to forecast earnings (decrease in error and dispersion) were achieved (Massoud, 2013). This study is interesting because of its methodological approach.

Three authors from India analysed the significance of cultural differences in accounting systems. Their empirical study proved that after IFRS adoption cultural differences still are very important. (Naghshbandi, Ombati, Khosravi, 2016). This finding is important for CEE countries; however, up-to-now this question has not been thoroughly examined.

For a better understanding of IFRS, it is necessary to know the main facts about this system, the division of labour between its organs, the adoption rules etc. The main items are cited in the References (See: The IFRS Mission, The IFRS Foundation, IFRS Constitution, International Accounting Standards Board (IASB), International Financial Reporting Interpretations Committee (IFRIC), Monitoring Board, IFRS Advisory Council, List of IFRS Standards, How we set IFRS Standards, Adoption and Copyright for IFRS Standards.)

From the existing literature on CMU were selected, firstly, academic contributions (doctoral theses, working papers, etc.), relevant for the CMU research, and secondly, selected official documents published by the EU and other international organizations.

In the academic literature the goal to create the EU CMU has been studied from the point of view of different theories, mainly the theory of the international economic integration, theory of growth (optimal sustainable growth), theory of the international financial regulation, theory of state governance, theory of globalization and a growing application of behavioural theories.

According to its prevailing theoretical orientation and significance, the general trend of the research has split into five periods. 1. Since the 1960s (1960) approx. until 1980es the research about the economic, regional and other forms of integration in Europe and other continents prevailed; the basics about integration as an important trend of the process of internationalization were elaborated (for example Balassa, 1962); 2. Since the 1980s up to the end of the century research based on theories of growth took the lead; the basics of the theory on the optimal sustainable growth were created; 3. After the year 2000, the question of economic, financial etc. regulation represented the dominating (pre-crisis and after-crisis) research trend; 4. After the protracted cyclical recession, the theory of the internationalization and globalization of the world economy dominated the scene; 5. A new trend of research – based on the application of the behaviourist theories – started. Nowadays, the adherers of all the above theoretical streams continue their research in a parallel way; the coexistence of manifold opinions (together with computers and internet) enables an unprecedented accumulation of new empirical findings.

From the relevant literature published after the World Crisis, some of the academic sources are cited, as they contain interesting new views. For example, Jonne Brücher (2016) classified effects of the integration policy: „Different regional integration policies … can produce a number of effects or gains that can be more or less clearly summarized into five groups of effects, namely (1) Allocation effects; (2) Accumulation effects; (3) Location effects; (4) Levelling effects; and (5) Governance effects." Andrea Bonilla Bolaños (2016) in one of her studies wrote: „Economic integration at a regional level seems to be the new global trend." A bibliography on the regional integration published before the year 2011 is available in the doctoral thesis of Alphonse Kabananiye (2011).

One of the best studies on the EU theoretical and policy problems of the CMU was written by two authors – Vérone and Wollf (2016), soon after the official approval of the Juncker Plan by the EU Commission (2015). The article evaluated the short-term concept of CMU creation due to implementation in 2019. The cited authors´ analysis proved that the CMU should be a comprehensive, long-term project supported by all EC members (Britain included) (Vérone & Wolff, 2016). To-day, difficulties connected with Brexit implementation prove that they were right.

However, some of the European Stock Exchanges addressed critical objections to the EU Commission already in 2015 before the EU Commission approved the CMU plan; they asked for a series of changes that were not accepted. (CMU, 2016)

References include selected national and international documents from the period of 2012–2019, mainly EU documents about the EU CMU.

3. METHODOLOGY

A starting point of our reasoning is the following thesis: "An interaction between CMs and IFRS exists (mutual influence, feedback). Employing suitable regulatory instruments and active support of *positive elements* of IFRS, it is possible to reduce the barriers to the CMU implementation; an acceleration of the CMU creation can be achieved". This thesis reflects a positive expectation of the positive role of IFRS.

In the second step, the information about the CMU Plan fulfilment found in the sources (EU documents, reports, academic literature etc.) was analyzed to find out whether and to what extent or not it corresponds to the above thesis.

In the third step, a limited number of important questions about the IFRS and CMU interaction (according to the view of the author) were formulated and discussed:
Firstly, the interaction between capital markets´ development and the changing use of IFRS in general (4.1); secondly, specific interaction of the use of IFRS and the process of CMU implementation (4.2); and thirdly, the impact of barriers on the implementation of CMU and on the scope of IFRS use in V4 countries (4.3).

The fourth step consists of setting up a list of partial (theoretical and practical) findings of minor importance. They will be included in Conclusion in an abbreviated form.

In the last step, conclusions based on the research finding were drawn.

4. RESULTS AND DISCUSSION

4.1 The Interaction between Capital Market and the use of IFRS in general

(The definitions or characteristics cited in this paper)
The International Financial Standards (IFRS): The IFRS Foundation has "… (a) to develop, in the public interest, a single set of high quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles. These standards should require high quality, transparent and comparable information in financial statements and other financial reporting to help investors, other participants in the world's; capital markets and other users of financial information make economic decisions. (b) to promote the use and rigorous application of those standards. (IFRS Foundation Constitution, December 2018.)

Capital Market: "Traditionally, this has referred to the market for trading long-term debt instruments (those that mature in more than one year). That is the market where capital is raised. More recently, the word "capital markets" was used in a more general context to refer to the market for stocks, bonds, derivatives and other investments (Nasdaq, 2019).

EU Capital Market Union (CMU): "The capital markets union (CMU) is a plan of the European Commission to mobilize capital in Europe. It will channel it to all companies, including SMEs, and infrastructure projects that need it to expand and create jobs." (EC. Europa, 2019)

Interaction between CMU and IFRS development: interaction of CMU and IFRS involves mutual relations between the process of CMU implementation and international financial reporting use in EU. There are different types of relations the quality of which differ. This Paper deals only with selected relations relevant to the interaction of CMU and IFRS on two different levels of abstraction.

Remarks on the analysis of financial relations

The analysis of the potential impact (influence) of the processes of CMU creation on implementation and use of IFRS depends on the availability of necessary data, information and knowledge.

Theoretically, all relations, processes and events in the world are – in some way or other – interconnected; in case of any scientific research, it is necessary to define a research object and appropriate research methods to be able to produce some research result. This is – *inter alia* - the reason, why the research object of this paper had to be limited (for technical, financial and other reasons) only to the most important relations.

The word "impact" means that some process has some influence on some other process or processes. The task of researchers is to find out the "quality" of the given relations. According to the purpose (aim, goal) of research, the relevant relations have to be identified and examined. It is possible to analyze any research object from different aspects, i.e. to analyze the relevant relations for the economy, management, accounting, psychology, sociology, jurisdiction, etc.

The research object of this paper is *primarily financial*; it would be certainly useful to examine its impacts from other aspects as well, such as legal, political, technical etc. aspects, i.e. in a more complex way, but it exceeds the prescribed scope of papers. Therefore, only the *qualitative features* of the selected relations were studied. In the future, a quantitative analysis – if feasible – should follow.

4.2 Interaction between IFRS and CMU

It is useful to derive and evaluate the interaction of IFRS and CMU from the aims/goals of CMU creation. An EU document recently defined the following goals of CMU creation in the following way: "...provide new sources of funding for businesses, especially for small and medium-sized enterprises; reduce the cost of raising capital; increase options for savers across the EU; facilitate cross-border investing and attract more foreign investment into the EU; support long-term projects; make the EU financial system more stable, resilient and competitive" (Consilium EU, Capital Market Union. 2019).

It is useful to distinguish different types of the final effect/impact of IFRS on the CMU creation. According to this criterion, it is useful to distinguish three types of standards´ effects/impacts: (a) positive standards, i.e. standards that support the CMU creation; (b) negative standards, i.e. standards that do not support the CMU creation; (c) neutral standards, i.e. standards irrelevant for the CMU creation.

From the point of view of the EU economic and financial policy strategy (performed by the EU Commission) it is rational to support the use of standards with a positive impact and to reduce the impact of standards with a negative impact.

The EU Commission and every member country should take care of IFRS correct use. At the same time, the IFRS Authorities should follow the same policy of support of standards with a positive impact on the use of IFRS in the EU. If any of the states that decide to use IFRS, apply for the exception from the national legislation, the relevant IFRS Authorities will examine this request from the IFRS Constitution and Principles. The national legislation will have to change to be compatible with the IFRS requirements

4.3 The barriers on the road to CMU and the impact of the differentiated scope of IFRS adoption in V4 countries

The barriers on the road to CMU were identified and evaluated by EU Commission Staff before the Juncker Investment Plan start (EU Commission Staff Working Document, 2015). Obstacles to efficient capital markets were categorized into 4 groups: 1. Underdeveloped or fragmented markets; 2. Barriers on the demand side of the market in terms of access to finance, in particular as regards SMEs; 3. Constraints on the supply (i.e. investor) side of the market that limit the flow of savings into capital market instruments; 4. Market distortions or regulatory failures, that limit or impede direct financing of investments with a long-term horizon. (EU Commission Staff Working Document, p. 10).

The impact of barriers on the implementation of the CMU

In March 2018, most of the above barriers allegedly were removed (approx. 85% according to the EU authorities). However, all V4 countries capital markets were still lagging behind the EU average. Let us briefly enumerate the main common barriers on the road to CMU according to authors´ extended classification based on his previous research (see: table 1).

Table 1. The Barriers on the road to CMU

BARRIERS	2015	2019	V4 EXPECTATION IN 2019
Underdevelopment and fragmentation of CMs	x	-	x
Endogenous constraints in reaching critical size of CMs	x	-	x
Impaired market data availability	x	-	-
Differences in regulation and supervisory enforcement	x	x	x
Diverse and fragmented legal frameworks for specific financial instruments	x	-	x
Insufficiently harmonized or inadequate company law and corporate governance rules	x	-	x
Non-harmonized conflict-of-law rules in the area of company law	x	-	-
Insolvency laws and enforcement of contracts	x	x	x
National Tax barriers	x	x	x
EU CMs´ overdependence on bank finance	x	x	x
Lack of (credit) information for potential investors	x	-	-
Underdeveloped market for risk capital	x	-	x
Regulatory and other barriers to SME listing	x	-	x
Lack of trust in financial markets and intermediaries	x	-	x
Lack of adequate financial expertise	x	-	x
Household preference for investment in real estate	x	-	x
Language and other technical barriers	x	x	x
Capital market inefficiency x/	-	x	x
Unsolved obstacles to digitalization of CM x/	-	x	x
Unethical behavior of CM participants x/	-	x	x
Criminal activities x/	-	x	x
Organized (financial) cybercrime x/	-	x	x
Exogenous factors: Brexit x/	-	x	x
Exogenous factors: Climatic changes x/	-	x	x
Exogenous factors: Massive Migration x/	-	x	x
Other exogenous factors x/	-	x	x

Sources: own elaboration (mainly based on EU documents and own research)

NOTE x/: the last 9 items were not included in the list of barriers in 2015. In 2019, they are included, because of their growing importance.

In the next future, it will be inevitable to research efficient and adequate legal procedures to settle disputes and enforce contracts, suitable investor protection and regulation and adequate infrastructures based on digitalization.

Special position of Central European Countries (V4 Agreement countries)

During the transition period to capitalist system in 90ties, the V4 Agreement countries´ capital market has been – step by step – created; to-day (because of the specific former historical development of each country), capital markets of these countries have special features that are reflected in their size, development level, different infrastructure, rate of growth etc.).

Their present important common task consists in the necessity to join the EU CMU and – as soon as possible – to remove all identified barriers from the road to CMU. For the above reasons, the development strategies of the V4 Stock Exchanges (SEs) have to be adapted to the needs of the CMU creation; however, they will have to use different regulatory ways and tools to be able to comply with the expected CMU regulations.

The probable time that elapses until the CMU emerges – the "distance" of each of the four V4 countries´ capital markets from the goal, i.e. from the implementation of the EU CMU, was described in this part of Paper.

In the Czech Republic a concept of capital market development (for years 2019–2023) elaborated by the Czech Ministry of Finance was approved by the Czech Government (2018. *National Strategy for the Development of the Capital Market in the Czech Republic 2019–2023)*. Up to now, three of V4 countries did not yet published their topical specific capital market development concepts. However, specific studies on the capital market of these countries elaborated by different international organization (World Bank, OECD etc.) already exist; they include recommendations concerning the implementation of CMU as well.

In Poland and Hungary, development strategies of the Warszaw Stock Exchange and Budapest Stock Exchange were published. i.e. (*GPW Group's Strategy by 2022 in 2018* and. BSE (*BSE strategy 2016–2020; 2016 Budapest Stock Exchange for Successful SMEs*) in 2017. These stock exchanges are still the most important institutions on capital markets and their role in investment allocation and price formation is recognized.

In Slovakia, the National bank of Slovakian Republic analyzed the state of Slovak capital market in 2016, see (Lojschova, 2016). According to the author, "…. The stock market in Slovakia … practically does not exist, as more than 99% of trades on the Bratislava Stock Exchange are represented by bond trading." (ibidem, p.14.). Because of a lack of comparable original sources, majority of our considerations is based on qualitative sources (official documents, academic articles etc.); at present, it is not possible to draw the definitive results. (This approach corresponds to the research method described in the Introduction, see 1.3).

In March 2018, EU Commission presented a package of proposals to accelerate the CMU creation to be able to put together all CMU building blocks together by mid-2019. (EU Commission Communication: Completing the Capital Market Union by 2019 – time to accelerate delivery. 12.03.2018).

The differentiated scope of IFRS adoption in V4 countries

The scope of IFRS adoption in different countries is different (see table 2).

Table 2. The scope of IFRS adoption in V4 countries (as of 2019)

COUNTRY	THE SCOPE OF IFRS ADOPTION
CZECH REPUBLIC	IFRS Standards are required for domestic public companies IFRS use for SMEs is under consideration
HUNGARY	IFRS Standards are permitted but not required for domestic public Companies IFRS fuse or SMEs is required or permitted
POLAND	IFRS Standards are required or permitted for listings by foreign Companies
SLOVAKIA	IFRS Standards are required or permitted for listings by foreign Companies

Source: https://www.ifrs.org/use-around-the-world/ (2019)

NOTE: In most cases, an SME may also choose full IFRS Standards. In some cases, an SME may also choose local standards for SMEs.

The future use and scope of IFRS in the V4 countries probably will depend more on political and other exogenous factors (Brexit, migration, taxation, world trade agreements, climatic changes etc.) than on endogenous economic and financial factors.

5. CONCLUSION

Researching the interaction between IFRS and CMU implementation is topical and useful, even though only preliminary results are available. IFRS is a part of the FMs and CMs infrastructure (in a broad sense); this concept enables a new approach to the research of their mutual relations. Under conditions of a dynamic process of economic development, it was useful to compare the aims of both processes.

The general aims of IFRS and the CMU creation are similar. The IFRS strive for transparency, accountability and efficiency of their use; the CMU creation strives for liquidity, transparency, integrity and accountability of capital markets (CMs). The choice of practical goals of IFRS use and the CMU creation depends on the availability of data, information and knowledge. In this paper, the research of the relationship between IFRS and CMU represents qualitative research; quantitative research has to follow to be able to verify the findings discussed in this paper.

The supposition that major obstacles to the CMU Plan would be eliminated till the end of 2019 evidently cannot be fulfilled. Up to now, it is not clear whether the real depth of EU capital market (measured on the base of EU statistics) will be *really* higher than in 2015. There is an expectation that the CMU plan will (in a modified form) either continue as a part of the EU Investment plan framework or set away. Anyway, the IFRS will continue to play a positive role on the further road to a deeper EU capital market integration (KPMG, The future of IFRS, 2019).

Selected qualitative research findings on the interaction between IFRS and CMU confirm the possibility to achieve the CMU aims in the future years. A summary of findings is set up here:

a) during the given period (2015–2018) a number of new standards IFRS – replacing the “old” IAS standards – was issued and/or the standards´ explanation was modified; decisions about a number of standards´ modification have been postponed; in case of reporting standards such delays may cause delays of CMU implementation;
b) up-to-now, the total impact of IFRS use on the process of CMU creation in the EU countries with less developed capital markets is relatively weak;
c) on the EU side, specific political aspects concerning the CMU implementation strategy are playing a higher role than in case of an autonomous global IFRS development on the side of IFRS Authorities;
d) the interdependence between the IFRS and CMU does not necessarily have a causal character;
e) The V4 countries are still lagging behind the 28 EU countries average of preparedness of then CMU creation (by the end of 2019).

Quantitative research is necessary to validate or not validate the result of preliminary qualitative findings.

BIBLIOGRAPHY

Balassa, B. (1962). *The Theory of Economic Integration*. London: Richard & Urwin.

Bolaños, A. B. (2016). *A step further in the theory of regional integration: A look at the Unasur's integration strategy*. Working paper GATE 2016–17, available at: https://halshs.archives-ouvertes.fr/halshs-01315692/document, accessed on 29. 1. 2019.

Brücher, J. (2016). *Regional economic integration and development: A theoretical and empirical conceptualization with particular focus on the East African Community*. University Leipzig, Germany, available at: http://ul.qucosa.de/api/qucosa%3A14993/attachment/ATT-0/, accessed on 29. 1. 2019.

BSE (2017). *BSE strategy 2016-2020*, available at: https://www.bse.hu/About-Us/About-Budapest-Stock-Exchange/bse-strategy-2016-2020, accessed on 29. 1. 2019.

CMU (2016). *Capital Markets and funding EU SMEs: Budapest Stock Exchange for Successful SMEs*, available at: https://www.bet.hu/pfile/file?path=/site/Kepek/KKV-konferencia/01_-_Niall_Bohan_European_Commission.pdf1, accessed on 29. 1. 2019.

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN CENTRAL BANK, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Capital Markets Union: progress on building a single market for capital for a strong Economic and Monetary Union (2019).

Consilium Europa. Capital Market Union (March, 2019). Available at: https://www.consilium.europa.eu/en/policies/capital-markets-union/ accessed on 29. 3. 2019.

EC. Europa, 2019.

Euractiv.com. Ed. Sam Morgan). (2019). Goodbye Juncker Plan, Europe´s new investment fund. available at: https://www.euractiv.com/section/economy-jobs/news/goodbye-juncker-plan-hello-investeu-europes-new-investment-fund/ accessed on 29. 3. 2019.

EU Commission (2015). *Action plan on building a capital market union*, available at: https://ec.europa.eu/info/publications/action-plan-building-capital-markets-union_en accessed on 29. 3. 2019.

EU Commission Staff Working Document.(2015) Initial reflections on the obstacles to the development of deep and integrated EU capital markets. Available at: http://eurlex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52015SC0013&from=EN

Government of the Czech Republic (2018). *National Strategy for the Development of the Capital Market in the Czech Republic 2019–2023*. Draft, available at: https://www.businessinfo.cz/app/content/files/engdocs/national-strategy-cz-capital-market.pdf, accessed on 29. 1. 2019.

GPW (2018). *GPW Group's Strategy by 2022*, available at: https://www.gpw.pl/news?cmn_id=107148, accessed on 29. 1. 2019.

European Commission contribution to the European Council (15.3.2019) Capital Markets Union: progress on building a Single Market for capital for a strong Economic and Monetary Union Available at: http://ec.europa.eu/finance/docs/policy/190315-cmu-communication_en.pdf, accessed on 29. 1. 2019.

European commission (n.d.) What is the capital market union?, available at: https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/what-capital-markets-union_en, accessed on 16. 6. 2019.

European Union official website, available at: https://europa.eu/european-union/topics/single-market_en, accessed on 16. 6. 2019.

Jindřichovská, I., Kubíčková, D. (2016), *Economic and Political Implications of IFRS Adoption in the Czech Republic*. In: Uchenna, E., Nnadi, M., Tanna, S., & Iyoha, F. (2016). Economics and Political Implications of International Financial Reporting Standards. 417

s. Hershey, PA: IGI Global (USA), pp. 105–132. ISBN: 978-1466-698-7-65, doi:10.4018/978-1-4666-9876-5.

Kabananiye, A. (2011) *Regional Integration and Sustainable Growth in*
SubSahara Africa: A Case Study of the East Africa Community. Doctoral thesis, Northumbria University, available at http://nrl.northumbria.ac.uk/2115/, accessed on 29. 1. 2019.

KPMG. The future of IFRS (2019). Available at: https://home.kpmg/xx/en/home/services/audit/international-financial-reporting-standards/future-of-ifrs.html accessed on 15.9.2019.

Kubíčková D., Jindřichovská I. (2016). The comparability and reliability of financial information in the sector of Czech SMES (ten years of IFRS as a part of Czech accounting context). *European research studies journal.* Vol. XIX, No 4. pp. 64–77.

Lojschova, A. (2016) Capital markets in Slovakia, National Bank of Slovakia Available at: https://mpra.ub.uni-muenchen.de/79584/1/biatec_02_2016_Lojschova.pdf, accessed on 19. 4. 2019.

Nasdaq (2019). Investing Glossary. Available at: https://www.nasdaq.com/glossary, accessed on 29.1.2019

Vérone, N., Wolff, G. B.. (2016). Capital Markets Union: A Vision for the Long Term. *Journal of Financial Regulation*, Vol. 2, No. 1, pp. 130–153.

THE INDEPENDENCE GAP IN FINANCIAL AUDIT. A CONCEPTUAL PERSPECTIVE

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Abstract
How the public perceives the financial audit profession and the independence of auditors are two topics that are again of interest for professionals, regulators and researchers. On this background, the current study attempts to develop a model on the independence gap in financial audit, starting from the models already developed in the literature on the expectation gap in financial audit. The author presents the evolution of the ”expectation gap” notion, investigates the main expectation gap models developed over time and presents a new conceptual model regarding the differing perceptions on the independence in auditing.

Keywords: *financial audit, financial dependence, fees, independence, model*

1. INTRODUCTION

In recent years, the perception upon the financial audit profession suffered as a consequence of the economic-financial crisis, on the one hand, and the accounting scandals from the beginning of the XXIst century, on the other. The discrepancy between public expectations and the actual performance of the financial auditor, as perceived by the public, has become more pronounced than ever. At the outbreak of the economic-financial crisis, the financial auditor was accused, for instance, the fact that he/she did not report upon the evidence regarding the non-validity of the going concern principle to the audited entities. Also, the ethical requirements and especially the one regarding the independence of the auditor returned to the forefront of the discussions carried out by practitioners, legislators and researchers. There are recent studies such as Jedidi & Richard (2018), where the expectation gap is analysed as a component of the work by auditors to preserve their professional autonomy. Our paper is different from previous studies in that it focuses on the independence gap, in particular, given the immense importance of independence in audit (Mocanu, 2009; Guénin-Paracini et al., 2015). Our paper aims to develop two current topics: discrepancies in perception about the financial auditor ("expectation gap") and the independence of the financial auditor. In the spirit of the constructivist research approach, the authors aim to develop a model regarding the discrepancies of perception about independence in the financial audit ("independence gap model"). The paper is structured as follows: the first section presents the evolution of the notion of “expectation gap”; the second section investigates the history of the main models regarding the "expectation gap", and the third presents the model proposed by the authors regarding the independence-related expectation gap in financial audit. The paper ends with the conclusions section.

2. THE EVOLUTION OF THE “EXPECTATION GAP” NOTION

Financial audit is one of the areas where the phrase “expectation gap” is commonly used. This phrase generally designates a difference between two reference points, usually the discrepancy between expectations and perceived reality. In the context of financial audit, the concept was first used by Liggio (1974), quoted by Block (2011, p. 17). He defined "expectation gap" as "[...] differing expectation levels as to both the quality and the standard of the accounting profession's performance and what it is expected to accomplish". Thus, the perception controversies in the audit are generated - according to Liggio – by the discrepancy between the expectations of the general public, on the one hand, and the actual performance of the profession of financial auditor, on the other.

The notion of "expectation gap" has been addressed internationally by many authors, so that at present there are various definitions and perspectives on this notion, which depart from the definition originally presented by Liggio. Summarizing these definitions, several types of discrepancies can be identified that can be generally referred to as the "expectation gap" or that are considered a component of the "expectation gap".

First, Block (2011) delineates five definitions of the "expectation gap" notion: discrepancies generated by unjustified expectations, discrepancies generated by regulations, discrepancies in performance, discrepancies in perception and discrepancies generated by the self-perception of the profession. These are presented in the following paragraphs, according to Block's vision (2011).

The gap generated by unjustified expectations refers to the difference between the expectations that the general public has towards the financial auditor and cannot be fulfilled and the expectations that the general public would have been entitled to have. This discrepancy is most often due to the fact that the general public understands and knows poorly the legal provisions regarding the area of responsibility of the financial auditor.

The gap generated by the regulations consists in the difference between the justified expectations for the financial audit and the requirements of the legislation or profession. In other words, there is a discrepancy between what the financial auditor is asked to do, by law or professional standards, and what can be justifiably claimed from a financial audit.

The performance gap consists of the difference between the requirements of the law and the profession and the effective performance of the tasks related to the financial audit. Thus, there may be a difference between the level of performance desired by the regulations and the actual performance level of the financial auditor. The causes of such a difference can be the wilful or necessary violations of the legislative framework by the auditor and or the fact that the imposed requirements are unjustified.

The perception gap refers to the difference between the actual performance of the profession and the way in which the general public perceives the carrying out of professional tasks. This difference may be the result of a distorted perception of the public regarding the profession of financial auditor.

Last but not least, the notion of "expectation gap" also includes how the profession perceives itself and the roles assigned to it. In this context, a gap may also arise between the self-perception of the profession of financial auditor and the perception of the general public and legislators about it. Also, if the understanding that the financial auditor has about his role is embodied in his actions, this definition is similar to that regarding performance gap. If, on the other hand, financial auditors tend towards self-idealization, the potential performance gap matters disappear totally or partially.

Regarding the expectations regarding the roles of the auditor, Doll (2000) highlights some important points in which there are differences between the auditor's perception and the perception of other parties interested in the outcome of the audit process, such as investors or legislators. For example, a perception gap arises: regarding the auditor's obligation to prove the correctness and conformity of the audited company's accounting; regarding his objective to discover all fraudulent actions; regarding his concern for the audited company to operate efficiently; regarding his responsibility to certify the future survival capacity of the client-company and so on. The profession does not consider these responsibilities that the public wants to be fulfilled as part of their duties.

Bahr (2003) differentiates various relations between the five definitions of "expectation gap" presented above. First, the expectations of the general public influence the financial auditing regulations. The expectations of the public incorporate, among other things, the needs of society. If these needs evolve and change, then the expectations regarding the financial audit will change. If these new expectations are considered justified by lawmakers and the profession, the financial audit rules are also amended. Therefore, financial audit regulations are dynamic and are influenced by changes in expectations.

Secondly, there is a direct connection between the audit rules and the effective fulfilment of the audit tasks. The accounting profession performs its activity according to the existing regulations. Assuming that the financial auditors know and accept the legal and professional norms, the distance between the requirements imposed by regulations and the effective execution of these requirements by the auditors is diminished.

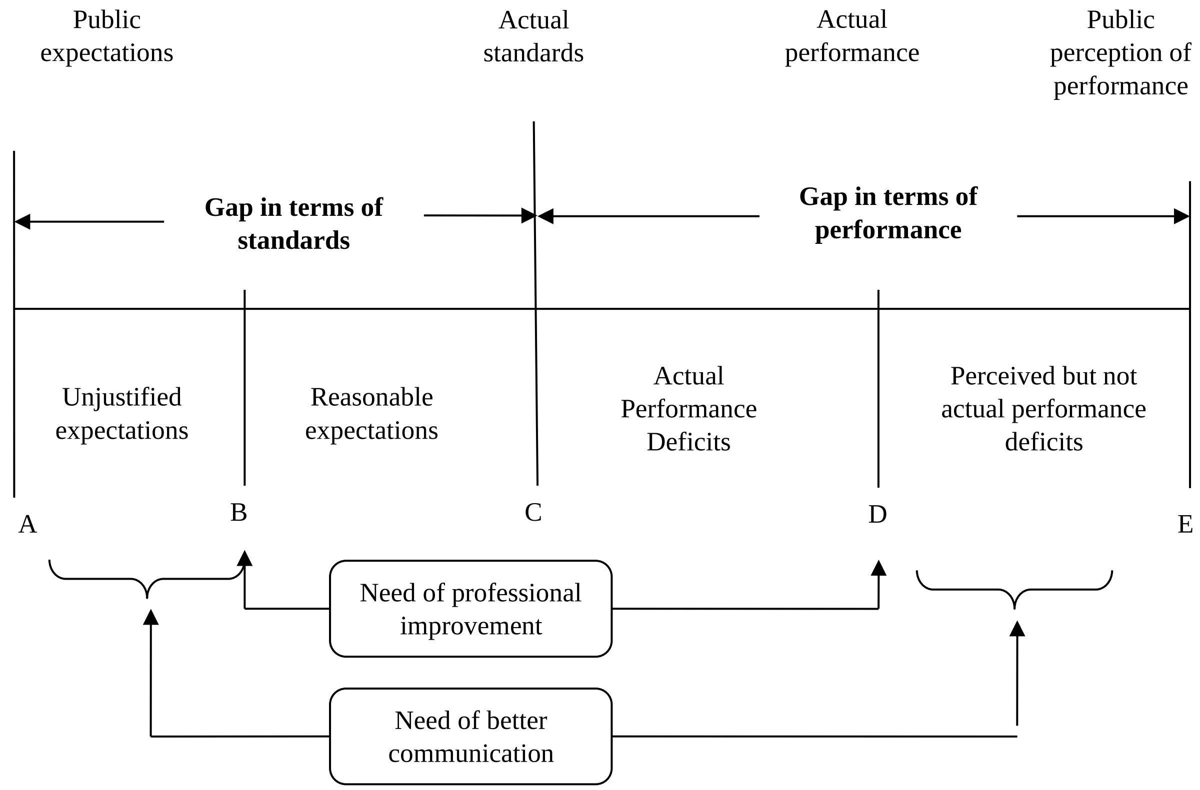
Last but not least, a relationship can be identified between the effective fulfilment of the tasks related to the financial audit and the public's perception of the fulfilment of these tasks. As a rule, the general public cannot fully know how the financial auditor pays his professional debts. What often become public are only the cases of behaviour that contravenes the fundamental principles of the profession of financial auditor, even if only partially.

3. HISTORY OF THE MAIN MODELS REGARDING THE EXPECTATION GAP

Over time, several models have been developed regarding the "expectation gap". One such model is that of the Macdonald Commission and presented by Bahr (2003) (Figure 1). Bahr (2003) defines the notion in a narrow sense, as the discrepancy between what is expected and what can be justifiably expected. Within the Macdonald Commission model, the notion is broadened, being divided into four components. As delimitation criteria, in addition to expectations and perceptions, one also uses legal or professional norms (point C), the effective performance of the profession (point D) and a theoretical criterion for separating justified or unjustified expectations (point B).

Applying these delimitation criteria, there are four resulting components: (1) unjustified expectations; (2) reasonable expectations; (3) actual performance deficits and (4) perceived but not actual performance deficits. The component "discrepancy in terms of standards" is composed of both justified and unjustified expectations (points A to C). These refer to expectations that exceed current standards. Similarly, the "performance gap" component is made up of effective and only perceived performance deficits.

Figure 1. Expectation gap model of the Macdonald committee



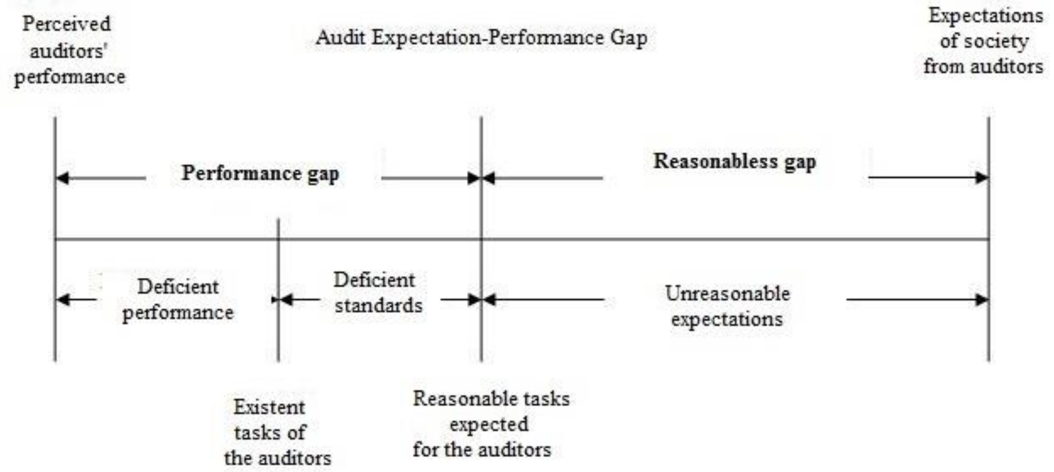
Source: Bahr (2003)

Another model relevant to the present discussion is Porter's model (1990). According to Bahr (2003), he understands the notion of "expectation gap" as the difference between what the general public expects from the external auditor and the performance of the auditor, as perceived by the public. The reference to perceptions is explicitly made by Porter, emphasizing the importance it attaches by the very name chosen for "expectation gap": "audit expectation-performance gap".

Porter (1990) separates the expectation gap into several components, namely the discrepancy between an auditor's expectations and the reasonable expectations (Reasonableness Gap) and the discrepancy between the reasonable expectations and the perceived performance. (Performance Gap). It is further divided into Deficient Standards and Deficient Performance.

To separate these three components, Porter (1990) uses two criteria: the auditor's existing tasks and the tasks reasonably expected. Existing tasks can be deduced from the analysis of laws and regulations issued by the profession, while the tasks expected to be fulfilled can be determined with difficulty, by generating additional costs. As can be seen in Figure 2, justified expectations delimit poor standards from unjustified expectations. The relationship between these two components is as follows: if justified expectations are implemented, unreasonable expectations are diminished and deficient standards increase simultaneously.

Figure 2. Expectation gap model developed by Porter



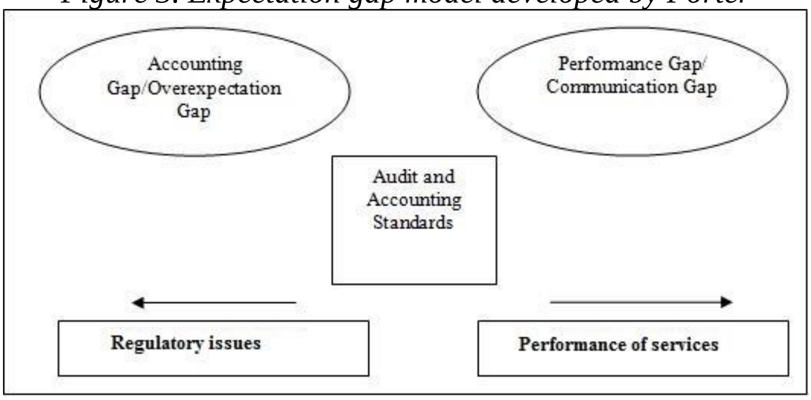
Source: Bahr (2003)

Through justified expectations, Porter understands those expectations compatible with the social role of the auditor and which presents an acceptable cost-benefit ratio. Regarding the compatibility with the role of the auditor, the viability of such a criterion can be questioned. One reason would be that the role of the professional accountant is constantly changing, depending on the changes at the economic, social and political level, and the purpose of a discussion of the notion of "expectation gap" is precisely to lead to an evolution of the role of the auditor and of its concrete tasks.

Behr (1996) developed another model for the perception of the financial audit profession. The novelty of this model is the fact that for the expectation gap, responsible are not only the financial auditors, but also those who prepare the financial statements, namely the audited company. This model contains several components, as follows:

- "performance gap", a gap generated by a defectuous performance of those responsible for the financial statements and/or the financial auditor;
- "communication gap", a gap caused by the difficulties of presenting in a short audit report some complex situations and assessments, as well as the difficulties in reporting companies;
- "overexpectation gap", a gap that occurs if there are false expectations regarding the possibilities of reporting, respectively regarding the audit. The way to eliminate such a component is clarification and objective, factual information.
- "accounting gap", a gap arising from the insufficient reporting of the audited company or from the erroneous application of accounting concepts.

Figure 3. Expectation gap model developed by Porter



Source: Behr (1996, p. 540)

The strength of this model is that it takes into consideration an otherwise very close and obvious connection between accounting and financial auditing. It is a well-known fact that irregularities in the field of accounting are inevitably affecting the financial audit. The reason is that the expectations regarding the true and fair view offered by the financial statements can be projected by their users also upon the financial audit.

Another model, developed by Heering (2000) regarding the expectation gap is based on the following definition of "expectation gap": the difference between users' expectations of the audit opinion and area of responsibility established legally for the financial audit. The model is based on the distinction between reasonable expectations and unjustified expectations. His perspective differs from that of other authors in that he understands the reasonableness of expectations. Thus, for Heering (2000), a reasonable expectation is not defined by the cost-benefit ratio, but by the fact that it can be found in the legal regulations or professional norms. The premise of such an agreement is that these regulations reflect the expectations of the general public as a whole. By default, any expectation that goes beyond the regulations (so the expectations of the public) cannot be justified.

Based on this distinction between justified and unwarranted expectations, Heering (2000) discusses about justified discrepancy and unjustified discrepancy. The first appears when the expectations are oriented towards the requirements of the legal and professional norms, while the unjustified discrepancy is generated by expectations that exceed the tasks established by law or by the professional body.

4. SUGGESTED MODEL REGARDING THE AUDIT INDEPENDENCE GAP

Analysing the definition of the notion of "expectation gap" and the most important models that have been developed over time, we can extract the following reference points on which we base our approach of delimiting the various gaps previously presented:

- the justified expectations of the public towards the financial auditor;
- the unjustified expectations of the public towards the financial auditor;
- the current tasks of the financial auditor, established by the regulations;
- the perception of the financial auditor on his own role;
- public perception on auditor's performance;
- the actual performance of the auditor;
- the quality of the financial reporting of the client-company;
- the quality of the communication from the financial auditor and the audited entity.

In our opinion, we consider that the definition of the phrase "expectation gap" and the related models can be applied also to the narrower field of financial auditor independence. This is because the controversies of perception on the audit (respectively "expectation gap") refer to the perception on the requirements of the auditor as a whole, and the requirement of independence represents a subset of the set of requirements made to the accounting professional. In addition, also in the case of independence, the question of independence in fact and independence in appearance is raised.

Therefore, we can consider that independence is a sub-component of the "expectation gap". There is a discrepancy between the public's expectations and reality regarding the role and performance of the auditor and, likewise, there may be a difference between the expectations or perceptions of the public regarding the independence and the actual independence of the financial auditor. And in this case there may be a difference between the conditions in which the auditor perceives himself independently and the conditions in which the public understands the concept of independence. Moreover, there may be a discrepancy between the regulations regarding independence and how they are understood and/or can be effectively put into practice by accounting professionals.

Based on the aforementioned discrepancies and considering that independence, more than the general role of the auditor, could be thought of as a game of perceptions, we suggest creating a model regarding independence, based on the analogy between the independence gap and the general expectation gap in audit. In order to develop this model, the first step is to identify the necessary criteria for delineating the different discrepancies that make up what will be called "independence gap".

Thus, by analogy with the benchmarks identified in the presentation of the “expectation gap” models elaborated by the Macdonald Commission, Porter, Behr and Heering, we suggest the following delimitation criteria:

- justified expectations of the public regarding the independence of the financial auditor;
- unjustified expectations of the public regarding the independence of the financial auditor;
- the independence requirements established by the existing regulations;
- the financial auditor's perception of his own independence;
- the public's perception of the auditor's independence;
- the effective independence of the auditor;
- type of audit opinion issued.

The type of audit opinion issued was also taken into account, assuming that issuing a modified opinion is a clear indication to the public that the auditor resisted any pressure from management to issue an opinion in his favour, therefore it can be considered that, at least apparently, the auditor was independent in carrying out the mission. We also included as delimitation criterion the auditor's perception on their own independence. The reason for this choice is that independence can also be considered a moral-cognitive process, in the sense that the financial auditor is a human being with emotions, beliefs, prejudices and a certain level of moral development, of which he is often not aware in the decision-making process, perceiving himself as being completely objective. Therefore, the differences between the independence perceived by the financial auditor and his independence may in fact be significant.

Starting from the previously proposed delimitation criteria, we suggest the following components of the “independence gap”, by analogy with the components presented in the models elaborated by the Macdonald Commission, by Porter, Behr and Heering:

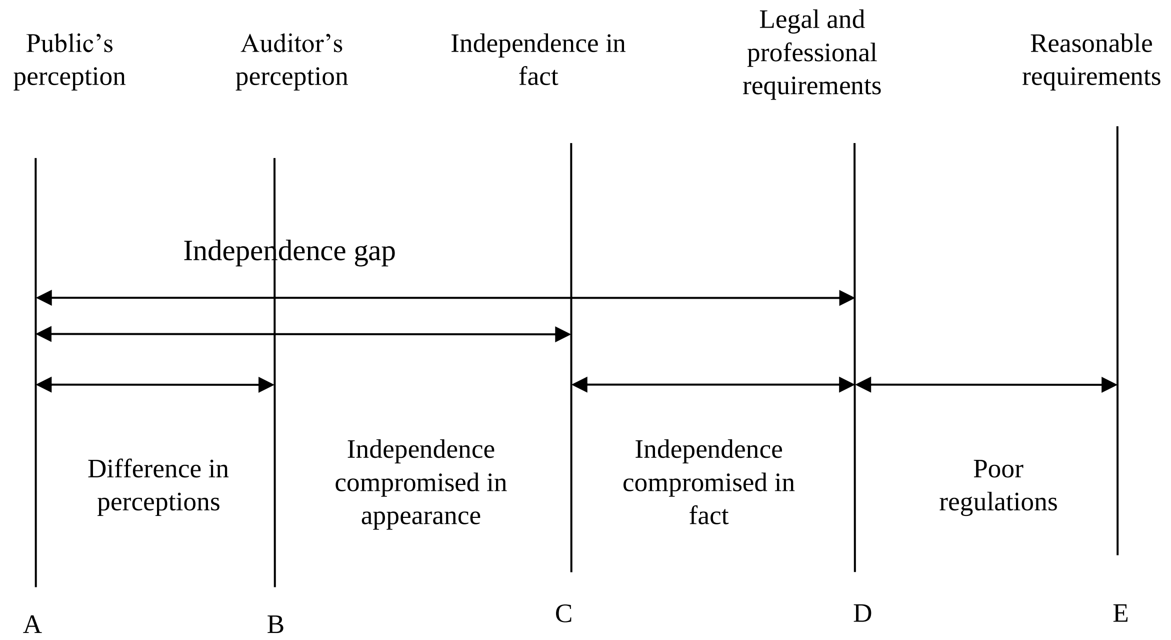
- “independence compromised in fact”: difference between the current regulations regarding independence and the effective independence of the financial auditor; this indicates that in reality, the financial auditor deviated from the existing rules regarding this ethical principle.
- “independence apparently compromised”: discrepancy between the auditor's independence in fact and a lack of the independence perceived by the public, but which in fact has no correspondent in reality;
- “deficient regulations”: the difference between the independence requirements established by the regulations in force and the requirements that could reasonably be imposed on the independence of the financial auditor; this difference may also be due to the fact that there is a tendency to regard independence as an impossibility, as an unattainable desire that cannot, in fact, be included in some regulations;
- “difference of perceptions”: the discrepancy between the financial auditor's perception of his / her independence and the public's perception of his / her independence;

- “independence achieved in appearance”: the difference between the auditor's independence in fact, which is compromised, and the public's positive but erroneous perception of the auditor's independence; a cause for such a perception may be, as explained above, a modified opinion or the impossibility to issue an opinion.

Figure 5 presents the model developed by the authors in terms of “independence gap”, i.e. in matters of perception controversy over the independence of the financial auditor. The model has the advantage that it systematizes the main differences of perception on the ethical principle of independence, differences that can have consequences: a distorted image on the profession of financial auditor; affecting its good reputation; lack of clarity as to the actual requirements of the legislation and of the profession in the matter of independence and of what these requirements should reasonably be.

Points A, B, C, D, E represent the criteria for delimiting the discrepancies and designate the following aspects: A: the perception of the general public on the independence of the financial auditor; B: the financial auditor's perception of his / her independence; C: the independence in fact of the financial auditor; D: the requirements established by the legislation and profession regarding independence; E: requirements that could reasonably be imposed on independence.

Figure 4. Independence gap model



Source: own design

According to the authors, there are two alternative variants regarding the relationships between them, as follows: (1) A <B <C <D <E or (2) A <B> C and C <D <E. These relationships determine, moreover, the entire design of the model in figure 4. The first inequality can be explained as follows: the perception of the general public on the independence of the financial auditor (A) is less favourable than the perception of the financial auditor on his own independence (B); the same perception (A) is also less favourable in relation to the reality, respectively in relation to the factual independence of the auditor (C); in turn, independence is in fact imperfect, the concept of independence being largely a difficult task to achieve in practice, so that the requirements set by legislation and profession

(D) are not fully met; these requirements (D) are a subset of the requirements that could reasonably be imposed on independence.

In the second case, all relations are preserved, except for the relation between the perception of the public and that of the auditor. Thus, the model also considers the happy and less common, but still possible, case where the public's perception of the auditor's independence is more favourable than the financial auditor's independence de facto. We start from the premise that the informational asymmetry between the general public and the auditor can work in favour of the good reputation of the financial auditor, not only to his disadvantage, as happened in the case of the balance scandals from the beginning of the 21st century or in the case of the economic crisis started around 2008. Since this second case is less likely, it is not presented in the graphical representation of the model.

5. CONCLUSIONS

The studies on the “expectation gap” in financial audit have become more frequent in the last decades due to the scandals affecting auditor’s role. On this background, several authors analysed auditors’ public image (García Benau et al., 1999), and particularly the effects on their reputation (Cameran et al., 2010; Piot, 2005). They concluded that reputation is crucial for any company offering financial services in general and especially for financial auditors, because reputable auditors perform higher quality audit reports (Krishnamurthy et al., 2006). The usefulness of this "independence gap" model is to (1) explain the differences of perceptions that arise in the context of the discussion about the financial auditor's independence, (2) to contribute to a better understanding of the pressures and interactions in the audit environment that impact on the independence of the accounting professional and (3) to contribute to the evolution of regulations regarding independence. The main limitation of our study, similar to the limitation of prior studies on the topic, consists in the fact that it is difficult to capture the concept through a tangible measure. The attempts to quantify the expectation gap consisted mainly in gathering data on the perception of different stakeholders on the good reputation of financial auditors (e.g. Salehi, 2016). Nevertheless, the presented model on independence gap in financial audit is notable for its novelty and originality, given that it is the personal conception of the author and the result of the efforts of analysis and synthesis of the specialized literature in this area.

BIBILOGRAPHY

Bahr A. (2003). *Vertrauen in Wirtschaftsprüfer. Konzeptioneller Bezugsrahmen für eine realwissenschaftliche Theorie der Erwartungslücke*, Deutscher Universitäts-Verlag.

Behr G. (1996). Expectation Gap – Rolle der Rechnungslegung, Der Schweizer Treuhänder 7-8, p. 539-546, disponible online at: http://www.aca.unisg.ch/behr/Publikationen/ST_7-8_1999.pdf

Block C. (2011). *Die Performance Gap des Abschlussprüfers*, Gabler Verlag, Wiesbaden.

Cameran, M., Moizer, P., Pettinicchio. (2010). *Customer satisfaction, corporateimage and service quality in professional services*. The Services Industry Journal, Vol. 30 No. 3, pp. 421–435.

Doll R. (2000). *Wahrnehmung und Signalisierung von Prüfungsqualität*, Peter Lang, Frankfurt am Main.

Heering, D. (2000). *Die Prüfung IAS-konformer Konzernabschlüsse: Besonderheiten vor dem Hintergrund der Erwartungslücke bei der Abschlussprüfung*, Lang, Frankfurt am Main u. a. 2000, zugl. Diss. Universität Innsbruck 2000.

García Benau, M. A., Garrido, P., Vico, A., Moizer, P., & Humphrey, C. (1999). *La calidad del servicio de auditoria: Los auditores vistos por sus clientes*. Revista Espanola de Financiación y Contabilidad, Vol. 28, No. 102, pp. 1005–1041.

Guénin-Paracini, H., Malsch, B. & Tremblay, M.S., (2015). *On the Operational Reality of Auditors' Independence: Lessons from the Field*. AUDITING: A Journal of Practice & Theory: May 2015, Vol. 34, No. 2, pp. 201–236.

Jedidi, I. & Richard, C. (2018). Le travail de démarcation des auditeurs : une histoire française de l'« expectation gap ». *Comptabilité – Contrôle – Audit*, Vol. 24, No. 3, pp. 39–66.

Krishnamurthy, S., Zhou, J., & Zhou, J. (2006). *Auditor reputation, auditor indepen-dence and the Stock Market Impact of Andersen's Indictment on its client firms*. Contemporary Accounting Research, Vol. 23, No. 2, pp. 465–490.

Liggio, C.D. (1974). *The Expectation Gap: The Accountant's Legal Waterloo*, *Journal of Contemporary Business*, Vol. 3, No.3, pp. 27–44.

Mocanu M. (2009). *An Analysis of the Concept of Auditor Independence*, Metalurgia International Vol. 13, No. 11, pp. 126–128.

Piot, C. (2005). *Auditor reputation and model of governance: A comparison of France, Germany and Canada*. International Journal of Auditing, Vol. 9, 21–44.

Porter, B. A. (1990). *The Audit Expectation-Performance Gap and the Role of External Auditors in Society*, New Zealand.

Salehi M. (2016). *Quantifying Audit Expectation Gap: A New approach to Measuring Expectation Gap*, Zagreb International Review of Economics & Business, Vol. 19, No. 1, pp. 25–44.

CSR/Integrated and Non-Financial Reporting

IMPACT OF COHESION FUND SUPPORT ON CORPORATE SOCIAL RESPONSIBILITY AND ANNUAL REPORTS OF CZECH PRIVATE ENTERPRISES

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Abstract
The EU, EU law and policies, such as the Europe 2020, attempt to decrease differences and divergences in CSR and harmonize, if not unify, related practices and reporting. Further, the EU provides financial support for various categories of CSR through funds such as the Cohesion Fund. The Czech Republic and Czech law follow this trend and require almost all enterprises to file their annual reports with CSR information with the Commercial Register. The aim of this contribution is to perform a pioneering micro case study entailing top enterprises from two CSR sensitive industries, power distribution and gasoline distribution, while focusing on the research question which targets their awareness as well as the effectiveness and efficiency of the current mechanism. These enterprises are subject to the CSR reporting duty and are aware about it, but surprisingly receiving financial support via the Cohesion Fund does not increase their awareness and commitment to CSR reporting. Consequently, the performed holistic Meta-analysis suggests that the current mechanism of CSR reporting and financial support is not set effectively and that its operation is not fully efficient. A deeper and broader study, along with dialogue and bottom-up communications needs to be developed to clarify this burning issue and to bring about improvements.

Keywords: *Cohesion Fund, CSR, EU, Reporting, Sustainability*

1. INTRODUCTION

Our post-modern and highly competitive era brings forth many challenges for the global society, its organization (Piekarczyk, 2016) and digitalization (Vivant, 2016). This is the setting for the European integration under the auspices of the EU, which mixes the supranational and inter-government approaches and has at its heart the doctrine of the famous four freedoms of movement in the single internal market (MacGregor Pelikánová & MacGregor, 2018a). Regardless of the blurred distinction between historical truth and reality (Chirita, 2014), the current ten year long strategy, Europe 2020, has three clear priorities – smart, sustainable and inclusive growth (EC, 2010) and desires to develop the technological (Balcerzak, 2016a) and other potentials of a European economy (Balcerzak, 2016b), especially in the digital setting (MacGregor Pelikánová, 2012), while being sustainable and complying with core values, such as the rule of law and social concerns. In sum, Europe 2020 is a product of the European Commission, which was conceived to create economic dominance of the EU on the global market (Stec & Grzebyk, 2017) and which has been impacted by both formal and informal institutions (Pasimeni & Pasimeni, 2016).

The EU should be united in differences and should follow with EU member states the same priorities, policies and goals in order to overcome political, military and economic crises (MacGregor Pelikánová & MacGregor, 2018b). It needs to promote competitiveness while reducing divergences (MacGregor Pelikánová, 2019c; MacGregor Pelikánová & MacGregor, 2019) and fostering cohesion in spite of the many events that threaten the EU at its core. Undoubtedly, substantial progress has been made in terms of building an internal market and an economic and monetary union, albeit not without problems, as the 2008 crisis has shown. It seems, actually, as if the EU mostly was thinking in economic terms, hoping that economic solutions will fix all current problems at once (Staníčková, 2017; Melecký, 2018). Although globalization, sustainability, innovations and digitalization (Świadek et al, 2019) are acknowledged by the EU and all EU member states (MacGregor Pelikánová, 2019b), still these states and their businesses share different social, political and economic traditions (Lajkepova, 2016; MacGregor Pelikánová, 2017). In addition, even within the same field of industry inside the same EU member state, there are significant differences in the commitment of enterprises to sustainability, i.e. these directly competing enterprises have dramatically different commitments to corporate social responsibility ("CSR") and its key categories (Čech et al, 2018 & 2019).

The modern concept of sustainability emerged in the 1960's in the USA and was incorporated in the well-known report Our Common Future – A global Agenda for Change, aka Brundtland Report 1987, which was published as the UN Annex to document A/42/427 in 1987. Almost 30 years after, on 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the UN 2030 Agenda for Sustainable Development came into force (UN, 2019). SDGs not only identify where the world has to be in 2030, but outline also new markets and opportunities for companies all over the world. Governments and intraregional or supra-regional institutions have responsibility to lead the way by setting national or regional plans and businesses to contribute significantly to SDGs success. Tools such as the UN Global Compact should serve as a good starting point for their CSR activities (UN, 2015). Over time, sustainability has been perceived as a systematic and visionary tool governed predominantly by soft law and self-regulation of businesses, with corporate responsibility seen as rather a normative and moral tool regulated by law (MacGregor Pelikánová & MacGregor, 2018c). Ultimately, sustainability and corporate responsibility merged into the CSR (Bansal & Song, 2017) and attracted the above indicated interest of the EU and EU law.

The EU attempts to go for sustainability, see the Europe 2020 drive for smart, sustainable and inclusive growth, and to decrease differences and divergences in CSR and harmonize, if not unify, related practices. The EU interest for sustainability is further reinforced by the willingness to meet the SDGs and with regards to CSR mostly the goal 12 to ensure sustainable consumption and production patterns. There are two mechanisms regarding how to induce European enterprises to go for CSR and inform the public about it so as to enhance the general awareness and inspire others in seeing CSR as a competitive advantage and not a burden. The first mechanism is the legal framework established by the EU law and EU member state's laws implying the legal duty to engage in CSR and publications about CSR in annual reports of enterprises. The second mechanism is the financial system represented by the expenditures of the EU budget via European funds linked especially to the first two categories of EU expenditures. The first mechanism orders enterprises to engage in at least a minimum of CSR and report about it, the second mechanism pays enterprises that are willing to do more. This leads to a burning question about the awareness, effectiveness and efficiency of the current setting in the light of a pioneering micro case study. The research question is incorporated in the hypothesis that Czech enterprises, from CSR sensitive industries, which receive substantial financial support from the EU Cohesion fund ("CF") are more aware and committed regarding the sustainability and report more about their CSR than their direct competitors not receiving such financial support.

In order to properly address these research questions about the impact of the CF support on CSR and to ultimately confirm or reject the hypothesis that such financial support is reflected in reporting more robust CSR, a foundation needs to be reviewed, i.e. there has to be presented the relevant legislative setting along with a literature review (2.). Thereafter, the information about the data and methods (3.) needs to be mentioned and continued by the case study entailing two groups of Czech enterprises and their reports from 2017 (4.). The yielded results and related discussion (5.) propose the answer to the research question, rejects the hypothesis and offer thoughts and recommendations regarding the increase of the awareness, effectiveness and efficiency of the employment of the CF to support the sustainability and boost the CSR of enterprises (6.)

2. LEGISLATIVE AND LITERATURE REVIEW

The majority of jurisdictions in the EU member states share the continental law tradition inclined to formalism, while a minority of them share the common law tradition inclined towards pragmatism (MacGregor Pelikánová & MacGregor, 2018a). Consequently, the EU and EU law reflect these features and differences (Rogalska, 2018) and project them into the EU constitutional setting represented by the primary EU law, namely the Treaty on EU ("TEU"), Treaty on the functioning of EU ("TFEU") and Charter of fundamental rights of the EU ("Charter") and projected in the strategy Europe 2020 (MacGregor Pelikánová, 2019a). These mechanisms and settings should boost innovations (Świadek et al, 2019), transparency, competitiveness as well as cohesion and solidarity, which are far from being a spontaneous, market-based process (Pohulak-Żołędowska, 2016). It needs to be clarified what awareness needs to be enhanced (Polcyn, 2018). The TEU aims towards a highly competitive social market economy while promoting scientific and technological advances (Art. 3), while TFEU focuses in more detail on the internal market, including provisions covering the right of establishment (Art. 49 et foll.) and consumer protection (Art. 169) (MacGregor Pelikánová & MacGregor, 2018a). In addition, TFEU covers economic, social and territorial cohesion (Art. 174 et foll.). Specifically, the EU shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favored regions (Art. 174) and support the achievement of objectives through Structural Funds (European Agricultural Guidance and Guarantee Fund, Guidance Section; European Social Fund; European Regional Development Fund), etc., while the European Regional Development Fund is intended to help to redress the main regional imbalances (Art. 176). The European Parliament and the Council assist in setting the CF to provide a financial contribution to projects in the fields of the environment and trans-European networks in the area of transport infrastructure (Art. 177). Hence, the CF clearly finances sustainability endeavors, supports the CSR of enterprises, especially the category of environment and R&D, and rewards business' ethics (Sroka & Szanto, 2018) and their interaction with CSR (Jindřichovská et al, 2019).

Regarding secondary EU law, which must be in compliance with the primary EU law and which further develops the primary EU law, two Directives and one Regulation are to be indicated in this context – (i) Regulation (EU) No 1300/2013 of the European Parliament and of the Council of 17 December 2013 on the Cohesion Fund ("Regulation 1300/2013"), (ii) Directive 2013/34/EU of 26th June, 2013 on the annual financial statements, consolidated financial statements and related reports ("Directive 2013/34"), and (iii) Directive (EU) 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law ("Directive 2017/1132).

Regulation 1300/2013 was enacted based on Art. 177 TFEU and states explicitly that the CF is established for the purpose of strengthening the economic, social and territorial cohesion of the EU in the interests of promoting sustainable development (Art.1). The CF primarily supports investments in the environment, including areas related to sustainable development and energy which present environmental benefits, TEN-T (Art.2) and transport infrastructure (Art.3). The Cohesion Fund is aimed at EU member states whose Gross National Income (GNI) per inhabitant is less than 90 % of the EU average, e.g. the Czech

Republic, and should help to reduce economic and social disparities and to promote sustainable development. For the 2014–2020 period, the CF allocates a total of EUR 63 400 million to activities regarding especially environmental protection and trans-European transport networks (EC, 2019c).

Directive 2013/34 addresses financial statements and other reports. It states explicitly that large undertakings which are public-interest entities exceeding on their balance sheet dates the criterion of the average number of 500 employees during the financial year, shall include in the management report a non-financial statement containing information to the extent necessary for an understanding of the undertaking's development, performance, position and impact of its activity, relating to, at a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters (Art. 19a).

Directive 2017/1132 requires compulsory disclosures, by companies, of a set of documents, including the instrument of constitution and statutes, and the statutes if they are contained in a separate instrument and accounting documents (Art. 14). This disclosure is to be done in the national register, i.e. each EU member state has to have a central, commercial or company register where, for each company, is open a file with such documents (Art. 16). Each register has the electronic version and the data is migrated to the central EU platform, i.e. eJustice.eu.

Czech Act No 563/1991 Coll., on accounting sets a legal duty for certain enterprises to have their final accounts verified by an auditor (Art. 20). The group of enterprises, to which this legal duty extends, includes enterprises reaching at least one of the following three thresholds: (i) assets of CZK 40 million, (ii) turnover of CZK 80 million, and (iii) 50 employees (Art. 20). In addition, the subjects of this "auditing" legal duty have another duty – to prepare as well an annual report with financial and non financial information, including the information about R&D, environmental protection activities and employment relationships (Art.21).

Czech Act No 304/2013 Coll., on public registers regulates the Czech Commercial Register and its records (Art. 42 et foll.) and specifically states that the Collection of documents kept by the Czech Commercial Register includes annual reports (Art. 66).

Hence, in sum, the multiannual financial framework represents the long-term budget of the EU and sets in advance the key parameters for each annual EU budget (MacGregor Pelikánová & Cvik, 2015), which is primarily an investment budget designed to finance EU policies focusing on agriculture, regional development, R&D, culture, border protection, etc. (Pohulak-Żoledowska, 2016). The EU budget for 2017 reached EUR 158 0000 million and the expenditures belonged to six categories: 1a Competitiveness for growth and jobs (14%) and 1b Economic, social and territorial cohesion (34%), 2. Sustainable growth: natural resources (37%), 3. Security and citizenship (3%), 4. Global Europe (6%), 5. Administration (6%), 6. Other special instruments (less than 1%) (EC, 2019a). These expenditures are realized often via funds. As a matter, there are two types of EU funds – funds dealing with finances not included in the EU budget, such as the European Development Fund and the indicated funds dealing with finances included in the EU budget, such as European structural and investment funds ("ESIFs"). Pursuant to partnership agreements, ESIFs are jointly managed on a decentralized basis by the EU and EU member states and support jobs and a sustainable and healthy EU economy and environment.

In total, over 50% of the EU budget is channelled through the following five ESIFs: European regional development fund ("ERDF"), European social fund ("ESF"), Cohesion fund ("CF"), the European Agricultural Fund for Rural Development ("EAFRD") and European maritime and fisheries fund ("EMFF"). The main focus areas of ESIFS are R&D, digital technologies, low-carbon economy, sustainable management of natural resources and small businesses (EC, 2019b).

Table 1. ESIFs – EU funds dealing with over 50% of the EU budget

Fund	Focus area
ERDF	promotes balanced development in the different regions of the EU.
ESF	supports employment-related projects throughout Europe and invests in Europe’s human capital – its workers, its young people and all those seeking a job.
CF	funds transport and environmental projects in countries where the gross national income (GNI) per inhabitant is less than 90% of the EU average, e.g. the Czech Republic.
EAFRD	focuses on resolving the particular challenges facing the EU's rural areas.
EMFF	helps fishermen to adopt sustainable fishing practices and coastal communities to diversify their economies, improving the quality of life along European coasts.

Source: Own processing by authors based on EC, 2019b

To put it differently, the largest EU expenditures are for the 1st category, i.e. 1a and 1b, supporting competitiveness, jobs and reduction of economic gaps (48%) and the 2nd category, with 37%, supporting agricultural production via the European Agricultural Guarantee Fund (“EAGF”), rural development by one of the mentioned ESIFs, i.e. EAFRD, and by other funds addressing maritime and other issues. The cohesion policy is financed by 5 ESIFs created by special legal acts, e.g. CF by the above mentioned Regulation (EU) No 1300/2013, and operated based on common provisions included in the Regulation (EU) No 1303/2013. For the 2014-2020 programming period, the EU has allocated EUR 63 400 million to CF of which EUR 6 259 million is for the Czech Republic, i.e. potentially Czech enterprises (EC, 2019c).

Manifestly, the CF is a pro-sustainable and pro-CSR fund and its beneficiaries are enterprises proclaiming their CSR and successfully obtaining support for it. If these beneficiary enterprises become a subject of the legal duty to include CSR information in their annual reports and publish it, then their CSR section of the annual reports should be robust and more developed than in the annual reports of their competitors. Or not? Well, this is worthy of exploring, and the best way to do so is to perform a case study entailing two industries with strong CSR and CF potential and using enterprises passing the threshold for the publication of CSR information in their annual reports, some of them being CF beneficiaries while others not.

3. DATA AND RESEARCH METHOD

This contribution addresses the impact of the CF on CSR and its reporting while using a micro case study of two groups of Czech enterprises. The research question targets the awareness, effectiveness and efficiency of the current setting of the EU financial support and EU and Czech laws on CSR and its reporting. It is embodied in a proposed hypothesis implied by the presented legislative and literature overview that Czech enterprises having the duty to include CSR information in their annual reports will do it more vigorously, extensively and deeply if they are a beneficiary of CF support. This hypothesis is boosted by the assumption that enterprises aware about the CSR and determined to go for it, will know and use the support provided by the EU and gladly report about it in the expected depth and extent, while their competitors, being less aware and less committed to CSR and not benefiting by such a support, will do it in a much-reduced manner. The hypothesis could be simplified in the statement that support by CF leads to a better quality and quantity of CSR reporting by enterprises.

The confirmation or rejection of such a hypothesis demands a holistic, open minded Meta-Analysis built upon the policy and legislation research and, due to their predominantly EU origins, their teleological interpretation and upon the exploration of annual reports of a sufficiently representative sample of enterprises. The Meta-Analysis was selected because it is an appropriate tool for the aggregation of information of a heterogeneous nature and from heterogeneous sources (Silverman, 2013).

The sample selection was carefully done while keeping in mind that, due to the set criteria (potential to be CF beneficiary + duty to include CSR information in annual reports) reduces the pool below the threshold of conventional statistical methods. This quantitative limitation is offset by the exclusive focus on two sensitive industries, homogeneity and representativeness of the sample, and their capacity to be presented in parallel. Power and gasoline distribution industries have a very high sensitivity risk score because they are dependent on highly volatile prices and even volatile supplies quantity and quality and at the same time they are absolutely critical for the economy and the entire society, see the oil crises in 1973 and 1979. Therefore, five top power distribution enterprises and five top gasoline distribution enterprises in the Czech Republic were selected, and consequently the sample included larger Czech companies and not typical SMEs. These two industries have a strong CSR potential, basically all these enterprises have to report about their CSR in their annual reports and can be a beneficiary of support provided by the CSR, but only some of them asked for it and received it. Therefore, the, below described, Delphi method to explore the content analysis of CSR data in annual reports for 2017 will concern the following two groups of Czech Enterprises. The first group of enterprises is from the power distribution industry and includes top Czech power distribution enterprises, including the largest one, ČEZ a.s., which is partially owned by the Czech Republic, see Table 2.

Table 2. Power distribution enterprises – ID, CF support, employees, turnover, balance sheet totals for 2016–2017

Enterprise (Company)	ID Number	CF support in EUR	Balance Sheet Total in CZK mil	Turnover in CZK mil	Employees
ČEZ, a.s.	45274649	887 400	532 770	77 257	29 837
Pražská energetika, a.s.	60193913	0	29 900	18 700	1 449
E.ON Česká republika, s.r.o.	25733591	716 258	17 917	7 970	1 086
innogy Energie s.r.o.	49903209	0	25 034	32 252	237
BOHEMIA ENERGY entity s.r.o.	27386732	0	11 525	10 218	462

Source: Author´s own processing based on EC, 2019c and justice.cz

The second group of enterprises is from the gas distribution industry and includes top Czech gas distribution enterprises, including ČEPRO a.s., which is completely owned by the Czech Republic, see Table 3. Both tables, Table 2 and Table 3, reveal that all enterprises have to have their annual reports verified by an auditor and they need to include in their annual reports both financial and non financial statements, because their assets are over CZK 40 million, their turnover is over CZK 80 million, and their number of employees exceeds (with the exception of OMV) 50 employees (Art.20 and Art.21 of the Act No. 563/1991 Coll.).

Table 3. Gasoline distribution enterprises – ID, CF support, employees, turnover, balance sheet totals for 2016–2017

Enterprise (Company)	ID Number	CF support in EUR	Balance Sheet Total in CZK mil	Turnover in CZK mil	Employees
UNIPETROL RPA s.r.o.	27597075	0	70 056	114 280	2 733
ČEPRO, a.s.	60193531	0	20 000	46 000	757
MOL Česká republika, s.r.o.	49450301	464 192	9 000	40 000	220
OMV Česká republika, s.r.o.	48038687	0	4 000	18 000	39
Shell Czech Republic a.s.	15890554	0	6 000	17 000	92

Source: Author´s own processing based on EC, 2019c and justice.cz

The information extracted from the annual reports of these two sets of enterprises for 2017 is to be complemented by information from other sources, such as the Internet domains of these enterprises, and refreshed by citations and ad hoc glossing. The critical and comparative exploration of such combined information, especially category, extent and depth of CSR information, should follow the classification set internationally by ISO 26000, regionally by the Directive 2013/34 and nationally by the Czech Act 1991 – environment, employees – human resources (HR), community-social-sport-others, plus the often omitted research and development ("R&D"). The content analysis with Delphi method of such an information conglomerate tackles both quantitative and qualitative aspects. The quantitative aspects are addressed based on the calculation of the total number of all the pages and the total of the pages dealing with CSR categories, while the qualitative aspect was addressed based on the granting of (+) according to the universal set of guidelines and questionnaires about the depth, concreteness and relevancy (MacGregor Pelikánová, 2019a) and by an explicit search of the information about CF support. This holistically manual approach, employing content analysis, qualitative text analysis (Kuckartz, 2014) and a simplified Delphi method (Okoli & Pawlowski, 2014; Rowe & Wright, 2011), involved three external experts benefiting by both a law and economic background and experience with corporate reporting and CSR (RKM, LM, ZF). After they then calculated the total pages about CSR and the pages for each CSR category, they ranked the information provided about CSR pursuant to the mentioned guidelines. The guidelines required ranking as no more than general information (+) all universal and proclamation-type statements lacking a relationship to real and controllable actions or omissions; to ranking as more developed and concrete information (++) all statements leading to a single real and controllable action or omission or participating on general CSR trends; and as robust information (+++) all statements about real and controllable actions culminating in an exemplary CSR behavior linked to the particular business and that was made public and regarding the existence of which is beyond any doubt (MacGregor Pelikánová, 2019a). The collected quantitative and qualitative results from the first round were read by the author and sent back to the experts for readjustments in order to achieve a mutual consent about both the number of pages and granted a mark (+).

The entire process was refreshed by Socratic questioning (Areeda, 1996) referring to the authors own findings as well as findings proposed by academic sources ranked and classified in the Web of Science (WoS) and Scopus databases. Ultimately, the interplay of economic, legal and technical aspects shapes the focus, targeting both qualitative and quantitative data and entailing deductive and inductive aspects of legal thinking.

4. CZECH CASE STUDY – ANNUAL REPORTS WITH CSR INFORMATION

At the very heart of this contribution is the Czech micro case study addressing two sensitive and CSR sensitive industries – power distribution and gasoline distribution. Namely five top enterprises active in each of these industries, with some of them a beneficiary of CF and others not. All of these 10 enterprises have to file their annual reports, verified by an accountant, with the Czech Commercial Register. As a matter of fact, they all did for the year 2017. Therefore, it is possible to explore these annual reports and test the set hypothesis while further considering the underlying research questions.

4.1 Top five Czech power distribution enterprises and their 2017 annual reports

The above indicated top five Czech power distribution enterprises did satisfy their legal duty and their audited annual reports for 2017 are freely available via justice.cz, i.e. they are in the e-collection of corporate documents kept by the Czech Commercial register. Two of these five enterprises were beneficiaries of significant support from the CF in 2017, i.e. ČEZ and E.ON got EUR 887 400, resp. EUR 716 258, to support their sustainability endeavour in the field of environment and transport from the EU in 2017. The Meta-Analysis and content analysis performed while using the Delphi method brought forth data incorporated in Tables four and five.

Table 4. Power distribution enterprises – 2017 annual reports, CSR – quantity per pages, quality per +

Enterprise	CSR pages/ all pages)	CF (pages/quality)	R&D (pages/quality)	Environment (pages/quality)	HR (pages/quality)	Others (pages/quality)
ČEZ, a.s.	13/356	1 page (141)/++	3/+++	3/+++	3/+++	3/+++
Pražská energetika, a.s.	5/170	0	0	2/++	2/++	1/++
E.ON ČR s.r.o.	4/45	0	0	1/++	2/++	1/+
innogy Energie s.r.o.	6/70	0	0	2/+++	2/+++	2/++
BOHEMIA ENERGY	2/28	0	0	1/+	1/+	0

Source: Author´s own processing based on justice.cz

As expected, the largest of these five, and as well a CF beneficiary, ČEZ, provided rather robust CSR information regarding all categories and mentioned even EU financial support (TEN-T). However, surprisingly, another CF beneficiary, E.ON, provided only a shallow amount of CSR information, skipped any references to EU financial support in its 2017 company annual report and included just minimal data in this respect in its 2017 consolidated holding annual report. This unexpected behavior is further magnified by the extent of the consolidated holding annual report on sustainability and the depth of data about German enterprises and action (E.ON, 2019). This lack of CSR proclamation by E.ON can be contrasted with the 2017 annual report of Innogy Energy. Naturally, this study of annual reports is not conclusive and has to be complemented by citations offered by annual reports, as well as the internet Websites of these five enterprises.

Table 5. Powers distribution enterprises – citations with comments

Enterprise	AR - citation	Website address	Website Citation	Comments
ČEZ, a.s.	*Electromobility with 91 stations .....TEN-T .. innovations I2US*	Cez.cz	*"Electromobiles for orphanages .... Sustainability principles are part of our business conduct…"*	Strong commitments regarding all CSR aspects, while focusing on electromobiles
Pražská energetika, a.s.	*Benefit packages for employees … education*	Pre.cz	*"Comfort energy for you … participation in SMART CITY project*	Focusing much more on people than on the environment or technologies
E.ON ČR s.r.o.	*Reducing CO2 emission … benefits for employees ..No R&D..*	Eon.cz	*Saving consumers money while saving (protectin) nature .... Solar solutions…*"	Heavily referring to the mother German company
Innogy Energie s.r.o.	*5 ecology agreements with the Czech state*	Innogy.cz	*"Rekola (re-bicycles) … Movie fund … "*	Big focus not only on employees, but perhaps even more on environment
BOHEMIA ENERGY	*… No R&D …*	Bohemiaenergy .cz	*"Ethical Codex … Project Black horses helping handicaped people"*	Only minimum CSR information in the annual report, much more on www

Source: Author´s own processing based on justice.cz and Websites of enterprises

ČEZ is strongly proclaiming its CSR commitment, both in its annual report as well as on its Internet Website. E.ON does it weakly both in its annual report as well on its Internet Website. Interestingly, Bohemia Energy does it weakly in its annual report, but goes strongly for sustainability within its CSR information on its Internet Website. References to CF and EU financial support or programs are nominal or completely missing.

4.2 Top five Czech gasoline distribution enterprises and their 2017 annual reports

The above indicated top five Czech gasoline distribution enterprises did satisfy their legal duty and their audited annual reports for 2017 are freely available via justice.cz, i.e. they are in the e-collection of corporate documents kept by the Czech Commercial register. One of these five enterprises was the beneficiary of significant support from the CF in 2017, i.e. MOL got EUR 464 192, to support its sustainability endeavours in the field of the environment and transport from the EU in 2017. The Meta-Analysis and content analysis performed while using the Delphi method brought information incorporated in Table 6 and in Table 7.

Interestingly, UNIPETROL and ČEPRO appear much more committed to CSR and especially to R&D and the environment than the other three enterprises, including MOL, i.e. a beneficiary of the EU support via CF in the amount of EUR 464 192. This shortcoming can arguably be offset by other platforms for CSR declarations, such as its own Internet Websites.

Table 6. Gas distribution enterprises – 2017 annual reports, CSR – quantity per pages, quality per +

Enterprise	CSR pages/ all pages	CF (pages/quality)	R&D (pages/quality)	Environment (pages/quality)	HR (pages/quality)	Others (pages/quality)
UNIPETROL	7/84	0	4/+++	1/++	1/++	1/+
ČEPRO, a.s.	12/116	0	3/++	3/++	5/+++	1/+
MOL ČR s.r.o.	2/38	0	1/+	1/++	1/++	0
OMV ČR s.r.o.	1/37	0	0	0	1/+	0
Shell CZ a.s.	2/41	0	1/++	1/++	1/++	1/+

Source: Author´s own processing based on justice.cz

Table 7. Gas distribution enterprises – citations with comments

Enterprise	AR - citation	Website address	Website Citation	Comments
UNIPETROL	… continuation in the National sustainability program of research centers … working in projects CATRO and CATAMARAN … connecting public and private research centers …	Unipetrol.cz	*"The strategic priority of the Unipetrol holding is the CSR …. We cooperate with municapilities … support various projects …."*	UNIPETROL has a separate Website section "Responsible enterprise"
ČEPRO, a.s.	*"the mapping of the situation regarding the possible substitution of fossil fuels with alternative fuels and energy sources…control audit ISO 9001 and 14001 … Code of Ethics ….Platform for company development as a free platform for the discussion with employees ..."*	Ceproas.cz	*"Certificate EU – ISCC in compliance with the Directive 2009/28/EC about the support of the use of energy from renewal resources ..... Certificate EU – ISCC -Reg.-1906... System of quality guarantee pursuant to ISO 9001 …. Environment protection and environment management pursuant to ISO 14001 ... protection of health of workers ..- certificate ISO 18001 .... Stability award ... AAA finance scoring ...."*	Čepro presents itself as a very modern and open-minded business with real and practically oriented focuses. Čepro relies on certificates and ISO norms.
MOL ČR s.r.o.	*„Transparency … fair treatment of employees …Green oasis funding to improve local environment (parks, green surfaces) ..MOL Cup Soccer support ..."*	Molcesko.cz	*„ ..MOL Cup Soccer support ..." „Green Oasis project for more green and water elements ... distributing grants ... planting six hundred bushes and three hundred trees ..."*	MOL has not only a separate section of its annual report dealing with CSR, but even a special Website section. It focuses on local social (soccer) and environmental (green oasis) issues
OMV ČR s.r.o.	*"… fair salary and no discrimination … no research and development …environment law followed "*	Omv.cz	"*… providing quality ... creating over 2 000 jobs ..."*	OMV states merely that to their knowledge they follow the law, it does not demonstrate any further sustainability aspirations. OMV does not engage in

				CSR statements on its Website.
Shell CZ a.s.	*"Masterpass digital wallet ... Upstream and downstream ... Drop of Hope (Kapka naděje) charity ... technology ...following international standards ISO 9001, ISO 14001 and OHSAS 18001 ..."*	Shell.cz	*"For the company Shell, the sustainable development means providing energy to the growing population while respecting humans, their safety and environement. The sustainable development concerns all spheres of activities of Shell ..."*	*Shell has a special CSR Webpage and addresses R&D, social and other concerns in an impressive manner. It follows standards.*

Source: Author´s own processing based on justice.cz and Websites of enterprises

Similarly to the first group, the first two enterprises, UNIPETROL and ČEPRO, appear, based on their annual reports and Website information, more committed to sustainability and engaged in CSR than the remaining three enterprises, including the CF beneficiary – MOL. Further, these two first enterprises perceive R&D as a true CSR category and attempt to go for sustainability through innovations. OMV appears to be the worst. This surprising result, as in the case of E.ON, is magnified by the in-depth information on sustainability and CSR provided by OMV Group, a signatory to the UN Global Compact (OMV 2019). But unlike E.ON ČR, OMVČR is not a CF recipient.

5. RESULTS AND DISCUSSION

There is a clear legislative (Hahn, 2018, MacGregor Pelikánová & MacGregor, 2017), social (Bode & Sing, 2017, Chassé & Courrent, 2018), technological (Balcerzak, 2016a) and even practical (Arminen et al., 2018) drive towards the recognition of CSR in the EU and EU member states, including the Czech Republic (MacGregor Pelikánová & MacGregor, 2018c). The outcome of this trend is the EU support via ESIFs with the assumption that financial support for CSR activities of enterprises will contribute to sustainability as such, as well as to the enhancement of awareness by transparent public information about these activities. On this wave, in May 2018, the European Commission published its proposals for the regulation of the EU cohesion policy after 2020, expecting the CF to continue the support of the project "Investment for growth and job," i.e. during the 2021-2027 programming period, the CF should support two specific objectives: a greener, low-carbon and circular economy (Policy Objective (PO) and a more connected Europe (PO3) (EC, 2019c). The CF should dispose with EUR 41 300 million for the same 15 EU member states as during 2014–2020.

Therefore, the EU wants to finish its Europe 2020 decade as a genuinely pro-smart, sustainable and inclusive era (Turečková & Nevima, 2018). However, the final accounts do not look too rosy, or better to say black. Definitely not all five headline targets of Europe 2020 will be met in 2020 (EC, 2010) and especially the lack of meeting of the "3% of the EU's GDP invested in R&D" and of "20/20/20 climate/energy targets" presents a true issue for the sustainability and CSR (MacGregor Pelikánová, 2019b). The Finland´s presidency of the Council of the EU led to a new strategic top document labelled Sustainable Europe – Sustainable Future – EU2019.FI (Council of the EU, 2019), which underscores that the EU faces "*an increasingly complex and unpredictable global environment"* and identifies the sustainability as the key to address it. Indeed, the Sustainable Europe – Sustainable Future – EU2019.FI states specifically: "*The common denominator for all EU action should be sustainability, which includes implementation both within and beyond the EU of the 2030 Agenda for Sustainable Development. The EU should raise its profile as a global leader in climate action by adopting a long-term climate strategy aimed at making the EU carbon* *neutral by 2050."* (Council of the EU, 2019). Indeed, the 17 SDGs of Agenda 2030 in combination with Europe 2020 and the new EU strategy for the decade 2020-2030 make indispensable the EU commitment to the sustainability, e.g. via CF instruments supporting CSR of European enterprises. Boldly, the EU is ready to keep sending through CF money to Czech enterprises engaged in CSR projects in the field of environment protection and R&D categories and transport infrastructure. At the same time, the EU in cooperation with EU member states has set a legal framework requiring larger enterprises to include in their annual reports both financial and non financial statements and to file and possibly even publish these annual reports. The CSR information is a typical example of such non financial information. Consequently, it can be expected, that enterprises will publish their annual reports with an information about their CSR and perhaps even will use pro-CSR declaration along with real data about their CSR achievement as marketing tools. Further, it might appear to be logical, that the enterprises most engaged in the CSR will get CF support and will gladly and even more deeply report about their CSR.

Well, the performed micro case study moves these expectations rather into the category of speculations. Although the used sample was small, it has a sufficiently indicative potential. Basically two set of five Czech biggest enterprises in the CSR sensitive industries, power distribution and gasoline distribution, generated data leading to six asseverations. Firstly, all enterprises satisfy (at least formalistically) the law requirements and file annual reports with required financial and non financial statements. Secondly, annual reports and even Website posting in both groups reveals the same pattern that the CSR information is decreasing, i.e. the largest and second largest enterprises declare more about its CSR than the third and fourth enterprises and these declare more than the fifth one. Thirdly, a very popular CSR category for Czech enterprises, in contrast to enterprises abroad, is „human resources – employment", as has been already proposed in previous study (MacGregor Pelikánová, 2019a). Fourthly, a turning point and a divider serve the CSR category „R&D", which is often completely overlooked as demonstrated by prior studies (MacGregor Pelikánová, 2019a et 2019b) and the micro case study group including power distribution enterprises. The micro case study group including gasoline distribution enterprises brings very promising message that there are Czech enterprises seriously considering R&D as a tool for both competitive advantage and the sustainability, i.e. matching it with their CSR. Fifthly, two out of the top Czech five enterprises regarding power distribution and one out of the top Czech five enterprises regarding gasoline distribution managed to obtain CF support. Sixthly, none of these three beneficiaries engaged in a deeper presentation of its projects supported by the CF, regardless whether via annual reports or Website.

Regarding the research question, the performed micro case study along with the legislative and literature review suggests that the current setting of the reporting and CF support is known to large Czech enterprises, i.e. they are aware about it and respect it. However, the effectiveness and especially efficiency of this setting does not seem to be perfect. Indeed, the hypothesis carrying further the research question brings a surprising answer. The hypothesis proposed that Czech enterprises, from CSR sensitive industries, which receive substantial financial support from the EU Cohesion fund ("CF"), are more aware and committed regarding the sustainability and report more about their CSR than their direct competitors not receiving such financial support. The micro case study rejected it and brought serious questions about any correlation between the CSR commitment, its reporting and granted financial support for it. This is an extremely serious proposition deserving future studies entailing much bigger sample of enterprises and going more intrinsically into motivations and true intents of enterprises. If these future studies reject as well the stated hypothesis and consequently confirms the objections proposed by this contribution about the effectiveness and efficiency of the current setting, then it is strictly necessary to promptly adjust the current setting. Even before we have results of these future studies, a genuine communication and bottom-up approach should be embraced and EU as well as EU member states should engaged in the communication with enterprises and holistically ask them how EU and EU member states could help them to behave in a more sustainable manner and to report more openly and clearly about their CSR so to spread the awareness and the interest for the sustainability.

6. CONCLUSIONS

The EU and EU member states their laws and policies create a framework to motivate, if not order, enterprises to behave in a sustainable manner and report about their CSR. The Czech micro case study reveals that, at least top Czech power distribution and gasoline distribution, enterprises are aware about this setting and satisfy their law duty. So their awareness about the setting is beyond question and both their filed annual reports and their Website convey clear message about their CSR. However, the effectiveness and efficiency of the current setting is problematic. The set hypothesis that among these enterprise, those receiving substantial financial support from the CF are more aware and committed regarding the sustainability and report more about their CSR than their direct competitors not receiving such financial support is rejected. This lack of correlation between CF support and CSR reporting poses serious question how well is the current mechanism set (effectiveness issue) and operated (efficiency issue). EU money should not be wasted and CF support should help both enterprises to go more for CSR and inform others so they do the same. The EU and EU member states are correct in promoting CSR, but they should make sure that the CF funding has a positive impact on it. So far, the impact is rather ambiguous and therefore more studies as well as direct dialogue with enterprises need to be performed in order to improve the current mechanism and its operation.

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BIBLIOGRAPHY

Areeda, P.E. (1996). The Socratic Method. *Harvard Law Review,* 109, 911–922.
Arminen, H., Puumalainen, K., Pätäri, S., Fellnhofer, K. (2018). Corporate social performance: Inter-industry and international differences. *Journal of Cleaner Production 177*, 426–437. DOI: https://doi.org/10.1016/j.jclepro.2017.12.250.
Balcerzak, A.P. (2016a). Technological Potential of European Economy. Proposition of Measurement with Application of Multiple Criteria Decision Analysis. *Montenegrin Journal of Economics*, 12(3): 7–17. Doi: 10.14254/1800-5845.2016/12-3/1.
Balcerzak, A. (2016b). Multiple-Criteria Evaluation of Quality of Human Capital in the European Union Countries. *Economics & Sociology,* 9(2), 11–26.
Bansal, P. & Song, H.C. (2017). Similar But Not the Same: Differentiating Corporate Sustainability from Corporate Responsibility. *Academy of Management Annals, 11*(1), 105–149. DOI: 10.5465/annals.2015.0095

Bode, Ch. & Singh, J. (2018). Taking a hit to save the world? Employee participation in a coroporate social initiative. *Strategic Management Journal 39*(4), 1003–1030. DOI: https://doi-org.infozdroje.czu.cz/10.1002/smj.2762

Chassé, S. & Courrent, J.M. (2018). Linking owner-managers´personal sustainability behaviors and corporate practices in SMEs: The moderating roles of perceived advantages and environmental hostility. *Business Ethics 27*(2): 127–173. DOI: http://orcid.org/0000-0003-3852-1787.

Chirita, A. D. (2014). A legal-historical review of the EU competition rules. *International and comparative law quarterly*, 63 (2): 281-316. Doi: 10.1017/S0020589314000037.

Council of the EU (2019). *Sustainable Europe – Sustainable Future – EU2019FI. Finland´s Presidency Programme July-December 2019*. Retrieved on 13th July 2019 from https://eu2019.fi/documents/11707387/14346258/EU2019FI-EU-puheenjohtajakauden-ohjelma-en.pdf/3556b7f1-16df-148c-6f59-2b2816611b36/EU2019FI-EU-puheenjohtajakauden-ohjelma-en.pdf.pdf

Čech, P., Jindřichovská, I. & Neubauer, J. (2018) "Corporate social responsibility in hotel industry: Empirical analysis of transitional market." *International Journal of Economics & Business Administration (IJEBA)* 6, no. 1: 61–89.

Čech, P., Jindřichovská, I., & Neubauer, J. (2019). Achieving a great reputation for corporate social responsibility: study from the Czech hospitality industry. *Scientific papers of the University of Pardubice. Series D, Faculty of Economics and Administration. 45/2019*.

E.ON (2019). *Sustainability Report*. Retrieved on 19th July 2019 from https://www.omv.com/en/sustainability-report

European Commission (2019a). *How the EU budget is spent*. Retrieved on 13th July 2019 from https://europa.eu/european-union/about-eu/eu-budget/expenditure_en

European Commission (2019b). *European structural and investment funds*. Retrieved on 13th July 2019 from https://ec.europa.eu/info/funding-tenders/funding-opportunities/funding-programmes/overview-funding-programmes/european-structural-and-investment-funds_en

European Commission (2019c). *Cohesion Fund*. Retrived on 13th July 2019 from https://ec.europa.eu/regional_policy/en/funding/cohesion-fund/

Europen Commission (2010). Europe 2020. Retrieved on 13th July 2019 from http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf

Hahn, T. et al. (2018). A Paradox Perspective on Corporate Sustainability: Descriptive, Instrumental, and Normative Aspects. *Journal of Business Ethics 148*, 235–248. DOI: https://doi.org/10.1007/s10551-017-3587-2.

Jindřichovská, I., Kubíčková, D., & Stratulat, M. (2019). Early Stage of Sustainability Reporting: Case Study from the Czech Tobacco Industry. *European Research Studies Journal*, *22*(1), 128–142.

Kuckartz, U. (2014). *Qualitative Text Analysis – A Guide to Methods, Practice and Using Software.* Sage Publications Ltd. ISBN 978-1-446-26775-2.

Lajtkepova, E. (2016). Differences and Similarities in the Indebtedness of EU Member States after Last Financial Crisis. *Oeconomia Copernicana*, 7(4): 551–563.

MacGregor Pelikánová, R. (2019a). Corporate Social Responsibility Information in Annual Reports in the EU – Czech Case Study. *Sustainability*, 11, 237.

MacGregor Pelikánová, R. (2019b). R&D expenditure and innovation in the EU and selected member states *Journal of Entrepreneurship, Management and Innovation (JEMI),* 15(1):13–33.

MacGregor Pelikánová, R. (2019c). Harmonization of the protection against misleading commercial practices: ongoing divergences in Central European countries. *Oeconomia Copernicana*, 10(2), 239–252.

MacGregor Pelikánová, R. (2017). European Myriad of Approaches to Parasitic Commercial Practices. *Oeconomia Copernicana*, 8(2): 167–180. Doi: 10.24136/oc.v8i2.11.

MacGregor Pelikánová, R. (2012). And the best top level domain for European enterprises is ... *International And Comparative Law Review,* 12(2): 41–57.

MacGregor Pelikánová, R.& Cvik, E.D. (2015). Unraveling Myths and Facts About EU Puzzling Expenses. IN: *Conference Proceedings of 2015 MEKON - 17th International Conference MEKON*, Ostrava, : VŠB–TUO, Faculty of Economics, 679–687.

MacGregor Pelikánová, R. & MacGregor, R. (2019). The Impact of the New EU Trademark Regime on Entrepreneurial Competitivenes. *Forum Scientiae Oeconomia*, 7(2): 59–70. DOI:10.23762/FSO_VOL7_NO2_4

MacGregor Pelikánová, R. & MacGregor, R. (2018a) Reality of e-Reporting of Annual Accounts of SMEs in the EU – McDonald's, BurgerKing, KFC and Subway Case Study. In: Jindřichovská, Irena; Kubíčková, Dana. Conference: 6*th International Scientific Conference on IFRS – Global Rules and Local Use Location*: Anglo Amer Univ, Prague, Czech Republic, October 11-12, 2018. IFRS: GLOBAL RULES & LOCAL USE, p. 142–157.

MacGregor Pelikánová, R. & MacGregor, R.(2018b). The Ephemeral Corporate Social Responsibility Committment Pursuant to Annual Reports – A Czech Case Study. In: 6*th* *International Conference on Innovation, Management, Enterpreneurship and Sustainability (IMES)* Univ Ecn , Prague, 614–623.

MacGregor Pelikánová, R. & MacGregor, R. (2018c). Corporate Social Responsibility e-Reporting as a tool for (Un)fair competition in the EU. In *Conference Proceedings*. *The 12th International Days of Statistics and Economics*. Prague, VŠE, 1112–1122.

MacGregor Pelikánová, R. & MacGregor, R. (2017). European e-Justice Portal – Reality of Electronic One-Stop-Shop for Publication of Financial Statements in the EU. *In:* Jindřichovská, Irena; Kubíčková, Dana. *Conference: 5th International Scientific Conference on IFRS – Global Rules and Local Use*.Anglo Amer Univ, Prague, 20. 10. 2017, pp. 98–111.

Melecký, L. (2018). The main achievements of the EU structural funds 2007–2013 in the EU member states: efficiency analysis of transport sector. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 13(2): 285–306. DOI: 10.24136/eq.2018.015

Okoli, Ch. & Pawlowski, S.D. (2004). The Delphi method as a research tool: an example, design considerations and applications. *Information & Management*, 15–29

OMV (2019). *OMV Sustainability Report*. Retrieved on 19th July 2019 from https://www.omv.com/en/sustainability-report

Pasimeni, F. & Pasimeni, P. (2016). An Institutional Analysis of the Europe 2020 Strategy. *Social Indicator Research*, 127(3): 1021–1038. Doi: 10.1007/s11205-015-1013-7.

Piekarczyk, A. (2016). Contemporary organization and a perspective on integration and development. *Oeconomia Copernicana*, 7(3): 467–483. DOI: 10.12775/OeC.2016.027.

Pohulak-Żoledowska, E. (2016). Innovation in Contemporary Economies. *Oeconomia Copernicana*, 7(3), 451–466. DOI: http://dx.doi.org/10.12775/OeC.2016.026.

Polcyn, J. (2018). Human development level as a modifier of education efficiency. *Management-Poland*, 22(2), 171–186.

Rogalska, E. (2018). Multiple-criteria analysis of regional entrepreneurship conditions in Poland. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 13(4), 707–723.

Rowe, G. & Wright G. (2011). The Delphi technique: Past, present, and future prospects — Introduction to the special issue. *Technological Forecasting and Social Change*, 78(9), 1487–1490.

Silverman, D. (2013). *Doing Qualitative Research—A Practical Handbook*, 4th ed.; SAGE: London, UK.

Sroka, W. & Szanto, R. (2018). Corporate Social Responsibility and Business Ethics in Controversial Sectors: Analysis of Research Results. *Journal of Entrepreneurship, Management and Innovation (JEMI)*, 14(3), 111–126. DOI: 10.7341/20181435.

Staníčková, M. (2017). Can the implementation of the Europe 2020 Strategy goals be efficient? The challenge for achieving social equality in the European Union. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 12(3): 383–398. Doi:10.24136/eq.v12i3.20.

Stec, M. & Grzebyk, M. (2017). The implementation of the Strategy Europe 2020 objectives in European Union countries: the concept analysis and statistical evaluation. *Quality & Quantity*, 52(1): 119–133. Doi: 10.1007/s11135-016-0454-7.

Świadek, A., Dzikowski, P., Tomaszewski, M., & Gorączkowska, J. (2019). Sectoral patterns of innovation cooperation in Polish industry. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 14(1), 183–200.

Turečková, K. & Nevima, J. (2018). SMART approach in regional development. In: *Proceedings of 16th International Scientific Conference Economic Policy in the European Union Member Countries*. Karviná: SU OPF Karviná, 386–394.

UN (2019). *Sustainable Development Goals*. Retrieved on 19th July 2019 from https://www.un.org/sustainabledevelopment/sustainable-development-goals/

UN (2015). *A Global Compact for Sustainable Development. Business and the Sustainable Development Goals: Acting Responsibility and Finding Opportunities*. Retrieved on 19th July 2019 from https://www.unglobalcompact.org/docs/issues_doc/development/GCforSDbrochure.pdf

Vivant, M. (2016). Building a common culture IP? *International revue of intellectual property and competition law*, 47(3). doi: 10.1007/s40319-016-0472-y.

VIRTUAL REALITY IN FINANCIAL REPORTING: ARE ACCOUNTANTS AN ENDANGERED SPECIES?

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Abstract
Careers in accounting can vary from entry-level positions of bookkeepers up to the executive level of Chief Financial Officers. Disregarding different career paths, disruptive changes are inevitable for all of them due to the advancement of technologies entering the world of accountancy and financial reporting. Enhanced computational power, big data, cloud computing, artificial intelligence and even social media hand in hand with rapidly changing business processes and their automation are clear signals for accountants reminding them of the necessity to take the future into their own hands and reskill and upskill themselves to stay competitive and in demand. The objective of this paper is to identify, analyse and critically evaluate new trends, changes and challenges for accounting professionals and accountancy per se. A global survey of 3,000 accountants complements the paper with selected research data offering valuable real-world insight into the landscape of the accounting profession as it is preparing itself for the coming decade. The changing role of accountants towards uniquely qualified strategic business consultants who understand important implications of data requires mastering an additional set of skills ranging from critical thinking to advanced levels of judgement and informed decision making, IT literacy, data visualization, or project management. Therefore, the background of experiential learning is explained and it is suggested to design and implement experiential learning activities into tertiary education accounting courses.

Keywords: *Accounting profession, artificial intelligence, augmented intelligence, business process automation, experiential learning*

1. INTRODUCTION

"We can only see a short distance ahead, but we can see plenty there that needs to be done."
Alan Turing

Alan Turing, who is known all over the world for his admirable contribution to breaking the Enigma Code in Bletchley Park during the World War II, in his iconic article Computed Machinery and Intelligence (Turing, 1950) tried to illustrate his ideas related to the question "Can machines think?". Today, thanks to his work and far-sighted ideas, he is considered the father of artificial intelligence. ('Meeting the Challenge of Artificial Intelligence', 2019) Only a few years later, in 1955, the term 'artificial intelligence' (AI) was coined by John McCarthy in his research proposal ('A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence', 2019) and presented at a conference held in Dartmouth in 1956. John McCarthy defined artificial intelligence as "the science and engineering of making intelligent machines." ('Meeting the Challenge of Artificial Intelligence', 2019) Thanks to hard work of our predecessors, today, almost 65 years later, we can benefit from results of scientific research into AI to the extent that we are either considering AI implementation or even already implementing it into many business processes. Also, the accounting profession, which is in the focus of this research, can significantly benefit from innovative uses of AI.

There are numerous examples of practical implementation of AI in human life. Some of them are rather new, e.g. automatic emergency breaking system in cars and some of them have become a part of our life and we have already been actively using them for a couple of years, e.g. the navigation assistance by Google Maps or Google predictive searches. One of the life-saving examples of AI is Facebook and its suicidal thinking patterns detection based on AI introduced in 2017 (Manifest, 2018). Also, a new version of Office 365 software by Microsoft uses AI-driven features, namely in PowerPoint. As for accountancy, interesting examples have been published, e.g. on how AI can help accounting firms to enhance the fraud audit. ('Meeting the Challenge of Artificial Intelligence', 2019) Considering the dynamics of AI development, there are serious implications for accountants, accounting firms as well as for universities offering tertiary accounting study programmes.

The Revised Conceptual Framework for Financial Reporting was issued in March 2018. ('IFRS – Conceptual Framework for Financial Reporting', 2018). On a global scale, the Framework helps companies in developing their accounting policies taking into account dynamic developments in the field of IFRS standards. Under the influence of all changes, it makes sense to revisit the original document of 1966, issued by the American Accounting Association, and remind us of the transhistorical definition of 'accounting'. It reads as follows: "Accounting is the process of identifying, measuring and communicating financial information about an entity to permit informed judgements and decisions by users of the information." (American Accounting Association, 1966, p. 1). Since then, the definition has been widely quoted also in many students' accounting textbooks (Weetman, 2019, p. 6). The transhistorical validity of this definition is proven again today, especially with the idea of permitting informed judgements and decisions by users of accounting information. The following chapters of this treatise deal with the new roles envisaged for accounting professionals as a result of virtual and augmented reality implementation into business processes in the coming decade. As Eli Fathi, President and CEO of MindBridge Ai, puts it in his article for Global Banking and Finance Review: "No profession is immune to the technological revolution and accounting is no exception it's among the best positioned to benefit from it." ('AI and Accountancy', 2018).

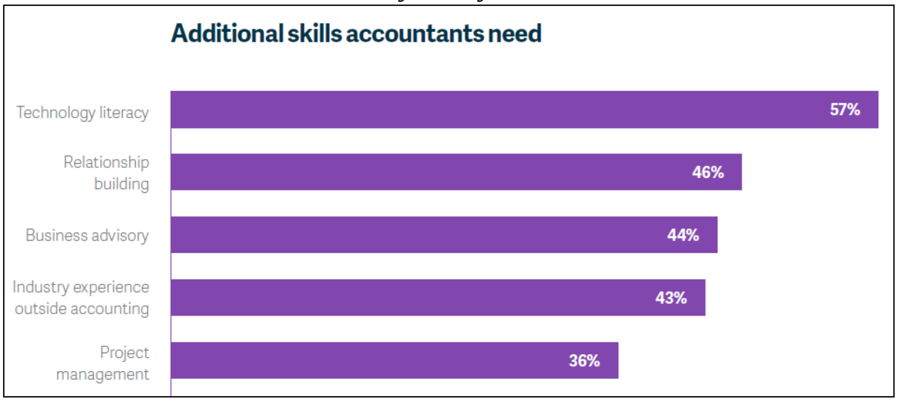
2. THE FUTURE OF ACCOUNTING PROFESSION

In this chapter, on the background of accounting theory and practice, the insight into the future of the accounting profession is based on the literature review and real-world experience of accountants expressed through their opinions in a global survey. The global survey titled 'The Practice of Now 2019' was conducted in January 2019. ('The Practice of Now 2019', 2019) The group of respondents consisted of 3,000 accountants from across the globe covering the geographical area of the USA, UK, Canada, Spain, France, and Australia. The experts from Sage[1], who commissioned the research project, offer "data-driven insight and advice into: (1) The changing landscape for accountants in 2019 and beyond; (2) How client expectations are driving changes within the profession, and (3) What accountants need to do and know to prepare for the coming decade." ('The Practice of Now 2019', 2019) The data of this global survey clearly demonstrate concerns about the new generation of accountants and their skills, doubts about the relevance of the traditional type of accountancy training and the slow pace of technology adoption. Selected findings of this survey are presented in this chapter.

Concerning the portfolio of knowledge and skills acquired during formal education, Buttler et. al., quoting Turner & Baskerville, believe that: "Traditional accounting instruction often emphasized task completion, memorization, and clear-cut answers" (Butler, Church, & Spencer, 2019, p. 12). Further on, they express their opinion that today: "The accounting profession expects graduates to possess critical thinking and professional judgement in addition to technical knowledge." (Butler, Church, & Spencer, 2019, p. 13)

In the above-mentioned survey, the survey question directly related to this topic has brought some fresh insight from practice.

Graph 1. Survey question: What additional skill-sets do you believe that accountants joining the industry today will need?



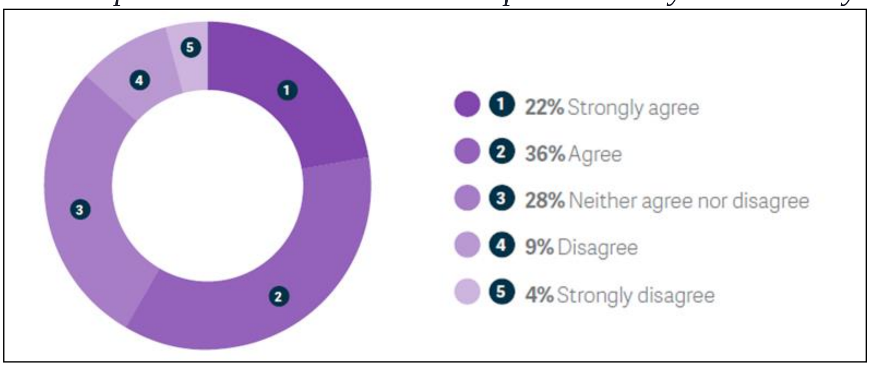
Source: 'The Practice of Now 2019', 2019, p. 9

Apart from concerns related to technology literacy, more than 40 % of respondents expressed their opinion that business advisory and industry experience outside accounting would be needed. ('The Practice of Now 2019', 2019, p. 9)

Being more specific about the exact types of technology, Moll and Yigitbasioglu, researchers from The University of Manchester, view these technologies like the ones having the potential to disrupt the work of accountants. Based on the work of previous researchers, focusing mainly on a cloud, big data, blockchain, and artificial intelligence, they suggest new directions for accounting research while they see its future from the perspective of the interplay between technologies and the work of accountants (Moll & Yigitbasioglu, 2019, p. 11). In the conclusion of their research, they are quite optimistic about the future: "While accountants may understandably feel threatened by technology, the technologies discussed in this study create new opportunities for accountants. Specifically, technology enables unprecedented sharing of data, access to cutting-edge hardware/software, and tools that can complement and enhance management accounting, financial accounting, and auditing." (Moll & Yigitbasioglu, 2019, p. 16)

Concerning artificial intelligence, the above-mentioned survey respondents were asked to express to what extent they agree with the following statement: "In the next three years, I will use some form of artificial intelligence to help me to automate tasks and improve the way that I run my business."

Graph 2. Survey question: In the next three years, I will use some form of artificial intelligence to help me to automate tasks and improve the way that I run my business.

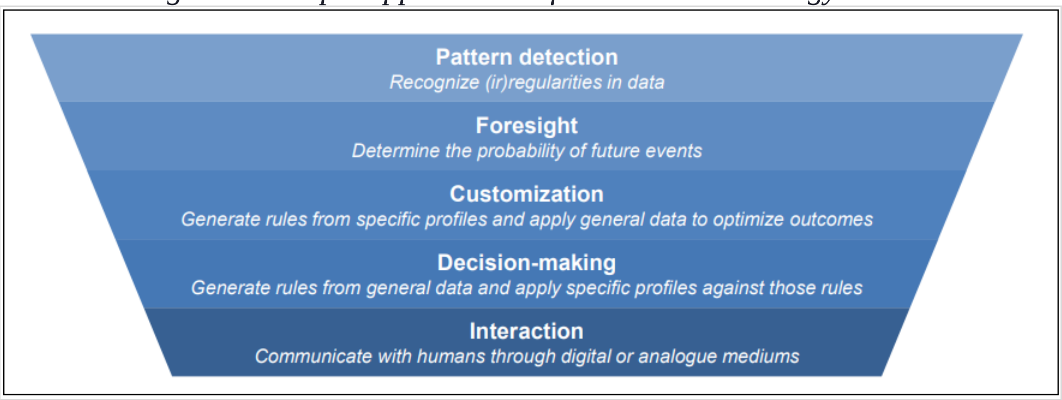


Source: 'The Practice of Now 2019', 2019, p. 17

The findings might sow the seeds of some interesting implications concerning AI, however, it is quite clear that accountants globally understand what technology offers and the future challenges they will have to cope with. Since there are two sides to every coin, apart from the concerns related to technology adoption, according to the survey, "85% of accountants believe that the profession in their country needs to pick up the pace of technology adoption to remain competitive internationally." ('The Practice of Now 2019', 2019, p. 18). Logically, nobody wants to be legging behind namely in financial accounting and financial reporting due to the growing level of international competition.

However, a general understanding of the term 'artificial intelligence' (AI) has been investigated by many other researchers and it is still rather unclear for many people. The report The New Physics of Financial Services – Understanding how artificial intelligence is transforming the financial ecosystem, prepared jointly by the World Economic Forum and Deloitte, revealed some doubts and stated that "There is a marked lack of clarity around the definition of AI, which frequently leads to confusion." ('The New Physics of Financial Services – How artificial intelligence is transforming the financial ecosystem', 2018, p. 10) When asked about artificial intelligence, business people are usually talking about a set of capabilities allowing them to run their businesses in a new way. They are well communicated and easily understood in the following visual – Fig. 1.

Figure 1. Sample applications of AI-driven technology in use



*Source: 'The New Physics of Financial Services –
How artificial intelligence is transforming the financial ecosystem', 2018, p. 11*

About the need of a set of new skills, the above-mentioned report identifies future skills replacing old modes of operating and offers the following explanation: "Institutions need to source more technical skills to develop AI solutions, as well as more high-value abilities to complement them (e.g. creativity, ingenuity, insight). To unlock the full potential of this workforce, institutions must effectively re-task existing talent as well as source new external talent." ('The New Physics of Financial Services – How artificial intelligence is transforming the financial ecosystem', 2018, p. 81) As a result, the diversification of the workforce is needed.

Last but not least, in the above-mentioned survey, authors believe that accountancy practices are likely to be very different from today. They will be empowered by technology and marked by the transformation into business advisory services. The following five changes are mentioned in the survey marking "The future practice of accountants: (1) no manual entry of data; (2) real-time relationship; (3) proactive alerts and notifications; (4) pre-emptive problem solving, and (5) higher fees – but better value." ('The Practice of Now 2019', 2019, p. 19) Thus, accountants will be ever-present trusted partners who will have real-time insight into their clients' business operations and deliver a much higher value.

The impact of AI on the accounting industry has been in the focus of many researchers globally. Specific areas of their work involve examining how AI can help to avoid financial fraud, how the quality of accounting information can be enhanced and/or how AI changes the area of managerial accounting and business forecasting. (Li & Zheng, 2018) As it is clearly seen from numerous examples explained in this treatise, dynamic development as a result of technological advancement is considered by researchers and other professionals involved in the field as a great opportunity rather than a problem, as Paul Lin and Tom Hazelbaker put it in their article for The CPA Journal: "Consequently, a firm's management teams – including IT, audit, tax, advisory, and HR – need to work together to identify where AI can be best utilized to build on their existing strengths, create new ones, and develop strategies for deploying AI-enabled tools in the workplace." ('Meeting the Challenge of Artificial Intelligence', 2019)

Disregarding the complexities of the transition period, AI is here to stay and serve people well at every imaginable level while inspiring them to get the most of the creative use of their data. Artificial intelligence will augment human intelligence, or as Aaron Masih explains: "This is where the concept of intelligence augmentation (IA) comes into play. IA is the use of technology to supplement and support human intelligence, with humans remaining at the centre of the decision-making process." (Masih, 2019) Simultaneously, the accounting profession will be augmented by additional functions and accountants will play the role of highly-trusted indispensable business advisors – partners supporting strategic decision-making processes of their clients' companies.

3. EXPERIENTIAL LEARNING IN TERTIARY ACCOUNTING EDUCATION

Working on the assumption that accountant profession has to be radically reshaped and new skills are to be acquired by professionals working in this field, Accounting Today[2] carried their survey among a wide range of practitioners, firm leaders, regulators and consultants in 2018. (Hood, 2018) Probably the most apposite answer reflecting the issue of new skills needed to be acquired by accountants was expressed by one of the "Technology's exponential advancement is impacting the profession in profound and unprecedented ways," according to Maryland Association of CPAs chief communications officer Bill Sheridan. "Artificial intelligence, cognitive computing, blockchain, and even more mainstream technologies like cloud computing and social media are transforming what accounting and finance professionals do — and what they need to know. Our very existence depends on our ability to learn the skills that will let us work side-by-side with the machines and do the things they cannot yet do." (Hood, 2018) Another respondent, Elizabeth Pittelkow Kittner, controller at Litera and a member of the American Institute of CPAs' Council, added a thought on education of accountants: "We need to determine how to best educate accounting students and professionals already in their accounting careers on how to build more skills outside of mastering technical accounting so we can better compete with people outside of our profession for the jobs we want to do." (Hood, 2018) Interestingly, in the above-mentioned survey, many respondents highlighted excellent communication and decision making skills, emotional intelligence and critical thinking as crucially important competences for accountant professionals in the years to come (Hood, 2018).

The survey data reflecting opinions of business leaders and other professionals in the field (Hood, 2018) reveal that technology is critically important, however, it cannot replace the wisdom and expertise that companies expect and want from their accountants. Consequently, the survey findings are raising red flags regarding courses of accounting at the tertiary level of education because of their content and methods of instruction.

Figure 2. Experiential learning

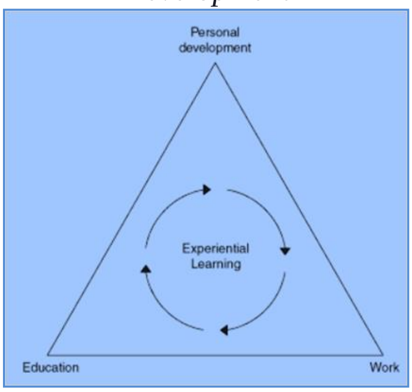
Source: Shutterstock Image, ID: 723460231

Therefore, the author of this paper would like to contribute to the work of previous researchers (Butler, Church, & Spencer, 2019) who suggested experiential learning as a method of instruction especially beneficial for accounting courses. In the next paragraphs of this chapter, the main axioms about experiential learning theory (ELT) are mentioned and ELT is portrayed on a diagram for easy understanding of the whole process of ELT. The chapter is complemented by a sample lesson plan based on experiential learning theory and designed for an accountancy course.

One of the strongest evidence for the necessity to use ELT and its methods in tertiary education was introduced by Specht (1991) in his research. (Kolb & Kolb, 2011, p. 59) He examined an ELT method in an undergraduate accounting course comparing the results to another class with the use of a traditional lecture method: “The results revealed no significant difference in short-term learning between the two course formats; however, the experiential class demonstrated retention of knowledge over a six-week period whereas a significant decrease in the scores of the lecture class was observed.” (Kolb & Kolb, 2011, p. 59)

Experiential learning theory was proposed by David Kolb, an American psychologist and educational theorist. In the second edition of his iconic book on experiential learning, in relation to higher education, Kolb writes: “In the field of higher education, there is a growing group of educators – faculty, administrators, and interested outsiders – who see experiential education as a way to revitalize the university curriculum and to cope with many of the changes facing higher education today.” (Kolb, 2015, p. 4) The experiential learning model is viewed by him as a framework for “examining and strengthening the critical linkages among education, work and personal development.” (Kolb, 2015, p. 4) – see Figure 3 below.

Figure 3. Experiential Learning as the Process that Links Education, Work and Personal Development



Source: Kolb, 2015

Experiential learning theory is based on the work of the most reputable scholars and integrates the research findings of J. Dewey, J. Piaget, C. Jung and others. Among the axioms, underpinning the model, there are the following six: (1) learning is best conceived as a process (in higher education, the primary focus should be on engaging students); (2) all learning is re-learning (integration of new, more refined ideas); (3) learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world (conflict, differences, and disagreement are the driving forces of the learning process); (4) learning is a holistic process of adaptation (it is not only the result of cognition but involves thinking, feeling, perceiving, behaving as well as problem-solving, decision making, and creativity); (5) learning results from synergetic transactions between the person and the environment (people create themselves based on their choices of actual occasions they live through); and finally (6) learning is the process of creating knowledge (social knowledge is created and recreated in the personal knowledge of the learner). (Kolb & Kolb, 2011, p. 44)

To design efficient lesson plans based on experiential learning, teachers integrate the key concepts from experiential learning theory (ELT) and examine a particular topic as a learning process. Accounting as a discipline is never constant since a continuous flow of legal changes keeps alert everybody who is involved – from legislators to practitioners and even to university teachers. The following sample lesson plan for an accountancy class proceeds from the widely acknowledged theoretical foundations and is structured according to M. G. Butler et al. recommendations for experiential learning activities based on a given content area. (Butler, Church, & Spencer, 2019, p. 17)

Chart 1. A Sample Lesson Plan – Accountancy

	Description
Objectives	At the end of the lesson, the students are expected to: a) distinguish between tangible and intangible assets; b) give examples of traditional and new types of intangible assets; c) prepare the balance sheet correctly inserting intangible assets; d) prepare a report for the client with their recommendations on intangible assets management; e) with the help of a mobile MOOC course, students will study the educational video related to the topic of intangible assets.
Pre-activities	1 The teacher will group the students into five. 2 Each group will be given an empty balance sheet with just the main sections. 3 Students will download the mobile app Coursera to their smartphones.
Activities[2]	A. Lesson intro B. Presentation: Teacher's presentation of the topic C. Activities (GW – reading, discussion): 1. Read the article Why Blog? The Benefits of Blogging for Business and Marketing at https://blog.hubspot.com/marketing/the-benefits-of-business-blogging-ht and answer the questions: a) What is blogging? b) What are the benefits of business blogs? 2. Your clients runs a very successful business blogs for a community of accountants with almost 20 000 new and returning visitors each month. The value of the blog is very high. There is another business entity which wants to buy the blog and the domain. Answer the following questions:

[2] GW stands for Group Work. IW stands for Individual Work.

<table>
<tr><td></td><td colspan="4">a) What kind of assets are blogs and website domains?
b) How would you find out their business value?
c) Are they "depreciated" or "amortized"? Explain the difference.
d) Are intangible assets usually recognized in the balance sheet?
e) Amortization is a work of French origin. Which French word can you recognize in its root?
f) Is goodwill considered an intangible asset? Explain.
3. Take the blank balance sheet and find the correct section/line for filling out data on tangible and intangible assets.
4. If you have access to an accounting software program, study the relevant section where information on assets is entered.
5. Activities – Homework (IW)
a) Find the mobile course Advanced Financial Reporting: Accounting for Business Combinations and Preparation of Consolidated Financial Statements on Coursera. Pay attention to the section Intangible Assets Other Than Goodwill.
b) Watch the video at https://www.coursera.org/lecture/wharton-financial-accounting/video-6-2-intangible-assets-and-goodwill-m18wd or enroll for free using "Audit Access" which is also free of charge.
c) Study the course syllabus and structure at https://www.coursera.org/learn/advanced-financial-reporting
d) Based on the video in 5b), prepare two questions to discuss with your group in the next accountancy class.
e) Write a report (min. 350 word) for your client with your recommendations on valuation of blogs and website domains.
f) Suggest 3 topics for an article for the a/m blog and write one article/blog post choosing the most attractive topic for accountants.
g) Shoot a promotional video trailer for the a/m blog using the mobile app iMovie.</td></tr>
<tr><td></td><td colspan="4">Experiential learning method – Course summary</td></tr>
<tr><td>Course topic</td><td>Do
(Concrete Experience)</td><td>Reflect
(Reflective Observation)</td><td>Think
(Abstract Conceptualization)</td><td>Apply
(Active Experimentation)</td></tr>
<tr><td>Financial Accounting (Intangible Assets)</td><td>A, B, C5a,b,c</td><td>C1, C2,</td><td>C3, C4, C5d</td><td>C5e,f,g</td></tr>
</table>

Source: author's own elaboration

4. DISCUSSION AND FURTHER RESEARCH

This study has gone some way towards enhancing our understanding of the changing world of the accounting profession and accountancy. Even though real-world insight based on opinions and ideas of 3,000 accounting professionals was analyzed and important implications highlighted, the author of the study is aware of the fact that the findings might not be fully transferable into the local situation and local conditions. Therefore, for the picture to be complete and to overcome potential weak points, further experimental investigations and research into the topic is needed at the local level. Thus, the global survey 'The Practice of

Now 2019' ('The Practice of Now 2019', 2019) – see Chapter 2 – is worth replicating locally to obtain fully comparable findings and draw even more reliable conclusions.

With acquiring a new set of skills ranging from mastering advanced technologies up to strategic business consulting, there is a segment of accountants in their midlife who might also want to reskill and upskill themselves. Thus, adult learners might enrol at universities – as David A. Kolb highlights – and demand "the relevance and application of ideas be demonstrated and tested against their own accumulated experience and wisdom." (Kolb, 2015, p. 6). Further studies should address this segment of students to identify their needs and expectations and start the process of redesigning the syllabi of accounting courses to offer them the opportunity to acquire knowledge and skills which they really need to be employable.

Last but not least, the globalization of the accounting profession is worth mentioning. Cloud solutions will enable accountants to serve their clients 'over the border' or – better to say – globally. As a result, the importance of foreign languages and especially fluency in professional English focused on the economy, business and accounting is growing and universities should react promptly.

5. CONCLUSION

Attempting to answer the question in the heading of this paper "Are accountants an endangered species?", the author of this paper analysed several pertaining research projects, studies and surveys to gain real-life insight into the issue in question. Being backed by virtual reality represented by artificial intelligence, blockchain, cloud computing and other highly sophisticated technologies, the accounting profession is changing its nature and accountants are envisaged to become ever-present trusted partners who will have a real-time insight into their clients' business operations and deliver a much higher value in comparison with their roles today. Experiential learning model was briefly introduced and recommended to tertiary education designers as a method of instruction with a high potential to help students acquire the new set of skills ranging from critical thinking, communication and decision-making skills up to advance levels of IT competences. A sample lesson plan based on the experiential learning model is a practical contribution to the discussion on how to convert existing methods of instruction in accounting courses into more efficient teaching scenarios and design learning materials better suited to the challenges to come. However, we have to bear in mind that a human being – a living person with many fears and anxieties – is the object of these changes and it is wise to offer them a helping hand. An anonymous quote says that outside of your comfort zone is where the magic happens, and accountants are now taking the steps outside their comfort zones to embrace the change and thrive again on challenges. In case they succeed to take the right steps in time, they are definitely not an endangered species.

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BIBLIOGRAPHY

A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence. (2019). Retrieved 20 September 2019, from http://jmc.stanford.edu/articles/dartmouth.html

AI and Accountancy: Friend or Foe? (2018, September 28). Retrieved 15 September 2019, from Global Banking & Finance Review website: https://www.globalbankingandfinance.com/ai-and-accountancy-friend-or-foe/

American Accounting Association. (1966). A Statement of Basic Accounting Theory.

Butler, M. G., Church, K. S., & Spencer, A. W. (2019). Do, reflect, think, apply: Experiential education in accounting. Journal of Accounting Education, 48, 12–21. https://doi.org/10.1016/j.jaccedu.2019.05.001

Closing the Skills Gap in the Future Workforce | Accenture. (n.d.). Retrieved 13 September 2019, from https://www.accenture.com/cz-en/insights/future-workforce/transforming-learning

Finance 2020: Death by digital—PDF. (n.d.). Retrieved 13 September 2019, from https://docplayer.net/27976526-Finance-2020-death-by-digital.html

Hood, D. (2018, October 1). The profession’s biggest challenges. Retrieved 13 September 2019, from Accounting Today website: https://www.accountingtoday.com/news/the-accounting-professions-biggest-challenges

IFRS - Conceptual Framework for Financial Reporting. (2018). Retrieved 15 September 2019, from https://www.ifrs.org/issued-standards/list-of-standards/conceptual-framework/

Kolb, A. Y., & Kolb, D. A. (2011). Experiential Learning Theory: A Dynamic, Holistic Approach to Management Learning, Education and Development. Retrieved 17 September 2019, from ResearchGate website: https://www.researchgate.net/publication/267974468_Experiential_Learning_Theory_A_Dynamic_Holistic_Approach_to_Management_Learning_Education_and_Development

Kolb, D. A. (2015). Experiential learning: Experience as the source of learning and development (Second edition). Upper Saddle River, New Jersey: Pearson Education, Inc.

Li, Z., & Zheng, L. (2018, September). The Impact of Artificial Intelligence on Accounting. Presented at the 2018 4th International Conference on Social Science and Higher Education (ICSSHE 2018). https://doi.org/10.2991/icsshe-18.2018.203

Manifest, T. (2018, September 26). 16 Examples of Artificial Intelligence (AI) in Your Everyday Life. Retrieved 20 September 2019, from Medium website: https://medium.com/@the_manifest/16-examples-of-artificial-intelligence-ai-in-your-everyday-life-655b2e6a49de

Masih, A. (2018). Why businesses must focus on intelligence augmentation over artificial intelligence | CIO Dive. Retrieved 13 September 2019, from https://www.ciodive.com/news/why-businesses-must-focus-on-intelligence-augmentation-over-artificial-inte/532471/

Masih, A. (2019, January 9). Augmented Intelligence, not Artificial Intelligence, is the Future. Retrieved 13 September 2019, from Medium website: https://medium.com/datadriveninvestor/augmented-intelligence-not-artificial-intelligence-is-the-future-f07ada7d4815

Meeting the Challenge of Artificial Intelligence. (2019, July 3). Retrieved 20 September 2019, from The CPA Journal website: https://www.cpajournal.com/2019/07/03/meeting-the-challenge-of-artificial-intelligence/

Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. The British Accounting Review, 100833. https://doi.org/10.1016/j.bar.2019.04.002

The History of Artificial Intelligence—Science in the News. (n.d.). Retrieved 20 September 2019, from http://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/

The New Physics of Financial Services – How artificial intelligence is transforming the financial ecosystem. (2018). Retrieved 15 September 2019, from the World Economic Forum website: https://www.weforum.org/reports/the-new-physics-of-financial-services-how-artificial-intelligence-is-transforming-the-financial-ecosystem/

The Practice of Now 2019: An essential report for accountants. (2019, May 13). Retrieved 15 September 2019, from Sage Advice United Kingdom website: https://www.sage.com/en-gb/blog/practice-of-now/

Turing, A. M. (1950a). Computing Machinery and Intelligence. Mind, New Series, 59(236), 433–460. Retrieved from http://www.jstor.org/stable/2251299

Weetman, P. (2019). Financial and management accounting (Eighth edition). Harlow, England; New York: Pearson.

[1] Founded in 1965, SAGE is a leading independent, academic and professional publisher of innovative, high-quality content. With its 1,500 employees, it operates globally.

[2] Accounting Today is the leading source of information for public accountants' community. Actionable and insightful content published by Accounting Today can be accessed at www.accountingtoday.com.

[3] GW stands for Group Work. IW stands for Individual Work.

REPORTING OF GOOD AND BAD NEWS: CASE OF THE PHARMACEUTICAL INDUSTRY[3]

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Abstract
Corporate narratives now play a crucial role in the company's annual reporting, being a good source of information for shareholders to track the company's performance. These narratives, however, are not regulated and are often an opportunity for companies to employ impression management techniques. The purpose of this research is to investigate the different disclosure strategies that organizations undertake, specifically regarding good aspects of their performance versus bad ones. The aim is to answer the research question – "What impression management tactics are companies using when reporting good vs bad news?". Using a case study approach, the subject of this research is the European pharmaceutical industry, specifically three of the top companies – Bayer, GlaxoSmithKline, and Novartis. The data chosen for research are the letters to shareholders from each of the companies' ten latest annual reports (2009-2018). The first part of the research involved coding the good and bad news in the letters to shareholders, following a predetermined coding rationale. These codings were then carefully analyzed to determine whether any impression management techniques were present. The main identified tactics are: stressing the positive and downplaying the negative, differential reporting, attribution, and competence enhancement. Additional impression management tactics, not necessarily pertaining to good and bad news, include ingratiation and the use of emotion. The implications drawn from this research are that the shareholders, and stakeholders in general, need to be vigilant when reading the corporate narratives, to discern when the meaning of text is somehow manipulated to manage their impressions of the companies.

Keywords: *chairman statement, corporate narrative, disclosure strategies, impression management*

1. INTRODUCTION

Besides reporting the company's financial statements, accompanying those with a corporate or accounting narrative has also become a standard practice. Corporate narratives now play a crucial role in the company's annual reporting, being a good source of information for shareholders to track the company's performance. These narratives, however, are not regulated and are often an opportunity for companies to employ impression management techniques.

The concept of impression management was first introduced by Goffman (1959), who discussed the self-presentation techniques individuals use to manage others' impressions of them. This book was later used as a basis for numerous studies applying the concept to a corporate level. Hooghiemstra (2000) defined impression management as a field of study dealing with the way individuals present themselves to be favorably perceived by others. Companies, just like individuals, use impression management techniques in their narratives in an attempt to manage stakeholders' perceptions of them.

Reporting of good and bad news regarding the companies' performances has also become a subject of interest for various researchers. The aim of such research is to determine

[3] This paper is part of the author's thesis, defended at Anglo-American University, in June 2019, for the degree of Master of Arts in Business and Law in International Markets.

whether companies focus mainly on the positive aspects, or address the negative ones as well, and whether they take responsibility for the bad news.

The purpose of this research is, thus, to investigate the different disclosure strategies that organizations undertake, specifically regarding good aspects of their performance versus bad ones. The aim is to answer the research question – "What impression management tactics are companies using when reporting good vs bad news?". Using a case study approach, the subject of this research is the European pharmaceutical industry, specifically three of the top companies – Bayer, GlaxoSmithKline, and Novartis.

The pharmaceutical industry is often largely scrutinized by the public, its questionable ethicality severely damaging its reputation and leading to stakeholders losing trust in the companies (Parker, 2007). Thus, the industry's bad reputation among stakeholders and close link to human welfare are the main roots of the importance and interest in studying it. The chosen three companies are big and well-known entities, part of the industry's top, therefore, researching them will shed more light on the impression management tactics used in the industry.

The rest of the paper is organized as follows: the next section provides a review of existing literature and discusses the value that this research brings. Section 3 discusses the collected data, the chosen research methodology, and describes the coding rationale. Chapters 4, 5 and 6 provide the results of the analyses of Bayer, GSK, and Novartis, respectively, including financial, content and impression management analyses. Section 7 brings a discussion of the findings, with a comparison of the three analyzed companies, and other impression management tactics that were used. The conclusion, limitations of the research, and future research opportunities are provided in Section 8.

2. LITERATURE REVIEW

There are numerous researchers that analyzed companies' disclosure strategies in annual reports from the perspective of impression management. Brennan, Guillamon-Saorin & Pierce (2009), set out to measure impression management by developing a score system for both qualitative and quantitative data in corporate narratives. The researchers analyzed the use of four impression management tactics – thematic manipulation, selectivity, presentation effects, and performance comparisons, using examples from press releases of UK firms. Findings conclude that such techniques are prevalent in financial communications, with positive news being exaggerated, while negative aspects downplayed.

Wang (2016) provided a literature review of impression management in corporate information disclosure. The author states that companies generally use it as a tool to bridge the gap between their actual status and their desired one (p. 727). The research done on financial information mainly concerns itself with the way companies may control the descriptions featured in their financial reports to enhance their image. Studies have also been conducted into the readability of reports, finding that managers may use graphs or different narratives to influence it (ibid.). This tactic is further discussed below, as well as throughout this paper.

Seeking to provide a better understanding of impression management in the corporate context, Merkl-Davies & Brennan (2011) designed a conceptual framework using theories from behavioral finance, sociology, and critical accounting. Employing a social psychology approach, another paper by Merkl-Davies, Brennan & McLeay (2011) analyzed UK chairmen's statements. Results suggest that building impressions involves providing an accurate view of the company and its performance, i.e. consistent with the overall tone of the report, but still favorable.

Jones (2011) emphasizes the susceptibility of accounting narratives to impression management, as these are not audited and offer a good opportunity for companies to manage their presentations. Moreover, evaluations of financial performance by managers can be considered inherently subjective (p. 98). The author discusses the impression management techniques that companies employ in their reporting, through the use of narratives, graphs, and photographs. The author argues that these are used for 'presentational enhancement'. The paper presents a synthesis of various existing studies, the results of which are used as a basis for discussion of four main impression management techniques. These include stressing the positive, downplaying the negative; baffling the readers, by using difficult-to-read language; using differential reporting; and using attribution.

The first impression management technique is quite self-explanatory, implying reporting more positive news and omitting the negative ones. This tactic prevails in most of the research done on impression management in annual reports (ibid., p. 99). Clatworthy & Jones (2003) discovered that even poorly performing companies still report more positive than negative news. Baffling the readers with technical language is another impression management technique, whereby negative news is reported in a less transparent manner than positive news (Jones, 2011, p. 100).

The next tactic is differential reporting, meaning that companies with successful results may report them differently from companies with poor results, focusing on different things (ibid, p. 101). Moreover, Clatworthy & Jones (2003) revealed that unprofitable companies do not focus on the past, but rather emphasize the future, whereas profitable companies clearly disclose their past results.

Finally, attribution is the last tactic, it implies management taking credit for good news, and blaming the bad news on the environment (p. 101). Staw, McKechnie & Puffer (1983) researched 49 reports of US companies and analyzed the attribution of the reported news, classifying those into 'internal credit' and 'external blame'. Clatworthy & Jones (2003), once again, reached the same conclusion, finding that both good and bad performers tended to attribute positive news to themselves, and bad news to external factors.

Melloni, Caglio & Perego (2016), drawing on studies of impression management, discuss the disclosure conciseness, completeness, and balance that should be prevalent in integrated reports. Their findings reveal that reports tend to be longer and more optimistic, thus less concise and less balanced, when companies have a poor financial performance. The researchers identified reading ease manipulation and manipulation of the content and verbal tone as impression management tactics that firms may use.

A study on financial reporting of good and bad news was done by Clatworthy & Jones (2003), analyzing the chairman's narratives of top 50 and bottom 50 UK firms. The purpose of the paper was to observe whether companies with improving performances report good/bad news differently from those with a declining performance. The researchers concluded that both types of firms focus on their positive aspects. Moreover, a pattern was revealed, whereby companies blame the external environment for bad news and attribute the good news to themselves.

Other researchers have set a similar research objective, employing different approaches and perspectives. Aly, El-Halaby & Hussainey (2018) researched whether, and to what extent, financial performance determines the tone disclosure in annual reports of Egyptian companies. Performing a content analysis of 105 firms over a three-year period, the researchers found that firms tend to disclose more good news than bad ones, this disclosure being positively associated to financial performance. There are also, however, various factors that affect the relationship between tone disclosure and financial performance, such as profitability, leverage, firm growth, etc.

This paper sets to research good and bad news disclosure in a similar way to Clatworthy & Jones (2003) and Aly, El-Halaby & Hussainey (2018), while combining that with the qualitative analysis of impression management techniques discussed previously by Hooghiemstra (2000), Merkl-Davies & Brennan (2011), Jones (2011), and others. This research is set to contribute to prior literature by providing an insight into the pharmaceutical companies, and the impression management methods that these might use.

The main expectations are that the chosen companies do indeed disclose more of their positive news rather than negative, and that the news are reported using the main impression management techniques discussed above. The main expected difficulty to be encountered during the research process stems from the chosen methodology, and the definition of the rationale behind it. This is further discussed in the Research Method section.

3. DATA AND RESEARCH METHODOLOGY

A. Data Collected

The ten latest annual reports of each of the three pharmaceutical companies were chosen for this research, from the years 2009 to 2018. These reports include sections discussing some fundamental information about the organizations, such as strategies, culture, values, etc., corporate governance, the remuneration report, and financial statements, among others. Containing such a variety of information about the company's business activities, these reports are quite lengthy, ranging from around 200 to 350 pages. Due to the excess information provided in these reports, only one specific section of them was chosen for the purpose of this thesis – the letters to shareholders.

According to Jones (2011), accounting narratives have become increasingly more important over the last two decades, with the Chairman's statements and President's letters being very influential. These allow managers to tell the company's yearly story to the shareholders, and have been known to shape investors' decisions (pp. 97–98).

The chairman's statement typically discloses important information regarding the company's future financial position (Smith & Taffler, 2000). In fact, Bartlett & Chandler (1997) found that the narrative sections of the annual reports have a larger readership, the most thoroughly read part by private investors being the chairman's statement. The authors' findings suggest that shareholders would rather read an overview of the company's performance than just plain financial data. Hooghiemstra (2010) states that, since the letters to shareholders are unregulated, they may be used by the CEOs to manage shareholders' impressions of the company.

Thus, because of their crucial importance and susceptibility to impression management, the main focus areas for this research will be the Chairman's and CEO's letters to shareholders. These usually discuss the company's performance in the previous year, substantiate its achievements and failures, disclose any major changes in the firm, and talk about the future outlook. The number of statements for each company differs, because not all of them have both Chairman's and CEO's statements, and these also change throughout the ten years. The total number of the collected letters or statements is 44. To ensure comparability, the content analysis results are provided in percentages.

B. Research Methodology

For the purpose of this research, both quantitative and qualitative methods were chosen. Before analyzing the actual corporate statements, however, the companies' income statements and balance sheets were evaluated to ascertain their financial situation. The aim was to observe whether the company experienced a growth or decline in performance. The chosen indicators were the ones most likely to be addressed by the Chairmen and/or CEOs in their statements: revenue, profit after tax, and earnings per share.

The percentage change from previous years was calculated in order to establish a preliminary set of expectations regarding what the Chairmen / CEOs' statements might include. In case the financial analysis showed a negative percentage change, i.e. a decline in performance, the goal was then to observe whether, and in what light, this was addressed in the accounting narratives. This, of course, does not represent a complete picture of what the letters to shareholders may include, seeing as there are various other aspects of a company's performance. But, it provides a basic idea of whether the businesses had an overall successful year, or not, in terms of financial performance.

In order to assess whether a company had a good or a poor year, both relative and absolute values of the mentioned indicators were considered. The percentages represent relative changes, showing the year-on-year dynamics, which helped reveal the extent of the growth or decline in results. But, these were sometimes quite volatile, and a sharp increase in an indicator in one year (above 100%) was, most likely, followed by a negative percentage change in the next year. This, however, did not necessarily mean that the company had a poor performance, the negative percentages just reflecting the comparison with the unusually high figures of the previous year. Thus, an analysis of the absolute values of figures was necessary for a more accurate assessment of the companies' performance.

To answer the posed research question, manual content analysis was chosen as the research method. Mimicking the research conducted by Clatworthy and Jones (2003), the accounting narratives were analyzed for specific statements of good or bad news regarding the company's financial performance. Sentences were coded as positive or negative when their connotations implied good or bad news for the company or its environment (p. 175). One coding represents one such statement, and a sentence can have multiple codings, if it includes more than one good or bad news, or both good and bad ones.

General statements praising the company, its competences and abilities, or discussing its business model, strategy, plans (etc.) were not coded, since the focus of this research is limited to news regarding the company's performance. The statements that were considered, for the purpose of this research, were specific and explicit, relating to performance in a given year or within a certain period. Statements reporting news or certain financial figures without providing substantiation or any context (e.g. percentage change, or a comment about the figures) were considered to be neutral statements and, therefore, not coded. Similarly, any estimations, potential future sales, and any other outlooks for the future were disregarded, since these are not really representative of the company's actual performance, and also fall outside the purpose of this paper.

Several letters to shareholders included general narratives about the state of the environment in which the company operates, especially on the macroeconomic level. Such statements were not considered, as these are out of the companies' control. However, the statements about the environment that are related to specific performance aspects of the companies were indeed coded. An example of such a statement would be: "net sales were down 2% cc due to fierce price competition in the US" (Novartis, 2018, p. 4). These statements were also further analyzed to determine the attribution of the good / bad news, e.g. whether the companies took credit for the good news, and blamed the environment for the bad news.

To introduce a quantitative representation of the good and bad news in the corporate statements, the number of words was counted for each of the codings. To put it into perspective and allow comparison between the companies and over the selected period of time, the number of words in the codings was also calculated as percentage of the total word count in the letters to shareholders. In an attempt to have more accurate results, the word count was taken from the actual statement / coding, as opposed to the sentence as a whole, seeing as some sentences are much longer, while others are concise and straight to the point. This meant that, occasionally, information that was not relevant to the point made in the good / bad news (e.g. description of the pharmaceutical products or product line) was not counted.

For the second part of the research, the codings were carefully read and analyzed to determine whether any impression management techniques were present. The main focus was on the tactics discussed by Jones (2011) – stressing the positive, downplaying the negative; baffling the readers; differential reporting; and attribution. However, other impression management strategies were also sought for, to provide a bigger picture of the tactics that were most prevalent and make conclusions on the potential reasoning behind companies using them.

4. ANALYSIS OF BAYER

A. Financial Analysis

Table 1. Financial Analysis of Bayer

Financial Indicators	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue	-5.3%	12.6%	4.1%	8.8%	1.0%	5.2%	9.7%	1.0%	-25.1%	13.1%
Profit after tax	-21.2%	-3.6%	88.7%	1.0%	27.6%	8.1%	19.0%	17.8%	67.7%	-78.9%
Profit after tax (cont. op.)	-21.2%	-3.6%	88.7%	1.0%	27.6%	8.1%	16.7%	13.4%	-28.7%	-47.3%
Earnings per share	-23.4%	-7.6%	90.4%	-1.0%	30.4%	7.3%	20.0%	9.5%	54.6%	-78.6%

Source: Researcher's own calculations with data from company's Annual Reports

Table 1 illustrates the year-over-year percentage change in the financial indicators for Bayer. For a better representation of the company's profitability, an extra row is dedicated to profit after tax just from continuing operations. These ten years can be divided into three specific periods, according to the company's financial performance: the years of 2009 and 2010, which were overall challenging, the 2011–2016 period, with seemingly positive results, and the years of 2017 and 2018, described by a rather poor performance. Therefore, it can be expected that the number of bad news reported in the unsuccessful periods will be higher than those during the successful period, vice versa with good news.

B. Content Analysis

Table 2. Number of good & bad codings for Bayer

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Good	17	7	22	32	21	17	19	17	14	11
Bad	6	6	5	4	4	0	0	0	11	5
Year	poor	poor	good	good	good	good	good	good	poor	poor

Source: Researcher's own findings from company's Annual Reports

Table 2 illustrates the number of good and bad codings found in 10 letters from Bayer's Chairmen. The last row of the table labels the years as either good or poor, reflecting the results of the Financial Analysis. The first observation is that the predictions made at the end of the previous section came true for the most part.

Table 3 displays the word count analysis of the Chairmen's statements, including the percentage of the total number of words that each coding represents, as well as the average of the figures.

Table 3. Word count analysis of Bayer's statements

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Avg.
Good	# of words	241	134	346	564	282	243	305	255	237	165	277.2
	% of Total	19.8%	10.2%	22.8%	34.4%	20.4%	19.6%	22.8%	18.0%	12.9%	12.7%	19.4%
Bad	# of words	64	88	74	74	49	0	0	0	183	83	61.5
	% of Total	5.3%	6.7%	4.9%	4.5%	3.5%	0.0%	0.0%	0.0%	9.9%	6.4%	4.1%
Total # of words		1,215	1,316	1,520	1,641	1,384	1,240	1,339	1,418	1,843	1,300	1,421.6
Year		poor	poor	good	good	good	good	good	good	poor	poor	

Source: Researcher's own findings from company's Annual Reports

In 2009, Bayer was struggling with the effects of the crisis, the Chairman addressing that in his letter, and, in fact, even starting his narrative with the bad news. The overall tone of the letter, however, is rather optimistic, having a relatively high amount of good news. This could be explained by the Chairman wanting to spotlight more of the company's positive aspects to reassure the stockholders of its competence. An interesting observation made was the way in which some of the news is framed:

> "we limited the drop in earnings to 6.6 percent"
>
> "The subgroup initiated a rapid, broad response to the sharp drop in demand with measures such as temporary plant shutdowns, production cutbacks …" (Bayer, 2010, p. 4).

These negative aspects are portrayed in a positive light. Admittedly, under those critical circumstances, a decrease in earnings that is not too significant does sound like good news. But, the word choice in those statements – "limited the drop", "rapid, broad response to the sharp drop" – still is aimed at emphasizing Bayer's good problem-solving capabilities.

In 2010, an overall challenging year for Bayer, the number of codings for good news substantially drops. These now make up only 10% of the total text, while the bad news codings increase to 7%. This was also the year when a new Chairman was assigned, which might have contributed to the change in disclosed news, due to a different style of reporting.

After six years of successful performance, Bayer encountered a significant decline in 2017. The codings for bad news skyrocket to 11, representing 10% of the whole text, the highest level across all years. Despite the poor performance, the number of codings for good news does not differ too much from other successful years, although the number of words does represent a lower percentage of the total – 13%. This seems to balance out the negative aspects that were reported, reminding the shareholders of the company's strengths.

The year of 2018 was, unfortunately, no better than the previous one, with the profit figures plunging further. Thus, codings for good news drop noticeably, but due to the letter being much shorter, still account for 13% of the text. As for the negative aspects, 5 bad news were coded, making up 6% of the whole statement. This is actually quite surprising, seeing as it is not much different from some of the years when the company showed a substantially better performance. Moreover, the reported bad news barely addresses any declines in financial figures, and mostly focus on the unfavorable market conditions.

C. Impression Management Analysis

As can be seen from the Content Analysis, the tactic of stressing the positive and downplaying the negative is certainly present in Bayer's reports. This can be noticed right from the first year analyzed, where the Chairman's statement reports quite a high number of good news, despite the financial performance being rather unsatisfactory. Moreover, some of Bayer's negative news was framed as positive, making the tone of the letter more optimistic.

In the rest of the years, there is always more good news than bad news, with three years even lacking bad news altogether. Although, in some of those years, the company had a successful performance, which explains the positive tone. In 2018, however, there is a significant decline in financials, but bad news remains on par with some years that saw a better performance. Moreover, the bad news does not address the decrease in financial indicators, thus downplaying the negative aspects again.

The tactic of baffling readers is actually not prevalent in Bayer's reports. Some technical language is indeed present, but it is used when reporting both good and bad news. But, even when technical terms are present, e.g. EBITDA, the overall message of those negative aspects is rather clear. Overall, it seems that the language used to report bad news is not different from that used with good news.

The next impression management tactic is differential reporting, one example of it being the use of more 'hard numbers' to back up positive performance and not the negative one. Most statements have either just one or no numbers substantiating the negative aspects, mostly focusing on the environment. An example is the 2010 Chairman's statement, where the entire paragraph discussing good news includes numerous figures and percentage changes, while the next paragraph that discusses bad news has no numbers whatsoever:

> "Adjusted for currency and portfolio effects, sales advanced by 8.0 percent. EBITDA before special items came in at €7.1 billion, which means we improved our operating performance by 9.7 percent" (Bayer, 2011, p. 4).

> "However, the performance of the CropScience and HealthCare subgroups did not meet our expectations. In HealthCare, generic competition had a very noticeable effect. A particularly negative factor is the pressure on Yaz® / Yasmin®, …" (ibid., p. 5).

The last impression management tactic under question is attribution. Instances with internal credit and external blame can indeed be noticed in Bayer's letters to shareholders. There are, however, quite a lot of cases when the company is merely reporting its results, either good or bad, without explicitly attributing these to internal or external factors.

There are also quite a few instances of external credit, the company naming the environment as one of the reasons behind successful results. On more rare occasions, the company may also take responsibility for the negative news – internal blame. These, however, are not as common, there being more cases of attribution. Interestingly, with good news, the Chairmen also tend to use more of the personal pronoun "we", thus emphasizing the company's competence in delivering the successful results. Examples of internal credit and external blame are provided below:

Internal Credit:

"Yet thanks to our strategic alignment, we navigated the economic downturn with comparative success" (Bayer, 2010, p. 4).

"Our refocused sales and marketing activities as well as our streamlined product range were key to our success" (Bayer, 2013, p. 4).

External Blame:

"In terms of earnings, CropScience was unable to match the record level of 2008 due to higher raw material costs and negative currency effects" (Bayer, 2010, p. 4).

"… difficult situation in Brazil, where several factors led to unexpectedly high inventories of crop protection products" (Bayer, 2018, p. 4)

5. ANALYSIS OF GLAXOSMITHKLINE

A. Financial Analysis

Table 4. Financial Analysis of GlaxoSmithKline

Financial Indicators	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue	**16.5%**	**0.1%**	**-3.5%**	**-3.5%**	**0.3%**	**-13.2%**	**4.0%**	**16.6%**	**8.2%**	**2.1%**
Profit after tax	**20.3%**	**-67.3%**	**194.5%**	**-13.1%**	**18.6%**	**-49.7%**	**195.7%**	**-87.3%**	**104.2%**	**86.5%**
Profit after tax (w/o other inc.)	**8.7%**	**-70.0%**	**258.2%**	**-28.4%**	**29.1%**	**-21.6%**	**-81.4%**	**579.9%**	**-7.5%**	**36.3%**
Earnings per share	**23.1%**	**-70.6%**	**225.9%**	**-11.2%**	**21.1%**	**-49.1%**	**204.2%**	**-89.2%**	**67.0%**	**134.7%**

Source: Researcher's own calculations with data from company's Annual Reports

Table 4 showcases the percentage change in the figures of GlaxoSmithKline. The percentage changes of GSK's financial indicators are quite erratic, it is, thus, not as easy to divide the years into just a few periods according to performance, as done with Bayer. Other income / loss, such as the asset disposal in 2015, was excluded in an attempt to get more stable results, but these remain just as volatile, with every other year showing a decline in performance. The good and bad codings for GSK can, thus, be expected to show similar erratic change year-on-year.

In order to accurately label the years as either good or bad, the actual financial figures of the company had to be observed and compared to previous years. Overall, the years 2009, 2011, 2013, and 2018 can certainly be labeled as good, while 2010, 2012, and 2014 – bad. The years 2015 and 2016 were labeled as mixed, due to the ambiguous percentage changes, while the year of 2017 was labeled as good, since the decrease in profit after tax (without other income) was insignificant, with the other indicators seeing a significant improvement.

B. Content Analysis

Table 5. Number of good & bad codings for GlaxoSmithKline

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Good	6	6	13	12	23	15	11	14	12	19
Bad	0	3	2	6	1	6	2	2	1	0
Year	good	poor	good	poor	good	poor	mixed	mixed	good	good

Source: Researcher's own findings from company's Annual Reports

As expected, the number of good and bad news reported each year is quite erratic. Table 6 displays the word count analysis Chairmen's and CEO's statements of GSK.

Table 6. Word count analysis of GlaxoSmithKline's statements

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Avg.
Good	# of words	87	77	156	161	399	281	164	207	203	274	200.9
	% of Total	11.9%	6.0%	8.5%	8.3%	17.3%	10.1%	12.8%	15.2%	10.5%	15.1%	11.6%
Bad	# of words	0	73	23	99	8	106	21	45	16	0	39.1
	% of Total	0.0%	5.7%	1.2%	5.1%	0.3%	3.8%	1.6%	3.3%	0.8%	0.0%	2.2%
Total # of words		733	1,276	1,843	1,940	2,309	2,771	1,284	1,365	1,931	1,813	1,726.5
Year		good	poor	good	poor	good	poor	mixed	mixed	good	good	

Source: Researcher's own findings from company's Annual Reports

In 2009, the Chairman's and CEO's statements were combined into one, which was rather short, the shortest out of all statements, in fact. The company had a rather good financial performance, negative news was omitted altogether. 2010 saw a substantial decrease in profit, which is reflected in the news disclosed in the statement. Bad news represents 6% of the text, the highest percentage out of all of the years, mostly on account of the letter being one of the shortest. Despite that, there are only 3 codings, which barely address the company's financial performance.

2012 saw another decline in financials, but there isn't much difference in the reporting of good news. The CEO does disclose more negative aspects than in the previous year, but half of the bad codings are followed by good news, and the other half addresses the challenging market. The slight recovery from this downturn resulted in another optimistic narrative from the Chairman and the CEO, in 2013. There is barely any bad news in either of the letters, the only negative aspect is addressed in passing when mentioning a successful result achieved by GSK.

The percentage changes in GSK's financial indicators for 2015 seem to show growth in the figures. However, that is mostly due to a disposal of an asset, which skyrocketed the company's profits. Not counting other income into the profit figures, a drastic drop can be noted. This is not addressed in the statements, the 2 bad news codings making up barely 2%. Good news decreases in terms of codings, but since the letters are much shorter than the few previous ones, these almost reach 13% of the whole. There also now seems to be a pattern for how the company reports bad news, as both of the codings are again accompanied by positive comments.

In 2017, the overall performance improved, the company slowly recovering. The statements only have one bad news coding, making up barely 1%. Other than that, the narratives are positive, especially the CEO's statement, which, despite being almost twice as long as the 2016 one, does not explicitly state any negative performance aspects for the year. This could be explained by the fact that a new CEO was appointed, who may have wanted to stress all of the positive aspects of the company in her first statement as the CEO, and not shed light on the negative ones.

GSK experienced continued improvement in 2018, with an increase across all financial indicators. Bad news is again null, making it the second year in a row that the CEO letter contains only good news. While in both of the years GSK did witness an overall positive financial performance, it still seems that the new CEO has an overly positive reporting style.

C. Impression Management Analysis

The tactic of emphasizing the positive and minimizing the negative is also evident in GlaxoSmithKline. The company has a couple of letters to shareholders that do not report any bad news. But, similar to Bayer, in those years the company had successful results, which might justify the optimism. However, there are some statements that have very little bad news, barely addressing the company's financials, despite it witnessing a decline in performance. The 2010 Chairman and CEO summary, for example, does not address the almost 70% drop in profit. Moreover, while there is a decrease in all financial indicators, the managers still state that "GSK remains financially very strong" (GlaxoSmithKline, 2011, p. 4).

The tactic of confusing the readers with technical language seems to be, again, not prevalent in GSK's statements. There is, of course, some technical terms and corporate legalese present, but these are used with both good and bad news.

As for differential reporting, GSK's letters to shareholders do seem to include 'hard numbers' when disclosing bad news, as well as good news. The majority of the bad codings actually have clear numbers and percentage changes, which might be a bit surprising since it is not advantageous for the company. However, this does not mean that GSK's reports are really transparent, seeing as a lot of the statements have barely any negative news even when the company's performance has been poor. Seven out of the ten analyzed letters only have between 0 and 2 bad codings, which is a lot less than in Bayer's case. Moreover, in the so-called unsuccessful years, when addressing the negative aspects, the company does focus mainly on the environment, which is another characteristic of differential reporting.

The tactic of attribution was not used as predominantly in GSK when disclosing good news. It seems that quite a few of them are reported in a more impartial manner, simply stating the results. However, in some of the letters to shareholders, the internal attribution seems to be more implicit than explicit. The managers do not always explicitly state that the positive performance is due to a company's specific capability. But, similarly to Bayer, some positive aspects are presented using the pronoun "we" and active verbs, such as "we were able to" or "we grew". This again emphasizes the company's abilities and competence to deliver successful results. There are also no good news statements that attribute the success, at least partially, to the external factors at play.

> "We have made good progress…"; "… we were able to maintain core earnings per share…" (GlaxoSmithKline, 2013, p.3)

"We grew sales and earnings in line with guidance …" (GlaxoSmithKline, 2014, p. 4)

As for the bad news, some of the statements were reported neutrally, but the majority were, in fact, attributed to the external environment. This is especially evident in the three reports that have more than just one or two bad codings.

An interesting contrast can be observed in some of the letters to shareholders. As illustrated above with examples from the 2012 and 2013 reports, some good news is disclosed using the plural first person pronoun, as opposed to the more common "sales grew" or "earnings increased", for example. The opposite can be noticed with bad news attributed to the environment, which is disclosed in a cause-and-effect manner, thus making a clear link between the external factors and the unsuccessful performance. Examples of this are displayed below, along with a couple more instances of self-serving attribution:

Internal Credit:

"a focus on cost and financial efficiencies has allowed the Board to set a dividend of 80p per share for 2014, an increase of 3%" (GlaxoSmithKline, 2015, p.2).

"Group Adjusted operating margin improved, reflecting effective management of costs …" (GlaxoSmithKline, 2018, p.5)

External Blame:

"Trading conditions continue to be challenging, particularly in the US primary care market. This led to sales for the year declining 3% …" (GlaxoSmithKline, 2015, p.3).

"Here, government austerity measures adversely impacted growth by approximately 6 percentage points during the year" (GlaxoSmithKline, 2013, p.3).

6. ANALYSIS OF NOVARTIS

A. Financial Analysis

Table 7. Financial Analysis of Novartis

Financial Indicators	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue	**6.8%**	**14.4%**	**15.7%**	**-3.2%**	**2.2%**	**-9.5%**	**-5.7%**	**-1.9%**	**1.2%**	**5.7%**
Profit after tax	**2.7%**	**17.9%**	**-7.3%**	**4.0%**	**-3.4%**	**10.6%**	**73.1%**	**-62.4%**	**15.0%**	**63.8%**
Profit after tax (cont. op.)	**3.6%**	**17.9%**	**-7.3%**	**4.0%**	**-3.4%**	**15.4%**	**-34.5%**	**-4.7%**	**15.0%**	**63.8%**
Earnings per share	**2.2%**	**15.7%**	**-10.5%**	**2.6%**	**-4.3%**	**16.8%**	**-33.5%**	**-3.4%**	**16.3%**	**65.9%**

Source: Researcher's own calculations with data from company's Annual Reports

The results for Novartis are presented in Table 7. The results of this financial analysis reveal a lot of ambiguous years, with percentages being positive for one indicator and negative for the others, and vice versa. To avoid having most years defined as 'mixed', the labeling is done based on the profit from continuing operations, since also the changes in these ambiguous years are not that significant. Thus, the years 2009, 2010, 2012, 2014, 2017 and 2018 are considered to be overall successful for the company, while the others being labeled as having a poor performance. It can be expected that the bad news will intensify in the unsuccessful years.

B. Content Analysis

Table 8. Number of good & bad codings for Novartis

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Good	31	35	20	13	36	11	14	5	18	10
Bad	7	1	5	6	0	0	0	5	1	0
Year	good	good	poor	good	poor	good	poor	poor	good	good

Source: Researcher's own findings from company's Annual Reports

The number of codings for Novartis is even more erratic than for GSK. The change in numbers for good news codings is quite drastic, ranging from 5 to 36. There are quite a few years with no bad codings, although this is not dissimilar to Bayer and GSK. There doesn't seem to be a pattern with reporting of good news, as was, more or less, visible in the other companies. Even though there are other factors that may contribute to the disclosure of good and bad news, besides just financial performance, it is still evident that Novartis has a different approach to reporting, especially compared to the other two companies.

Table 9 provides the word count analysis of the company's statements.

Table 9. Word count analysis of Novartis' statements

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Avg.
Good	# of words	495	589	290	212	483	139	183	75	219	121	280.6
	% of Total	11.9%	18.5%	20.5%	9.1%	21.4%	14.2%	17.5%	5.6%	16.6%	11.2%	14.7%
Bad	# of words	96	16	58	109	0	0	0	76	16	0	37.1
	% of Total	2.3%	0.5%	4.1%	4.5%	0.0%	0.0%	0.0%	5.7%	1.2%	0.0%	1.8%
Total # of words		4,155	3,186	1,415	2,338	2,252	982	1,045	1,330	1,318	1,082	1,910.3
Year		good	good	poor	good	poor	good	poor	poor	good	good	

Source: Researcher's own findings from company's Annual Reports

A slight increase in all indicators, in 2009, signaled a promising recovery for Novartis after the global crisis. The number of codings for good news is among the highest, and, similarly, bad news is at its highest as well. But, the tone of the statement is still very positive, since the vast majority of it is either good news, or positive narrative about other general areas of performance, overshadowing the negative news.

While revenue increased in 2011, all the other profit figures slightly dropped. Good news decreased to 20 codings, and there are 5 bad news codings, but none of them address the decrease in profits.

In 2013, there is a change in the Chairman position, and an official letter to shareholders from the CEO is introduced. The number of good news codings is the highest of all years, and makes up 21%. Neither of the statements includes any negative news, despite there being a slight decrease in profit.

Further changes in the company's reporting can be noted in 2014. Starting with this year, all of the statements are a lot more concise, especially compared to the previous years. In terms of financial performance, Novartis saw a slight growth in its profit. Bad news is non-existent, while good news understandably dropped to 11 codings.

In 2015, the company experienced another decline, more substantial than in the previous years. Surprisingly, neither of the statements reports this, bad news again being null, while good news even slightly increasing. 2016 was another rough year for Novartis, good news notably drops to only 5 codings, the lowest number across all years. Bad news increases to 5 codings, which is quite the contrast against the previous years with no negative news whatsoever. This year's statements have a more prominent negative undertone than others, although still outweighed by the optimistic narrative about the company's plans and competences in general.

In 2018, Novartis experienced substantial growth in its profit indicators. There is a slight decline in good news, now at 11% of the statements, and, unsurprisingly, again no bad news is reported. However, this year saw a change in the CEO position, there thus being a change in the reporting style as well.

C. Impression Management Analysis

Novartis is not an exception when it comes to employing the tactic of stressing the positive and downplaying the negative. More than half of the annual reports have either just one bad news coding, or none at all. While most of those years saw some financial growth, there are a couple during which Novartis witnessed decline in performance. In 2013, for example, despite a slight decrease in profit figures, both letters to shareholders only report positive results. Even more unexpected are the 2015 statements, which again do not mention any bad news despite the even more considerable decrease in figures. The reports that have more than just one bad news coding, however, are still overshadowed by the good news.

Just as the other two companies, Novartis does not seem to use difficult-to-read language in order to baffle the readers when disclosing negative news. Technical terms are again present throughout all reports, with both good and bad news. However, this is again not a sign of transparency, seeing as the company barely discloses bad news, especially in some statements where there is merely one sentence or none at all.

Instances of differential reporting can be detected in the letters to shareholders. Indeed, when addressing positive aspects, the company often uses hard numbers to illustrate the extent of its growth, while the few negative statements do not report as many percentage changes. An interesting observation can be made for the 2012 Chairman's statement. While some of the bad news do technically disclose unfavorable numbers for the company, these are only included in parentheses, avoiding the use of words 'decrease', 'decline', etc. There are also a couple of good codings that just include the percentage change in brackets, but these are followed by further positive news, and other good codings use words like 'increase' and 'growth'.

Several instances of attribution can be encountered in the letters to shareholders. When it comes to good news, however, there aren't as many explicit ones, with most of them not directly attributed to the company's competence. Some are disclosed neutrally, while some do appear to include implicit internal attribution. This is done in a similar way to GSK, using phrases like "we increase", "we delivered", "we were able to", etc. Overall, most of the good news were just presented in a self-laudatory manner.

On very rare occasions, the positive statements give credit to some external factors that benefitted the company:

> "Sandoz benefited from strong growth in generics and biosimilars in Europe and emerging markets" (ibid., p.8).

Equally rare are also statements where the company is taking responsibility for poor results. An example of internal blame is depicted below. There are also several bad news codings that seemingly point towards an internal problem, e.g. quality issues or production bottlenecks. However, these are not formulated in a way that portrays a clear link between the internal problems and the negative results, and thus, do not really present a case of attribution:

> "One area where we fell short in 2016 was Alcon" (Novartis, 2017, p.5).

> "The performance of OTC and Animal Health … was hurt by quality issues at a US production site …" (Novartis, 2013, p.6).

Most of the bad news in the letters to shareholders, however, still focus on the environment. Not all of them explicitly blame the external factors for the negative results, but a couple of the examples that were detected are presented below, along with an example of internal credit:

Internal Credit:

> "The generics division Sandoz achieved solid underlying growth … in key markets thanks to new product launches and increased marketing initiatives" (Novartis, 2010, p.7).

External Blame:

> "However, Sandoz net sales were down 2% cc due to fierce price competition in the US" (Novartis, 2018, p.4).

> "Our core operating income of USD 13.0 billion declined 2% (cc), as we expected, reflecting generic competition and growth investments" (Novartis, 2017, p.5).

7. DISCUSSION

A. Comparison of the Three Companies

All three companies reported more good news than bad, all of them also having several reports that lacked bad news altogether. This is not surprising and is consistent with the findings of various studies on corporate reporting, some of which were mentioned in the Literature Review. In terms of the relationship between the profit and the number of good news reported, there is some level of association present in Bayer and GSK, but not evident in the case of Novartis. The reason behind that might be the frequent changes in the reporting style of Novartis' statements. But, some association between profit and bad news could be observed in all three companies. These relationships were not detected in all years and are, of course, not precise, since the positive and negative news also included aspects beyond just the financial performance.

Each company had a different number of statements or letters to shareholders in the chosen 10-year period, but *Table 10* presents their word count analysis using percentages to ensure comparability. Since Bayer's reports only include a letter from the Chairman, the number of words is lower than the other two companies', although not as significant as might be expected. Despite the shorter statements, however, the reported good news represents 19.5% of all of Bayer's statements, the highest number out of the companies. But, equally, the reported bad news also represents the highest percentage – 4.3%, while the other companies' figures are around 2%. It appears that the gap between the positive and negative codings is the smallest in Bayer's case, and the biggest in Novartis. It, thus, seems that Bayer has slightly more balanced reports. However, this does not necessarily mean that it is more transparent, since the way in which the negative news is presented is important.

Table 10. Word count comparison of all three companies

	TOTAL # OF WORDS	# OF WORDS IN GOOD NEWS	% OF TOTAL	# OF WORDS IN BAD NEWS	% OF TOTAL
BAYER	**14,216**	**2,772**	**19.5%**	**615**	**4.3%**
GSK	**17,265**	**2,009**	**11.6%**	**391**	**2.3%**
NOVARTIS	**19,103**	**2,806**	**14.7%**	**368**	**1.9%**

Source: Researcher's own findings from company's Annual Reports

Overall, however, the statements of GSK and Novartis did seem more positive. More than half of their letters, 7 out of 10 for GSK, and 6 out of 10 for Novartis, had 0 to 2 bad news codings, while only 3 out of 10 Bayer's letters had 0 negative news reported, the others having at least over 4 codings. But, the tactic of stressing the positive and downplaying the negative was still observed in all three companies, to a lesser degree in Bayer though. It was especially evident in those years with a relatively poor performance that had barely any bad news reported, or none at all.

This ties with the impression management tactic of differential reporting, which was again present in all companies. In the case of Novartis, the company often used clear numbers when reporting good news, but not when reporting bad news. The few codings that did include some figures were still more focused on the environment. In GSK's case, majority of the bad news were actually reported using clear numbers, but these were often attributed to the environment. As for Bayer, only one of its reports included clear financial figures when discussing poor performance, the other letters having more generalized bad statements or, again, ones focused on the environment. Thus, even though Bayer's statements have more bad news than the other two companies, it does not indicate an increased level of transparency.

Overall, the tactic of attribution was not used as blatantly as might be expected. A good portion of the news was disclosed in an impartial manner, merely stating the results. Moreover, there were some cases of internal blame, the company conceding its responsibility for bad news, and external credit, giving credit to the environmental factors for positive results. These, however, were not as common, and could be observed more in Bayer's statements, but not as much in Novartis, and not at all in GSK.

But, some instances of attribution could still be observed in all companies. An interesting remark was made regarding the self-attribution of good news, which was often more implicit rather than explicit, especially in GSK and Novartis. This was done with the frequent use of the pronoun "we", which helped emphasize that it was the companies' own merits for achieving the good results. In the cases with external blame for the negative results, a clear link between the environment and the bad news was often made, using cause-and-effect terminology.

The technique of baffling the readers with difficult-to-read language when reporting bad news could not be detected in the analyzed reports. While some technical terms and corporate language were indeed present, these were used when discussing both good and bad news. Overall, it did not seem that any of the companies were burying the negative results under complicated language. However, a lot of the reports had barely any bad statements, so it could be that the companies prefer to omit them altogether rather than confuse the readers when disclosing them. Although it is a subjective interpretation, the language used in the reports seemed to be fitting to their intended audience, which is at least somewhat familiar with the field. But, further research, especially with the help of tools for assessing the readability of the text, can shed some more light on this matter.

B. Other Impression Management Techniques

Besides the four impression management tactics from Jones (2011), there are other techniques that were pervasive in the companies' annual reports. One of them involves the companies immediately accompanying the good news with bad news, thus creating a contrast that highlights their accomplishments.

Stratulat (2019) analyzed the annual reports of Volkswagen, also detecting this technique of juxtaposing the company's progress against challenging external factors, thus enhancing its corporate image. This could be put under the umbrella of an impression management tactic discussed by Tierney and Webb (1995), called competence enhancement, which was used by Exxon during the oil spill crisis. The authors explained this tactic as highlighting a company's fitness to overcome an emergency.

Even though crisis events are outside the scope of this research, this technique could also be observed when the companies were reporting their good and bad news. Previously in the Content and Impression Management Analyses of GSK, its pattern of stating the good news right after disclosing some negative aspects was discussed. The tactic of competence enhancement, however, is a bit different. In GSK's case, it almost seemed as if the managers always wanted to finish on an optimistic note, bringing a positive aspect to any statement. But, competence enhancement involves disclosing the adverse effects of certain factors with the aim of emphasizing the company's ability to overcome them:

> "Group sales rose 17% at actual rates, 6% CER (5% pro-forma) to £27.9 billion, despite the uncertainty and volatility experienced globally in 2016" (GlaxoSmithKline, 2017, p. 5)

The example above shows the presence of this tactic within a single sentence. This is quite common in some of the reports, several good news statements being preceded or followed by short remarks of some bad news. In other cases, this technique can be noticed within bigger sections of the letters. Sometimes, the managers describe the bad news over several sentences, following that with a comment on how remarkable it is for the company to achieve its positive results given the circumstances. Again, this contrast helps illustrate the company's competence to perform successfully even during difficult times:

> "The economic and debt crisis has cast a shadow over Europe and the United States for more than four years, and it significantly affected 2012, as well. Despite major concerted efforts, the end of this troubling period is not yet in sight. […] Despite this ominous backdrop, Novartis once again posted strong results in 2012" (Novartis, 2013, p. 5).

Another tactic present in the analyzed reports was ingratiation, described by Allen & Caillouet (1994) as companies trying to persuade stakeholders of their legitimacy. It involves organizations portraying an image of compliance to the environment's rules, so to speak, expressing their values, beliefs, positive qualities and intentions, all in an attempt to gain likeability and approval from the audience. In the case of the three analyzed companies, this was evident in the discussion about their stance on corporate social responsibility, as well as their overall corporate values:

> "It is also important to us that economic growth be achieved in harmony with environmental and social responsibility. We adhere to the fundamentals of sustainable development and the ten principles of the Global Compact of the United Nations" (Bayer, 2016 p. 6).

The other tactic observed was the use of emotion in the letters to shareholders. It is understandable for pharmaceutical companies to evoke emotion, due to the industry's link with human welfare, especially when it comes to biggest societal challenges in terms of healthcare or terminal illnesses. In several of the analyzed reports, emotional narratives, however, were used with a self-laudatory aim, the companies enhancing their importance for the industry and society.

In the case of Novartis, the best example of this tactic can be observed in the 2016 and 2017 reports. The CEO starts his statements with stories about seriously-ill patients, only to then express his pride in the company and its great success in changing people's lives. In some of Bayer's statements, it was evident during the discussions of the many plans that the company aims to achieve, put into perspective by mentioning the benefits these bring or will bring to society. In a much similar fashion, so does the CEO of GSK emphasize the company's ability to fight some of the biggest global health challenges, stressing its value-based culture:

> "Emily Whitehead was once a little girl close to death. […] Our ability to deliver new breakthrough treatments like Kymriah is one of the many reasons I am proud of our company …" (Novartis, 2018, p. 4)

> "All of these questions are part of a challenge for humankind that farmers around the world will have to tackle in the years ahead. As a partner to farmers – both large companies as well as smallholders – Bayer wants to contribute to the solution for this challenge" (Bayer, 2018, p. 4).

While the tactics of ingratiation and use of emotion do not necessarily pertain to the reporting of good and bad news, their discussion contributes to the understanding of the overall tone of the companies' disclosures. The tone of the letters is largely positive, and sometimes overly-positive when negative aspects are omitted. But, even when these are reported, they are often overshadowed by the discussion of the positive aspects, and the narratives praising the companies.

8. CONCLUSION

As expected, the findings reveal that companies do focus more on reporting their good news in the Chairmen's and CEO's statements. On average, the good news represented around 15% of all statements taken together, while bad news around 3%. The reported bad news was especially scarce in GSK and Novartis, with majority of their statements having either a couple of codings, which is barely anything, or no codings at all.

When observing the relationship between the companies' profitability and reporting of good and bad news, some level of association could be observed. This was, however, more evident in the cases of Bayer and GSK, the companies' financial situation impacting the type of news reported in a more predictable way than in Novartis' case.

The main impression management tactics detected when the companies reported their good and bad news were stressing the positive and downplaying the negative, differential reporting, attribution, and competence enhancement. Baffling the readers was the one technique that could not be observed in the chosen companies, but further research into the readability of the statements might reveal a different conclusion. The additional impression management tactics that were identified include ingratiation and the use of emotion. Although not pertaining to the good and bad news reporting, their discussion helps provide more insight into the rhetorical manipulation used in the letters to shareholders.

This thesis contributes to the existing research on impression management techniques used in corporate statements. It brings value through its study of the letters to shareholders, one of the most important sections of the annual report, and sheds light on the impression management tactics used in the pharmaceutical industry. The implications drawn from this research are that the shareholders, and stakeholders in general, need to be vigilant when reading the corporate narratives, to discern when the meaning of text is somehow manipulated to manage their impressions of the companies.

The main limitation of this research stems from the chosen methodology, as the findings might be contingent upon the researcher's subjective interpretations. Areas for potential future research could be: finding ways to further eliminate possible subjectivity, looking into the companies during scandals or crisis events to observe the changes in reporting, or extending the sample of companies to include more of the industry's top players.

BIBLIOGRAPHY

Adelberg, A. (1979). Narrative Disclosures Contained in Financial Reports: Means of Communication or Manipulation?. *Accounting and Business Research*, *9*(35), 179–190. doi: 10.1080/00014788.1979.9729157

Allen, M., & Caillouet, R. (1994). Legitimation Endeavors: Impression Management Strategies Used by an Organization in Crisis. *Communication Monographs*, *61*, 44–62.

Aly, D., El-Halaby, S., & Hussainey, K. (2018). Tone disclosure and financial performance: evidence from Egypt. *Accounting Research Journal*, *31*(1), 63–74. doi: 10.1108/arj-09-2016-0123

Anderson, R. (2014). Pharma industry gets high on profits. Retrieved from https://www.bbc.com/news/business-28212223

Bartlett, S., & Chandler, R. (1997). The Corporate Report and the Private Shareholder: Lee and Tweedie Twenty Years On. *The British Accounting Review*, *29*(3), 245–261. doi: 10.1006/bare.1996.0044

Bayer. (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019). *Annual Report 2009*. *Annual Report 2010*. *Annual Report 2011*. *Annual Report 2012*. *Annual Report 2013*. *Annual Report 2014*. *Annual Report 2015*. *Annual Report 2016*. *Annual Report 2017*. *Annual Report 2018.* All retrieved from https://www.investor.bayer.de/en/reports/archive/

Brennan, N., Guillamon-Saorin, E., & Pierce, A. (2009). Methodological Insights. *Accounting, Auditing & Accountability Journal*, *22*(5), 789–832. doi: 10.1108/09513570910966379

Clarke, G. (1997). Messages from CEOs: a content analysis approach. *Corporate Communications: An International Journal*, *2*(1), 31–39. doi: 10.1108/eb046532

Clatworthy, M., & Jones, M. (2003). Financial reporting of good news and bad news: evidence from accounting narratives. *Accounting And Business Research*, *33*(3), 171–185. doi: 10.1080/00014788.2003.9729645

GlaxoSmithKline. (2010). *Annual Report 2009*. Retrieved from https://www.gsk.com/media/2688/annual-report-2009.pdf

GlaxoSmithKline. (2011). *Annual Report 2010*. Retrieved from https://www.gsk.com/media/2691/annual-report-2010.pdf

GlaxoSmithKline. (2012). *Annual Report 2011*. Retrieved from https://www.gsk.com/media/2696/annual-report-2011.pdf

GlaxoSmithKline. (2013). *Annual Report 2012*. Retrieved from https://www.gsk.com/media/2694/annual-report-2012.pdf

GlaxoSmithKline. (2014). *Annual Report 2013*. Retrieved from https://www.gsk.com/media/2701/annual-report-2013-interactive.pdf

GlaxoSmithKline. (2015). *Annual Report 2014*. Retrieved from https://www.gsk.com/media/2710/gsk-annual-report-2014-interactive.pdf

GlaxoSmithKline. (2016). *Annual Report 2015*. Retrieved from https://www.gsk.com/media/4697/gsk-annual-report-2015.pdf

GlaxoSmithKline. (2017). *Annual Report 2016*. Retrieved from https://www.gsk.com/media/3609/annual-report-2016.pdf

GlaxoSmithKline. (2018). *Annual Report 2017*. Retrieved from https://www.gsk.com/media/4751/annual-report.pdf

GlaxoSmithKline. (2019). *Annual Report 2018*. Retrieved from https://www.gsk.com/media/5349/annual-report-2018.pdf

Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, N.Y.: Doubleday.

Hooghiemstra, R. (2000). Corporate Communication and Impression Management – New Perspectives Why Companies Engage in Corporate Social Reporting. *Journal of Business Ethics*, *27*(1/2), 55–68. doi: 10.1023/a:1006400707757

Hooghiemstra, R. (2010). Letters to the shareholders: A content analysis comparison of letters written by CEOs in the United States and Japan. *The International Journal Of Accounting*, *45*(3), 275–300. doi: 10.1016/j.intacc.2010.06.006

Jones, M. (2011). Impression Management. In M. Jones, *Creative Accounting, Fraud and International Accounting Scandals* (pp. 97–113). Chichester, West Sussex, England: John Wiley & Sons.

Melloni, G., Caglio, A., & Perego, P. (2016). Saying More with Less? Disclosure Conciseness and Completeness in Integrated Reports. *SSRN Electronic Journal*. doi: 10.2139/ssrn.2861056

Merkl-Davies, D., & Brennan, N. (2011). A conceptual framework of impression management: new insights from psychology, sociology and critical perspectives. *Accounting and Business Research*, *41*(5), 415–437. doi: 10.1080/00014788.2011.574222

Merkl-Davies, D., Brennan, N., & McLeay, S. (2011). Impression management and retrospective sense-making in corporate narratives. *Accounting, Auditing & Accountability Journal*, *24*(3), 315–344. doi: 10.1108/09513571111124036

Neu, D. (1991). Trust, impression management and the public accounting profession. *Critical Perspectives on Accounting*, *2*(3), 295–313. doi: 10.1016/1045-2354(91)90015-6

Neu, D., Warsame, H., & Pedwell, K. (1998). Managing Public Impressions: Environmental Disclosures in Annual Reports. *Accounting, Organizations and Society*, *23*(3), 265–282. doi: 10.1016/s0361-3682(97)00008-1

Novartis. (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018). *Annual Report 2009*. *Annual Report 2010*. *Annual Report 2011*. *Annual Report 2012*. *Annual Report 2013*.

Annual Report 2014. *Annual Report 2015*. *Annual Report 2016*. *Annual Report 2017*. All retrieved from https://www.novartis.com/investors/novartis-annual-reporting-suite/annual-report-and-20-f-archive

Novartis. (2019a). *Annual Report 2018*. Retrieved from https://www.novartis.com/investors/novartis-annual-reporting-suite

Novartis. (2019b). *Annual Review 2018*. Retrieved from https://www.novartis.com/investors/novartis-annual-reporting-suite

Parker, J. (2007). The reputation, image and influence of the pharmaceutical industry: Regaining credibility. *Journal Of Medical Marketing*, *7*(4), 309–313. doi: 10.1057/palgrave.jmm.5050098

Smith, M., & Taffler, R. (1992). The Chairman's Statement and Corporate Financial Performance. *Accounting & Finance*, *32*(2), 75–90. doi: 10.1111/j.1467-629x.1992.tb00187.x

Smith, M., & Taffler, R. (2000). The chairman's statement. A content analysis of discretionary narrative disclosures. *Accounting, Auditing & Accountability Journal*, *13*(5), 624–647. doi: 10.1108/09513570010353738

Staw, B., McKechnie, P., & Puffer, S. (1983). The Justification of Organizational Performance. *Administrative Science Quarterly*, *28*(4), 582–600. doi: 10.2307/2393010

Stratulat, M. (2019). Impression Management During a Crisis Event. *Logforum*, *15*(1), 119–128. doi: 10.17270/j.log.2019.320

Tierney, K., & Webb, G. (1995). Managing Organizational Impressions in Crisis Situations: Exxon Corporation and the Exxon Valdez Oil Spill. *University of Delaware Disaster Research Center*, *Preliminary Paper #235*.

Wang, J. (2016). Literature Review on the Impression Management in Corporate Information Disclosure. *Modern Economy*, *07*(06), 725–731. doi: 10.4236/me.2016.76076

Quantitative Studies

USABILITY OF REGRESSION BETA FACTOR WHEN EVALUATING STOCK TRADED ON PSE

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Abstract
The beta factor measures the systematic risk associated with a stock or a portfolio. The beta factor is the only independent input variable in the CAPM model that is widely used as a tool to calculate the investor's desired return rate, which is an indispensable part of the DCF valuation models.
There are several types of beta factor, but most often, analysts use the regression beta factor, which has advantages but also flaws. One of the major weaknesses in the beta factor of each stock is the considerable volatility and unstable methodology for calculating regression beta. Both factors may depreciate the stock's valuation result.
This paper focuses on the calculation of regression beta factors of selected stocks traded on the Prague Stock Exchange at different times and with different data rates. The aim of the paper is to evaluate the volatility and subsequent usability of beta factors for the valuation of individual stocks traded on the Prague Stock Exchange or for measuring the systematic risk of the equity portfolio created by them. It was confirmed on the Prague Stock Exchange data that the beta factor of the individual stock is more volatile than beta factor of the portfolio composed of them. Beta factor values and their variability strongly depend on the time period and character of data used for the calculation.

Keywords: *Beta factor, Systematic risk, CAPM model, Stock, Prague Stock Exchange*

1. INTRODUCTION – ROLE OF BETA FACTOR IN VALUATION AND ITS TYPES

In the stock valuation process, it is very important to collect and prepare adequate variables into valuation models. For the valuation of publicly traded stocks, DCF models are most often used. The input variables into these models are various forms of future cash flow, its growth rate and the required rate of return of the investor. The CAPM model, whose independent input variable is the beta factor, is usually used to determine the required rate of return.

The task of the required rate of return in the valuation model is to bring the effect of risk and liquidity or other factors into the process of valuation of the stock or portfolio. The investor is constantly exposed to risk on the market and then he adapts its level to the rate of return required for the stock or portfolio. The overall risk associated with a stock or portfolio is understood as the rate of return variability. However, Sharpe (1964) divided this overall risk into a systematic (market) and unique risk. While systematic risk is caused by market factors specific to the particular market, economy or region, the unique risk is always associated with the particular asset and its issuer. By appropriately selecting instruments for the portfolio, as Markowitz (1952) states, the unique risk can be completely diversified or eliminated. Therefore, there is no reason for the investor to demand a remuneration in the form of an additional return for the influence of the unique risk.

If an investor invests only within one economic system, the market, he remains entirely under the influence of the systematic risk arising from that system. In this case, it is not possible to diversify systematic risk, the investor must bear it and it is therefore necessary to calculate and take into account its level so that the investor can further deduce the amount of additional rate of return it will require as a reward for the impact of this systematic risk. The beta factor, which measures the sensitivity of the rate of return of an asset to the movement of the market represented by the market index, serves as a measure of systematic risk. Beta factors can take both positive and negative values, and the higher the beta factor is calculated, the higher the systematic risk associated with the investment instrument is considered.

In cases where the beta factor takes values between 0 and 1, that is positive and less than 1, it is either an investment instrument with lower volatility than the market, or a volatile instrument whose price movements are strongly correlated with the market (market stocks index). A positive beta factor of less than 1 can be found for defensive stocks such as the food, tobacco and service industries. Stocks with a lower beta factor are associated with lower risk but also a lower rate of return.

For the beta factor greater than 1, the investment instrument is volatile, moving in the same direction as the market, but its movements are more extensive. Positive beta factor greater than 1 have aggressive stocks such as automotive, aerospace, metallurgical or chemical industry, production of durable goods, or stocks of the IT industry. Stocks with higher beta factors tend to be more volatile and therefore riskier, but at the same time, they provide the investor with the potential for a higher rate of return. Extreme beta factor values above 3 or 4 are rare and are typical for highly volatile stocks.

Negative beta values are typical for investment instruments whose prices are moving in the opposite direction to market movements. Examples of such an instrument could be stocks of young companies, start-ups, inverse fund or put stock option, inverse ETF's or short selling.

If the beta factor reaches 0, it means that price movements of the instrument are not correlated with movements of the stock index. Some government bonds may reach beta values close to 0. A beta factor of 1 is calculated for instruments whose price movements are the same as those of the benchmark index, or which have a fundamental representation in the index that serves as a benchmark in the beta factor calculation.

There are several procedures for determining the beta factor, which are differently demanding, require different input data and have different popularity and usability among investors and analysts.

1) **The regression (historical) beta factor**, sometimes also referred to as the top-down beta factor, is the result of a simple regression between return rates of a stock (asset) and return rates of the market index in the past period. This type of beta factor can only be used for publicly traded companies. In practice, this is clearly the most commonly used type of the beta factor by analysts and investors (see below for details).

2) **The modified regression beta factor** is based on the assumption that beta factors tend to converge over time to market and industry averages. There are two basic ways to adjust the regression beta factor. The first modification of the regression beta factor was developed by Vašíček (1973), who pointed out that more volatile beta factors tend to converge to industry averages more than less volatile beta factors. Vašíček's modified beta factor is calculated as the weighted average of the company's beta factor and that of a comparable group (e.g. industry) where weights are the ratio of the variance of betas of the stock to the sum of the variance of betas of the stock and the variance of betas of the industry or the ratio of the variance of betas of industry to the sum of the variance of betas of the stock and the variance of betas of the industry.

The greater the variance of the beta factor of a stock, the greater the weight of the beta factor of the industry, and the lower the weight of the beta factor of the stock in the calculation of the modified regression beta factor. This regression beta factor adjustment is referred to as Vašíček's shrinkage.

The second modification of the regression beta factor was created by Blume (1970) and is referred to as Blume's adjustment. The principle of this modification, also used by the Bloomberg platform, is very simple: the original regression beta factor is multiplied by 0,67, plus the product of 0,33 and 1 (market beta). Both these methods of modification of regression beta factor were further elaborated in the following years, however, both original modifications remain the best known and mostly used.

3) **The bottom-up beta factor** focuses on the underlying fundamentals that influence the level of company risk rather than the historical data. The bottom-up beta factor calculation takes into account the type of industry in which the company operates (companies that are more sensitive to changing market conditions will have a greater beta factor), the degree of operating leverage (higher operating leverage leads to the beta factor growth) in the company and the level of leverage (higher leverage leads to the beta factor growth) in the company.

When determining the fundamental (bottom-up) beta factor, it is necessary to use the average beta factor of the industry or the average beta factor of a group of comparable firms. The degree of operating leverage is taken into account either by the ratio of fixed costs to the total cost of the company or by the percentage change in operating profit to the percentage change in sales. The level of financial leverage is taken into account when calculating the fundamental beta factor by the proportion of foreign and own capital. If only the influence of the industry and the operating leverage is taken into account when calculating the fundamental beta factor, the beta factor of the unlevered beta is determined. If all three factors are taken into account in the calculation, the leveraged beta factor is calculated.

4) **The accounting beta factor** is primarily intended for the valuation of companies for which the development of the price of its stocks is not available or for companies whose price development is extremely volatile. The calculation of the accounting beta factor is based on a simple regression of changes in the company's quarterly or annual profits and changes in the quarterly or annual profits of the market index (equities in its base). This approach is based on the assumption of a close correlation of corporate earnings and stock prices. If only operating profits are included in the calculation, we get the beta factor of the non-indebted company, while if the calculation includes the net profits, the result is the beta factor of the indebted company, i.e. the company that uses its own and foreign capital to finance it. According to Damodaran (2002), the financial performance of the beta factor may be adversely affected by high volatility of profits, limited observations or non-operating factors such as changes in depreciation methods or inventory valuation methods.

5) **The multifactor beta factor** is based on the assumption that the beta factor value is a function of several fundamental factors. Multi-factor regression is then used to determine the value of the multifactor beta factor. The fundamental factors influencing the beta factor are the following calculations: variation coefficient of the operating profit of the last 5 years, dividend yield, debt to equity ratio, earnings per stock growth and total assets that reflect its size. The beta factor increases with profit growth, variability and debt ratio. The beta factor, on the other hand, decreases with the size of the company and with the increase in dividend yields. The biggest problem of this procedure is the determination of regression coefficients. The calculation of regression coefficients is very demanding on the amount of input data, which may represent a certain limitation of this approach in economies with capital markets with short history. As a solution to this situation, Damodaran (2006) offers the use of regression coefficients calculated from US data reported in the author's publications or websites. While of course it is possible to discuss the accuracy of this solution, it offers the

analyst the opportunity to determine the beta factor even for companies with insufficient data history.

6) **The total beta factor** is intended to evaluate, in particular, non-publicly traded companies, which have only one owner, the owner having all of his capital invested in the company and therefore does not have the possibility of risk diversification. Such an investor is therefore exposed to all risks associated with the investment without the possibility of diversification. The total beta factor is given by the ratio between the market (systematic) beta factor and the correlation coefficient between the rate of return on the stock and the rate of return on the market index. Total beta factor is higher than the market (systematic) beta factor. The total beta factor is significantly influenced by the correlation between the stock and the market rate of return: the lower the correlation, the higher the total beta factor.

In addition to the methodology used to calculate the beta factor of a stock, other factors influence its value. One of them is the subject of business of the company, the branch in which the company operates.

Not all sectors respond in the same way to the economic development. Cyclical industries (e.g. construction, automotive, air transport, tourism, chemical industry, electrical industry, luxury goods manufacturing) respond to the development of the economy in the direct and very sensitive way. Neutral sectors (food industry, agriculture, tobacco industry, production of alcoholic and non-alcoholic beverages, production of basic drugstore goods) respond to the economic development in minimal or almost non-responsive way. Anticyclic industries (producing cheap substitutes for expensive products) are developing in reverse to economic developments. Sectors that are more sensitive to economic and market developments will have higher beta factors compared to less sensitive or neutral sectors. Positive beta factors can be expected for cyclical industries, while negative beta factors will not be surprising for anticyclic industries. If a business operates in multiple industries, the beta factor is determined as a weighted average of beta factors of each industry. In this case, therefore, it depends most on the nature of the industry that dominates the business.

The beta factor is also influenced by the life cycle position of the business or industry. Adult, stable firms, whose value is predominantly composed of their assets and which are characterized by zero or very low growth potential, often have positive beta factors ranging from 0 to 1. Growth firms that have considerable growth potential have beta factors often higher than 1. For young start-ups in the first phase of their life cycle, it is not surprising that analysts may find negative beta factors if it is however possible to determine the beta factor for such company due to the lack of necessary input data. If specific factors do not act, beta factors of bank stocks show the better stability, which is given, as stated by Veselá (2013), by the stricter regulation, the greater homogeneity of the capital structure of banks and very similar features typical for their scope of business.

This paper focuses primarily on the historical regression beta factor, which is generally used by analysts and investors in the valuation of publicly traded stocks. The aim of this paper is to measure and evaluate the volatility of regression beta factors on a selected sample of shares traded on the Prague Stock Exchange and the volatility of portfolio beta factors based on the time period used, the frequency of input data and the number and type of stocks in the portfolio.

Researches conducted by Fama & French (1992), Isakov (1999) or Campbell & Vuolteena (2002) pointed to the considerable volatility of the regression beta factor of stocks traded on foreign markets.While the regression beta factor is still widely used and monitored by domestic and foreign analysts in the valuation of stocks, the question of beta factor volatility and its negative impact on the quality of stock valuation is still relevant. The purpose of the contribution is to calculate and evaluate the volatility of beta factors over the longest period of time (not only for short periods such as the period of financial crisis or the introduction of the Xetra trading system), which is available given the length of marketability of stocks.

At the same time, data with different frequencies will be used as there is no agreement in the methodology of calculating the regression beta factor in practice, but the effect of data frequency on the beta factor value is considerable. Attention will therefore be paid to the question whether the volatility of beta factors of stocks traded on the Prague Stock Exchange is high, as suggested by the above-mentioned research on foreign markets, respectively. whether there is a difference in beta factor volatility depending on the particular stock or the time period used.

2. THE REGRESSION BETA FACTOR

To determine the beta factor of an asset, it is possible to use the simple regression of the historical rate of return of that asset and the historical rate of return of the index representing the market over a specified period of time.

$$R_i = \alpha + \beta_i R_M \quad (1)$$

$$\beta_i = \frac{Cov(R_M, R_i)}{\sigma^2_M} \quad (2)$$

where R_i is the historical rate of return of the asset i,
R_M is the historical rate of return of the market index,
β_i is the slope of the regression line (the regression beta factor),
α is the intercept of the regression line,
$Cov(R_M, R_i)$ is the covariance between the rate of return of the market index and rate of return of the asset i,
σ^2_M is the variance of rates of returns of the market index.

Considering valid relationships between the standard deviation, the variance and the correlation, the regression beta factor calculation may alternatively be written as follows:

$$\rho_{M,t} = \frac{Cov(R_M, R_i)}{\sqrt{\sigma^2_M \,.\, \sigma^2_i}} \quad (3)$$

$$\beta_i = \rho_{M,i} \frac{\sigma_M}{\sigma_i} \quad (4)$$

where $\rho_{M,i}$ is the correlation coefficient between the rate of return of the market index and rate of return of the asset i,
R_i is the historical rate of return of the asset i,

R_M is the historical rate of return of the market index,
β_i is the slope of the regression line (the regression beta factor),
α is the intercept of the regression line,
$Cov(R_M, R_i)$ is the covariance between the rate of return of the market index and rate of return of the asset i,
σ^2_M and σ^2_i are variances of rates of returns of the market index and the asset i,
σ_M a σ_i are standard deviations of rates of returns of the market index and the asset i.

The beta factor is here standardized in relation to the market index used. It measures the risk delivered by the asset to the market index. Therefore, the weighted average of all slope coefficients, the beta factors of all instruments in a given index, will be 1.

The coefficient of determination, commonly referred to as R^2, is the measure of the quality of the regression model and, in the case of the straight-line model, it is equal to the square of the simple correlation coefficient.

The general formula for coefficient of determination R^2 is:

$$R^2 = \frac{SS_R}{SS_T} \qquad (5)$$

where SS_R is the regression sum of squares – variability explained by the chosen model,
SS_T is the total sum of squares – total variability of the dependent variable.

It expresses what proportion of variability of the dependent variable the model explains. The maximum value is 1 or 100 %. The value of the indicator R^2 should therefore be taken into account when assessing the predictive ability of the calculated beta factor. If the value of this indicator is close to 1, this means higher correlation and stronger relationship between returns on this asset and returns on the market index. Conversely, the value of R^2 close to 0 indicates that the model does not provide any information for knowing the dependent variable and is therefore completely useless.

The relationship between the expected rate of return and the beta factor of an asset i is shown in the one-factor CAPM pricing model by the Security Market Line (SML), which shows the expected rate of return as the function of the beta factor. The origin of this straight line corresponds to the nominal risk-free rate of return, and from the slope of this straight line it is possible to derive the risk premium, which depends on the level of systemic risk measured by the beta factor. The SML line equation in the CAPM model, created by Sharpe (1964), can be written as follows:

$$E(R_i) = R_F + \beta_i(E(R_M) - R_F) \qquad (5)$$

Where $E(R_i)$ is the expected rate of return of the asset i,
$E(R_M)$ is the expected rate of return of the market index,
R_F is the risk-free rate of return,
β_i is the beta factor or the systematic risk of the asset i,

The CAPM model is very useful in determining the adequate, equilibrium rate of return that an investor should demand from a given asset in conjunction with the systematic risk it is taking. At the same time, the CAPM model can be used to identify undervalued assets that are typically above the equilibrium rate of return and are located above the SML line, but also overvalued assets that are typically below the equilibrium rate of return and found below the SML line.

3. WEAKNESSES OF THE REGRESSION BETA FACTOR OF STOCKS

An enormous problem in calculating historical regression beta factors is that historical regression beta factors determined for individual assets tend to **vary widely over time**, not only in small and emerging markets but also in stable, developed markets. The Harrington study (1983) has shown the evidence of significant variability in regression beta factors. The author divided the selected group of companies from the USA into 10 risk classes. She further examined what percentage of stocks remained in the same risk class after five years. The results of the study showed considerable instability of the beta factor, as in most risk classes only 13-18 % of stocks remained in the same class. The exception was the least risk stock class, where 40 % of the stocks were held in the same risk class and the most risk class where 35 % of the stocks were held in the same risk class after 5 years. Although the results are better in the last two mentioned classes, we can talk about considerable variability of regression beta factors in these classes. More favourable in terms of variability, as stated by Veselá (2019), is to calculate beta factors of equity portfolios, as beta factors of portfolios show much less volatility than beta factors of individual stocks. According to Sharpe and Alexander (1994) individual inaccuracies of beta factors cancel in the portfolio and calculated beta of the portfolio is a fairly accurate estimate. The predictive ability of portfolio regression beta factors improves as portfolio diversification increases.

Another source of problems in the predictive ability of the regression beta factor is the input data used. Given the fact that the calculation of the regression beta factor is consistently based on the use of historical data of the development of the return rate of the stock and the market index, it only indicates the historical level of systematic risk. In practice, however, the relationship between the development of the return rate of the stock and the market index seldom remains unchanged over time due to a change in fundamental economic factors, which reduces the accuracy of the calculated beta factor. If there are economic changes in the economy and in the industry, more sensitive stocks, such as cyclical companies, technology companies or young start-ups, respond to them. Scholes and Williams (1977) have demonstrated that the past stock exchange volatility cannot predict the future return on these stocks reliably, and thus evidence that beta factors are an inaccurate measure of risk.

Significant problems in the beta factor calculation are caused by the fact that there is no uniformity or procedure that determines what kind of data and time period should be used when calculating beta factors. Obviously, the use of quarterly, monthly or weekly data will yield different results for the calculated beta factor. Given the fact that, in particular on less liquid markets, the rate of return of the stock may reach zero on some days because the stock was not traded that day, it is not recommended to use daily data to calculate the beta factor. However, the question of how long period of time to use for beta factor calculation is not answered. In practice there are periods from 3 months (PSE), 2 years (Bloomberg), even 3 years (most common analytical practice) to 5 years (Standard & Poor's and Value Line database), with the choice of length that depends on the subject counting the beta factor. In general, the longer the period we take into account, the more data we have. However, in the longer term, the risk factors of the stock are more likely to change. The calculated beta factor may no longer accurately reflect the current risk of the stock.

Another factor that complicates the determination of beta factor is the choice of market index. In most stock markets several stock indices are usually calculated, which express the development of the given market. Although the development of these stock indices tends to be strongly positively correlated, their development in any case cannot be described as identical. The beta values of the same stock determined using different market indices must then necessarily differ. If the stock is traded on multiple markets, it would be ideal to use an index that represents all of these markets for the purposes of determining the beta factor, but such an index cannot be found. A solution to this situation is the use of a global international index (e.g. the MSCI EAFE index or the S&P Global 100 index), which covers more international markets that are increasingly globalized.

Also, from a statistical point of view, the estimation of beta factors using regression of historical rates of return is considered inaccurate. Roll (1977, 1978) refers in this context to the range in which the beta factor determined using regression varies. This interval can be defined by a non-zero standard error +/- from the calculated beta factor. However, larger standard errors are typical for less liquid markets, young start-ups, technology and cyclical firms.

The beta factor takes into account the correlation of the rate of return on an asset with the rate of return on the market. In a situation where the rate of return of the stock does not correlate with the rate of return on the market, it is possible that the resulting regression beta factor of the highly volatile stock may approach 0, as in the extreme example of AT&T Inc. proves Tofallis (2008). Although the development of the stock price of AT&T Inc. it was visibly much more volatile in this case than the market index development, the standard estimate of the regression beta was significantly less than 1. The evaluation of the company using such an inaccurate beta factor could not be adequate and accurate.

An essential obstacle to the determination of the regression beta factor arises when it is necessary to evaluate the stock of a non-public company. If the stock is not publicly traded, there is no historical time series of the stock's prices and therefore the rate of return on that stock cannot be determined. In this case, the analyst must resort to fundamental, accounting or other types of beta factor, but their calculation is much more laborious.

The regression beta factor calculation is based on the linear model. Therefore, it cannot be an accurate and well-usable measure of systematic risk for assets with a non-linear price change compared to the price change of the underlying asset, such as derivatives.

4. CALCULATION OF BETA FACTORS OF A SAMPLE OF STOCKS FROM THE PSE

This part focuses on the calculation of regression beta factors in accordance with formula (2) and using data of the exchange rates of selected 12 stocks traded on PSE and data of the PX index development from May 2008 to July 2019.

Methodology used

The sample of PSE stocks traded on the Prime and Standard markets with trading longer than 11 years was used to verify the beta factor properties for sufficient comparison. Quarterly and monthly rates of return of each stock and PX index was considered. Two approaches were used to evaluate beta factor behaviour - with different observation intervals (last 2, 3, 5, 8, 11 years) and 2 years moving values. The investigated period is from 6.5. 2008 until 1.7. 2019, therefore last 11 years of trading of the main stocks of the PSE were investigated. For the calculation of monthly or quarterly rates of return the start of each month or quarter was taken. Publicly available data from the Patria Finance website (2019) was used to calculate beta factors.

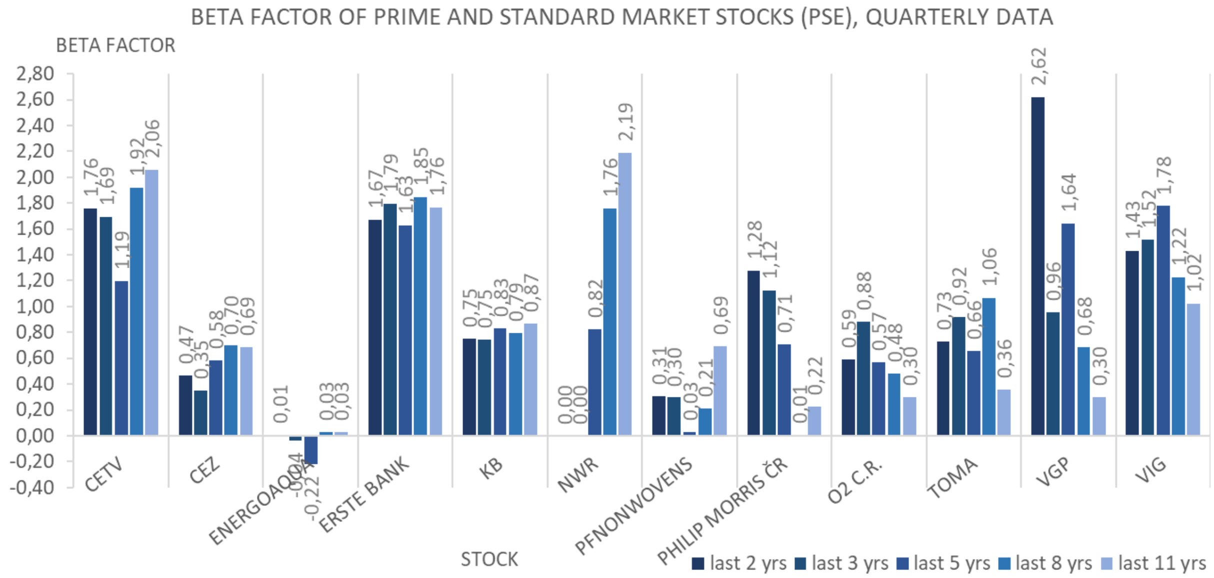
Testing the statement of Sharpe & Alexander (1994), Musílek (1999) or Veselá (2019) that the beta factor of the portfolio is less volatile than the beta factors of individual stocks was made for 4 different portfolios. The first portfolio (A) was built by high volatile stocks (according to the beta factor values), the second (B) conversely by low volatile stocks. The third (C) and fourth (D) was made with stocks with similar behaviour and development. Beta factors of portfolios was calculated as non-weighted average of beta factors of individual stocks.

The last part of the analysis is focused on the testing the assumption that with the increasing number of stocks in the portfolio the volatility decreases.

Results and interpretation

Graph 1 shows beta factors of the sample of 12 stocks calculated using quarterly data over time periods of 2,3,5,8 and 11 years.

Figure 1. Beta factors of prime and standard market stocks (PSE), quarterly data, comparison of different periods, 2008–2019



Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 2. Beta factors of prime and standard market stocks (PSE), quarterly data, comparison of different periods, 2008–2019

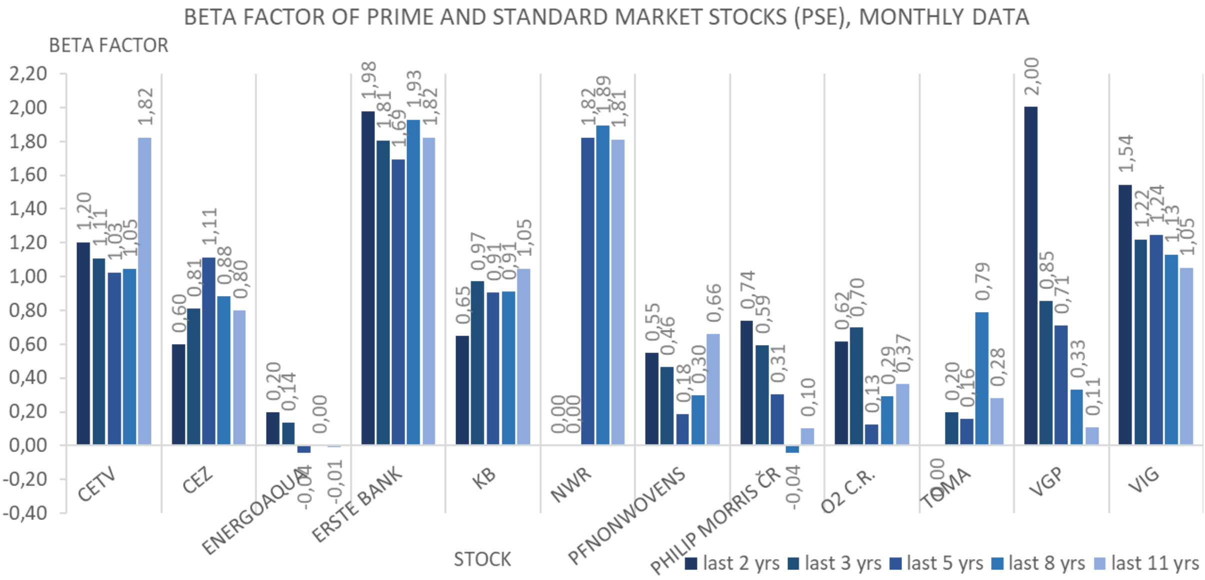
BETA FACTOR	CETV	CEZ	ENERGO AQUA	ERSTE BANK	KB	NWR	PFNonwovens	PHILIP MORRIS	O2 C.R.	TOMA	VGP	VIG
last 2 yrs	1,76	0,47	0,01	1,67	0,75	0,00	0,31	1,28	0,59	0,73	2,62	1,43
last 3 yrs	1,69	0,35	-0,04	1,79	0,75	0,00	0,30	1,12	0,88	0,92	0,96	1,52
last 5 yrs	1,19	0,58	-0,22	1,63	0,83	0,82	0,03	0,71	0,57	0,66	1,64	1,78
last 7 yrs	1,63	0,65	0,12	1,75	0,88	2,03	0,15	0,31	0,52	1,84	0,84	1,40
last 8 yrs	1,92	0,70	0,03	1,85	0,79	1,76	0,21	0,01	0,48	1,06	0,68	1,22
last 9 yrs	1,77	0,65	0,08	1,87	0,83	1,95	0,22	0,08	0,44	1,08	0,57	1,18
last 11 yrs	2,06	0,69	0,03	1,76	0,87	2,19	0,69	0,22	0,30	0,36	0,30	1,02

Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

It can be seen from the Figure 1 and 2 that values of calculated beta factors are very variable depending on the time period used. However, the variability of the beta factor varies considerably between the individual stocks examined. CEZ and KB seem to have the less volatile beta factor (lower than 1), which may be influenced by higher stability, liquidity of these shares and also by the significant share of these stocks in the PX index. The variability of beta factors of other stocks is considerable, while beta factors of CETV, NWR, PFNONWOVENS, Philip Morris, VGP, and VIG achieve significantly different values over time. For example, CETV beta factors take on values from 1,19 to 2,06 depending on the period as well as the VIG beta factors ranging from 1,02 till 1,78, showing higher volatility for shorter periods (2–5 years).

However, it should also be taken into account that NWR's beta factor calculations were influenced by the termination of marketability of this stock on 4.5. 2016 and VGP beta factor calculations were influenced by the termination of marketability of this stock as of 17.10.2018.

Figure 3. Beta factors of prime and standard market stocks (PSE), monthly data, comparison of different periods, 2008–2019



Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 4. Beta factors of prime and standard market stocks (PSE), monthly data, comparison of different periods, 2008–2019

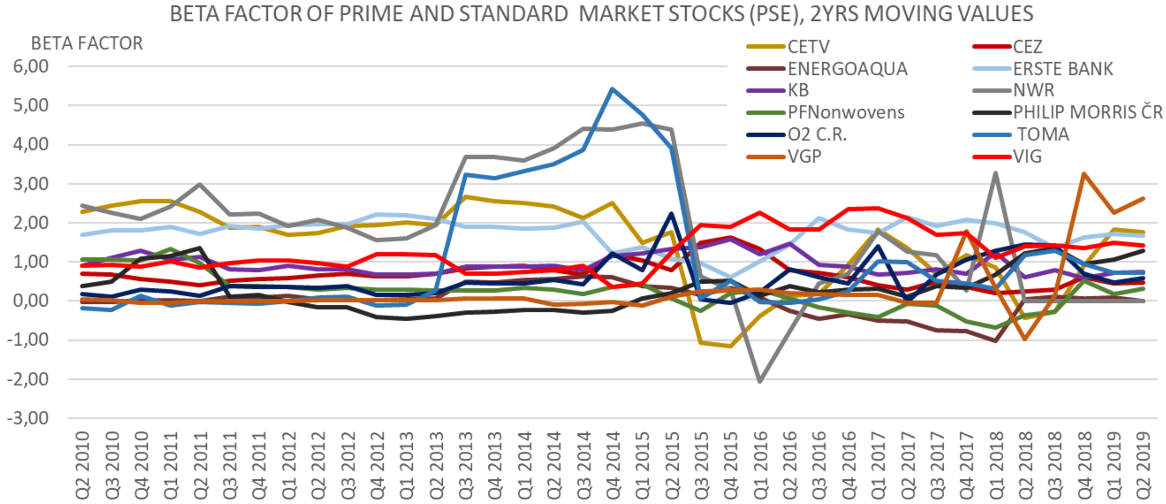
BETA FACTOR	CETV	CEZ	ENERGO AQUA	ERSTE BANK	KB	NWR	PFNonwovens	PHILIP MORRIS	O2 C.R.	TOMA	VGP	VIG
last 2 yrs	1,20	0,60	0,20	1,98	0,65	0,00	0,55	0,74	0,62	0,00	2,00	1,54
last 3 yrs	1,11	0,81	0,14	1,81	0,97	0,00	0,46	0,59	0,70	0,20	0,85	1,22
last 5 yrs	1,03	1,11	-0,04	1,69	0,91	1,82	0,18	0,31	0,13	0,16	0,71	1,24
last 7 yrs	0,78	1,10	0,07	1,72	0,92	1,93	0,31	0,16	0,27	1,28	0,40	1,11
last 8 yrs	1,05	0,88	0,00	1,93	0,91	1,89	0,30	-0,04	0,29	0,79	0,33	1,13
last 9 yrs	0,99	0,87	0,01	1,88	0,89	2,00	0,33	0,01	0,33	0,82	0,27	1,07
last 11 yrs	1,82	0,80	-0,01	1,82	1,05	1,81	0,66	0,10	0,37	0,28	0,11	1,05

Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 3 and 4 confirm conclusions made from the previous graph. The variability of beta factors of examined stocks is changing with time. For example, VIG beta factors show higher

volatility in last 2 years in comparison to the longer period (1,54 vs. 1,05). Conversely, beta factors of CETV show higher variability in the longer period of last 11 years (1,82) than in the shorter period of 8 or 5 years (1,05 resp. 1,03).
Next graph shows the development of 2-year moving values of the beta factor of the sample of stocks examined during period of the third quarter of 2008 to the second quarter of 2019. Beta factors of two years are calculated from the quarterly data with a move of one quarter. The values on x-axis show the end of the interval taken into account.

Figure 5. Beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019



Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

The considerable variability of some stocks is clearly evident, as the change of beta factor values can be observed during the reporting period. In the second half of this period the volatility of the beta factor for all the stocks under review is increasing, all in the context of stable development of the PX index and falling PSE trading volume. It can be assumed that the increasing variability of beta factors may have been affected by declining liquidity of the market, which is very shallow.

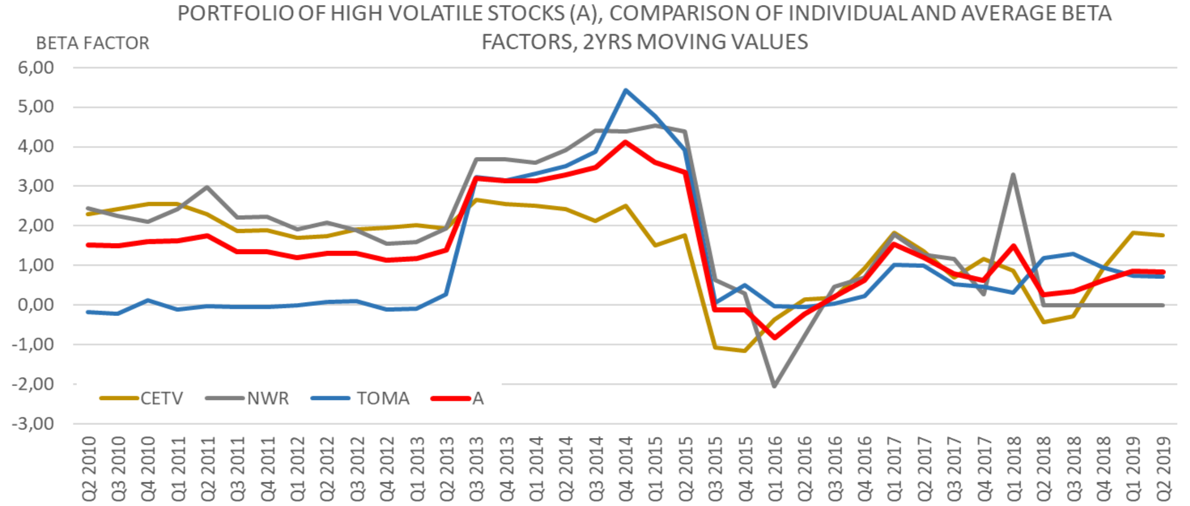
The same beta factors (2-year moving values) were used for the next part of the analysis. From the sample of 12 stocks used, 4 portfolios were created, each consisting of 3 stocks. The criterion for selecting portfolio stocks was the volatility of their beta factor, as measured by its standard deviation. Portfolio A is the portfolio of the most volatile stocks, while Portfolio B is the portfolio of the least volatile stocks. Portfolio C contains stocks with rather less volatility, Portfolio D then stocks with more volatility, while the volatility of stocks in portfolios C and D does not differ much. None of the stocks used is in two portfolios. Subsequently, the 2-year moving values of its beta factor (red line) over the reference period was calculated for the portfolios created in this way. Figures 7–10 show the development of the 2-year moving values of the beta factors of the given portfolio together with 2-year moving values of beta factors of individual stocks in the given portfolio.

Figure 6. Standard deviation of the beta factor of the stock and the beta factor of the portfolio, quarterly data, 2-year moving values, Q3 2008–Q2 2019

Portfolio/stock	Standard Deviation	Portfolio/stock	Standard Deviation	Portfolio/stock	Standard Deviation	Portfolio/stock	Standard Deviation
A	1,21	B	0,25	C	0,18	D	0,43
CETV	1,07	CEZ	0,32	ERSTE BANK	0,37	PHILIP MORRIS	0,55
NWR	1,63	ENERGOAQUA	0,39	PFNonwovens	0,45	O2 C.R.	0,50
TOMA	1,59	KB	0,25	VIG	0,53	VGP	0,82

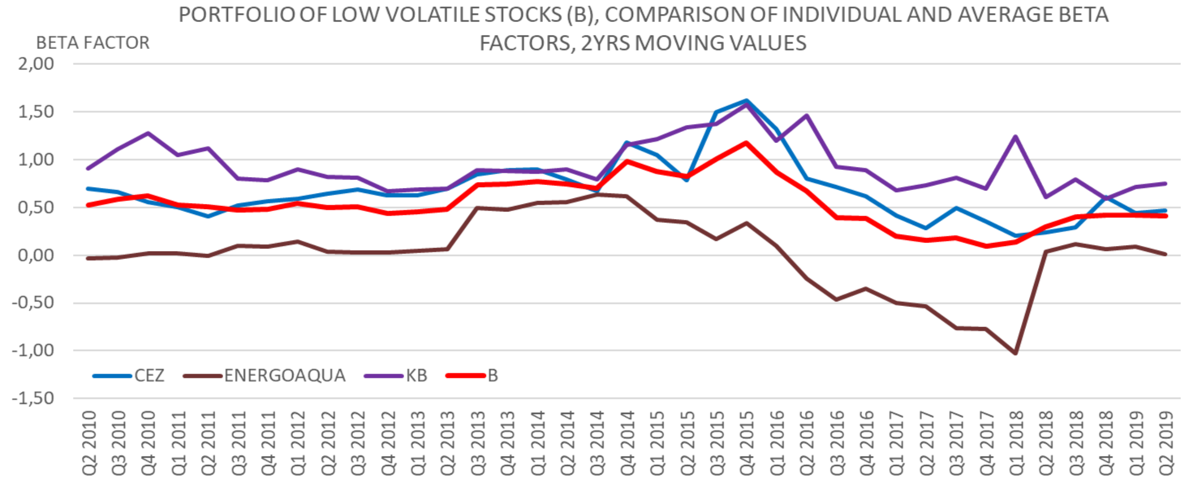
Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 7. The portfolio of high volatile stocks (A), beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019



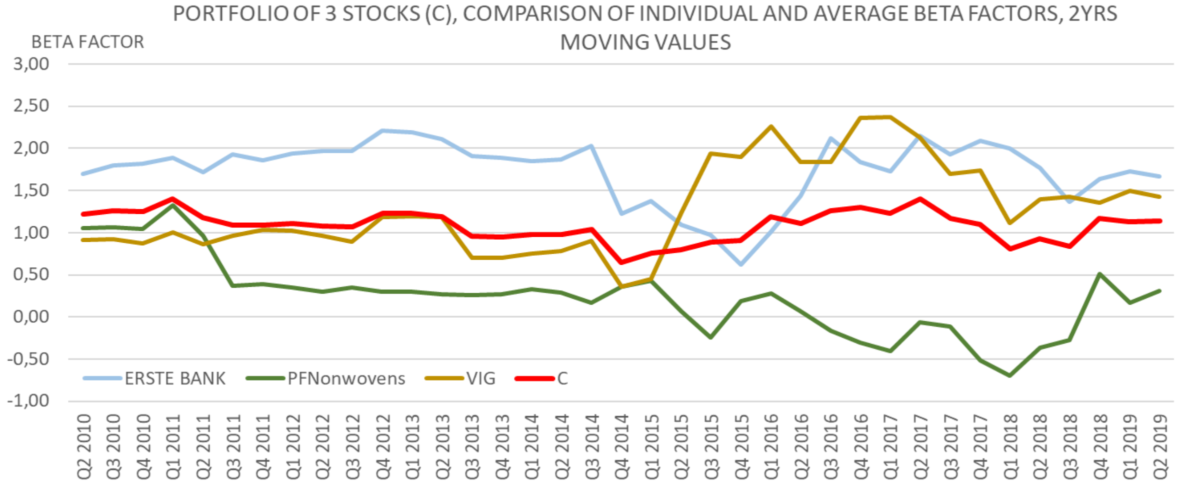
Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 8. The portfolio of low volatile stocks (B), beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019



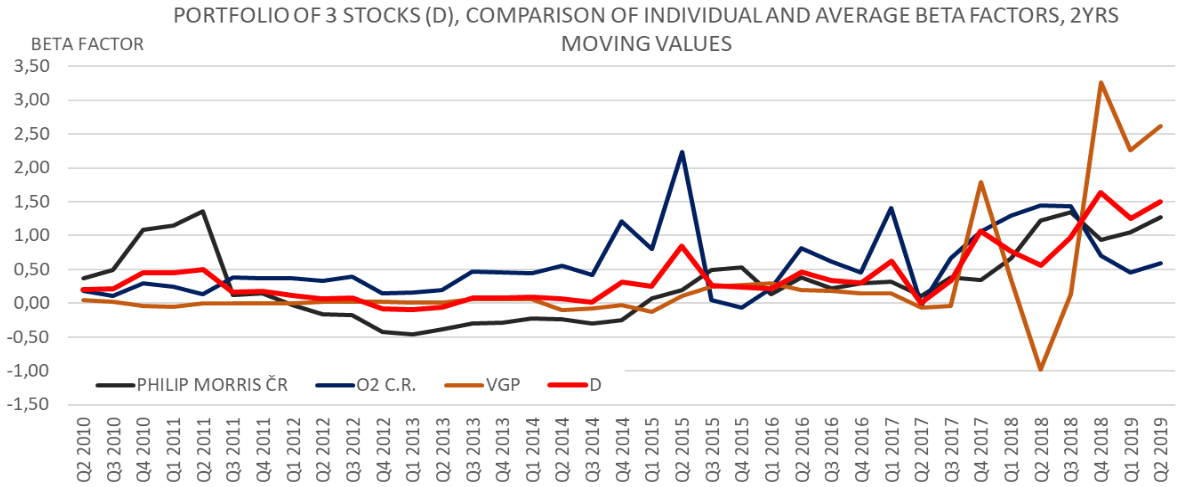
Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 9. The portfolio of lower volatile stocks (C), beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019



Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Figure 10. The portfolio of higher volatile stocks (D), beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019

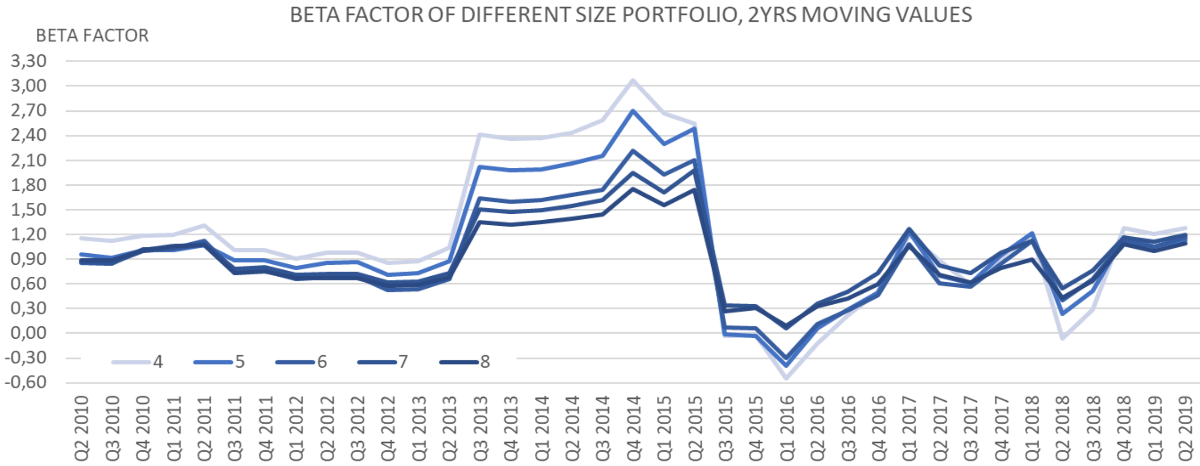


Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

In all 4 graphs (figures 7–10), it is clear that the red line representing the moving development of the portfolio beta factor shows much less volatility than the moving beta factors of the individual stocks making up the portfolio. This is in line with the assertion that the portfolio beta factor is much less volatile than beta factors of individual stocks in the portfolio because individual inaccuracies in calculated beta factors offset each other and the total portfolio beta factor then represents the much more accurate systematic risk estimate than beta factors of individual stocks. This result was achieved in all portfolios, regardless of whether the portfolio is composed of more or less volatile stocks.

Figure 11 shows the development of 2-year moving values of beta factor of 5 various portfolios compiled from selected stocks from the sample under review. Individual portfolios differ in the number of stocks they are made up of. The smallest portfolio contains 4 selected stocks and the largest portfolio contains 8 stocks.

Figure 11. Comparison of different size portfolios, beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019



Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

Next table (figure 12) reports on standard deviations of beta factors of individual portfolios containing different number of stocks.

Figure 12. Comparison of standard deviations of beta factors, different size portfolios, beta factors of prime and standard market stocks (PSE), quarterly data, 2-year moving values, Q3 2008–Q2 2019

Number of stocks in portfolio	Standard deviation of beta factor
4	0,88
5	0,73
6	0,59
7	0,46
8	0,41

Source: Own calculation based on data from Patria Finance, a.s., www.patria.cz

It is clear from Figure 11 that the volatility of the beta factor of the portfolio decreases as the number of stocks in the portfolio increases. The results of the calculations support the idea that the increase in the number of stocks in the portfolio allows for a broader diversification of risk, which contributes to less volatility of the beta factor of the portfolio and to increase its predictive ability. The decreasing standard deviation of the beta factor of the portfolio also illustrates the decline in risk in a portfolio with higher number of stocks.

5. CONCLUSION

It can be stated that calculations generally confirmed findings and opinions on which the classical financial theory is based and highlighted in the article of the mentioned study focused on foreign markets. Historical regression beta factors of stocks traded on the small and shallow Czech market show considerable volatility depending on the used time period and frequency of data. Similar situation is typical for historical regression beta factors of stocks traded on the larger and far more developed markets. In our opinion, the very dangerous weakness of the historical regression beta factor is the inconsistency in methodology of calculation of this beta factor. This weakness significantly complicates the stock valuation process, as all inaccuracies and differences in beta factor calculation translate into the required rate of return and then the intrinsic value of the stock.

From the calculations made in this paper, it is clear that less volatility and smaller differences between betas calculated over different time periods produce usage of monthly data, although there are significant differences in the volatility of the beta factor of individual stocks (Figure 1-4). At the same time, the volatility of beta factors is higher in all monitored stocks in the second half of the reporting period, i.e. after 2013 or after 2014 (Figure 5). The increase in volatility, as well as the significantly different volatility of the beta factors of the individual stocks under review, is, in our opinion, caused by a significant decline in the liquidity (volume of trades) on the Prague Stock Exchange, that occurred after the change of trading system at the end of 2012 (transition to trading system Xetra). Since 2013, this decline in liquidity has significantly affected the entire market. All shares traded here were affected, but not to the same extent. In addition to the low liquidity, other factors contributing to the unequal volatility of the beta factors of the shares under investigation are: differences in the proportion of individual shares in the PX index, sector specificity (relative stability of beta factors of banking shares of Komerční banka and Erste Bank) as well as corporate, especially financial factors (significant volatility of beta factors of NWR, PEGAS, VGP, TOMA).

The beta factors of all four contributing portfolios designated A, B, C, D (Figure 7-10) showed significantly lower volatility than the beta factors of individual stocks. This finding fully corresponds with the claims mentioned in the literature, eg Sharpe (1994), Musílek (1999) or Veselá (2019). Therefore, from an analytical point of view, it is more accurate to work with the beta factor of the whole portfolio rather than the individual stock beta factor, especially when evaluating the performance of a group of stocks. Comparing the volatility of beta factors of portfolios composed of different numbers of stocks (Figure 11-12), it is evident that as the number of stocks in the portfolio increases, the volatility of the beta factor of this portfolio decreases. Again, this can be practically used when measuring performance or evaluating portfolios.

In very few liquid markets of transition economies it is not possible to agree with the use of a 3-month or several months period of data for the beta factor calculation. Low liquidity and frequency of trading brings so-called nontrading bias, the occurrence of which distorts the beta factor. The three-month period for the calculation of the beta factor used by Prague Stock Exchange cannot therefore be viewed with confidence. On the other hand, too long periods of time to calculate the beta factor (8-11 years) are too demanding on the amount of input data, as sufficient input data may not be available for all stocks traded in transition economies markets. Moreover, too long data periods take into account historical risk factors, that do not have be relevant to the current situation. Based on our own calculations and our own experience, we recommend using monthly data and a five-year period to calculate the beta factor, not only in transition economies. This period is long enough to meet statistical requirements when calculating the historical regression beta factor, while also considering the sufficient amount of monthly data. These monthly data are preferable in less liquid markets as it allows to eliminate the effect of nontrading biases. The use of a five-year period is compatible with the beta factors used by Standard & Poor's and Value Line, which offers a comparison of results. In the case of a limited market life of the stock, a 3-year time period for calculating the regression beta factor may alternatively be used. The occurrence of nontrading bias in this period is unlikely. This approach takes into account current systematic risks of the last three years but the comparison to beta factors calculated in the world's largest markets is limited.

Research on beta regression factors of the sample of stocks traded on the Prague Stock Exchange can continue in several ways. On the one hand, it is possible to extend the monitored sample and the time period used, to calculate other beta factors and to assess whether the trends and manifestations in beta factor development that we have discovered, change or remain unchanged. Another, much more extensive and laborious option is to apply regression beta factors together with another type of beta factors (e.g. Bottom-up beta) to the valuation of selected stocks. Then the quality of the valuation provided by the use of regression beta factor and by the use of another type of beta factor can be compared.

BIBLIOGRAPHY

Blume, M. (1970). Portfolio Theory: A Step Towards Its Practical Application, *Journal of* Business, 43(2), 152–173.

Campbell, J. Y. & vuolteenaho, T. (2004). Bad Beta, Good Beta. *American Economic Review,* 94 (5), 1249–1275.

Damodaran, A. (2002). Investment Valuation: Tools and Techniques for Determining *the Value of Any Asset. 2nd Edition.* New York: Wiley & Sons, Inc. ISBN 047128081X.

Damodaran, A. (2006). *Damodaran on valuation: security analysis for investment and corporate finance.* Hoboken: Wiley & Sons. ISBN 0-471-75121-9.

Fama, E. F., & French, K. R. (1992). The cross section of expected stock returns. *The Journal of Finance,* 47(2), 427–465.

Harrington, D. R. (1983). Whose Beta is Best. *Financial Analysts Journal,* 39(4), 67–73.

Isakov, D. (1999). Is beta still alive? Conclusive evidence from the Swiss stock market. *The European Journal of Finance*, 5(3), 202–212.

Markowitz, H. (1952). Portfolio Selection. *Journal of Finance,* 7(1), 77–91.

Musílek, P. (1999). *Finanční trhy a investiční bankovnictví.* 1st Edition. Praha: ETC Publishing. ISBN 80-86006-78-6.

Patria finance. (2019). *Akcie & Fondy.* Výzkum. Databanky. [on-line]. [cit. 2019-07-18]. Available from: https://www.patria.cz/akcie/vyzkum/databanka.html

Roll, R. (1977). Critique of the asset pricing theory´s tests, Part I.: On past and potential testability of the theory, *Journal of Financial Economics,* 4(2), 129–176.

Roll, R. (1978). Ambiguity when performance is measured by the securities market line, *Journal of Finance,* 33(4), 1051–1069.

Scholes, M. & Williams, J. (1977). Estimating betas from nonsynchronous data. *Journal of Financial Economics,* 5 (3), 309–327.

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk, *Journal of Finance,* 19(3), 425–442.

Sharpe, W F. & Alexander, G J. (1994). *Investice. 4th Edition.* Praha: Victoria Publishing, ISBN 80-85605-47-3.

Tofallis, Ch. (2008). Investment volatility: A critique of standard beta estimation and a simple way forward. *European Journal of Operational Research,* 187(3), 1358–1367.

Vasicek, O. A. (1973). A note on using cross-sectional information in Bayesian estimation of security betas. *Journal of Finance,* 28(5), 1233–1239.

Veselá, J. (2013). Some specifics of the valuation of bank stocks. *European Financial Systems 2013*. 349–355. ISBN 978-80-210-6294-8.

Veselá, J. (2019). *Investování na kapitálových trzích. 3rd Edition.* Praha: Wolters Kluwer. ISBN 978-80-7598-212-4.

IFRS COMPLIANCE IN ROMANIA: THE CASE OF COMPANIES LISTED ON BUCHAREST STOCK EXCHANGE

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Abstract[4]
Idea: This study aims to explore the level of IFRS compliance in Romania, for the years 2013 and 2018.
Data: For this purpose, the audit opinions received was employed as a compliance proxy and data were collected from the Bucharest Stock Exchange and companies' websites. Information was also collected for the auditor type (categorized into Big 4, other audit networks, local audit firms and sole practitioners), the shareholders' structure and the market capitalization.
What's new? Key findings: The results are surprising from the perspective that IFRS compliance determined using the audit opinion is higher than 70% and with an ascending trend, for both years, while other studies in the literature claim low level of actual compliance. However, the results are to be interpreted carefully in the context of Brown et al. (2014), who found a low audit environment quality level in 2008 and considering Lichtenstein's observation (1996) (cited in Albu et al., 2011) that remnant institutions from previous periods will transcend to following periods.
So what? The debate remains on whether other studies in the literature using compliance indexes are too biased, subject to the researcher's lack of objectivity when in fact compliance levels are high, or audit opinions received on the capital markets are issued despite the presence of non-compliant elements, thus raising an audit environment quality question.
Contribution: Thus, the study may be of interest for audit practitioners in the first place, but also for regulators and policy-makers, which are institutions that can enforce and ensure IFRS compliance in companies' practice.

Keywords: *IFRS compliance, emerging country, audit opinion, audit type*

1. INTRODUCTION

Due to the globalization phenomena, international trade has become more and more prominent, engaging a significant number of countries in more and more complex relationships. In this context, the capital markets have developed accordingly and for them, it is of vital importance for the well-functioning of the capital markets (Alrawahi and Sarea, 2016). Thus, various stakeholders around the world, in financial domain or not, have increased their expectations related to transparency of financial and non-financial information, quality of accounting standards and comparability across entities located in different parts of the world (Glaum *et al*., 2013; Latifah *et al.*, 2012 cited in Alrawahi and Sarea, 2016). However, globalization has also led to "complications for preparing, consolidating, auditing, and interpreting published financial statements" (Gyasi, 2010, p. 27, cited in Houqe, 2018). Thus, we can notice that IFRS emerged as global, high-quality accounting standards in a world which needs more and more transparency and comparability.

Despite the fact that IFRS were conceived in a socio-economic and political environment which is characteristic for the developed countries, where investors' interest is protected, (La Porta *et al*., 1998), in a common law set-up, (Glaum *et al*., 2013), Houqe (2018) claims that the majority of the IFRS adopters were developing countries. Developing

[4] (Faff, 2015, 2018a, 2018b)

economies can be defined as "Markets in securities in newly industrialized countries and in countries in Central and Eastern Europe and elsewhere, in transition from planned economies to free-market economies and in developing countries with capital markets at an early stage of development" (Ida. Clientwebs cited in IMF Working Paper, 2004). They can be recognized by an incomplete separation of accounting from the tax functions, a secretive culture, higher corruption levels (Nurunnabi, 2015; Albu *et al.*, 2011; Houqe, 2018). From a financial perspective at the beginning and then developing to all aspects of the society, IFRS could be a solution for the above-mentioned issues, as they enhance comparability and credibility of the financial statements in a globalized trade context, thus they decrease the cost of raising capital for the companies in emerging countries and at a higher-level the disseminated information is of higher-quality (Samaha and Khlif, 2016; Ionașcu *et al.,* 2011).

An extensive number of theories have been formulated to deal with understanding the level of compliance with IFRS in developing countries; the basis of this study are the institutional framework and the theories of *agency, signaling* and *capital needs*. These theories reveal the approach to raising financing by relying on the tendencies to increase transparency and equalize information among stakeholders, especially in the methods of management and the increase in providing high quality information available to potential investors (Samaha and Khlif, 2016). In addition, in Di Maggio and Powell (1983), the types of institutional isomorphism are identified as being coercive, in the case where an organization behaves in a certain way due to external pressures from institutions they are depending on, mimetic, where an organization copies other organizations they perceive to be more successful, or normative, which is the case of obtaining uniformity in an economic field by professionalization and socialization.

With the above in mind, the aim of this study is to address the answer research question: *What is the level of IFRS compliance in Romania and what are its potential associated factors for the years 2013 and 2018?* The first period represents the year after first time IFRS application in Romania, in listed entities' individual accounts, assuming that companies might have had time to accommodate the new regulation and the drawn conclusions could be reasonable ones and the second period is the most recent available year after financial statements' publication – 2018 in order to have the most recent view on the IFRS compliance. For the purpose of this study, a proxy was used for IFRS compliance – the audit opinion, provided in the independent auditor's report published separately or incorporated in the annual reports, available on the Bucharest Stock Exchange website. We also collected other information, previously associated with IFRS compliance levels: auditor type, ownership structure and market capitalization (e.g. Glaum *et al.*, 2013, Samaha and Khlif, 2016) in order to better understand the compliance drivers. Our findings reveal that more than 70% of the opinions received in both years were unqualified, which is to be interpreted critically, in the context of Preiato *et al*. (2014) study, which demonstrated a low level of audit environment quality for the year 2008.

Our motivation to pursue a study based on Romania is due to the fact that CEE countries have been omitted from prior studies, mostly focused on the developed countries (as results for example from the literature review conducted by ICAEW, 2014). We, thus intend to address this gap in the literature regarding IFRS compliance and focus our research efforts on one of these insufficiently studied countries, which are, though, relevant to the IFRS global picture.

The present study is structured as follows: the second section contains a literature review on the IFRS compliance, the third part makes an introduction of how IFRS in Romania have emerged and what are the relevant milestones, the fourth part sets the theoretical framework which has been the foundation of the research, the fifth section and the sixth sections contain the methodology and the results obtained and the last part draws the conclusions of the study.

2. LITERATURE REVIEW

Since July 2014, it has been reported that 130 states have been requested to apply IFRS in the financial statements of the locally listed firms (Deloitte Touche Tohmastu, 2014, cited in Alrawahi and Sarea, 2016). Later, in April 2018, the IFRS Foundation announced that 87% of the jurisdictions worldwide are required to use IFRS "for most domestically accountable companies" and 75% of the G20 economies "require the use of IFRS". At European level, since 2005, IFRS are mandatory in the consolidated accounts (due to EU 1606/2002).

As Houqe (2018) claimed the majority of the IFRS adopters were developing countries, it is very important to determine whether they have really implemented the accounting standards, because many scholars have rightfully stated that it is not enough to simply adopt high-quality regulation, but it is even more important to enforce and apply it (Albu *et al*., 2011, Glaum *et al*., 2013, Brown et al. (2014) specifically study the relevance of enforcement in IFRS adoption and compliance and they draw their attention to some of the CEE countries: the Czech Republic, Hungary, Poland, Romania and Slovenia. This factor has been recognized in the literature as being of defining relevance to IFRS compliance in emerging economies and has low values in Brown et al. (2014) study in the year 2008 (less than 20), as compared to the developed countries from the analysis. Enforcement is a function of two important elements: enforcement level (which we would associate with coercive isomorphism) and audit (which could have both coercive and normative functions). Their study is particularly relevant because previous research has been focused on determining the level of enforcement in a broader understanding (e.g. La Porta, 1998 focus on the "rule of law", considering more general aspects, such as investors' protection, corruption, shareholders' and creditors' rights, judicial efficiency, which are tangential and relevant to accounting enforcement but not fully explanatory). All these aspects strongly differ from one country to another and this could be a reason for which IFRS adoption and compliance are also heterogenous around the world. Also, IOSCO (2003), cited in Brown *et al*. (2014) define accounting enforcement as "the activities undertaken by independent bodies (monitoring, reviewing, educating and sanctioning) to promote firms' compliance with accounting standards in their statutory financial statements". We can also note that some of these functions can be fulfilled by the audit function. While determining the audit environment quality in their research, Brown *et al*. (2014) considered nine aspects: whether the auditors are licensed or not, if the environment they operate in requires more extensive license, whether they undergo continuous professional development, if they have put in place a quality assurance programme, whether the institutional setting possesses an audit oversight body and it can (or not apply sanctions), whether the audit rotation is required in client relationships, the level of practiced audit fees and the level of litigation risk for auditors. Lastly, they conclude that audit environment quality, together with the enforcement characteristics do have an influence on the financial information, in a positive manner.

One more reason to focus on enforcement is that emerging countries possess some characteristics that put them in conflict with the principles on which IFRS were developed: investors' protection is at low levels (La Porta, *et al*., 1998), the accounting has a very strong link with tax (Albu *et al*., 2011) and generally financial transparency and rule of law are weak.

However, some studies claim that there is a little evidence on the link between high-quality accounting disclosure and IFRS adoption (Fuad *et al*., 2019).

Mokhtar *et al*. (2018) mention some potential factors which could lead to significant non-compliance in Egypt: audit firms may have a low enforcement authority; accounting practice may be book-keeping and tax oriented.

Among literature review we have identified both qualitative and quantitative methods of determining the IFRS compliance.

In the quantitative methods we can mention Tsalavoutas *et al*., (2010), Tsalavoutas (2011) and Tsalavoutas *et al*. (2014). They comprise the "Cooke's dichotomous approach" (also mentioned in Juhmani, 2017; Mazzi *et al*., 2018) and the Partial compliance index. The first one calculates the compliance index considering: the number of items disclosed out of total items to be disclosed and the second one adds an extra step in which the compliance is firstly determined by each standard.

As for qualitative methods we could find they are based on interviews and surveys (Uyar *et al.*, 2016; Ballas *et al.*, 2010).

The literature review provides a series of factors which could influence IFRS compliance, but the main two categories we identified are: country-level factors and firm-level characteristics.

From the first one, aspects related to a country's environment prove to be relevant: the legal system (common law versus code law), the level of development of capital markets (Ding et al. 2007 cited in Houqe, 2018), the perceived corruption levels (Houqe and Monem, 2016), inflation, GDP growth, total tax rate (M. A. dos Santos *et al.*, 2015), Hierarchy, Mastery and Embeddedness (Mazzi *et al*., 2018), cultural factors (Nurunnabi, 2015).

As for the company-level factors, we have met in the literature references to: entity size (in terms of assets size, number of employees, profitability), auditor type, the internal audit presence, professional training provided to the employees, listing status (Tsalavoutas, 2010; Juhmani, 2017; Glaum *et al*., 2013; Nurunnabi, 2015).

3. IFRS IN ROMANIA

Romania's accounting system has developed into a multi-influence model, since throughout history the country's interactions were diverse and in some cases opposite. As such, before the socialist regime (meaning before 1950s), western influences were present and shaped the environment (Albu *et al*., 2011).

During the socialist period, as earlier mentioned in the paper, the country was characterized by a strong link of accounting with tax regulation, mainly because the only user of the financial statements was the Romanian state, whose sole purpose was to collect taxes, while instilling a secrecy culture (Albu *et al*., 2014; Ionașcu *et al*., 2011). After 1989, and the fall of the communist regime, French influences in accounting re-emerged (Albu *et al*., 2011), leading to a reform of practices. Since then, Romania has been following the international trends, with IFRS becoming mandatory for financial institutions and listed companies' consolidated accounts in 2007, while for the other entities, adoption still remained voluntary. In 2012, the international standards became mandatory for banks and all listed firms (Gorgan and Gorgan, 2014; Ionașcu *et al.*, 2014), in their individual reportings.

Ionascu *et al*. (2011) identified some aspects which make IFRS compliance more difficult in Romania's context: insufficient IFRS training for employees, a link that is too strong between accounting and tax, low motivation especially because in Romania financing is provided by the financial institutions and less from the capital market, financial audit quality, lack of active financial markets in order to determine the fair value.

In Brown *et al*. (2014) Romania is also included, together with Croatia, the Czech Republic, Hungary, Poland, Slovenia, Turkey and Ukraine, for a three years analysis (2002, 2005 and 2008). It is worth mentioning that regarding the audit environment quality, Romania ranked the second lowest value in 2008 (6 items), surpassing only Ukraine and being at the same level with Hungary. Regarding the enforcement, Romania had the second highest value among the above-mentioned countries (9 points, the first one being Hungary with 12 items). The trend was ascending for both audit environment quality and enforcement but still very far from the ranks got by the developed countries (29 out of 32 maximum for audit environment quality in 2008 for France and 23 for Germany respectively; 16 out of 24 maximum for enforcement in 2008 for France and 21 for Germany respectively). However, this data was collected for the years in which IFRS was mandatory in Romania, but only for consolidated accounts, while the index is not available for the post-IFRS adoption in the individual financial statements in 2013.

4. THEORETICAL FRAMEWORK

For the theoretical framework we employed the institutional theory, found in DiMaggio and Powell (1983), when they introduced the concept of *isomorphism,* once they noticed that the entities tend to behave in a similar way if they are operating in a certain environment. Three types of isomorphism have emerged: *coercive, mimetic* and *normative*, which we will further explain.

Coercive isomorphism emerges in constraint and dependency conditions: when an entity depends on another entity or when an organizational field is dependent on a certain source of resources (the first case can be found between parent-subsidiary entities and the second is characteristic for state-firms types of relationship).

Mimetic isomorphism appears in ambiguous conditions, and it manifests itself when companies copy the behavior and practices of other entities they consider successful.

Normative isomorphism is represented by the power professional bodies and educational institutions have to set criteria, rules and directions, behaviours, vocabulary and ways of thinking.

Other theories identified in the literature review refer to *signaling, agency* and *capital needs* theories.

Signaling theory is frequently mentioned and refers to the fact that entities may adopt IFRS in order to increase trust and credibility in the market, from stakeholders, by emitting the signal that the company uses high-quality accounting standards and the disseminated information is reliable (Kwame Agyei-Mensah, 2017, Tsalavoutas, 2009 cited in Alrawahi and Sarea, 2016). The variable that could be associated with the signaling theory is profitability, often found in the literature review.

Agency theory can open room for analysis from the perspective of the auditor type, ownership structure and company size and considers the information asymmetry which inevitably arises in the stakeholders-managers’ relationship. Both categories have different interests, but managers have the power to control the entity’s operations and also the way they are being disclosed in the market, therefore, in order to reduce information asymmetry and improve transparency, they may adopt IFRS (Samaha and Khlif, 2016, Alrawahi and Sarea, 2016).

Capital needs theory states that the listing status is determinant for the way an entity raises financing in order to carry out its’ activity, so it is believed that the more internationally and openly visible a company is, the lower its’ capital costs will be (Samaha and Khlif, 2016).

5. METHODOLOGY

For the aim of this paper, the annual reports and financial statements of the listed entities from Bucharest Stock Exchange website were analyzed, for the years 2013 and 2018. We chose the latter year because it is the most recent available one and also 2013 because it is the first year after IFRS became mandatory in individual accounts for listed companies in Romania.

We started from the monthly report issued in December 2018 by BSE, where we identified the premium and standard category entities, in order to have more variability and visibility into the compliance phenomenon. Out of 84 entities, we excluded 13 financial institutions and banks, because they possess special characteristics that are not on the scope of this study and we also excluded 9 delisted or suspended entities, thus the number remaining 62 companies to be analyzed for IFRS compliance in individual accounts in 2018. For one entity only the consolidated accounts' report was available, thus the entity was excluded from the analysis.

For 2013 we started from the above described list and we excluded the entities for which information was not available (8 entities), resulting in a final number of 54 entities.

For both years, we collected information regarding: the audit opinion (qualified, unqualified, disclaimer of opinion and adverse opinion); auditor type, which in the case of our study was categorized into Big 4 audit companies, other international audit networks, local audit firms and sole practitioners, shareholders' structure in terms of highest ownership percentage (foreign, private Romanian and Romanian state ownership) and market capitalization (divided into 4 ranges: less than 20M RON, 20M RON – 50M RON, 50M RON – 150M RON and higher than 150M RON).

For the IFRS compliance measurement we used as a proxy the audit opinion (following some similar approaches identified in the literature e.g. Uyar *et al*. 2016 used the declared implementation degree of IFRS obtained by applying online-based questionnaires). Thus, if the audit opinion is unqualified, the compliance level is a higher one and the same applies in the opposite case.

6. RESULTS

The first level of the analysis consists in determining which is the percentage of opinion types in total audit opinions, for premium and standard entities, in 2013 and 2018.

Table 1. Premium category audit opinion

Premium		
Opinion	2013	2018
% Qualified opinion	36.36%	14.29%
Auditor type		
Other audit networks	25.00%	100.00%
Big 4 audit	75.00%	0.00%
% Unqualified opinion	63.64%	85.71%
Auditor type		
Other audit networks	14.29%	25.00%
Big 4 audit	71.43%	66.67%
Local audit firms	14.29%	8.33%

Source: Author's processing

For the premium category there can be seen an improvement in 2018 as compared to 2013 in the IFRS compliance measured based on the audit opinion proxy. Regarding the auditor type, we can notice a small shift between the unqualified opinions issued by Big 4 companies and unqualified opinions issued by Other audit network companies. However good these results may seem, they are to be interpreted carefully in the context of Brown *et al*. (2014) findings. For 2008 they found a low audit environment quality level for Romania and other emerging countries. The study has not been replicated for the post-IFRS period, but, as Lichtenstein (1996) was cited in Albu *et al*. (2011), the new society (in our case the one impacted by IFRS adoption) will always keep the institutional elements that were previously characteristic. Thus, if the audit environment quality has low levels, the audit opinion is to be interpreted from a critical perspective.

Table 2. Standard category audit opinion

Standard		
Opinion	2013	2018
% Qualified opinion	13.95%	8.51%
Auditor type		
Other audit networks	0.00%	50.00%
Big 4 audit	33.33%	25.00%
Local audit firms	50.00%	25.00%
Sole practitioners	16.67%	0.00%
% Unqualified opinion	81.40%	85.11%
Auditor type		
Other audit networks	5.71%	5.00%
Big 4 audit	28.57%	22.50%
Local audit firms	45.71%	67.50%
Sole practitioners	20.00%	5.00%
% Disclaimer of opinion	4.65%	6.38%
Auditor type		
Other audit networks	50.00%	33.33%
Local audit firms	50.00%	66.67%

Source: Author's processing

For the standard category the decrease in qualified opinions seems to offset the increase in the disclaimer of opinion (approx. 38%). There can also be noticed an improvement in the audit opinions in 2018 as compared to 2013 and regarding the auditor type, there seems to be a preference on the capital market in the favor of local audit companies (since all other audit categories decreased between the two analyzed years, for the unqualified opinions and disclaimer of opinion). Many the studies in the literature found a positive correlation between Big 4 audit companies and higher IFRS compliance levels (Glaum *et al*., 2013; Alrawahi and Sarea, 2016; Samaha and Khlif, 2016; Bova and Pereira, 2012). Thus, most of the unqualified opinions were received from local audit firms, and not from Big 4 audit companies. This could be linked to the fact that, as Brown *et al*. mention in 2014, among the elements considered for the audit environment quality we can find reputation and/or litigation risks and exposure to liability, which we assess are higher in the case of Big 4 companies, hence lower percentages of unqualified opinions among standard entities.

Table 3. Premium category audit opinion and shareholders' structure

Premium		
Opinion	2013	2018
% Qualified opinion	36.36%	14.29%
Romania - other than state	25.00%	0.00%
Romania - state	75.00%	100.00%
Foreign	0.00%	0.00%
% Unqualified opinion	63.64%	85.71%
Romania - other than state	28.57%	33.33%
Romania - state	42.86%	41.67%
Foreign	28.57%	25.00%

Source: Author's processing

Regarding the premium category entities, we can see that the most of the qualified opinions in 2013 and 2018 were received by Romanian companies mainly owned by the state.

For the unqualified opinions, a shift can be observed from foreign and state-owned companies to Romanian-other than private owned companies, for which the percentage increased by almost 17% and also, per total there can be seen an increase in such opinions by 35%, which can be interpreted as an improvement in the IFRS compliance between the two years. Samaha and Khlif, (2016) and Alrawahi and Sarea, (2016) stress the importance of ownership structure in the agency theory context, which in the present case of premium entities does not necessarily apply (since in 2018 only 25% of the unqualified opinions were received by foreign-owned companies)

Table 4. Standard category audit opinion and shareholders' structure

Standard		
Opinion	2013	2018
% Qualified opinion	13.95%	8.51%
Romania – other than state	66.67%	75.00%
Romania – state	0.00%	0.00%
Foreign	16.67%	25.00%
n/a	16.67%	0.00%
% Unqualified opinion	81.40%	85.11%
Romania - other than state	71.43%	67.50%
Romania - state	5.71%	7.50%
Foreign	20.00%	22.50%
n/a	2.86%	2.50%
% Disclaimer of opinion	4.65%	6.38%
Romania – other than state	50.00%	66.67%
Romania – state	0.00%	0.00%
Foreign	50.00%	33.33%

Source: Author's processing

Qualified opinions for standard category increased for Romanian-other than state and foreign owned companies but per total the number of such opinions decreased in 2018 as compared to 2013 by 39%. However, disclaimer of opinion increased by 37% and the percentage of companies having received such reports shifted from foreign to other than Romanian-owned entities. Among standard category firms the percentage of unqualified opinions remained quite stable, with a small increase of 5%, mainly due to the increase of the percentage of state-owned companies who received an unqualified opinion.

Table 5. Premium category audit opinion and market capitalization

Premium		
Opinion	2013	2018
% Qualified opinion	36.36%	14.29%
>150M RON	50.00%	100.00%
between 20M RON and 50M RON	50.00%	0.00%
% Unqualified opinion	63.64%	85.71%
>150M RON	57.14%	66.67%
between 20M RON and 50M RON	42.86%	33.33%

Source: Author's processing

For the premium category entities, we can see that in 2018 qualified opinions were received entirely by entities with more than 150M RON market capitalization, while in 2013 the split was even.

Unqualified opinions, on the other hand, were received in both years mainly by companies with a value of market capitalization greater than 150M EUR, which confirms the results of previous studies claiming that IFRS compliance is higher among entities with a strong listing status and/or international presence (Samaha and Khlif, 2016). In the agency theory Alrawahi and Sarea (2016) mention that company size can be positively correlated with higher IFRS compliance, since the more developed on a capital market a company is, the more interested it is to reduce the information asymmetry between the shareholders and the management, which applies in the case of premium entities. In 2018. 67% of the unqualified opinions were received by companies with a market capitalization higher than 150M RON, but does not seem to apply in the case of standard firms, where the majority of the unqualified opinions in both years were given to companies with a market capitalization between 20 and 50 M RON

Table 6. Standard category audit opinion and market capitalization

Standard		
Opinion	2013	2018
% Qualified opinion	13.95%	8.51%
<20 M RON	50.00%	50.00%
between 20M RON and 50M RON	50.00%	50.00%
% Unqualified opinion	81.40%	8.51%
<20 M RON	20.00%	17.50%
>150M RON	2.86%	7.50%
between 20M RON and 50M RON	77.14%	75.00%
% Disclaimer of opinion	4.65%	6.38%
<20 M RON	100.00%	100.00%

Source: Author's processing

Qualified opinions' structure for standard category entities kept a stable proportion between the two analyzed periods, while most of the unqualified opinions were received were received in both years by companies with a market capitalization between 20M RON and 50M RON.

7. CONCLUSIONS

The purpose of this paper was to identify which is the IFRS compliance degree and evolution in the years 2013 (one year after first time application in Romania, considering the companies might have had time to accommodate the new regulation and the drawn conclusions were reasonable ones) and last available year after financial statements' publication – 2018 in order to have the most recent view on the IFRS compliance in Romania.

For the present study we used as a proxy for the IFRS compliance the auditor's opinion, which was interpreted in the context of analyzing the auditor type and the shareholders' structure and the market capitalization. Data were collected mainly from Bucharest Stock Exchange website and additional information was searched for on the companies' websites. One first conclusion that can be drawn is that the unqualified received opinions were predominant for most companies in the two years and the percentage in total opinions increased from one period to another. This finding is consistent with Păunescu's study in 2015, which states that, despite their expectations regarding the audit opinion, in 2013 most of the companies received unqualified opinion. However, Gorgan and Gorgan (2014) obtained significantly different results while analyzing the compliance with IAS 38 Intangible assets, for the years 2010-2012. Their research was conducted using the "Cooke's dichotomous approach" (Tsalavoutas, 2011), a compliance index was calculated and the result was that "in line with previous studies from Romania and other countries that apply IFRS, our study shows that there is a high level of non-compliance with IAS 38". Also, following Tsalavoutas results in 2010, by applying the compliance index calculated by the researcher, the results thus obtained are that partial-compliance index compliance values are lower than results obtained using the dichotomous approach. Also, numerous studies in the literature claim that there is a low level of compliance with one or more IFRS ("compliance with IAS was limited with respect to IAS 1, IAS 2, IAS 7, IAS 12, IAS 16, IAS 17, IAS 18, IAS 21 and IAS 39" (World Bank, 2003 cited in Albu *et al*., 2011); Carlin and Finch (2010) regarding goodwill accounting among Australian firms; Kwame Agyei-Mensah (2017) regarding IFRS 7 compliance in Ghana; Abdullah *et al*. (2012) regarding IFRS compliance in Malaysia – "none of the companies examined received a qualified audit opinion despite their significant non-compliance with IFRS disclosure requirements").

Consequently, the second conclusion we can draw is that if the audit opinion is used as a proxy for compliance and compliance significantly differs among studies depending on the method used to determine it, in our present study a legitimate question on the audit environment quality in Romania arises and the topic is to be investigated by further research, because Romania is well known for its' cultural characteristics which influenced accounting practices (tax-driven nature of accounting system, secrecy, code-law country according to Albu *et al.,* 2014), which are incompatible with an IFRS-permissive socio-economic environment. Further more recent research is to be also conducted in what Brown *et al*., (2014) developed as a quality of the audit environment index model, so that results obtained in studies like the present one can be coherently interpreted and a fair view can be gained on the IFRS compliance in Romania and in other emerging countries.

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BIBLIOGRAPHY

Abdullah M., Sulaiman N. A., Ismail K., Sapiei N. S. (2012). Compliance with International Financial Reporting Standards (IFRSs) In a Developing country: Evidence from Malaysia, *Journal of Accounting Perspectives*, (5), 23–34.

Albu, N., Albu, C. N., Bunea, Ș., Calu, D. A. and Garbina, M. M. (2011). A Story About IAS/IFRS Implementation in Romania – An Institutional and Structuration Theory Perspective, *Journal of Accounting in Emerging Economies*, 1(1), 76–100.

Albu, N., Albu, C. (2014). Editorial – IFRS application in Central and South-Eastern European countries. *Accounting and Management Information Systems.*

Alrawahi F. E., Sarea A. M. (2016). An investigation of the level of compliance with international accounting standards (IAS 1) by listed firms in Bahrain Bourse, *International Journal of Islamic and Middle Eastern Finance and Management*, 9(2), 254–276.

Ballas A. A., Skoutela D., Tzovas C. A. (2010). The relevance of IFRS to an emerging market: evidence from Greece, *Managerial Finance*, 36(11), 931–948.

Bova F., Pereira R. (2012). The Determinants and Consequences of Heterogeneous IFRS Compliance Levels Following Mandatory IFRS Adoption: Evidence from a Developing Country, *Journal of International Accounting Research*, 11(1), 83–111.

Brown P., Preiato J., Tarca A. (2014). Measuring country differences in Enforcement of accounting standards: an audit and enforcement proxy, *Journal of Business Finance & Accounting*, 41(1) & (2), 1–52.

Carlin T. M., Finch N. (2010). Resisting compliance with IFRS goodwill accounting and reporting disclosures: Evidence from Australia, *Journal of Accounting & Organizational Change*, 6(2), 260–280.

DiMaggio P. J., Powell W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields, *American Sociological Review*, 48(2), 147–160.

Dos Santos M.A, Lopes Favero L.P, Distadio L.F. (2015). Adoption of the International Financial Reporting Standards (IFRS) on companies' financing structure in emerging economies, *Finance Research Letters*, 16, 1–11.

Faff, Robert W. (May 6, 2019). Pitching Research.

Fuad, F., Juliarto, A. and Harto, P. (2019). Does IFRS convergence really increase accounting qualities? Emerging market evidence, *Journal of Economics, Finance and Administrative Science.*

Glaum M., Schmidt P., L. Street D. & Vogel S. (2013). Compliance with IFRS 3- and IAS 36-required disclosures across 17 European countries: company- and country-level determinants, *Accounting and Business Research*, 43(3), 163–2014.

Gorgan C., Gorgan V. (2014). Study on Disclosure Level of Companies Listed on The Bucharest Stock Exchange in Accordance with International Financial Reporting Standards: The Case of Intangible Assets, *Annals of the „Constantin Brâncuşi" University of Târgu Jiu, Economy Series*, Issue 2.

Houqe M. N., Monem R. M. (2016). IFRS Adoption, extent of Disclosure, and Perceived Corruption: A Cross-Country Study, *International Journal of Accounting*, 51, 363–378.

Houqe N. (2018). A review of the current debate on the determinants and consequences of mandatory IFRS adoption, *International Journal of Accounting & Information Management*, 26(3), 413–442.

ICAEW. (2014). The effects of Mandatory IFRS Adoption in the EU: A Review of Empirical Research.

IFRS Foundation. (2018). Use of IFRS Standards Around the World.

Ionașcu, I., Ionașcu, M. and Munteanu, L. (2011). Motivații și consecințe ale adoptării IFRS percepții privind factorii instituționali din mediul românesc [Determinants and Consequences of IFRS Adoption: Perspectives on the Romanian Institutional Factors], *Audit Financiar*, 12, 33–41.

Juhmani O. (2017). Corporate governance and the level of Bahraini corporate compliance with IFRS disclosure, *Journal of Applied Accounting Research*, 18(1), 22–41.

Kwame Agyei-Mensah B. (2017). The relationship between corporate governance mechanisms and IFRS 7 compliance: evidence from an emerging market, *Corporate Governance: The International Journal of Business in Society*, (17)3, 446–465.

La Porta R., Lopez-de-Silanes F., Shleifer A., W. Vishny R. (1998). Law and Finance, *Journal of Political Economy*, 106(6), 1113–1155.

Mazzi F., Slack R. and Tsalavoutas I. (2018). The effect of corruption and culture on mandatory disclosure compliance levels: Goodwill reporting in Europe, *Journal of International Accounting, Auditing and Taxation*, 31, 52–73.

Mody A. (2004). IMF Working paper. What is an emerging market?

Mokhtar E., Elharidy A., Mandour M. (2018). Compliance with IFRSs: The case of risk disclosure practices in Egypt, *Arab Economic and Business Journal*, 13, 1–14.

Nurunnabi M. (2015). The impact of cultural factors on the implementation of global accounting standards (IFRS) in a developing country, *Advances in Accounting*, 31(1), 136–149.

Păunescu M. (2015). The Romanian audit market structure in case of listed companies and the impact of adopting IFRS, *Procedia Economics and Finance*, 32, 686–693.

Samaha K., Khlif H. (2016). Adoption of and compliance with IFRS in developing countries: A synthesis of theories and directions for future research, *Journal of Accounting in Emerging Economies*, 6(1), 33–49.

Tsalavoutas I. (2011). Transition to IFRS and compliance with mandatory disclosure requirements: What is the signal?, *Advances in Accounting*, 27(2), 390–405 – Peer review.

Tsalavoutas I., Evans L., Smith M. (2010). Comparison of two methods for measuring compliance with IFRS mandatory disclosure requirements, *Journal of Applied Accounting Research*, 11(3), 213–228.

Tsalavoutas I., André P., Dionysiou D. (2014). Worldwide application of IFRS 3, IAS 38 and IAS 36, related disclosures, and determinants of non-compliance, *ACCA Research Report*, 134.

Uyar A., Kılıç M. & Gökçen B. A. (2016). Compliance with IAS/IFRS and firm characteristics: evidence from the emerging capital market of Turkey, *Economic Research-Ekonomska Istraživanja*, 29(1), 148–161.

EXPLORING THE TREND OF CZECH FDIs AND ITS LINK TO CHANGING INSTITUTIONAL ENVIRONMENT

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Abstract
Idea: The goal of this paper is to explore FDIs in the Czech Republic and their changes in recent years using the gravity model. Apart from traditional variables used in FDI models we also introduce the institutional change - introduction of IFRS in national accounting rules.
Data: We use predominantly open-source data from the World Bank and FDI data from the Czech national bank and Czech statistical office
Tools: We analyse a panel data of bilateral FDI for 19 EU countries over the period 2008–2017 using OLS model and PPLM specification.
What is new: FDI contributed significantly to the economy especially in the beginning of 1990. FDI is concentrated in major sectors – automotive, financial and wholesale.
So what: Although we have observed the effect of positive impact on broader introduction of IFRS in 2010 in terms of country import and export we cannot identify the same significance of this dummy on FDIs in the Czech Republic.
Contribution: FDI was increasing the productivity in the Czech Republic, especially in 1990s. We assess the effect and possible contribution of traditional variables like size, GDP, border and distance to Czech FDIs. We also add variable representing institutional changes - introduction of IFRS, Here we find that the positive of IFRS exists on export and import, nevertheless in case of FDIs there the effect is mixed with other institutional issues, and therefore the corresponding dummy is not statistically significant. In the future we want to try different model specification and broader set of data similarly as in previous literature.

Keywords: *OLS Model, FDI, export, international trade, IFRS*

1. INTRODUCTION AND MOTIVATION

Empirical results show that foreign direct investment abroad stimulates the growth of exports from countries of origin, and consequently, this investment is complementary to trade (Fontagné, 1999). Foreign direct investments are understood to support the growth of countries. Research on relationship between IFRS and foreign direct investment has been performed in many economies, e.g. Gordon, Loeb, and Zhu (2012), Márquez-Ramos (2011), Okpala (2012), Efobi, Nnadi, Odebiyi and Beecroft (2014) and Chen, Ding and Xu (2014). Similar conclusions were found in studies concentrating on Eastern Europe Albu and Albu (2014), Lungu, Caraiani, and Dascălu (2017). In this context it is assumed that one of influences of IFRS in Czech Republic is the attraction of FDIs.

In the Czech Republic, which is part of Eastern Europe, the relation was more difficult to establish empirically due to weak capital market, which does not allow measuring the effect directly. Only 11 shares are listed on the Prague Stock Exchange as of 27.8.2019. We can observe gradual improvement over time as more and more companies are now using IFRS as their reporting standard. This is mostly motivated by trade relations with their clients or parents from other countries, where IFRS is used as accounting standard Prochazka (2017). In Czech Republic intensive inflow of FDIs were observed namely in selected industries Szabo (2019). In these sectors there are also many subsidiaries of foreign companies increasing production and efficiency of Czech economy, see Prochazka (2018).

This paper is structured as follows: Section 1 is introduction and motivation. Section 2 provides a literature review on studies of FDI and IFRS in Czech Republic. Section 3 introduces data and model, whilst section 4 presents results and section 5 conclusion, limitations and suggests avenues for further research.

2. LITERATURE REVIEW

International accounting standards contribute to positive changes of institutional environment in the country which affects the economic growth of countries Wysocki (2011), Gordon, Loeb and Zhu (2012) or Liu, Yao, Hu and Liu (2011). In general, this relation is valid across the globe, however the direct impact is sometimes difficult to measure especially in less developed economies with underdeveloped capital markets. In our study we concentrate on the link between trend of FDIs and changing instructional environment in the Czech Republic, one of the countries in Central and Eastern Europe, which has lately undergone many institutional changes.

2.1 Studies on FDI in the Czech Republic

Coming from the general macroeconomic perspective, it is assumed that the contribution of FDI is an essential factor of countries development. Alfaro, Chanda, Kalemli-Ozcan, and Sayek (2004) explored links among foreign direct investment (FDI), financial markets and economic growth. Their research came to conclusion that "FDI alone plays an ambiguous role in contributing to economic growth." However, countries with well-developed financial markets gain significantly from FDI" see Alfaro, Chanda, Kalemli-Ozcan and Sayek (2004), page 22). Babuněk (2012) explored the character of FDI in V4 countries and as a compact group using FDI per capita. The author found that there remain significant differences between the countries (MacGregor Pelikánová, 2019), especially when taking into consideration the nearest trading partners Germany and Austria. Although there are many other contributing factors mostly of institutional and conceptual nature (MacGregor Pelikánová, 2017), that the study did not take fully into consideration. Maitah, Hayat, Malec, and Eldeeb (2014) researched the impact of FDI on employment in the Czech Republic. The authors investigated long term relationship between FDI, GDP and host country employment on data form 1993–2011. The authors found that the major positive role is played by multinational companies, which use the appropriate economic incentives and convenient environment to FDI inflow. The effect of FDI inflow is observed mainly by an increase in GDP and employment will impact positively on capital investments thus money flow to country from outside will be increased (Uğurlu, 2010).

Several studies concentrate on positive FDI spillovers: e.g., Smarzynska Javorcik (2004) explored the existence of positive spillovers initiated by FDIs initiated by presence of multinational firms and found that "firm productivity is positively correlated with the extent of potential contacts with multinational customers but not with the presence of multinationals in the same industry" Smarzynska Javorcik, 2004, page 7). Subsequently, Arnold, Javorcik and Mattoo (2007) explored the situation in manufacturing sector in the Czech Republic, where they researched the effects of services liberalization with use of firm-level data for the period 1998–2003. In particular they examined the link between services sector reforms and the productivity of domestic firms in downstream manufacturing. Their study reached two conclusions. They found that "services policy matters for the productivity of manufacturing firms relying on services inputs" and there is evidence that opening services sectors to foreign providers is a key channel through which services liberalization contributes to improved performance of downstream manufacturing sectors" (Arnold, Javorcik and Mattoo, 2007, page 21). Havranek and Irsova (2011) concentrated on vertical spillovers from FDIs using meta-analysis. In their study exploring 47 countries they found that there is "robust evidence consistent with knowledge transfer from foreign investors to domestic firms in supplier sectors" (Havranek and Irsova, 2011, page 20). Irsova and Havranek (2013) explore determinants of horizontal spillovers from FDI. Using a large sample of 1,205 spillovers around the world the authors found that there are several important factors influencing the extent of positive spillover: "The nationality of foreign investors is essential: when the technology gap of domestic firms with respect to foreign investors is too large, horizontal spillovers are small.

Moreover, spillovers are likely to be smaller with higher trade openness and better protection of intellectual property rights in the host country. On the other hand, higher levels of human capital in the host country are associated with larger spillovers. Finally, investment projects in the form of joint ventures with domestic firms bring more positive spillovers than fully foreign-owned projects." (Irsova and Havranek, 2013, page 21) According to economic theory it is expected that if the openness increase it

Similarly, as any investment, FDI has its lifecycle. After the initial period of growth followed by FDI inflow, the investment reaches maturity, which will be naturally followed by decline. At the maturity stage the investment generates the highest cash flows. So it depends whether the venture decides to continue in operations or not. The decline can be slowed down by timely introduction of innovation. A different situation occurs when the foreign company repatriates the profits generated in the host country and leaves. In this case the money will leave the country. It remains a question, whether the host country has created enough potential for favourite conditions for innovations itself. The profitability of Life cycle of FDI in the Czech Republic was studied by Novotny (2018), who researched the profitability life cycle of FDI on a panel of both advanced and emerging mostly European countries. For the Czech Republic the author found that „The first and the third scenario delimitate the likely future path of total FDI earnings… yearly total FDI earnings outflows will remain at levels above EUR 10 bn. (6% of GDP) Until 2018. They will then decrease and stabilize at around EUR 6 bn. After that in summary the author expects FDI to continue to play an important role in determining the balance of payments in the Czech economy in the coming decades in spite of the fact that according to our baseline scenario the economy will record only a very gradual increase in new green or brown-field FDI inflows" (Novotny, 2018, page 1632–1633). Recent facts about FDI in the country in comparison with V4 provided Szabo (2019), who provided an analysis of foreign direct investment in the Czech Republic since the 1990s to 2019 and concluded that: "As the ratio of the FDI stock to GDP has grown six-fold since 1993, FDI has become a major contributor to the country's development. The authors suggest that "traditional incentives provided for FDI such as tax reliefs, tax breaks, and cash grants should be provided in a way that does not discourage domestic entrepreneurs to invest in their own country and ensure tax transparency, fairness and compliance with state aid regulations" (Szabo, 2019, page 11).

2.2 Selected studies on IFRS in the CZ

Development and implementation of IFRS on accounting in the Czech Republic were researched among others by Sucher and Jindrichovska (2004), Nerudova and Bohusova (2008), Procházka (2010), Procházka and Ilinitchi (2011), Jindrichovska and Kubickova (2016), Procházka (2017 and 2018) and Ugurlu and Jindřichovská (2019) who studied the relationship between import-export and IFRS in the Czech Republic using gravity model to see whether there is a correspondence between use of IFRS and country export and import

In their early study, Procházka and Ilinitchi (2011) suggest that different pattern of raising capital by companies across countries requires a more sophisticated approach to detect properly the influence of the IFRS adoption on mutual relation of labour and capital. With reference to the literature cited above, we propose to refine the level of IFRS adoption in each country depending on the scope of companies, for which financial statements based on IFRS are relevant. E.g. …"the amendment of Czech Act on accounting, which – from 2011 – allows certain non-listed companies to select the IFRS as the basis for preparation of individual financial statements accepted for statutory purposes may have introduced a supportive factor boosting the inflow of foreign direct investments into the Czech Republic." For this reason, further analysis should not focus on adoption of the IFRS by listed companies only, but the possibility to apply the IFRS by non-listed companies should be taken into account too. Procházka and Ilinitchi (2011), page 94, however, this inflow is mainly in the form of FDI investment in major MNEs, e.g. in automotive and sales. Which is pulling smaller local companies as suppliers as one of the forms of spillover effect. These findings are also repeated in Procházka (2017) where the author argues that there is a positive link on the performance of subsidiaries. Furthermore he suggests, that a high-quality IFRS adoption in a chain "foreign parent—local subsidiary" may positively affect an undeveloped accounting practice in a transition country if the number of such subsidiaries is significant.

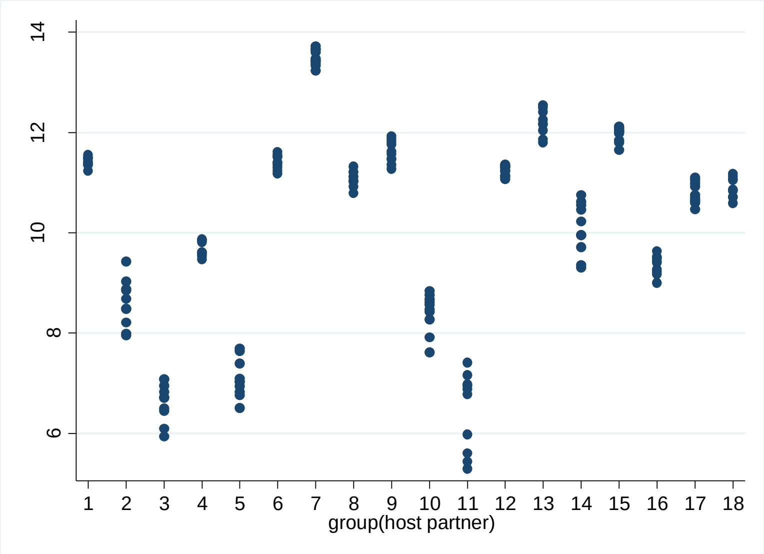
3. DATA AND MODEL

We collected 25 European Union member countries[5] data that have bilateral FDI with the Czech Republic. In the data set, we used there are many zero values for inward and outward FDI. We deleted the countries which have more than five zero values in these variables in other words if any country has no inward or outward FDI, we removed the country. Thus Belgium, Finland, Greece, Latvia, Lithuania, Portugal are omitted. We analyse a panel of bilateral FDI for 19 EU countries (with the Czech Republic) over the period 2008–2017. We use gravity model which is originated from the "Law of Universal Gravitation" by Isaac Newton in 1968 and adopted its formulation to trade (Muratoglu, Ugurlu and Muratoglu, 2017).

In the gravity model literature, an imported issue is discussed for this version of the data; zero trade problem. In the gravity model literature; if there is no trade or trade value is zero between two countries for a year, it is called a zero trade problem. Generally, in gravity models variables are used after taking their logarithms, therefore because of the log of zero is not defined zero trade flows will be dropped (WTO, 2012).

[5] Austria, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom.

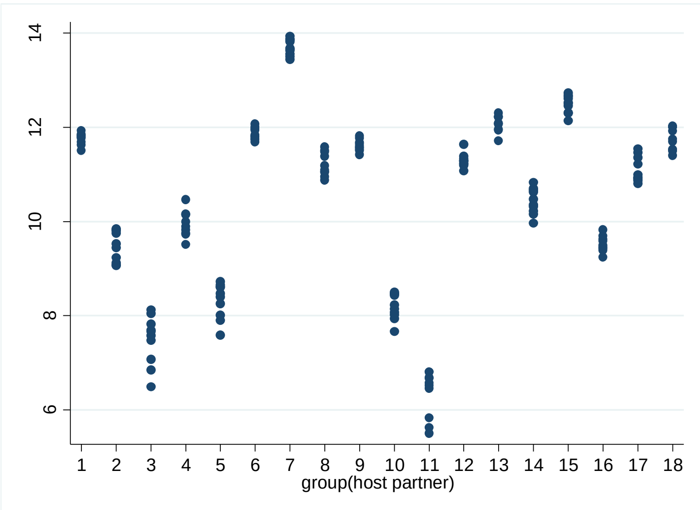
Figure 1. Logarithmic Import by Countries



Notes: 1. Austria 2. Bulgaria 3.Cyprus 4.Denmark 5.Estonia 6.France 7.Germany 8.Hungary 9. Italy 10. Luxembourg 11. Malta 12. Netherlands 13. Poland 14. Romania 15. The Slovak Republic 16. Slovenia 17. Spain 18. United Kingdom

Figure 1. and Figure 2. show the logarithmic values of import and export by countries.

Figure 2. Logarithmic Export by Countries



WTO (2002) argues two ways to solve this, three different approaches to handle this problem: truncating the sample by dropping the observations with zero trade (Van Bergeijk and Oldersma, 1990; Wang and Winters, 1991; and Raballand 2003, etc. use this approach); adding a small constant to zero values then taking their logarithms and estimating the model in levels. However; if second and third approaches are used, OLS estimation will not be correct. Therefore two techniques are suggested to use in these two approaches; using Tobit estimator (such as Rose, 2004; Soloaga and Winters, 2001; Anderson and Marcouiller, 2002) and using Pseudo Poisson maximum likelihood (PPML) estimator. Comparing appropriates of these two techniques "Tobit model is not the appropriate model to explain why some trade flows are missing" (Linders and de Groot, 2006: p. 5) and in the presence of heteroskedasticity, the PPML is a robust approach (Santos Silva and Tenreyro, 2006). Baltagi, Egger, and Pfaffermayr (2014) link the zero trade problem with trade relations of the countries. Small countries may not have trade relations with all possible trade partner countries.

Although we investigate FDI data in this paper, we have zero values such as bilateral trade, both FDI inward and FDI outward have zero values. Therefore we have a certain version of zero trade problem, and to solve this we will use the PPML model.

Relevant previous papers to this problem are Procházka and Ilinitchi, 2011; Gordon, Loeb and Zhu, 2012; Lungu, Caraiani and Dascălu, 2017; Chen, Ding and Xu 2011; Nejad et al. (2018), Baltagi, Egger and Pfaffermayr (2014), Beneish, Miller, and Yohn (2015). Whereas Busse, Könniger, and Nunnenkamp (2010) do not use IFRS dummy it is convenient paper to understand relationship between macroeconomic variables and FDI. The papers which are mentioned below investigate the impact of IFRS adoption on FDI similar to our paper. One of the contribution of our paper we use gravity model while the mentioned did not. While our paper uses the gravity model, most of these papers use another type of models. Procházka and Ilinitchi (2011) is a theoretical paper, Busse, Könniger and Nunnenkamp (2010) use "gravity-type model", PPML and GMM estimation, Gordon, Loeb, and Zhu (2012) use OLS and instrumental variable model, Lungu, Caraiani and Dascălu (2017) use OLS model, Nejad et al. (2018) use Square Dummy variable bias-corrected (LSDVC) model, and Beneish, Miller, and Yohn (2015) use OLS model. Except Charles, Ding and Xu (2011), these papers haven't distance variable also we can say that they do not think that a distance has Visegradimpact on FDI. Some of these papers use FDI inflow some of use FDI outflow variable as an independent variable. Charles, Ding and Xu (2011) use summation of the absolute values of FDI flows and FDI outflows as a different approach for a dependent variable. Moreover, independent variables in these papers are various. Table 1 shows selected independent variables, significance, and direction of the coefficient of selected five papers which are related FDI and IFRS.

Table 1. Result of Selected Variables for Selected Papers

Model:	1[a]	2[b]	3[c]	4[d]	5
Variable Coefficient	lnGDP sig. /pos.	SIZE not sig.	logGDP sig./pos.	GDPi sig./pos.	GDPGROWTH sig./pos
Variable Coefficient	ln(DiffGDPC) not sig.	GDPCAP not sig.	GDP_CAP sig. /neg.	GDPj sig./pos.	Inflation sig./pos
Variable Coefficient	Growth sig. /pos.	GDPG sig./pos.	GDP_GR not sig.	DIST sig./neg.	EXCH not sig
Variable Coefficient	ln(inflaton) not sig.	OPEN not sig.	INTEREST sig. /neg.	GDPPCi not sig.	EDU sig./pos
Variable Coefficient	Openness sig. /neg.	EXCHANGE not sig	EXCHANGE sig. /neg.	GDPPCi not sig.	NODA not sig
Variable Coefficient	BIT sig./pos.	INTEREST not sig.	GOV_INDEX sig. /pos.	-	-
Variable Coefficient	RTA sig. /pos.	IFRS:ADOPT not sig	IFRS: IFRSsd sig./pos.	IFRS:CONFORM sig./pos.	IFRS sig./pos

Notes: 1: Busse, Könniger and Nunnenkamp, 2010 2: Gordon, Loeb and Zhu, 2012 3: Lungu, Caraiani and Dascălu, 2017 4: Chen, Ding and Xu 2011 5: Nejad et al. (2018) a: Model 1 in the paper b:Developed countries. c:EU countries d: Model 6.1. in the model. E: Model 2 in the paper. sig: significant, pos: positive, neg: negative BIT : Bilateral investment treaty RTA: Dummy regional trade agreement, GDP: Real GDP, DiffGDPC: Difference between source and host countries' GDP per *capita, Growth: Real GDP growth rate of host country in percent, Openness: Sum of imports and exports in percent of GDP (host country), SIZE: Log of GDP in current US dollars, capturing a market factor that attracts FDI. GDPCAP and GDP_CAP: GDP per capita in current US dollars scaled by 1000, capturing a labor cost factor that attracts FDI. GDPG: GDP growth measured by dividing normal GDP with current year population, capturing a market factor that attracts FDI. OPEN: Absolute value of exports plus imports as percentage of real GDP, capturing an investment climate factor that attracts FDI. PHONE: Mobile cellular subscription per 100 people, capturing infrastructure element that attracts FDI, EXCHANGE, and EXCH: Annual year-end exchange rates measured by national currency units per SDRb scaled by 100, capturing an investment climate factor that attracts FDI. INTEREST: National lending interest rates measured by the period average in percentage per annual year. GDP_GR :Annual percentage growth rate of GDP per capita based on constant local currency. INTEREST: Lending rate is the bank rate, GOV_INDEX: Governance index, NODA: Natural Logarithm of Net official development assistance.*

Gordon, Loeb, and Zhu (2012) estimate model for developed and developing economies and find that there is a positive relationship between IFRS adoption and FDI inflows. Beneish, Miller, and Yohn (2015) investigate the effect of IFRS on debt, foreign equity and FDI and found similar results with Gordon, Loeb, and Zhu (2012) in terms of FDI.

4. RESULTS

Based on the literature above we decide to use the sum of FDI inflow and FDI outflow (FDI inflow+FDI outflow) as a dependent variable[6] mostly based on Charles, Ding and Xu (2011). Because of we estimate gravity model, the dependent variables are GDP of the Czech Republic (GDP_h), GDP of the partner countries (GDP_p), distance between the countries (DIST), population of the Czech Republic (POP_h), population of the partner countries (POP_p), IFRS dummy: 1 if the year is 2010 and after and 0 for others (IFRS), Border Dummy: 1 if the country has a border with the Czech Republic and 0 for others (border) Visegrad dummy: 1 for Visegrad countries and 0 for others (VIS). Except for dummy variables, GDP, population data were collected from the World Bank World Development Indicators database and distance between the countries from CEPII. FDI data were collected from the Czech National Bank.

Dummy variables were calculated by authors. We estimate the PPML model because of the zero trade problem that we mentioned above.

The estimated regression model is:

$$\ln FDI_{ijt} = \alpha_0 + \alpha_1 \ln GDP\_h_{it} + \alpha_2 \ln GDP\_p_{jt} + \alpha_3 \ln POP\_h_{it} + \alpha_4 \ln POP\_p_{jt} + \alpha_5 \ln DIST_{ijt} + \alpha_6 BORD_{ijt} + \alpha_7 VIS_{jt} + \alpha_8 IFRS_{it} + \varepsilon_{itj}$$

where i=1 and shows the host country and j=1 to 19 and shows partner countries, ε_{itj} shows the error term. Descriptive statistics of the variables and the correlation coefficients are provided in the appendix.

[6] If any variable is missing we wrote "0" for the respective cell.

Table 2. PMML Model: Independent Variable lnFDI

	OLS		PPML	
Var.	Coef.	p value	Coeff.	p value
Constant	2613.544	0.541	354.55	0.503
lnGDP_h	31.740**	0.029	3.808**	0.03
lnGDP_p	1.812***	0.001	0.244***	0.002
LnPOP_h	0.285	0.508	-28.134	0.423
lnPOP_p	-1.802***	0.000	-0.240***	0.000
lnDIST	-213.766	0.449	0.029	0.461
BORD	2.993	0.001	0.303***	0
VIS	1.675*	0.056	0.242**	0.036
IFRS	1.198	0.691	0.178	0.656
R-sq.	0.1384		R-sq.	0,13
Obs.	180		Obs.	180
Ramset Reset (p value)		0.60(0.6191)		

, and *** shows %10, %5 and %1 level significance respectively*

Both OLS and PPML model shows the GDP of the Czech Republic and GDP of the other countries as significant in %5 and %1 significance level respectively. The population of the Czech Republic is not significant in the two models, whereas the border is not significant in OLS model. Coefficient of Border is significant in PPML model in %1 level. Also Visegrad dummy variable is significant in two models, but IFRS is not significant in neither of the two models, also Distance variable has same result. IFRS dummy variable shows us if there is any significant change after adoption. The dummy variable IFRS is not significant then this means that adoption has no impact. However we may need more years to see it. Variables lnGDP_h, ln GDP_p, and Visegrad dummy have a positive and significant effect on dependent variable.
The results show that if the income of the Czech Republic and the population of partner countries increase FDI increase. The population of the Czech Republic does not affect FDI. Moreover, if the country is Visegrad country FDI will increase. Ramset Reset test shows that model has no omitted variables.

Previous papers which are discussed above do not take into a consideration distance variable. That is why we expect that insignificant distance variable.

5. CONCLUSION, LIMITATIONS AND AVENUES FOR FURTHER RESEARCH

In this paper, we explored the impact of traditional macroeconomic variables on foreign direct investment in the Czech Republic with the use of two specifications of gravity model. We have found that gravity model works for FDI in the Czech Republic, albeit the IFRS dummy representing change of accounting environment did not show as significant under the two model specifications. In light of previous literature in this area we suggest that better specification is needed, or a change in approach - not to explore the IFRS in isolation of only one country.

In case of Foreign Direct Investment, we expect that the links between investing and recipient countries will be stronger creating room for long term working relationship from an institutional or economic standpoint because we can perceive long term engagement on both sides and not just a short term action or one-of trading operation. Also, in particular case of multinational companies, the recipient country must offer the investing party more opportunities than comparative home investment opportunities.

Institutional background provided in the country is important to attract the FDIs, however since there is already big proportion of foreign companies in place in the Czech Republic the influence of new FDIs will not be so easy to capture and different specifications talking into account more qualitative features would be recommended see e.g. Nejad, et al, 2018. It would also be interesting to concentrate on the effect of FDI spillovers and impact of FDIs in specific sectors of economy.

Currently, there is a new accounting act in preparation that will institute compulsory IFRS adoption in all Czech companies. Therefore it will be interesting to analyse the situation in a few years time.

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BIBLIOGRAPHY

Albu, C. N., Albu, N., Pali-Pista, S. F., Gîrbină, M. M., Selimoglu, S. K., Kovács, D. M., Lukács, J. , Mohl, G., Müllerová, L., Paseková, M., Arsoy, A. P., Sipahi, B. and Strouhal, J. (2013). Implementation of IFRS for SME s in Emerging Economies: Stakeholder Perceptions in the Czech Republic, Hungary, Romania and Turkey. *Journal of International Financial Management & Accounting*, *24*(2), 140–175.

Albu, N., & Albu, C. N. (2014). IFRS application in Central and South-Eastern European countries. *Accounting & Management Information Systems*, *13*(2), 182–197.

Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, *64*(1), 89–112.

Anderson, J.E. and D. Marcouiller (2002): Insecurity and the Pattern of Trade: An Empirical Investigation, Review of Economics and Statistics, 84, pp. 342–352.

Arnold, J., Javorcik, B. S., & Mattoo, A. (2007). *Does services liberalization benefit manufacturing firms? Evidence from the Czech Republic*. The World Bank.

Babuněk, O. (2012). Foreign direct investment in Visegrad four and the main trading partners. *Statistika: Statistics and Economy Journal*, *49*(4), 14–26.

Badi H. Baltagi & Peter Egger & Michael Pfaffermayr, 2014. "Panel Data Gravity Models of International Trade", CESifo Working Paper Series 4616, CESifo Group Munich.

Beneish, M. D., Miller, B. P., & Yohn, T. L. (2015). Macroeconomic evidence on the impact of mandatory IFRS adoption on equity and debt markets. Journal of Accounting and Public Policy, 34, 1–27. doi:10.1016/j.jaccpubpol.2014.10.002

Busse, M., Königer, J., & Nunnenkamp, P. (2010). FDI promotion through bilateral investment treaties: More than a BIT? Review of World Economics, 146, 147–177

Chen, C. J., Ding, Y., & Xu, B. (2014). Convergence of accounting standards and foreign direct investment. *The International Journal of Accounting*, *49*(1), 53–86.

Efobi, U., Nnadi, M., Odebiyi, J., & Beecroft, I. (2014). Do the Rules Attract the Money? Implication of IFRS Adoption on Foreign Direct Investment. *Implication of IFRS Adoption on Foreign Direct Investment (June 30, 2014)*.

Fontagné, L. (1999), "Foreign Direct Investment and International Trade: Complements or Substitutes?", *OECD Science, Technology and Industry Working Papers*, No. 1999/03, OECD Publishing, Paris, https://doi.org/10.1787/788565713012.

Gordon, Lawrence A., Martin P. Loeb, and Wenjie Zhu. (2012) "The impact of IFRS adoption on foreign direct investment." *Journal of accounting and public policy* 31, no. 4: 374–398.

Havranek, T. and Z. Irsova, 2011. Estimating vertical spillovers from FDI: Why results vary and what the true effect is. J. Int. Econ., 85: 234–244.

Irsova, Z. and T. Havranek, 2013. Determinants of horizontal spillovers from FDI: Evidence from a large meta-analysis. World Dev., 42: 1–15.

Jindrichovska,I., & Kubickova, D. (2016). Economic and Political Implications of IFRS Adoption in the Czech Republic. In Uchenna, E., Nnadi, M., Tanna, S., & Iyoha, F.,Economics and Political Implications of International Financial Reporting Standards (105-132). Hershey, PA: IGI Global. doi:10.4018/978-1-466-9876-5.

Linders, G. M. and de Groot, H. L. (2006), “Estimation of the gravity equation in the presence of zero flows”, Tinbergen Institute Discussion Paper 2006–072/3.

Liu, C., Yao, L. J., Hu, N., & Liu, L. (2011). The impact of IFRS on accounting quality in a regulated market: An empirical study of China. *Journal of Accounting, Auditing & Finance*, 26(4), 659–676.

Lungu, C. I., Caraiani, C., & Dascălu, C. (2017). The impact of IFRS adoption on foreign direct investments: Insights for emerging countries. *Accounting in Europe*, 14(3), 331–357.

MacGregor Pelikánová, R. (2017). European Myriad of Approaches to Parasitic Commercial Practices. *Oeconomia Copernicana*, *8*(2): 167–180. Doi: 10.24136/oc.v8i2.11.

MacGregor Pelikánová, R. (2019). Harmonization of the protection against misleading commercial practices: ongoing divergences in Central European countries. *Oeconomia Copernicana*, 10(2), 239–252.

Maitah, M., Hayat, A., Malec, K., & Eldeeb, O. (2014). The impact of foreign direct investments on employment in the Czech Republic. *Research Journal of Applied Sciences*, 9(12), 1001–1008.

Márquez-Ramos, L. (2011). European accounting harmonization: Consequences of IFRS adoption on trade in goods and foreign direct investments. *Emerging markets finance and trade*, *47*(sup4), 42–57.

Muratoğlu, G., Uğurlu E., & Muratoğlu Y. (2017). Trade Flows between Russia and Other Black Sea Economic Cooperation Countries: A Gravity Model Analysis. *GUEJISS, Gümüşhane University Electronic Journal of The Institute of Social Sciences,* 8(20), 287–307.

Nejad MY, Ahmad A, Mdsalleh F, Rahim RA. (2018). IFRS adoption and foreign direct investment: An application of the LSDVC estimator. Proceeding of the 5th International Conference on Management and Muamalah 2018 (ICoMM 2018) e-ISBN: 978-967-2122.

Nerudova, D., & Bohusova, H. (2008) and . The empirical study of the SMEs position in the process of IFRS for SME application in the Czech Republic. Economics & Management. 163–169.

Novotný, F. (2018) Profitability Life Cycle of Foreign Direct Investment:Application to the Czech Republic, Emerging Markets Finance and Trade, 54:7, 1623–1634, DOI: 10.1080/1540496X.2017.1316259.

Okpala, K. E. (2012). Adoption of IFRS and financial statements effects: The perceived implications on FDI and Nigeria economy. *Australian Journal of Business and Management Research*, *2*(5), 76.

Procházka, D. A. (2010). The development of financial and management accounting after the IFRS adoption: a case from the Czech Republic. *Available at SSRN 1660122*.

Procházka, D., & Procházková Ilinitchi, C. (2011). The theoretical relationships among foreign direct investments, migration and IFRS adoption. *European Financial and Accounting Journal*, *6*(4), 1–15.

Procházka, D. (2017). Forced IFRS Adoption: Direction of the "EU-15 Parents-CEESubsidiaries" Links. In New Trends in Finance and Accounting.Švýcarsko: Springer International Publishing, 2017, 361–371.

Procházka, D. (2018) Financial Performance of Czech Subsidiaries of the EU-Listed Companies. In: Procházka D. (eds.) The Impact of Globalization on International Finance and Accounting. Springer Proceedings in Business and Economics. Springer, Cham.

Raballand, G. (2003): Determinants of the Negative Impact of Being Landlocked on Trade:An Empirical Investigation through the Central Asian Case, Comparative Economic Studies, 45, pp. 520–536.

Rose, A.K. (2000): One Money, One Market: The Effect of Common Currencies on Trade,Economic Policy, 15, pp. 8–45.

Silva, S, J. and Tenreyro, S. (2006), "The log of gravity", The Review of Economics and Statistics 88: 641–58.

Soloaga, I. and L.A. Winters (2001): Regionalism in the Nineties: What Effect on Trade?,North American Journal of Economics and Finance, 12, pp. 1–29.

Szabo Septimiu (2019) FDI in the Czech Republic: A Visegrád Comparison, EUROPEAN ECONOMY Economic and Financial AffairsISSN 2443-8030 (online)Septimiu Szabo ECONOMIC BRIEF 042 | FEBRUARY 2019, https://ec.europa.eu/info/publications/economic-and-financial-affairs-publications_en

Smarzynska Javorcik, B. (2004). Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American economic review*, *94*(3), 605–627.

Sucher, P., & Jindrichovska, I. (2004). Implementing IFRS: A case study of the Czech Republic. *Accounting in Europe*, *1*(1), 109–141.

Ugurlu, E., & Jindrichovska, I. (2019). Estimating Gravity Model in the Czech Republic: Empirical Study of Impact of IFRS on Czech International Trade. *European Research Studies Journal*, *22*(2), 265–281.

Uğurlu, E. (2010) "Growth And Openness Relationship in the EU15: Panel Data Analysis", *Ekonomika*,89(2), 44–54. doi: 10.15388/Ekon.2010.0.986.

Van Bergeijk, P.A.G. and H. Oldersma (1990): Detente, Market-Oriented Reform and German Unification: Potential Consequences for the World Trade System, Kyklos, 43, pp. 599–609.

Wang, Z.K. and L.A. Winters (1991): The Trading Potential of Eastern Europe, CEPR Discussion Paper, no. 610, London.

Wysocki, P. (2011). New institutional accounting and IFRS. *Accounting and business research*, *41*(3), 309–328., Gordon, L. A., Loeb, M. P., & Zhu, W. (2012). The impact of IFRS adoption on foreign direct investment. *Journal of accounting and public policy*, *31*(4), 374–398.

WTO (2012) – World Trade Organisation, 2012. A Practical Guide to Trade Policy Analysis. WTO Publications. ISBN 978-92-870-3812-8.

Appendix

Table 1a. List of explanatory variables

Abbreviation	Definition	Source
INWARD	Yearly FDI inflows to Czech Republic from each partner country	Czech National Bank
OUTWARD	Yearly FDI outflows from the Czech Republic to each partner country	Czech National Bank
GDP_H	Host (Czech Republic) Country Gross Domestic Product (Purchaser's prices, constant 2010 US$)	World Bank, WDI
GDP_P	Partner Country Gross Domestic Product (Purchaser's prices, constant 2010 US$)	World Bank, WDI
POP_H	Host Country Population	World Bank, WDI
POP_P	Partner Country Population	World Bank, WDI
DIST	Distance Between Countries (km)	CEPII
BORDa	Border Dummy: 1 if the country has a border with the Czech Republic and 0 for others	Authors' Calculation
VISb	Visegrad(V4) Dummy: 1 for Visegrad countries and 0 for others	Authors' Calculation
IFRS	IFRS Dummy: 1 if the year is 2010 and after and 0 for others	Authors' Calculation

Notes: a: Austria, Germany, Poland, and the Slovak Republic. b: Hungary, Poland, Slovak Republic

Table 2a. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
lnFDI	180	8.411335	6.021056	0	15.61966
lnGDP_h	180	26.09936	.0524079	26.03581	26.20915
lnGDP_p	180	26.21504	1.808941	22.85648	28.98318
lnPOP_p	180	16.01713	1.670184	12.9224	18.23067
lnPOP_h	180	16.16738	.0054649	16.15583	16.17554
lndist	180	6.874123	.8581392	5.680466	9.68642

Table 3a. Correlation Matrix

	lnFDI	lnGDP_h	lnGDP_p	lnPOP_p	lnPOP_h	lnDist
lnFDI	1					
lnGDP_h	0.1766	1				
p value	0.0177					
lnGDP_p	0.1242	0.0258	1			
p value	0.0967	0.7313				
lnPOP_p	0.0627	0.0056	0.9269	1		
p value	0.4028	0.941	0			
lnPOP_h	0.0779	0.7251	0.0202	0.006	1	
p value	0.2983	0	0.7883	0.936		
lndist	0.0285	0	-0.0341	-0.08	0	1
p value	0.7041	1	0.6492	0.2859	1	

VALUE CREATION – 10 YEARS OF EVOLUTION ACROSS INDUSTRIES AND BUSINESS MODELS

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Abstract
This paper focuses on the evolution of value creation across industries and business models in the past ten years. Market capitalization data from the 50 biggest US stock exchange listed companies were used for the analysis. The authors made a hypothesis that value creation is going to shift from traditional industries (production of high and low value added products, service providers) to information technology industries and companies from the so-called 'zero marginal cost' economies. The results obtained confirm that hypothesis. In the past decade, there is a noticeable decrease in the share of the total market capitalization produced by low-added value companies and service providers. On the other hand, a significant increase in technology platform business models is observed, making almost 30% of the total market capitalization in 2019. There are no signs of a different trend in the future.

Keywords: *business model, industry, valuation, value creation*

1. INTRODUCTION

Value creation is the topic everybody in the financial world is interested in. Owners, shareholders, managers, even external subjects desperately focus on value creation. A great number of recent articles focused on value creation in specific industries (i.e. Lafferty, 2019, Schlegel, 2019, Cabral, Mahoney, McGahan & Potoski, 2019, Chatain & Plaksenkova, 2019, Porter & Kramer, 2019, Beattie & Smith, 2013) prove that a high level of interest exists in this field. Respectful authors (i.e. Damodaran, 2012 or Mařík, 2018) also devote their precious time to summarizing thoughts about valuation techniques.

The aim of this paper is to analyze the value creation (the growth of market capitalization) of the 50 biggest US companies. In order to prepare a comprehensive study, the authors collected data from the past ten years and tried to summarize the developments in the market. Data from the US stock exchanges were used as their sample. The analysis will be focused not only on the differences between industry sectors but also on business models.

Sedkaoui (2018) provides this definition of business model: "A business model is a company's plan for how it will generate revenues and make a profit. It explains what products or services the business plans to manufacture and market, and how it plans to do so, including what expenses it will incur." According to Johnson, Christensen & Kagermann (2008), designing the product itself is the starting point of business model development. The key factors the company must recognize are: i) value provided to customers (customer value proposition); ii) resources which the company needs to provide value to customers; iii) processes required to achieve the final product. The value provided to customers is often based on market multiple methods.

According to Ribaudo's (2018) article, we can recognize four basic types of businesses with different business models – asset builders, service providers, technology creators, and network orchestrators. Asset builders make, market, distribute, and sell physical products. Their business model is based on the price per piece billing. Service providers charge billable hours for the services provided. Technology creators use intellectual property tools to protect and sell their technology. The business model is based on the “make one, sell many” principle. Network orchestrators build their business model on connecting the demand with the supply through advanced technology. (Ribaudo, 2016) By using digital networks of businesses and consumers, they offer value added to both sides – the supply and demand. Examples of network orchestrator are card associations such as Visa and MasterCard, Uber, Airbnb, and Kiwi.com. Sharing economy services (SES) recently dominate the market and are the fastest growing segments of the economy. Apte and Davis (2019) studied the common characteristics of SES companies and proposed a set of business model building blocks.

The hypothesis of the authors is that value creation will shift from traditional industries (production of high and low value added products, service providers) to companies in information technology industries and the ‘zero marginal cost economy’ (creators of digital content).

2. DATA DESCRIPTION AND METHODOLOGY

The authors analyzed the data of the 50 biggest companies in terms of market capitalization traded the on US stock exchanges in the period of 2009–2019. The source data was provided by iWeblist.com website. The data sample contains the end of the year market capitalizations of the companies, the last available data is as of 31 July 2019. (iWeblists.com, 2019).

Firstly, the total market capitalization of the sample was analyzed. The authors aggregated market capitalizations in each year of the period 2009–2019 and calculated the following characteristics – the year-on-year ratio, the average growth ratio over the period 2009–2018 using the arithmetic and geometric averages.

Secondly, the companies in the sample were categorized by industry. The authors used the industry categorization by Damodaran published on his website (Damodaran, 2019). In order to get more concentrated data, the authors classified industries into 15 industry sectors according to the following key:

- **Banks and Financial Institutions** (Bank, Financial Services, Brokerage & Investment Banking and Information Services*);
- **Healthcare** (Drugs Producers, Healthcare Products, Healthcare Support Services and Healthcare Information and Technology);
- **Retail** (All types of Retail);
- **Information Technologies** (Software Producers, Computers/Peripherals, Computer Services and Semiconductor Producers);
- **Mining and Quarrying** (Oil/Gas and Oilfield Services/Equipment);
- **Tobacco** (Tobacco);
- **Transportation** (Transportation);
- **Telecommunication and Cable TV** (Telecommunication Services, Telecommunication Equipment and Cable TV);
- **Household Products** (Household Products);
- **Diversified** (Diversified);
- **Aerospace and Defense** (Aerospace and Defense);
- **Food** (Food Processing and Restaurant/Dining);
- **Entertainment** (Entertainment);
- **Chemical** (Chemical);
- **Fashion and Sports Gear** (Shoe).

*Companies in this sector are Visa, MasterCard and PayPal.
Based on this classification, the authors will present how frequently each industry appears at three distinct points in time – the end of 2009 and 2014, and as of 31 July 2019.

Finally, the companies in the sample were categorized according to their respective business models. Following nine business models were identified:

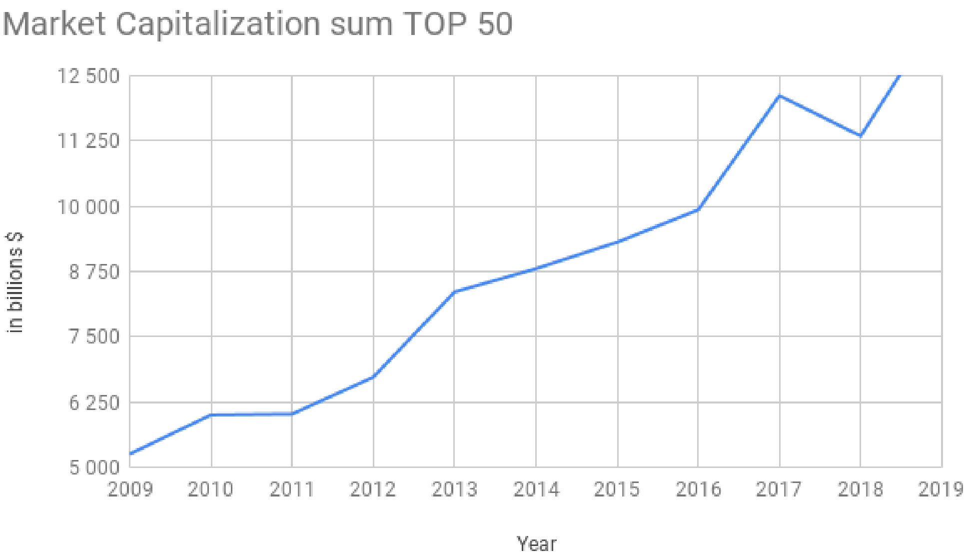
- **Producers of Products With Low Value Added** (Typically companies from Tobacco, Food Processing, Household Products, Oil/Gas or Restaurant/Dining sectors)
- **Retailers** (Wal-Mart, Home Depot, CVS Health and Costco Wholesale Corp.)
- **Service Providers** (Typically companies from Computer Services, Banks, Brokerage & Investment Banking, Transportation and Financial Services sectors)
- **Infrastructure Providers** (AT&T, Verizon Communications, Comcast and Cisco Systems)
- **Producers of Products With High Value Added** Typically companies from among Drugs producers, Healthcare Products, Healthcare Support Services and Healthcare Information and Technology, Computers/Peripherals, Semiconductor producers and Aerospace and Defense sectors)
- **Intangible Assets Producers** (Walt Disney Co., Oracle Corp., Adobe Inc., Netflix Inc., Salesforce.com Inc.)
- **Network Orchestrators** (Facebook Inc., Visa Inc., MasterCard Inc. and PayPal Holdings Inc.)
- **Diversified** (Companies with more than one dominant business model: General Electric and Berkshire Hathaway)
- **Technology Platforms** (Companies that have built a wide range of interconnected products around their core business model. They combine a wide range of business models to create their own ecosystems. Such platforms are Apple, Google (Alphabet), Microsoft and Amazon. Recently, the companies using the Technology Platforms model have been the most valuable ones traded on the US stock exchanges.

Based on the classification, the authors will present how frequently each business model type appears at three distinct points in time – the end of 2009 and 2014, and as of 31 July 2019.

3. RESULTS

The authors examined the growth of the market capitalization of the companies. In the period under review, the total market capitalization of the sample increased by 162%. The total market capitalization value increased from USD 5,252 to USD 13,762 billion. The sums of the market capitalization in individual years are shown in Figure 1.

Figure 1. Market Capitalization sum TOP 50



Source: Authors' research based on iWeblists.com (2019)

With respect to the results, the year-on-year growth of the total market capitalization was calculated (Table 1). The largest year-on-year growth was recorded between 2013 and 2014 when the total market capitalization grew by 24%. On the contrary, the only decrease of the value created occurred between 2018 and 2019 when the total market capitalization decreased by 6%.

Table 1. Year-on-year growth

Year	**2009/2010**	**2010/2011**	**2011/2012**	**2012/2013**	**2013/2014**
Y-o-y growth	14.29%	0.29%	11.73%	24.24%	5.36%
Year	**2014/2015**	**2015/2016**	**2016/2017**	**2017/2018**	**2018/2019**
Y-o-y growth	5.75%	6.65%	22.03%	- 6.35%	x

Source: Authors' research based on iWeblists.com (2019)

The average annual growth of the total market capitalization by the arithmetic mean was 9.33% and by the geometric mean 8.94%.

According to the 15 recognized industry sectors in the Data and Methodology section of this article, the authors analyzed the frequency of appearance for each industry sector in the sample. In 2009, most companies were from the Healthcare and Information Technologies sectors. Both sectors had eight representatives in the sample. The industry sectors that follow: Banks & Financial Institutions (seven representatives), Mining & Quarrying (five representatives), and Retail, Telecommunication & Cable TV, and Food (four representatives each).

In 2014, a mix of the top industry sectors did not changed a lot. Most of the companies in the sample were from the Healthcare sector (10), followed by those in the Information Technologies (8), Banks & Financial Institutions (7), and Telecommunication & Cable TV (4) sectors. The number of representatives of the Mining & Quarrying industry sector dropped to three.

The most recent observation (data as of July 31, 2019) shows the dominance of the Information Technologies sector. It has the highest incidence (12 representatives), followed by the Healthcare industry with eight representatives and the Banks & Financial Institutions sector with seven representatives. The position of the Telecommunication & Cable TV sector did not change and has 4 representatives in the sample. A drop of the Mining & Quarrying sector continued and recently has only two representatives in the sample. A results summary is shown in Table 2 below.

Table 2. Occurrence of industry sectors

Industry sector / year	**2009**	**2014**	**31/7/2019**
Banks & Financial Institutions	7	7	7
Healthcare	8	10	8
Retail	4	4	5
Information Technologies	8	8	12
Mining & Quarrying	5	3	2
Tobacco	2	2	1
Transportation	1	2	1
Telecommunication & Cable TV	4	4	4
Household Products	2	1	1
Diversified	2	3	2
Aerospace & Defense	1	2	1
Food	4	3	4
Entertainment	1	1	1
Chemical	1	0	0
Fashion & Sports Gear	0	0	1

Source: Authors' research

The Information Technologies sector has the largest share of the total market capitalization. Its share increased from 24% in 2009 to almost 34% as of 31 July 2019. A relatively stable share was recorded within the Banks & Financial Institutions sector with a 13% share. On the other side, the Mining & Quarrying sector fell from 13% to 4%. A substantial drop was also recorded in the Tobacco and Household Products industry sector. Table 3 shows data for all industry sectors.

Table 3. Shares of the industry sectors of the total market capitalization

Industry sector / year	**2009**	**2014**	**31/7/2019**
Banks & Financial Institutions	12.85%	12.61%	13.47%
Healthcare	12.99%	16.01%	11.17%
Retail	6.79%	7.83%	12.82%
Information Technologies	24.06%	24.80%	33.74%
Mining & Quarrying	13.29%	7.60%	4.04%
Tobacco	2.52%	2.61%	0.98%
Transportation	1.08%	2.20%	0.92%

Telecommunication & Cable TV	8.48%	7.18%	6.73%
Household Products	4.15%	2.59%	2.19%
Diversified	4.18%	7.82%	4.62%
Aerospace & Defense	1.24%	2.33%	1.42%
Industry sector / year	2009	2014	31/7/2019
Food	6.37%	4.66%	5.03%
Entertainment	1.15%	1.75%	1.90%
Chemical	0.85%	0.00%	0.00%
Fashion & Sports Gear	0.00%	0.00%	0.99%

Source: Authors' research

From the business model point of view, most of the representatives in the sample in 2009 had a business model based on the production of high added value products (14). This was followed by the business model based on the production of low added value products (13) and the Service Providers (9). In 2014, the situation did not change dramatically. The business model based on high added value products (14) was still leading, whereas the model based on low added value products as well as the Service Providers (both 9) were behind. In particular, there was a noticeable decrease in the occurrence of the business model based on low added value products. In 2014, three representatives of the Network Orchestrators business model also appeared in the sample. In the last available dataset (31 July 2019), the business model based on the production of high added value products (12) still has the largest number of representatives in the sample, dropping from 14. There are nine representatives of the Producers with Low Added Value Products in the sample, and eight of the Service Providers. It is clear that the sample is changing. Whereas in 2009 there were no Network Orchestrators, in 2019 there are four representatives, and also the number of Producers of intangible assets is rising (5 in 2019). The occurrence of individual business models recorded is shown in Table 4.

Table 4. Occurrence of business models

Business model / year	**2009**	**2014**	**31/7/2019**
Producers of Low Added Value Products	13	9	9
Retailers	3	3	3
Service Providers	9	9	8
Infrastructure Providers	4	4	4
Producers of High Added Value Products	14	14	12
Intangible Assets Providers	2	2	5
Network Orchestrators	0	3	4
Diversified	1	2	1
Technology Platforms	4	4	4

Source: Authors' research

Table 5 below shows the shares of the individual business models on the total capitalization in the sample. The highest share was recorded in 2009 for the Producers of products with low added value (26%). However, this share has fallen to 13% over the next decade. Also, the share of the high added value product producers, the Service Providers, and the Infrastructure Providers has declined. The share of the Producers of products with high added value dropped significantly by 30%. On the other hand, the business models based on the production of intangible assets, the Network Orchestrators and the Technology Platforms recorded an increase in the share of the total market capitalization in the sample. The companies with the Network Orchestrators business model already have a 10% share of the total market capitalization in the sample and the Technology Platforms around 28%. The Technology Platforms increased their share by 100% over the reporting period. At the present moment, the Technology Platforms companies are the largest companies in terms of market capitalization, attacking the value of one trillion USD.

Table 5. Shares of the business models of the total market capitalization

Business model / year	**2009**	**2014**	**31/7/2019**
Producers of Low Added Value Products	26.34%	17.46%	13.23%
Retailers	5.68%	5.96%	4.96%
Service Providers	17.21%	14.82%	12.20%
Infrastructure Providers	8.48%	7.18%	6.73%
Producers of High Added Value Products	22.12%	21.30%	15.14%
Intangible Assets Providers	3.49%	3.84%	6.29%
Network Orchestrators	0.00%	5.27%	9.95%
Diversified	3.07%	6.65%	3.71%
Technology Platforms	13.62%	17.51%	27.80%

Source: Authors' research

4. DISCUSSION

There are several limitations of this paper. One limitation of this research is the underlying data. The authors only worked with the data of publicly traded companies, because the market capitalization of privately owned companies is not traceable. Some private companies could appear in the rankings (i.e. consultancies such as Deloitte). The data from the US markets were also used. That is the reason why the research does not cover non-US companies, i.e. Royal Dutch Shell, Tencent, Samsung, Alibaba or L'Oréal.

Another limitation can be the fluctuation in the capital markets. The data were collected on specific dates in the past. Therefore the authors work with a point selection, and the sample can be quite different between those data points. However, the authors tried to minimize this limitation by the length of the time series.

The results are valid for the current state of the stock market. The economic boom and low interest rates could have an impact on the results. In the last ten years, markets were in a unique situation of continual growth. Another important factor was that the interest rates were on a very low level – close to zero and sometimes even negative. This was one of the impacts of the quantitative easing. Investors were looking for bigger yields and invested in riskier assets. The question is whether investors would continue to invest in companies with the new business models over less risky assets, such as government obligations and dividend titles. The authors strongly believe that there is a trend related to the new business models, but this opinion has to be confirmed for the full economic cycle, including the period of expansion and recession.

5. CONCLUSION

The authors consider the goal set out in the Introduction as fulfilled. Value creation was analyzed on a sample of the 50 largest US publicly traded companies. The paper also confirmed the hypothesis set out in the Introduction. Investors really favour IT companies and especially the Technology Platforms. A high growth in the market capitalization was also observed for the Intangible asset producers and the Network Orchestrators, connecting the demand and the supply.

This research confirms the previous research by Ribaudo (2016 and 2018). The transformation of value creation may have interesting implications for some economies, i.e. for countries that focuses on the production of products with low added value, and generally on traditional industries. According to our research, this business model represents almost a 100 % smaller share of the total market capitalization in 2019, compared to 2009. The whole European Union, which is far behind the US and China in the technology sector, could have a future problem in this respect. The transformation of value creation also makes other demands on financial reporting. Many key assets are intangible. According to the authors' opinion, this transformation has not yet been reflected in accounting standardization. Both could be the subject of further research.

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BIBLIOGRAPHY

Apte, U. M., & Davis, M. M. (2019). *Sharing Economy Services: Business Model Generation*. California Management Review, 61(2), 104–131.

Beattie, V., & Smith, S. J. (2013). *Value creation and business models: refocusing the intellectual capital debate.* The British Accounting Review, 45(4), 243–254.

Cabral, S., Mahoney, J. T., McGahan, A. M., & Potoski, M. (2019). *Value creation and value appropriation in public and nonprofit organizations*. Strategic Management Journal, 40(4), 465–475.

Chatain, O., & Plaksenkova, E. (2019). *NGOs and the creation of value in supply chains*. Strategic Management Journal, 40(4), 604–630.

Damodaran, A. (2012). *Investment valuation: Tools and techniques for determining the value of any asset* (Vol. 666). John Wiley & Sons.

Damodaran, A. (2019): *Detail on which companies are included in each industry [XLS]*. New York: Damodaran Online. Retrieved from http://www.stern.nyu.edu/~adamodar/pc/datasets/indname.xls

iWeblists.com. (2019). *U.S. Commerce – Stock Market Capitalization of the 50 Largest American Companies*. Retrieved from http://www.iweblists.com/us/commerce/MarketCapitalization.html

Johnson, M. W., Christensen, C. M., & Kagermann, H. (2008). Reinventing your business model. *Harvard business review*, *86*(12), 57–68.

Lafferty, C. (2019). *Sustainable Industry 4.0: Product Decision-Making Information Systems, Data-driven Innovation, and Smart Industrial Value Creation*. Journal of Self-Governance and Management Economics, 7(2), 19–24.

Mařík, M. (2018). *Metody oceňování podniku pro pokročilé: hlubší pohled na vybrané problémy*. Ekopress.

Porter, M. E., & Kramer, M. R. (2019). *Creating shared value*. Managing sustainable business. Springer, Dordrecht, 323–346.

Ribaudo, B. (2018). *The Great (Country) Race: Company Business Models and Country GDP – Opportunity or Threat?* SNS Subscriber edition. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/us/Documents/finance/company-business-models-country-gdp-opportunity-or-threat%20.pdf

Ribaudo, W. (2016). *Technology is Changing How We View Industry, Value Companies, and Develop Strategy*. SNS Subscriber edition. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/us/Documents/risk/us-ers-global-report-on-technology-and-the-economy.pdf

Schlegel, D. (2019). *Value Creation in the Private Equity Industry*. International Journal of Management Cases, 21(2).

Sedkaoui, S. (Ed.). (2018). *Big Data Analytics for Entrepreneurial Success*. IGI Global.

Management and Economic Policy I

GOODWILL: IS THIS THE NEXT BUBBLE?

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Abstract
The subject of goodwill seems overlooked often in both investment and accounting literature. Searches for papers on this topic do not seem to draw many results. Yet in recent years merger and acquisition activity has increased significantly actually requiring attention to this topic. Though the IASB is due to release a discussion paper by late 2019, goodwill remains an issue which seems to slumber. The last review recorded on the IFRS site was in 2015. Meanwhile, acquisitions proceed apace – some 49,000 transactions worth about 3.8 trillion US dollars in 2018. How these transactions are shown on financial statements seems to slip under the radar. This study has taken the 75 largest companies in the S&P 500, using the most recent financial statements (10K), compared with the statements five years previous. Given current regulations regarding the booking of goodwill, large sums remain unimpaired and tend to accumulate as long-term assets over time. This could seriously distort the results reported, and is, as this paper argues, developing a bubble which will eventually require an adjustment.

Keywords: *Goodwill; IAS 36 – Impairment of Assets; IFRS 3; intangible assets; SFAS 142*

1. INTRODUCTION

IFRS 3 - Business Combinations says:

> "The core principles in IFRS 3 are that an acquirer measures the cost of the acquisition at the fair value of the consideration paid; allocates that cost to the acquired identifiable assets and liabilities on the basis of their fair values; allocates the rest of the cost to goodwill."

It is questionable whether the term "goodwill" has a universal understanding. Even when discussing the issue with MBA graduates, one frequently hears that it is a figure that represents the value of trademarks, client lists and other intangibles of value. In fact, it is an accounting figure which represents the amount above the fair market value of an enterprise acquired or merged with another. There are methods used to determine these values. However, this asset has one important property which most other assets do not have. It cannot be converted into cash. Even a reviewer of this article repeated the oft-cited chant that goodwill represents all the intangible extras that cannot be valued in the other assets. One more time… The assets have been valued for their tangible net worth and booked as such. The amount above that value is goodwill. It has not been valued in the formal sense, it is just the difference been the fair market value of the assets and the price paid. Once paid, it is booked. Period. The value requires no further justification or valuation unless reasons, which rarely arise (e.g. resale of the merged entity, retirement of a brand etc) Further, the role of goodwill is not to be converted into cash. It sits on the Asset side of the balance sheet as a monument to the transaction from which it emerged. In fact, an article published in the Harvard Business Review in 2016 based in a study of 2,500 M&A transactions showed that 60% of them destroyed shareholder value. (HBR, 2016)

Another important point regarding this asset is that under SFAS 142 (2001) and IAS 36 regarding Impairment of Assets, Goodwill is to be booked and re-valued periodically, as required, and, if necessary, should be impaired. It should be noted that previously goodwill was amortized over a period of up to 40 years. Goodwill as a concept goes back to the mid-19th century. There are several views which have been summarized but not resolved in an IFRS Agenda consultation in May 2016. Impairment, to some is done "too little, too late", others wish to see amortization returned, and still others wish impairment decisions to be left to the management of the respective organizations (IFRS, May 2016).

It was argued that Goodwill should be amortized in a manner consistent with the Matching Principle in my paper last year. As the entity showing goodwill is benefitting from additional revenues from acquiring another entity, it should show the cost of enjoying this additional benefit by apportioning that cost over a time period, much as acquisition of a building is depreciated over time as the benefits of use of the building are realized. This was argued in a previous paper in a previous paper. (Muir, 2018).

Further comparative study has been done to determine whether there is, in fact, an accumulation of Goodwill in Assets. In order to do this, the 75 largest stocks on the S&P 500 were studied. The companies are well known, and represented at the time of the study about 62% of the market capitalization of the S&P. The group was diverse, with representatives in 10 economic sectors. Observations were further broken down by sector. The two critical figures were the value of goodwill and the value of shareholders' equity. Comparison of these two figures gives us an idea of the impact of goodwill on the tangible net worth of the company, and by taking the same measure five years apart, it is possible to consider the extent to which accumulation, if it exists, impacts the tangible value of shareholders' equity over a recent time period.

2. LITERATURE REVIEW

As previously noted, there is not a great deal of literature of the precise subject. While many articles are available on the topic of goodwill, the name itself has many alternate meanings. Li and Sloan (2017) have examined the pre-SFAS 142 era vs the period after. They conclude that not only are impairments not timely, but also that investors are not aware of the impact of the lack of timeliness. Many others are less than enthusiastic about leaving management in charge of making the decision to impair (Schulze, 2010; Pajumen, 2013; Boyle, 2012).

An interesting recent article to underline the complexity of the situation was written in 2018 about the level of sophistication required by those reading the financial statements. The basic perception emerging from this study is that those with a lower level of training in accounting tend to be less critical of accounting practices, in particular the management of goodwill. (Saastamoinen, 2018)

Another study into the timeliness of impairment showed that management tended to be less conservative (observance of the conservatism principle) after the adoption of SFAS 142. The study pays particular attention to the nature of asymmetrical returns, which are common phenomenon in business, and how goodwill impairment (or lack thereof) seems to be used to smooth the results. (Kim, 2013)

3. METHODOLOGY

There are very few tools which can extract *en masse* the kind of data sought in the format which is required and because a great deal of attention is paid by investors to price and factors such as ROE, debt/equity, capital gross margins, Free Cash flows etc., it was difficult to find a way to extract precise, audited data regarding goodwill. The author has worked in the past with Compustat and Bloomberg, and was in fact offered a chance to use a Dun and Bradstreet database. The precise information required could not be satisfactorily extracted. This meant that the information was extracted year by year, company by company. Three bits of data were isolated:

1. Goodwill
2. Intangible assets
3. Shareholders' equity

This was done twice for each company – for the most recent financials available, and for five years previous.

As stated previously, goodwill is an asset which can not be monetized, and as such does little, once incurred to truly add shareholder value. It represents the amount paid above fair tangible market value of the acquired enterprise. It should be noted that mergers and acquisitions are very risky business. Another Harvard study in 2015 placed the failure rate at above 83%, but perhaps a more realist figure might be 50% (Koi-Akrofi, 2016). If this is the case, we could expect a higher impairment rate than the current 5%. Given that shareholder loss is expected to happen 30% and 50%, and further that no shareholder gain happens in 60% to 80% of the cases, one can express amazement if goodwill would not decrease overall over time – this would be shown in the shareholders' equity when compared with the total goodwill. (Boyle, 2010)

The 75 stocks which were chosen are the largest by market capitalization on the S&P 500, which includes the 500 largest companies by market cap listed on the NTSE. The 75 chosen represent 62% of the total capitalization of the index and have a cap-weighted price/earnings ratio of 28.47. The historical average of the S&P is 16, so this indicates that the stocks seem over-priced by the market at this point.

The chart below shows activity on the S&P for the past 5 years. The index has gained about 51% over that period, with an annualized return of 8.6 over the period. The S&P is considered a reliable indicator of market activity and is widely used for purposes of market diagnostics. Unlike the Dow, which is made up of 30 stocks which are price weighted, the S&P is market cap weighted and considered a more reliable market tool, though the Dow, for the sake of simplicity is more widely quoted.

4. STUDY RESULTS

The first table shows an overall breakdown by sector. As a percentage of Shareholders' Equity (SE), the goodwill asset component supporting the equity increased by 9%. Four of the ten sectors have increased the proportion of goodwill to shareholder equity by more than 25%. Those four sectors together make up 58% the sample, with Information Technology accounting for 27.5% of the total group. This is not surprising with the growth of the FAANGs in recent years.

There have been suggestions by reviewers that the results be compared to market-based values. This would defeat the purpose of the study, which is questioning whether the financial statements fairly represent the financial situation of the company. This is not about the valuation of stocks based on the stock market – that is a different issue entirely.

Table 1 Breakdown by Sector

Sector	GW/SE 2014	GW/SE 2019	Diff	Weight
Communication Services	36.96%	47.39%	10.42%	16.33%
Consumer Discretionary	15.75%	65.41%	49.67%	10.55%
Consumer Staples	53.35%	60.72%	7.36%	9.26%
Energy	1.40%	0.90%	-0.50%	3.44%
Financials	20.96%	18.82%	-2.14%	11.74%
Health Care	51.73%	88.17%	36.44%	13.96%
Industrials	58.23%	96.32%	38.09%	5.97%
Information Technology	28.17%	54.03%	25.86%	27.46%
Real Estate	103.90%	93.26%	-10.64%	0.63%
Utilities	0.00%	0.00%	0.00%	0.67%
Total	**31.11%**	**39.84%**	**8.73%**	

Utilities and energy stocks, the mainstay of conservative investors, have low levels of activity.

The next table underlines part of the problem:

Table 2 Overall change in Goodwill and Equity

Sector	Goodwill	Shareholders' Eq
Communication Services	105.31%	60.15%
Consumer Discretionary	168.72%	-35.31%
Consumer Staples	-6.11%	-17.49%
Energy	-2.61%	51.65%
Financials	6.36%	18.45%
Health Care	80.55%	5.92%
Industrials	8.31%	-34.52%
Information Technology	86.76%	-2.64%
Real Estate	47.51%	64.33%
Utilities	0.00%	89.27%
Overall	**47.55%**	**15.21%**

On this table the extent of growth of goodwill is evident. In consumer discretionary, the case is most evident. We can see that shareholder's equity has lost 35%, but goodwill has advanced 169%. This must surely mean that the equity value is thinning in this sector. In five of the sectors, the increase is above 47%, with two more than 100%. This is a strong indication that the market may over-paying for shares on the market.
Let's first look at consumer discretionary:

Table 3 - Consumer Discretionary

	2018-9			2013-4				
	Goodwill	S/E	GW/SE	Goodwill 2014	S/E 2014	GW/SE	DIFF	P/E Ratio
Amazon.com, Inc.	14,548	27,709.00	52.50%	2,655.00	9,746.00	27.24%	25.26%	71.86009
The Home Depot, Inc.	2,252	(1,878.00)	-119.91%	1,289.00	12,522.00	10.29%	-130.21%	20.39168
McDonald's Corp.	2,332	(6,258.40)	-37.25%	2,872.70	16,009.70	17.94%	-55.20%	28.47269
NIKE, Inc.	154	9,812.00	1.57%	131.00	11,156.00	1.17%	0.40%	31.71999
Starbucks Corp.	3,542	1,175.80	301.21%	862.90	4,482.30	19.25%	281.96%	33.63636
Booking Holdings, Inc.	2,910	8,785.00	33.12%	1,767.00	6,910.00	25.57%	7.55%	20.87776

There are six stocks in this category. It is significant that Mcdonald's has negative shareholders' equity. There are several reasons for this, but the most evident is that the company has been buying back stock for a several years to a total value of more than $61 billion. In the most recent year, the buyback was worth 5.2 billion, without which the deficit would be less than a billion.

Also of note is Starbucks, which has been buying out competitors. This company alone accounts for most of the change in the sector, but we should also note a decrease in the SE. what is this attributable to a stock buyback of about $7 billion. In both these cases, the increase in Goodwill, along with the stock buyback has significantly impacted the shareholders' value, but the high P/E ratio indicates that the shareholders do not seem to be concerned.

Home Depot almost doubled its goodwill, but, significantly, a share buyback program again destroyed shareholder value. The company has been pursuing a policy of buying back share for an amount equal to the net income, and paying dividends at the same time. Shareholder value has been reduced to the extent that shareholders equity is negative making the company balance-sheet insolvent.

Amazon is the company that has the highest P\E ratio at 71. It also has one of the highest Market capitalizations in the S&P. the goodwill increased more than five-fold, and SE tripled. This resulted on goodwill going from about a quarter of the SE to about one half.
The next group to look at is Industrials:

Table 4 - Industrials

	2018-9			2013-4				
	Goodwill	S/E	GW/SE	Goodwill 2014	S/E 2014	GW/SE	DIFF	P/E Ratio
The Boeing Co.	7,840	410	1912.2%	5,043	14,997	33.63%	1878.57%	37.49
Honeywell International, Inc.	15,546	18,358	84.7%	13,046	17,579	74.21%	10.47%	17.29
Union Pacific Corp.		38,724	0.0%		21,225	0.00%	0.00%	19.44
United Technologies Corp.	48,112	38,446	125.1%	28,168	33,219	84.79%	40.35%	20.27
Lockheed Martin Corp.	10,769	1,394	772.5%	10,348	4,918	210.41%	562.11%	17.99
United Parcel Service, Inc.	3,811	3,037	125.5%	2,190	6,488	33.75%	91.73%	20.86
3M Co.	10,051	9,848	102.1%	7,345	17,948	40.92%	61.14%	18.96
General Electric Co.	59,614	51,481	115.8%	77,648	130,566	59.47%	56.33%	n/a

Several stocks in this group should be mentioned. The first is General Electric. In the early 1990's, General Electric was the biggest stock on the S&P. It was expanding business into broadcasting, banking, medical, appliances, electrical and the list went on. The company has divested many of its businesses, such as banking and broadcasting , and is now focused on more technical items. However, it does not seem to be able to bring down the goodwill as quickly as it has brought down the SE which has declined by about 60%, but goodwill is down by only 23%.

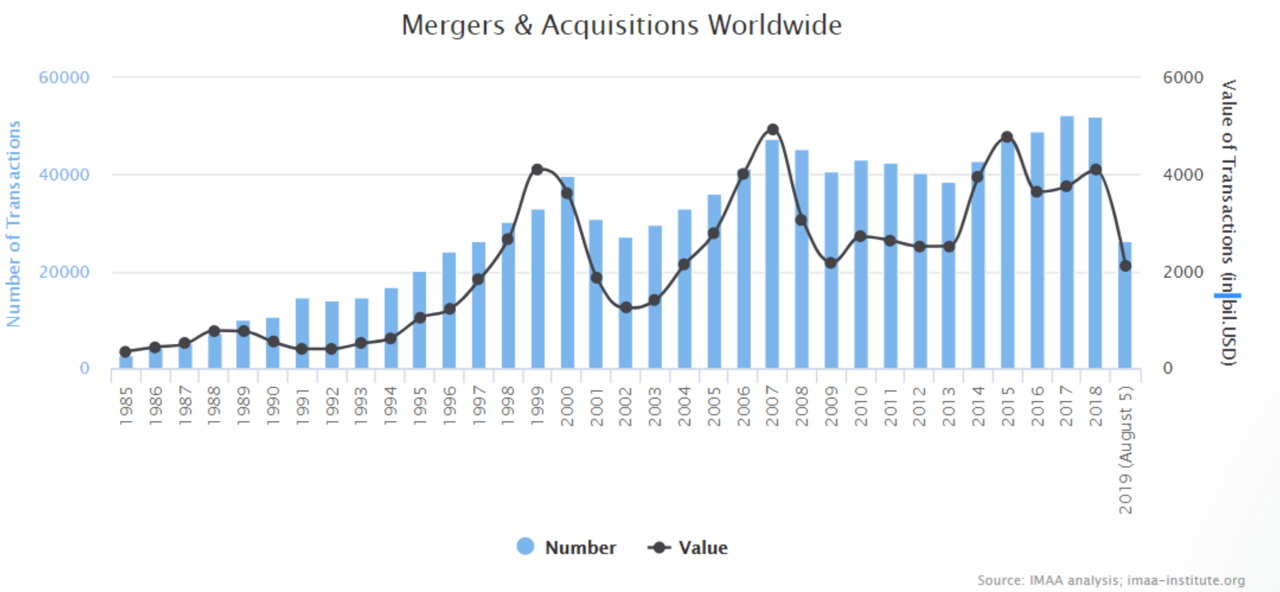
Boeing has of course had trouble with the 737 Max, which has hit the equity. However, UTC has been acquiring companies for years, and is now spinning them off (Linde, Carrier, Sikorsky, for example). But the goodwill does not seem to have diminished. In fact, much of the rest of the increase in the ratio is due to decrease in equity – in some cases a combination of weak or negative profits and buybacks. It is evident that, as we saw with Home Depot, even if a company has no retained earnings left, it will borrow money to buy back shares. This is, of course a questionable practice.

5. CONCLUSIONS

The study covered the 75 largest shares in the S&P.

The first and most important finding was that goodwill as an asset is growing at a rate exceeding overall growth of the market. Once again, it has no true monetary value – for example a CFO could not pick up his phone to call a contact at a potential buyer and offer him $7 billion of goodwill to raise a cash injection. Goodwill should be reviewed annually, but often, it just left as is because is no reason to decrease it, but meanwhile new acquisitions take place. There is an incentive for a manager to accept the benefits of an acquisition without having to expense the all of the associated costs.

The graph below is from the International Merger and Acquisition Association. It shows how M&A activity has grown in recent years, with some 790,000 transactions since 2000 worth about $57 trillion. The increase in volume warrants greater attention to be paid to this activity and how it is recorded in the accounting records of an acquiring entity.



The main finding was the difficulty which persists in valuation, and the timelines with which impairment takes place. This has resulted in a significant increase in goodwill in recent years. The average citizen is not too aware that the balance sheets of companies with which he deals as a customer or supplier may be in a state of disorder. Some situations should be looked at very carefully to determine how much value is really now defunct and should be cycled off the balance sheet.

A key ancillary observation is that stock buybacks are also slowly eating away at shareholders' equity. The pattern is reminiscent of bubbles. It has become a practice that seems to be engaged in without much thought, while goodwill balloons on balance sheets year after year. Meanwhile the stock buybacks extract cash from the enterprise, and the remaining shareholders are left with shares worth considerably less than may seem at first.

There are a number of possible remedies, but the one that seems to best suit the requirements or accounting convention is to return to amortization. This meets the requirements of the Matching Principle, and the Conservatism Principle, while at the same time reducing the incentives for mangers to overstate revenues and understate potential impairments, thus saving their bonuses. Prudence and fairness are paramount when dealing with other people's money.

BIBLIOGRAPHY

Boyle, Daniel et al ; A Closer Examination of the Matter of Nonimpairments; Management Accounting Quarterly; Summer 2012; Vol 13 No 4 pp. 10–19.

Depamphilis, Donald M.; Merges, Acquisitions and Other Restructuring Activities 8th ed; Elsevier; 2015.

IFRS, Consultative Agenda, Goodwill and impairment project, May 2016.

Kim, Sohyung et al; Goodwill accounting and asymmetric timeliness of earnings; Review of Accounting and Finance; Vol. 12 No. 2, 2013; pp. 112–129.

Koi-Akrofi Godfred Yaw; Mergers and Acquisitions Failure Rates and Perspectives on Why They Fail; International Journal of Innovation and Applied Studies ISSN 2028-9324 Vol. 17 No. 1 Jul. 2016, pp. 150–158.

Lewis, Alan and McKone, Dan; So Many M&A Deals Fail Because Companies Overlook This Simple Strategy; Harvard Business Review, May 10, 2016.

Li, Kevin K. and Sloan, Richard G.; Has goodwill accounting gone bad?; Review of Accounting Studies (2017) 22: 964–1003.

Muir, David John, Goodwill: An Accounting Conundrum; IFRS: Global Rules and Local Use; Prague; 2018.

Pajunen. Kati and Saastamoinen, Jani; Do auditors perceive that there exists earnings management in goodwill accounting under IFRS? ; Managerial Auditing Journal, Vol. 28 No. 3, 2013 pp. 245–260.

Saastamoinen, Jani; Ojala, Hannu; Pajunen, Kati; Troberg, Pontus; Analyst Characteristics and the Level of Critical Perception of Goodwill Accounting.

Australian Accounting Review; Melbourne Vol. 28, Iss. 4, (Dec 2018): 538–555.

Schultze, Wolfgang and Weiler, Andreas; Goodwill accounting and performance measurement; Managerial Finance; Vol. 36 No. 9, 2010; pp. 768–784.

THE IMPACT OF IFRS ADOPTION ON AUDIT FEES AND AUDIT QUALITY

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Abstract
This study highlights the impact of adopting the International Financial Reporting Standards(IFRS) on audit fees for all the companies that trade European shares on the Bucharest Stock Exchange (ATS INT – Alternative international trading systems). The total sample that is the basis of this study is made up of 15 companies that trade European shares through the International Alternative Trading Systems. The data was collected manually, from the Thomson Reuters BDI, for the period 2000–2018, so we could easily observe the real size of the audit fees after the adoption of IFRS became mandatory, which is the share of companies audited by Big 4 and their audit opinion. In this paper a CrossTabuation was used in SPSS, to test our hypothesis, according to which the adoption of IFRS led to the growth of the audit fees, which registered considerable increases after 2012. At the same time, it was observed that most of the companies are audited by Big 4 and an unqualified opinion is given above all by them.

Keywords: *audit fees, audit opinion, discretionary accrual, IFRS adoption*

1. INTRODUCTION

In 2002, the International Accounting Standards Board (IASB) together with the International Accounting Standards Board (FASB) formulated a unifying instrument for the entire world. The main arguments that increase the number of IFRS users are: increasing the credibility, the high level of the disclosure of the financial information, the high accuracy of the financial accounting information existing in the financial reports and the increased comparability (Kusumaningwedari and Oktorina, 2017). Moreover, in 2015, Scott pointed out that the adoption of IFRS only led an increase of the disclosure of financial information and an accelerated decrease of the number of options to the commonly used accounting methods. Limiting the number of quotable methods required by the adoption of IFRS represents a huge advantage because it can control the managerial discretionary power leading an increase in earnings. In the same context an year earlier, Byun & Luttecke stated that companies have a positive reaction, lacking evidence of informational asymmetry and a mistaken calculation in Agency costs. The tendency observed by Ibanichuka (2018), in this sense, is that these companies that adopt IFRS tend to record small managerial gains, increasing the information transparency.

In 2014, Kao confirmed the relationship between the audit fees and the expenses related to the adoption of IFRS, considering the fact that there is a real need for resources, specialized trainings but also the training of the competent authorities in order to apply international standards. The globalization of the accounting standards has led, without preparation, to the information transparency, to the increase of the degree of complexity of the operational business, impact felt by all the users of the financial information, having qualitative and conclusive financial statements (Wulandari, Lastanti, 2015).

On the other hand, the growth of audit risk has led to the growth of audit costs, because that companies which are not experienced with these standards can make big mistakes. At the same time for the auditors, the complexity brought by the transition but also the failure of the client entity can increase the risk in their evaluation. By following the complexity of the audit and the risk that may exist from the client entity are associated with high audit costs. In order to be able to understand the exaggerated increase in audit fees after the transition to international standards, we must analyze the costs underlying the adoption of IFRS, namely:

1) The Theory of Economic Bonding – it emphasizes that the auditor's independence can be indeterminate if there is an economic commitment that can have a considerable impact on the quality of the audit services. This economic commitment occurs when the client entity pays a larger amount of money to the auditor so that he can follow in detail the managerial discretionary power in the financial statements or in the reports of the companies. In some cases, companies give up the quality of the audit services and place more emphasis on the economic commitment, at the request of the client entity.
2) The Theory of Audit Effort – it emphasizes that an extremely high level of the expenses related to the audit services is given by the auditor's effort in increasing the quality of the audit services. Finally, the audit risk assessed by the audit firm leads to increase audit fees (Esheman, Guo, 2014).

On the other hand, Jung (2016) pointed out that when the audit risk is low, the level of the expenses related to the audit services should not be at all associated with the quality of the audit services. This relationship between the quality of the audit services and the level of the audit expenses was analyzed by many researchers in the field, using the discretionary acrual as the calculation figure of the quality of the audit services. Moreover, depending on the time period analyzed (pre / post IFRS), it was found that there is no relation between the high level of the expenses related to the audit services and its quality until 2012, but we have a positive relation between the abnormal expenses of audit and the quality of the audit services during the post IFRS period.

For the period 2000–2018, we analyzed the level of audit fees using the type of auditor and audit opinion to emphasize if the quality of the audit services is changeable, and also to see if these expenses increased after the IFRS adoption became mandatory. Therefore, the transition year 2012 was taken as a benchmark to observe easily how the financial reporting standards have influenced over time.

2. LITERATURE REVIEW

At global level, financial reporting according to IFRS has led to an informational transparency and a very high disclosure of financial statements. These benefits of IFRS were also observed in the quality of the audit, because more transparent information is reported, the risk of the audit is lower.

All audit services play a critical role in applying the new reporting standards, especially regarding implementation costs (Loukil, 2016). When reporting according to International Financial Reporting Standards became mandatory, the costs of audit services have undergone considerable changes. These expenses have increased because the new financial reporting model required a rather large effort, which automatically led to these costs rising. Ultimately, the audit represents the control mechanism of the company, and the main purpose is to reduce the agency's costs.

In order to be able to analyze audit fees, we need to look at what are the underlying costs of transactions within an entity. Agency Theory (Agency Theory) highlights the immanent chain of contracts between associates / shareholders and agents (managers who are required to control all resources within an entity) (Jensen and Meckling, 1976; Adams, 1994). This theory postulates the general idea that the associates / shareholders do not have access to all the information when the managers have to make certain decisions. The informational asymmetry represents the difference between the figures reported and the disclosures which are in the financial statements reported by the management. Therefore, the auditors have the obligation to minimize the information asymmetry, discovering all the irregularities existing in the audited documents. The informational asymmetry that emerges from this theory can be a moral hazard, when managers act only for the purpose of maximizing their own wealth and not for the purpose of the company they work for (Mohammad, 2011).

There is the possibility of an endogenous decrease in establishing the exact monitoring processes from the point of view of the managers, which can affect the general working conditions of the audit companies (Hudson, 2014). In this context, the Theory of the Agency postulates that the managers tend to favor the interests of the shareholders to the detriment of the creditors, which may include restrictions in the contracts carried out (Watson et al., 2002), which lead to the distorted increase of the agency's costs. This is where the specialized auditors intervene, who must constantly defend the interests of all shareholders / creditors, while also verifying internal controls, risk and financial reporting of management. For the first time, this criterion was observed by Jensen and Meckling as follows: “the existence and size of agency costs depend on the nature of the costs monitored by the agent (manager)”. The audit companies that have the obligation to control the financial statements and the management behavior attest the decreasing of the expenses related to the audit services. In 2011, in a well-known journal, Leventis stated the following: "Audit expenses are the most measurable and direct costs of the agency and reducing audit costs reveals reducing agency costs." It is quite immanent to conclude that audit firms make larger checks when there are problems, which increases the number of hours worked, leading to an increased level of costs.
Another advantage of large firms compared to small firms is that they have a rather sophisticated accounting system, thus having an advantage given by internal audit, which imminently reduces the total level of expenses related to audit services. Even if the convergence with IFRS has brought numerous benefits to internal and external users, this financial reporting has increased the expenses related to the audit services, especially for those who first adopted these standards (DeGeorge et al., 2013; Schadewitz and Vieru, 2010). In the audit market where the competition is quite tight, the term audit costs is associated with the audit risk and audit effort, factors that are determined by the auditing company (Big 4 / Non Big 4). Therefore, the audit costs are divided as follows:

- the normal audit expenses (determined according to the complexity, size and risk of the client entity);
- abnormal audit expenses (expenses that are generated from the relationship with the client entity);

Choi (2010) pointed out that these exaggerated audit fees can hide a compromise between the client entity and the auditor, in which case the auditor does not take into account the independence and the quality of the audit services is altered. This compromise may take the form of a bribe or may only be the result of high operational costs signed by the mission auditor (KAP). Another less bias point of view is Blankley (2012), who pointed out that these high costs related to audit services can be considered as additional audit costs, in order to maintain the reputation of the accounting profession, which leads to an increase in audit quality.

Also in this context, the same point of view was emphasized in the same year by Boone and Asthana, which certified that a low level of audit expenses does not show a low level of auditor's effort or a negative relationship with the audit mission partner (KAP). To the level of our country, for the analyzed period after IFRS adoption, a positive relationship can be observed between the quality of the audit services and the high level of the audit expenses. On the other hand, an increase of the same audit fees exists to the companies audited by Big 4.

In the UK, the authors Taffler and Ramalinggam (1982) analyzed the entire period 1978-1980, and their results showed that more than 38% of companies are not audited by Big 4. In Germany, for the period 2005–2007, Hoelbacher (2009), then Khurana et al. (2004) and Michael (2014) analyzed these 3 years, and the final result sugested that for more than 93% of the total volume of the entities are audited by Big 4. In Australia, Hay et Jeter (2008) marked that 90% of companies are audited by Big 4 and the authors Booklay & O'Leary could confirm the same growth later in 2011.

The global reporting has undergone important changes in the last decade of time. One major change was brought by IFRS adoption. IFRSs are the most important standards issued by the IASB to grow the quality of accounting principles (Chen and Zhang, 2010) and also to standardize them globally and to enhance the quality of financial reporting (Tyrrall et al., 2007). In 2000, Leutz and Verrecchia analysed the risk reduction and the capital cost as direct effects of IFRS. Also, IFRS facilitated financial investment and in the same time amplified the growth of the global economy (Street and Bryant, 2000, Pacter, 2001, Ball, 2006, Pickard, 2007, Chen and Zhang, 2010, Peng and Bewley, 2010).

3. THE RELATIONSHIP BETWEEN FINANCIAL REPORTING ACCORDING TO IFRS AND AUDIT FEES

The first researcher in the field that analyzed the audit fees was Simunic (1980), who built a regression model in order to calculate the level of the expenses related to the audit services.

The audit services consist of the audit offer and demand, regulated on a free market. The audit request depends on certain characteristics, namely: various company-specific elements, name, size and other risk factors of the client entity (Dye, 1993). Moreover, the factors existing at the company level systematically specify the audit procedures, the complexity of the audit mission and, ultimately, the effort of the auditor who can have a direct correspondent in the share of the audit expenses.

A study by Narktabtee and Patpanichot, in 2011, shows that all the features of the client entity can affect the improvement of the information system after adopting IFRS. Also, it was observed that, where the client entities allow a high discretionary power of the manager, no results were seen regarding the quality improvement during the post IFRS period. This discretionary power has raised many problems over time, not always being calculated within the legal limits. When calculating the discretionary power of management, the following must be taken into account: the size of the client entity, the cash flow affected by the operational volatility, the volatility of sales, and the probability of negative earnings.

On the other hand, another study attests that the growth of the quality gains (earning quality) increases at the same time as the growth of the expenses related to the audit services. Taking into consideration the Sarbones-Oxford (Sarbox / SOX) law of 2002 (Pub. L. 107–204, 116 Stat. 745, adopted July 30, 2002), also known as the Public Companies Accounting Act for reform and investor protection and by the corporate and audit act of responsibilities and responsibilities, the result seems to remain the same and provisions increase corporate governance and financial reporting gradually (Ittonen et al., 2019). In addition, The Institute of Chartered Accountants in England announced in 2007 that listed companies in the European Union have recorded an increase in audit costs following the adoption of IFRS.

One of the first countries that adopted IFRS was New Zealand, and a study of small and medium-sized Finnish companies, conducted by Grifin (2009), vehemently attests that

IFRS adjustments arising from a disparity between local and IFRS standards, implicitly incorporate increased audit fees. Regarding the transition year, the expenses related to the audit services were even higher, as the audit effort increased considerably, the effort measured in ensuring the mission and the work of the auditor.

Regarding the audit offer, most studies in the field have pronouncedly Big 4 / Non Big 4 and the level of audit fees was given by this differences. Imperatively, the change of the auditor appeared, as the first influence of the adoption of IFRS, because the legal context constrained this tendency over time.

The statistics shows that the number of countries with IFRS adoption is increasing because the financial reporting implies a number of advantages, namely: IFRS increases the level of investments at international level or the ability of foreign investors to make economic decisions, significantly reduces managerial discretion (In Continental Europe, the accounting system allowed the manipulation of results accounting, efficiency of reflecting financial gains / losses (Berglund et Eshleman, 2019), the main ability of investors to observe the important decisions, eliminating any confusion taking in consideration the measurement of the entities performance, decreasing the costs regarding the preparation of accounting information, more efficient allocation of financial resources, increases the comparability of the financial statements, the benefits resulting from the adoption of IFRS are higher than the fees of implementing the actual paradigm, the commitment of managers increases because the degree of evaluation increases, the use of certain recognition / measurement criteria that it effects the economic reality, information materialized in accounting notes and the free access to the specific competences of accounting standardization (Lisic et al., 2019)

4. RESEARCH METHODOLOGY

The present analysis is based on official data published by Bucharest Stock Exchage, Thomson Reuteres and official site of Big 4 (Delloitte, E&Y, KPMG & PWC). The database is for the entire period 2000-2018, which also contains the transition year, registered for 15 companies which trade ATS INT audited by Big 4 firms.

Looking at audit fees, for the period 2000–2018, we can observe that for all companies that trade ATS Int, these costs register a continuous growth.

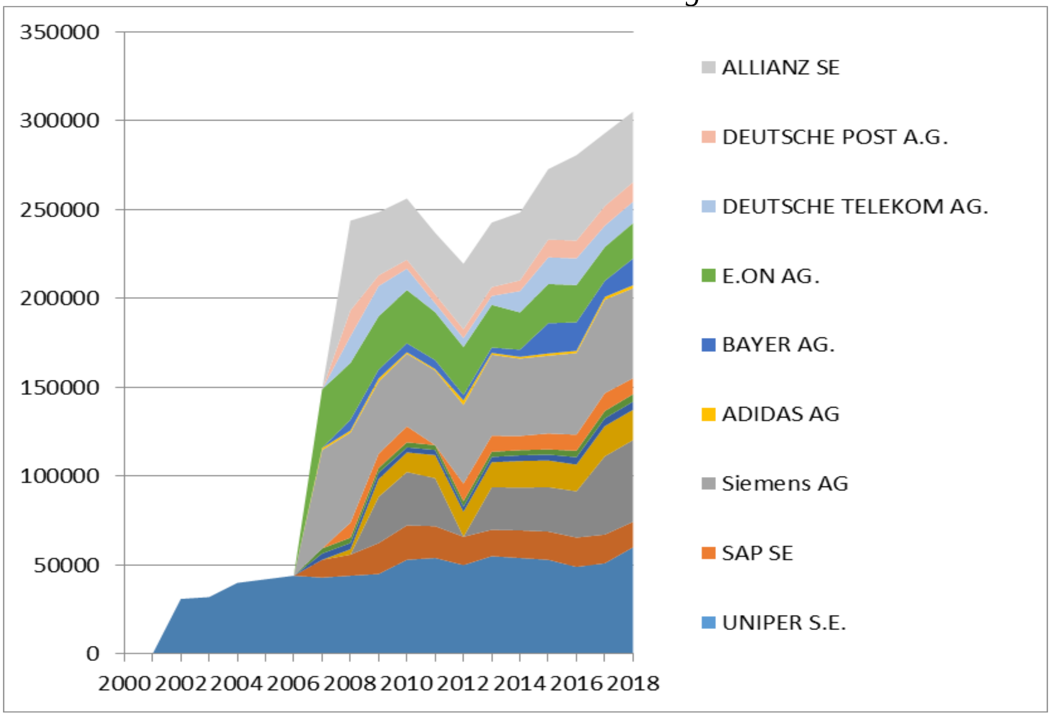
Figure 1. The evolution of the audit fees, for the period 2000–2018

Client / Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DEUTSCHE BANK AG			31.000	32.000	40.000	42.000	44.000	43.000	44.000	45.000	53.000	54.000	50.000	55.000	54.000	53.000	49.000	51.000	60.000
Commerzbank AG								10.000	11.905	17.358	19.344	17.876	15.945	14.852	15.540	15.850	16.532	16.136	14.324
DAIMLER A.G.										26.000	30.000	27.000	--	24.000	24.000	25.000	26.000	44.000	46.000
BAYERISCHE MOTOREN WERKE AG								0	3.000	10.000	11.000	13.000	14.000	14.000	15.000	15.000	15.000	17.000	17.000
CONTINENTAL A.G.								3.500	3.500	3.500	2.900	2.900	2.900	3.000	3.200	3.300	4.200	4.400	4.600
DEUTSCHE LUFTHANSA A.G.								2.900	3.000	2.800	2.800	2.700	3.000	2.900	2.900	2.900	3.600	4.100	4.200
UNIPER S.E.																			
SAP SE									8.400	8.000	9.000	--	10.000	9.000	8.000	9.000	9.000	10.000	9.000
Siemens AG								55.300	50.700	40.500	40.900	42.000	44.200	45.600	43.500	43.700	45.900	52.600	50.600
ADIDAS AG								1.200	1.200	1.800	800	800	2.600	1.000	1.000	1.300	1.300	1.600	1.700
BAYER AG.								--	6.000	5.000	5.000	5.000	3.000	3.000	4.000	17.000	16.000	9.000	15.000
E.ON AG.								33.000	32.000	30.000	30.000	27.000	27.000	24.000	21.000	22.000	21.000	19.000	20.000
DEUTSCHE TELEKOM AG.								-	15.000	17.000	12.000	5.000	5.000	5.000	12.000	15.000	15.000	12.000	12.000
DEUTSCHE POST A.G.								--	14.500	6.000	5.000	5.000	5.000	5.000	6.000	10.000	10.000	11.000	11.000
ALLIANZ SE								--	50.500	35.500	34.400	34.600	36.800	36.300	38.100	39.600	48.000	41.000	39.600

Source: Own projection, usind Excel-Microsoft Office

The entire sample shows a growth of audit fees, for the period 2008–2018. For the company, UNIPER S.E., we didn't find any data. About the period 2000–2007, Thomson Reuters didn't count any figures.

Figure 2. The increasing of audit fees, for all European shares trade on Bucharest Stock Exchange



Source: Own projection, usind Excel-Microsoft Office

As we can observe, the adoption of International Financial Reporting Standards has grown steadily, between the years 2007–2018. The transition year 2012 emphasized a continuous increasing of audit fees.

Also, for the period 2008–2018, we verified the growth of audit fees using descriptive statistics because we wanted to see exactly the standard deviation. In this context, we observed that audit fees counted a growth in time.

Figure 3. Audit fees, for the period 2008-2018

Yr. Cl.	DEUTSCHE	Commerz	DAIMLER	BAYERISC	CONTINEN	DEUTSCHE	SAP SE	Siemens A	ADIDAS A	BAYER AG	E.ON AG.	DEUTSCHE	DEUTSCHE	ALLIANZ SE
2008	44000	11905		3000	3500	3000	8400	50700	1200	6000	32000	15000	14500	50500
2009	45000	17358	26000	10000	3500	2800	8000	40500	1800	5000	30000	17000	6000	35500
2010	53000	19344	30000	11000	2900	2800	9000	40900	800	5000	30000	12000	5000	34400
2011	54000	17876	27000	13000	2900	2700		42000	800	5000	27000	5000	5000	34600
2012	50000	15945		14000	2900	3000	10000	44200	2600	3000	27000	5000	5000	36800
2013	55000	14852	24000	14000	3000	2900	9000	45600	1000	3000	24000	5000	5000	36300
2014	54000	15540	24000	15000	3200	2900	8000	43500	1000	4000	21000	12000	6000	38100
2015	53000	15850	25000	15000	3300	2900	9000	43700	1300	17000	22000	15000	10000	39600
2016	49000	16532	26000	15000	4200	3600	9000	45900	1300	16000	21000	15000	10000	48000
2017	51000	16136	44000	17000	4400	4100	10000	52600	1600	9000	19000	12000	11000	41000
2018	60000	14324	46000	17000	4600	4200	9000	50600	1700	15000	20000	12000	11000	39600

Source: Own projection, usind SPSS

We extracted manually the data from Thomson Reuters, for the entire period 2000-2018. Till the year 2008 we didn't find any data for our sample. The main reason is that it wasn't mandatory for all the entities to apply IFRS. So, we can conclude that the adoption of IFRS brought some changes for all the types of users.

Figure 4. A descriptive statistics of audit fees using the average of audit fees

Descriptive Statistics			
	Num.	Mean	Std. Deviation
ADIDAS AG	11	1372,73	531,208
DEUTSCHE LUFTHANSA A.G.	11	3172,73	536,826
CONTINENTAL A.G.	11	3490,91	630,007
BAYERISCHE MOTOREN WERKE AG	11	13090,91	3986,340
Commerzbank AG	11	15969,27	1948,590
E.ON AG.	11	24818,18	4578,606
Siemens AG	11	45472,73	4134,753
DEUTSCHE BANK AG	11	51636,36	4566,678

Source: Own projection, usind SPSS

The entire sample was formed by 15 companies but we tested only 14 because for the entity UNIPER S.E. we didn't find any data to Thomson Reuters. We demonstrate, in the same time that, the trend continues with unqualified opinion for the companies audited by Big 4 (13entities from the entire sample). Also, Big 4 remains unchanged for the analyzed period 2000–2019. We found one exception, the entity SAP S.E. which was audited by Non Big 4.

Figure 5. The dependence of variable (The type of auditor and the auditor opinion)

Year		2000		2001		2002		2003		2004	
		Auditor opinion		Auditor opinion		Auditor opinion		Auditor opinion		Auditor opinion	
Type of variable		Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified
Big 4	no	0	1	0	1	0	0	0	0	0	0
	yes	0	13	0	13	0	14	0	14	0	14
Total		0	14	0	14	0	14	0	14	0	14

Year		2005		2006		2007		2008		2009	
		opinion		opinion		Auditor opinion		Auditor opinion		Auditor opinion	
Type of variable		Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified
Big 4	no	0	0	0	0	0	0	0	0	0	0
	yes	0	14	0	14	0	14	0	14	0	14
Total		0	14	0	14	0	14	0	14	0	14

Year		2010		2011		2012		2013		2014	
		Auditor opinion		Auditor opinion		Auditor opinion		Auditor opinion		Auditor opinion	
Type of variable		Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified
Big 4	no	0	0	0	0	0	0	0	0	0	0
	yes	0	14	0	14	0	14	0	14	0	14
Total		0	14	0	14	0	14	0	14	0	14

Year		2015		2016		2017		2018	
		Auditor opinion		Auditor opinion		Auditor opinion		Auditor opinion	
Type of variable		Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified
Big 4	no	0	0	0	0	0	0	0	0
	yes	0	14	0	14	0	14	0	14
Total		0	14	0	14	0	14	0	14

Source: Own projection, usind SPSS

Between the period 2000–2018, our results show that more than 99% of companies are audited by Big 4, while only one company is audited by Non Big 4. A study by Mohrmann et al., (2019) shows that for the countries from the European Union, the percentage is lower, because the Romanian market is not as concentrated as the other markets in the European Union. In the actual study, it is related that the adoption of International Financial Reporting Standards has implied a major change of audit firms from Non Big 4 to Big 4. The total number of clients audited by Big 4 increased by 89.96%.

Also, it could be seen that out of a total sample of 15 companies, a single company is audited by Non-Big 4. The quality of the audit is represented by the ability of the audit firm to find and report errors at the customer's level, to make decisions by providing expertise on the client's information system and finally to provide an opinion conveyed in the audit report (Singh et al., 2019).

5. CONCLUSIONS

The principal objective of the actual study is to emphasize the structure of the financial audit market for the companies listed on the Bucharest Stock Exchange (BSE), focusing on ATS Intl shares. The main results of the actual CrossTabulation analysis are very consistent with the global predictions on the direct effects of IFRS adoption on audit fees. Using the full sample of 15 firms, for the period 2000–2018, the evidence was found to achieve our hypothesis that the adoption of IFRS always has a positive effect on audit fees. In the same time, for the entire period, the companies were audited by Big 4 which gave an unqualified opinion, for the majority of firms. The inherent limitations of this study cannot be circumvented because our sample size is relatively more than small even if we counted all the ATS Intl shares traded on Bucharest Stock Exchange. The result of the empirical test of the relationship between the adoption of IFRS and audit fees carried out on the Bucharest Stock Exchange, Alternative International Trading Systems (ATS Intl) based on data of companies listed on BSE, for the period 2000–2018. The entire sample shows a growth of audit fees, for the period 2008–2018. For the company, UNIPER S.E., we didn't find any data and for the years 2000–2007, Thomson Reuters didn't count any figures.

While this small sample may reduce involuntary the generalizability of our findings on a global scale, our results are still generalizable and the effects of IFRS adoption on audit fees remains positive. Additionally, our findings hand over new evidence on audit costs from a specific type of shares, ATS Intl, avoiding more potential issues that can appear with cross section research.

We can conclude that the adoption of International Financial Reporting Standards has increased the number of societies audited by Big 4, even though the audit fees have recorded high values. Moreover, the effect of IFRS adoption is positive for the entire simple of different sizes. In addition, depending on the possibilities of accessing the specific data series, the study can also be applied for another types of shares.

BIBLIOGRAPHY

Asthana C. si J. Boone, (2012), *"Abnormal audit and audit quality",* Auditing: A Journal of Practice & Theory, Vol. 31, No. 3, pp. 1–22.

Ball R., (2006), *"International Financial Reporting Standards (IFRS): pros and cons for investors"*, Accounting and Business Research, Vol. 36, No.1, pp. 5–27.

Ball R., Kothari, S. P. A., (2000), *"The Effect of International Institutional Factors on Properties of Accounting Earnings",* Journal of Accounting and Economics, Vol. 29, pp. 1–51.

Berglund N., Eshleman J., (2019), *"Client and audit partner ethnicity and auditor-client alignment",* MANAGERIAL AUDITING JOURNAL, Vol: 34, No: 7, Pp: 835–862.

Blankley A., H. Hurtt and MacGregor, (2012), *"Abnormal audit fees and restatement"* Auditing: A Journal of Practice &Theory, Vol. 31, No. 1, pp. 79–96.

Booklay & O'Leary, (2011), *"Determining The Strength of Auditing Standards and Reporting"*, Australasian Accounting, Business and Finance Journal, Vol. 7, pp.18–26.

Chen J. si Zhang H., (2010), *"The impact of regulatory enforcement and audit upon IFRS compliance – evidence from China"*, European Accounting Review, Vol. 19, No. 4, pp. 665–692.

Choi J., J. Kim, Y. Zang, (2010), *"Do abnormally high audit fees impair audit quality",* Auditing: A Journal of Practice& Theory, Vol. 29, No. 2, pp. 115–140.

DeGeorge T., B. Ferguson and N. Spear, (2013), "How much does IFRS Cost? IFRS Adoption and Audit Fees", The accounting review, Vol. 88, No.2, pp. 429–462.

Dye R., (1993), "Auditing Standards, Legal Liability, and Auditor Wealth", Journal of Political Economy, Vol. 101, No. 5, pp. 887–914.

Eshlemen D., P. Guo, (2014), *"Do Big 4 auditors provide higher audit quality after controlling for the endogenous choice of auditor?",* Auditing: A Journal of Practices and Theory, Vol. 33, No. 4, pp. 197–210.

Griffin A., H. Lont, Y. Sun, (2009), "Governance Regulatory Changes, International Financial Reporting Standards Adoption, and New Zeeland Audit and Non Audit Fees: Empirical Evidence", Accounting and Finance, Vol. 49, No. 4, pp. 697–724.

Hay D., Jeter D., (2011), *"The pricing of industry specialization by auditors in New Zeeland",* Accounting and Business Research, Vol 2, pp. 171–195.

Holthausen R. W., (2013), *"Testing the Relative Power of Accounting Standards Versus Incentives and other Instituțional Features of Influece the Outcome of Financia Reporting în an Internațional Settings"*, Journal of Accounting and Economics, Vol. 36, pp. 271–283.

Ibanichuka E. and A. Briggs, (2018), *"Audit Reports and Value Relevance of Accounting Information: Evidence from Commercial Banks in Nigeria",* Indian Journal of Finance and Banking, Vol. 2, No. 1.

Ittonen K., E. Myllymaki, C. Tronnes, (2019), "Bank's audit committees, audit firm alumni and fees paid to audit firm", Managerial Auditing Journal, Vol. 37, No. 7, pp. 783–807.

Jung S., B. Kim, and J. Chung, (2016), *"The association between abnormal audit fees and audit quality after IFRS adoption: Evidence from Korea",* International Journal of Accounting and Information Management, Vol. 24, No. 3, pp. 252–271.

Kao H., (2014), *"The relationship between IFRS, Earning losses threshold and Earnings Management"*, Journal of Chinese Economic and Business Studies, Vol. 12, pp. 81–98.

Khurana I. și Raman K., (2004), *"Litigation risk and the financial reporting credibility of big 4 versus non-big 4 audits: evidence from Anglo-American countries",* The Accounting Review, Vol. 79, No. 2, pp. 578–591.

Kusumaningwedari L. and M. Oktorina, (2017),*"Does IFRS have impact on earning's quality and audit fees",* JAMAL, Volume 8, No. 2, pp. 227–429.

Lisic L., Myers L., Seidel T., (2019), *"Do Accounting Firm Consulting Revenues Affect Audit Quality? Evidence from the Pre- and Post-SOX Eras",* CONTEMPORARY ACCOUNTING RESEARCH, Vol. 36, No. 2, pp. 1028–1054.

Michael Dobler(2014), *"Auditor-provided non-audit services in listed and private family firms",* Managerial Auditing Journal, Vol. 1, pp. 245–287.

Mohrmann U., Riepe J., Stefani U., (2019), *"Fool's gold or value for money? The link between abnormal audit fees, audit firm type, fair-value disclosures, and market valuation",* INTERNATIONAL JOURNAL OF AUDITING, Vol. 23, No. 2, pp. 181–203.

Pacter P., (2001), *"What exactly is convergence?",* International Journal of Accounting, Auditing and Performance Evaluation, Vol. 2, No. 2, pp. 67–83.

Peng S si Bewly K., (2010), *"Adaptability to fair value accounting in an emerging economy: a case study of China's IFRS convergence"*, Accounting, Auditing & Accountability Journal, Vol. 23, No. 8, pp. 982–1011.

Pickard G., (2007), *"Simplifying global accounting"*, Journal of Accountacy, Vol. 204, No.1, pp. 36–39.

Schadewitz H. and M. Vieru, (2010), "The impact of IFRS Transition Complexity on audit and non audit fees: Evidence from small and medium sized listed companies in Finland", The Finnish Journal of Business Economics, Vol. 59, No. 1, pp. 11–1.

Scott and all., (2015)*,"Longer term audit costs of IFRS and the differential impact of implied auditor cost structures"* , Vol. 56, pp. 156–203.

Singh A., Sultana N., Evans J., (2019), *"Independent and joint effects of audit partner tenure and non-audit fees on audit quality",* JOURNAL OF CONTEMPORARY ACCOUNTING & ECONOMICS, Vol. 15, No. 2, pp: 186–205.

Street D. si Bryant S., (2000), *"Disclosure level and compliance with IASs: a comparison of companies with and eithout IS listing and filings",* The International Journal of Accounting, Vol. 35, No. 3, pp. 305–329.

Taffler R. and Ramalingam R. (1982) *"The Determinants of Audit Fee in the UK: An Exploratory Study City",* University Business School (Working Paper Series No. 37), London: Gresham College.

Tyrall D., Woodward si Rakhimbegova A., (2007), *"The relevance of international financial reporting standards to a developing country: Evidence from Khazakhstan".*

Wulandari S, Lastanti, (2015), *"Effect of IFRS Convergence Toward Earning Management",* E-Journal Trisakti, Vol. 2, No. 1, pp. 67–86.

EU EMPLOYMENT POLICY: IMPLEMENTATION AND CASE STUDIES

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Abstract
The paper focuses on transnational, national and local contexts of European Union employment policy. At the transnational level, the European Union's employment policy setting will be analysed. The implementation and functioning of specific instruments will be compared in selected EU countries. The objective of the paper is to indicate good practice in the implementation of employment policy by selected Member States.
The local level includes a case study of the use of subsidies from the Structural Funds in the Czech Republic. The aim of the case study is to evaluate the implementation of the European Social Fund in the Czech Republic. Both the link between subsidies and employment increases and labour market conditions will be explored.

Keywords: *employment, social policy, European Union funds, standard of living, support.*

1. INTRODUCTION

Within the market economies, labour, services, goods and capital markets operate simultaneously. However, the individual segments cannot be monitored separately and must be understood in the context of each other. Labour is sold and purchased on the market for wages or salaries and as such is tied to a specific person. Every person has different abilities, endowment and talent, as well as different work or life experiences and also different ideas about work and about the appreciation for the work done. The main mission of the labour market is to provide companies and enterprises with the workforce needed for their purposes. It is therefore about securing workers who will create products and provide services and this means that at the labour market meets the demand and supply for work (Kaczor, 2013).

Labour supply in the economy is created through households, that is, through people that want to work. In general and to a certain extent it pays that people are able to offer more work for higher wages. It can be stated that those citizens who have so far lived on unemployment benefits are, with higher wages, more motivated to start work. Such behaviour is referred to as a substitution effect, which means that with the rise in wages, the supply of labour increases. Also, free time gets more expensive as it is scarcer. However, if it turns out that people with rising or higher wages reach a certain level at which that their income (pension) allows them to prefer leisure time instead of work, it is a so-called pension effect.

Labour demand is created by companies and is determined by the amount of labour that depends on its price, i.e. on wages. If the workforce is more expensive, companies consider the need for the number of workers they will employ so that the rising costs do not dampen their production.

Lower wages, on the other hand, mean also a lower cost for employers and they can thus afford to hire more employees and by that means affect their production.

The labour market equilibrium is created by the interaction of the supply and demand. There are two situations on the market. Firstly, the price of labour is higher than the equilibrium, i.e. the willingness of companies to employ workers is lower than the interest of households to work and the supply of work exceeds demand for it. Conversely, if the demand for work is higher, households are willing to work more and the readiness of companies to increase wages is lower which makes the price of work is lower (Kaczor, 2013). If the wage deviates from the equilibrium level, there is either a shortage or an excess of labour supply on the market, depending on the market wage level.

The paper focuses on transnational, national and local contexts of European Union employment policy. At the transnational level, the European Union's employment policy setting will be analysed. The implementation and functioning of specific instruments will be compared in selected EU countries. The objective of the paper is to indicate good practice in the implementation of employment policy by selected Member States.

The local level includes a case study of the use of subsidies from the Structural Funds in the Czech Republic. The aim of the case study is to evaluate the implementation of the European Social Fund in the Czech Republic. Both the link between subsidies and employment increases and labour market conditions will be explored.

2. ECONOMIC AND SOCIAL DISPARITIES OF THE EU

The economic level of the European Union is different not only across states but also across the regions. The last rounds of the enlargement of the European Union in 2004, 2007 and 2013 logically contributed to deepening those differences.

The most advanced areas at the NUTS 2 level exceed by 200% or more the average GDP per capita of the European Union. By contrast, the least developed regions are between 30–50% of the average GDP per capita of the enlarged European Union (EU 28). The extreme margins were recorded in 2014 between the most underdeveloped and the most advanced region of the EU. The gross domestic product per capita of the Inner London-West region in the UK is almost 18 times higher than the one in the Northwest region of Bulgaria (http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_at_regional_level, 12/07/2019).

The core area of the European Union in terms of economic maturity had long been located in a so-called pentagon, defined by five agglomerations, namely: London, Hamburg, Munich, Milan and Paris (https://ec.europa.eu/info/index_en, 12/07/2018). However, the dominance of that area is gradually decreasing. The most developed regions are more dispersed throughout the European Union (for example, the regions of Ireland, Scandinavian countries, Vienna or the capitals in Central European countries).

In most EU-28 countries, much of the regional prosperity gap is due to the concentration of the economic activity around the capital. In only three countries of the European Union, the capitals are not the most developed regions. It pays for Italy, the Netherlands and Germany. In other Member States, the capital regions tend to dominate. The dominant position of the central regions can be identified in Great Britain, France, Belgium, but also in the Czech Republic or Slovakia. However, it should be noted that the central regions show a relatively high inflow of commuters. The income of those workers increases the disposable income of households outside the capital. In the case of Luxembourg, the commuters are often foreign workers from neighbouring regions of France, Belgium and Germany.

The more favourable development of the capitals is connected with the attractiveness both for business and for the inhabitants. A polarization of the capital cities brings benefits in terms of economies of scale, agglomeration of businesses, concentration of a research base, educational institutions and market size. But it also has undeniable disadvantages, such as congestions in transport infrastructure, poorer environmental quality and higher property prices.

Another important feature of the regional differentiation of the European Union is the North-South or East-West dichotomy, respectively, which is reflected in the lower economic level of the regions geographically more distant from the EU's core regions. For example, the new Member States of the European Union (in particular Hungary, Slovakia and Poland), where the regions at the eastern borders have a lower degree of economic development than the regions bordering on developed EU countries. The north-south dichotomy is represented by Italy and Spain.

Peripheral regions are mainly located in geographically remote parts of the European Union. The 15 least developed regions come from five Member States. The largest number of lagging areas can be found in Bulgaria and Romania (e.g. Severozapaden, Severen Tzentralen and Yuzen Tzentralen regions in Bulgaria or Nord-Est, Sud muntenia and Sud-Vest Olstenia regions in Romania), as well as at the eastern borders of Hungary (Észak-Magyarország, Észak –Alföld regions) and Poland (Lubelskie region). The French region of Mayotte, located in the Comoro Islands in the Indian Ocean, occupies a specific position among the peripheral regions. In 2011 it became a French department. It is the outermost and at the same time the second most deprived region of the European Union (http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_at_regional_level, 12/07/2019).

The vast majority of regions of the new Member States of Central and Eastern Europe are characterized by an underdevelopment compared to the European Union average. Only a few regions from the new Member States achieved higher GDP per capita in 2014 than the EU-27 average (e.g. Prague, Bratislava, Zachodna Slovenia, Közép-Magyarország, Bucharest in Romania and the Mazowieckie Voivodeship in Poland).

If we compare the development of regional disparities within individual Member States, we find that the convergence of regions across the Union is not necessarily linked to the convergence within individual countries. In 2008–2014, eight countries (Denmark, Finland, Ireland, Spain, Poland, Sweden, the United Kingdom and Slovakia) witnessed increased disparities at the regional level, while 14 Member States (Belgium, Bulgaria, Czech Republic, Germany, Hungary, Greece, Croatia, Italy, the Netherlands, Austria, Portugal, Romania, Slovenia and France), enjoyed decreasing regional disparities at the NUTS 2 level. Compared to 2000-2008, there were fewer countries with an increase in disparities. The effects of the economic crisis and the slowdown in economic growth on the development of regional differentiation can thus be assessed quite positively.

In the period 2008–2014, the regional disparities within the European Union as a whole decreased. The main cause of the convergence of the regions was a rapid growth of regions with an economic level below 50 % of the average GDP per capita of the European Union. Reducing the gap between other areas was not so significant. In particular, the regions of Poland, Lithuania, Romania, Hungary, but also Germany, Austria and Luxembourg grew. The largest increase in GDP was recorded for the central region in Poland (Mazowieckie). By contrast, the regions of the countries affected by the economic recession (Spain, Greece, Finland, Italy and Ireland) showed the slowest growth.

In summary, the regional structure of the European Union shows a diffusion of both the convergence and divergence tendencies. On one hand, significant regional disparities persist in the long term, however, the most underdeveloped regions converge gradually towards the European Union average. In the surveyed period, those were mainly the areas of Poland, Lithuania, Romania and Hungary. On the other hand, there was a decline in most regions of Southern Europe (Spain, Portugal and Greece). The divergence tendencies were apparent within the Eurozone. The differences between countries varied unevenly, but the convergence trends prevailed compared to the previous period. The number of countries in which regional disparities decreased was almost double that of the countries in which they grew in the period 2008–2014. In this respect, the impacts of the financial and economic crisis can be assessed positively. Also the slowdown in regional growth was associated with a decline in regional disparities.

The main features of the regional differentiation of the economic level in the European Union were mainly the polarization of capital regions, more favourable development of urban regions compared to rural areas and also a higher economic level of regions in the so-called central pentagon defined by five agglomerations – London, Hamburg, Munich, Milan and Paris.

Regional differences are a result of a variety of economic, demographic, historical, geographical, social and political factors. Some regions (mainly urban agglomerations) have undoubtedly a better competitive position in the current globalized economy and the complete elimination of the economic inequalities is either not possible in the market environment, nor would it be effective. In many cases, central regions represent the growth poles that positively influence the development of other areas. Regional, national and European actors should therefore continue to seek rather optimal instruments to maintain a balanced regional development and to strengthen the competitive position of regions in the national as well as the international environment.

Major differences in economic level are apparent between the old and the new Member States (countries that joined the EU after 2004). GDP per capita is below the EU average in any of the new Member States. Within the original Member countries, there is a significant gap in the economic level of the North-western and Southern Europe. Like in the case of the new Member States, the gross domestic product per capita of Italy, Spain, Portugal and Greece is below the EU average. Based on the data the European Union can be divided into three groups according to the economic level achieved:

- the most advanced economies are the Benelux countries, the Scandinavian countries, Ireland and Germany, where GDP per capita (with the exception of Luxembourg) is between 123 and 177% of the Union average,
- a group of intermediate countries includes Italy, Spain, Cyprus, Slovenia, the Czech Republic and Malta (GDP per capita around the EU_28 average, 80–109% in 2016),
- low economic level is peculiar to the Balkan countries, Poland, Hungary, Greece, the Baltic States, Slovakia and Portugal (48–77% of the EU average in 2016).

The long-term goal of the integration process is to contribute to reducing disparities between the Member States through the effects of both the single market and the supporting mechanisms. The following text will analyse the convergence process in the last 15 years (2000–2016). A comparison of the results of the coefficient of variation of gross domestic product per capita was used as a method for testing the convergence of the European Union membership.

The results of the analysis show that the European Union membership was characterized by a combination of both the convergence and divergence tendencies. The European Union converged until the onset of the economic crisis (Table 1). The convergence processes were mainly due to the reduction of the gap between the new and old Member States as well as the convergence of the economic level of the new Member States within each other. In the period after the adoption of the common currency, the level of southern European countries (Greece and Spain) also increased. In summary, in the period 2000–2009, the economic level of the membership converged. The financial and subsequently debt crisis, however, caused substantial changes in the development of the main macroeconomic indicators. Traditionally observed effects of the integration process have not been seen in recent years. Faster growth in the less developed countries and their convergence to the EU average resulting from both the trade and capital movements between Member States is no longer taking place. On the contrary, in the period 2009–2016 we could see a more favourable growth of the core countries of north-western Europe compared to the countries of a so-called Southern wing (a deteriorating comparative position of Spain, Portugal and especially Greece can be observed).

Table 1. Convergence of the EU membership (EU 28)

Coefficient of variation of GDP per capita (%)	2001	2008	2009	2012	2016
European Union (EU_28)	44.6	42.4	40.8	41.3	43.5
Old Member States (EU_15)	27.6	33.3	31.1	35.5	38.5
New Member States (EU_13)	36.3	23.5	23.8	18.5	16.6
Eurozone (number of members differs in time)	28.5	20.3	20.5	21.8	43.7

Source: Eurostat http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb010 [cit. 2018-07-12]

From Table 1, which contains the results of the coefficient of variation, one can observe that the most divergent tendency in the period 2009–2016 showed the Eurozone, followed by the old Member States of the European Union. On the contrary, the economic level of the new Member States was converging. It is also possible to observe the convergence of the economic level of the new EU Member States towards the average. However, these convergence processes are not so significant and the differences across the EU membership base are increasing. The single currency is currently contributing to the divergence of the Eurozone membership, which is in contradiction to the original intentions of that project.

It is on the theoretical-legal platform of social services implementation where fulfils both the important social function of the state, which seeks to act not only as a guarantor of minimum standards of social rights, but also where via social services an imaginary "friendly hand" to those who need it, is provided. However, such a position of the state cannot be absolute, because there is evident a penetration of various circumstances i.e. factors, into the area of providing social services, mainly in connection with legislative adjustments, real observance of value-axiological principles applied in social policy as well as demographic changes, the economic environment, etc. (Žofčinová, 2016).

When looking at the situation in Europe, one can speak of the migration of its inhabitants, especially towards the New World, over the past several centuries. The reason was a vision of free and welcoming space in America as such. But nowadays, we can speak of a significant increase in immigrants to Europe, not because it is underpopulated, but also because Europeans have become rich and even poor Europeans do not incline to accept any dirty or, in their eyes, degrading work. Therefore, in the target countries, an international migration can be used as a tool to address specific labour shortages in the labour market (Olejárová, Čajka, 2016). A significant influx of migrants is coming to the EU from economically poor countries.

The differences are evident not only in terms of economic level and growth, but also in terms of social indicators. The labour market is one of the areas of the economy where the gap between the European Union and other advanced centres of the world economy (the USA and Japan) has remained for three decades. At European Union level, the employment is therefore one of the main priorities for maintaining the growth and competitiveness of Member States. The original Lisbon Strategy of 2000 set two main objectives for employment:

- move the employment rate (persons aged 15–64) up to 70% by 2010;
- increase the employment rate of women (aged 15–64) up to 60% by 2010.

At the Stockholm European Council, another objective was set to raise the employment rate of older people (55–64 years) to 50% by 2010. The new Europe 2020 strategy reformed the goals to be achieved in the labour market and social policy by 2020 as follows:

- increase the employment rate for persons aged 20–64 to at least 75%;
- reduce by 25% the number of Europeans living below the national poverty line, leading to over 20 million people out of poverty.

Despite the fact that the objectives of the reform strategy have not yet been achieved in all the countries, the current labour market developments in the European Union can be viewed positively. The development of the employment largely follows the economic cycle. The unemployment behaves in the opposite direction. The significant increase in unemployment and the decline in employment during the economic crisis were replaced by a gradual improvement in both indicators over the past three years (Table 2).

Table 2. Both employment and unemployment in the European Union (2016)

Country	Unemployment rate (%)	Employment rate (%)
Luxembourg	6.2	70
Ireland	8.3	70
Netherlands	6.0	77
Austria	6.0	75
Denmark	6.2	77
Sweden	6.9	81
Germany	4.2	79
Belgium	8.3	67
Finland	9.1	73
France	10.3	70
United Kingdom	5.0	77
Italy	11.4	61
EU_28	8.6	71
Malta	3.9	69
Spain	19.6	63
Czech Republic	4.2	76
Slovenia	7.9	69
Cyprus	11.6	68
Slovakia	9.7	69
Portugal	11.1	70
Lithuania	8.8	75
Estonia	7.0	76
Poland	6.1	69
Greece	23.5	56
Hungary	5.1	71
Latvia	9.5	74
Croatia	13.2	61
Romania	6.1	66
Bulgaria	7.9	68

Source: Eurostat
http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb010 [cit. 2018-07-12]

The decline in working capacities during the crisis took place mainly in industry and construction sectors. Conversely, the sector of services became the engine of the increasing employment in the European Union. There is seen a considerable restructuring as a result of the development of the digital economy. However, labour market performance cannot be seen as a universal problem for all European Union countries. Relatively large differences in employment rates and unemployment rates persist between the Member States. In 2016, the spread between the countries with the highest and lowest total employment rates was between

56% (Greece) to 81% (Sweden). Denmark, the Netherlands, Germany, the Czech Republic, Estonia, Latvia, the United Kingdom and Austria also met the 75% criterion. By contrast, Italy, Greece, Croatia and Spain did not even reach 60% of the employment rate. The differences in unemployment are not directly proportional to employment due to the different methodological concepts of the two indicators. A list of countries with the highest unemployment rates currently includes the southern European economies (Greece, Spain, Portugal, Italy, Cyprus and Portugal). By contrast, Malta, the Czech Republic, Hungary, the United Kingdom and Germany report abnormally low unemployment rates (up to 5%).

3. EMPLOYMENT POLICY IN THE EUROPEAN UNION

If we look at employment policy from the point of view of the European Union (Anderson, 2015), it can be stated that it is one of the so-called coordinated policies within the meaning of Article 5 of the Treaty on the Functioning of the European Union. The Treaty of Amsterdam revising the Treaty establishing the European Community (1997) has included two new chapters-on employment and social policy, with close links between them from the outset undoubted. Accordingly to valid European Union law, the provisions concerning employment are stipulated in Articles 145 to 150 of the Treaty on the Functioning of the European Union and the provisions concerning social policy in Articles 151 to 161 of the mentioned Treaty. But the social content also has provisions on the free movement of workers laid down in the articles 45 to 48 of the Treaty on the Functioning of the European Union.

In a broader sense, employment policy is usually conceived as a part of the European social policy in terms of “targeted measures to ensure the status of high employees, or combating unemployment” (Tichý, 2014). Article 151 of the Treaty mentions employment promotion as one of the main objectives of social policy. And European Commission encourages, inter alia, cooperation between Member States in this area (see Article 156 of the Treaty).

Regarding social policy (Anderson, 2015), it must be said, that there was no single social policy created in the course of the European integration. This is impracticable due to different political, cultural and economic circumstances and different social security systems. In the future, the EU should ensure the greatest possible coherence between different social systems and one of the solutions on the table could be a flexicurity-based social model that contributes to increasing the competitiveness of the European labour market. Each Member State of the Union has its own social policy system based on the financial possibilities, historical traditions and living values of the population. The same is true about the parts of social policy (sickness insurance, pension, family policy, etc.). Coordination at EU level mainly concerns rules that affect the functioning of the free movement of workers and persons within the single market (Fuchs, Cornelissen, 2015). It is based on an adherence to several basic principles. These are equal treatment of migrants, equal treatment of benefits, incomes, facts or events (a principle of so-called territorial equality), addition of periods, abandonment of residence rules (so-called export of benefits principle), application of the law of one Member State et al. (Chvátalová, 2016). In any case, the migration of an individual or a group of people has certain consequences affecting, in a positive or negative sense, the individual, the country of origin and the country of destination in several spheres, most notably at the microeconomic level. But it also affects the cultural processes with the impact on social inclusion, discrimination and security and does not circumvent the political sphere (Jankurová, 2016).

In the field of working conditions, equal opportunities between men and women in the labor market and other areas defined in Article 153 of the Treaty on the Functioning of the

European Union, the European Union sets minimum social standards. Last but not least, cooperation between the Member States and the European Union institutions and bodies in the framework of the open method of coordination, both in the field of employment and in other selected areas of social policy (e.g. in the fight against social exclusion) can be mentioned (Trubek, Trubek, 2005).

It can be said, that so called social model can be understood as a sum of common values and principles shared by Member States and the European Union (Scharpf, 2002; also see e.g. Article 2 and 3 of the Treaty on the European Union and the Charter of Fundamental Rights of the European Union).

EU social policy uses legal and economic instruments, social documents etc. Especially with regard to employment policy, the European Union lays down guiding principles to be taken into account by the Member States when formulating their employment policies. Decisions, recommendations, suggestions, evaluation reports are taken (however, harmonization is excluded). The financial aid also holds a prominent place among the instruments.

4. EMPLOYMENT POLICY IN AUSTRIA, IRELAND AND THE UNITED KINGDOM

Austria is a federal republic with a bicameral parliament and is made up of nine federal states. Each of these nine countries has its own constitution and government, which is responsible for the application of provincial laws. The overall unemployment rate in Austria was long one of the lowest in the EU. In the last five years, the unemployment rate in Austria has averaged at 4.4%.

The Austrian Public Employment Services (AMS) is a basic executive body in the labour market. AMS has a legal personality to perform services under the Public Employment Services Act. The Public Employment Services (AMS) was part of the federal administration until an organizational reform took place, which entrusted the institution with a relatively high degree of autonomy. The executive and supervisory bodies of the AMS are present at all levels, with members of the supervisory bodies being drafted and delegated by the social partners (a tripartite organisation at national level). As the social partners are particularly important in policy implementation (towards specific target groups), their contribution to the implementation of the employment policy is essential. They are also involved in formulating national and regional plans for implementing European strategies with regard to the ESF funding opportunities and the European Community initiatives. The competencies of territorial pacts are gradually expanded from purely co-ordination platforms to actors responsible for implementing measures at regional levels. Functional corporatist mechanisms are formalized within so called Territorial Employment Pacts (TEPs). Although the social partners are rather behind the political and administrative bodies (governmental level and AMS), traditional Austrian corporatism is undoubtedly an important factor both for the effective functioning and further development of TEPs. With the decentralization of AMS, there has been a demand for a higher level of Territorial Employment Pact (TEP) and the European Commission supports the establishment of local labour market partnerships. The funds come from the cohesion policy budget and are directed in particular to meeting the objectives through strengthening the influence of regional actors on the labour market. The first territorial employment pacts in Austria resulted from the coordination of the implementation of the employment policy in the labour market in individual regions, which created a space for strengthening the role of TEPs. Austria has a long tradition in regional cooperation of all actors in the labour market. The Commission launched a programme of financial and information assistance to promote regional cooperation in 1997. Many years earlier and without the support of the EU institutions, projects corresponding to territorial employment pacts were developed. The clearly positive results of those early projects led the Austrian Government to include employment pacts among the employment strategy instruments at the level of the federal governments. (https://journals.muni.cz/cepsr/rt/printerFriendly/4596/6154, 19. 3. 2019).

In employment services, Austria has taken on a model of involving external suppliers of professional services. Most of the employees of the Labour Office are professional advisors for clients. The management apparatus of the Labour Office is minimal as well as the number of administrative staff. The Austrian network of Labour Offices is a highly functional body with high independence from the Austrian Ministry of Labour. It provides its services to job seekers and employers similar to private organizations. The whole range of special services for applicants (retraining, health services, and legal services) is provided through external suppliers of these services (https://www.old.nvf.cz/spps/dokumenty/2008_12.pdf, 19. 3. 2019).

Ireland is a parliamentary republic. The most represented sectors are services and industry. It is about fifty to fifty, although most of us would guess that agriculture has this position. In the past, Ireland was one of the poorest countries in the Western European region. This was probably due to the high number of migrants who currently account for about 15 % of the Irish population. Ireland joined the EU in 1973. Ireland became a member of the Eurozone in 2002. At present, Ireland is clearly at the forefront of the quality of life of its citizens. But a long journey with many unpopular measures led to this prosperity. The Human Development Index (HDI) can be cited as an indicator of citizens' satisfaction. Further indicators are, for example, life expectancy, quality of health, access to education, etc. Ireland, like Austria, has also opted for cooperation between the authorities and employers based on the principle of providing services by which Labour Offices strive to be a respected and namely qualified supplier of the appropriated workforce for the labour market. Therefore, they operate on a similar principle as recruitment agencies, including the provision of more workers to companies for seasonal employment (https://www.old.nvf.cz/spps/dokumenty/2008_12.pdf, 19. 3. 2019).

Ireland also chose a flat organizational structure where employees are in most the advisors working directly with clients. The organizational and management structures are limited to a minimum of employees. This model of flat organizational structure is also used, for example, by Austria or the United Kingdom. In Ireland, the responsibility for local employment advisory services lies with the Local Employment Services (LES), in particular to secure the long-term unemployed, who are outside the labour market for more than 6 months. LES provides service through a branch system, and these branches are a contact point for LES services for clients. In Ireland, there is a really high degree of confidence in employment services from people seeking a position in the labour market. They have a space to solve their life situation by themselves and the system gives them a lot of space. For the first three months the unemployed are financially secured, but they are still not compulsorily registered in the employment services system (FÁS). Jobseekers can use basic FÁS services without any restrictions. Specifically, it is possible to obtain information about labour market offers through the contact points in the LO premises. The jobseekers can also print out the contacts found and then contact the potential employer by himself. One can also print out his own CV. The FÁS website will help you to write your CV with several accessible models. The service is open to the general public and is not bound by anything. There is also a possibility of contacting a potential employer directly from the point free of charge and apply for a job interview. They receive unemployment benefits through the Social Welfare Service. It is only if the unemployed does not find employment in the labour market for three months that he / she is obliged to enter the counselling system and take part in interviews with trained employees of employment services.

The United Kingdom is a parliamentary monarchy. The sovereign holds in his hands all the executive power in the country, and according to tradition, the government exercises power on behalf of the sovereign. A peculiarity of this democratic system is that law is not based on a written constitution. The United Kingdom is in the group of the world's most developed countries and is also a member of the G8 group. The United Kingdom has historically been an agricultural country, partly due to its geographical location. Today's economic maturity is due to the transition from agriculture to industry. This reform was undertaken by the United Kingdom as one of the first countries in the world. Important industries are the electrical, chemical and food industries. The highest number of employees works in the field of services, especially in public administration, health care, education and finance. Indeed, only a few people are employed in agriculture as the agriculture employs only 2 % of the population. Such a small percentage is surprising given that the food industry is one of the UK's largest employers. The United Kingdom has chosen to organize and manage employment services via a model of a flat organizational structure that limits over-administration by limiting the number of executives. Most employment service employees are in direct contact with clients. This economically very advantageous distribution of forces has also been chosen, for example, by Ireland or Austria. The model allows most of the employees of the employment service office to be classified as advisors working directly with clients. The number of managers is limited and administrative procedures are simplified to the minimum necessary.

Professional services are mostly realized through external subjects. Great Britain prefers to purchase specialized services. In the United Kingdom, all client services are provided by personal advisers, who are tasked with guiding clients through the various phases to find optimal programs implemented by external suppliers. These advisers are closely specialized. The vast majority of local community-type institutions provide work with clients that require specific leadership. These are mostly clients being long-term unemployed, clients from socially excluded groups or localities.

Working Links is a network of organizations working with Job Centre Plus Employment Services Offices as well as with municipalities and regional professional groups. Their work is based on cooperation and partnership between the public sector, the private sector and not least on volunteering. The partnership of these three strong sectors is a precondition for the implementation of the Working Links mission. The target groups of Working Links are:

- the group of the long-term unemployed (graduates, persons 50+, socially inadaptable),
- persons receiving incapacity benefits, i.e. persons who do not work because of their health handicap (mental disability, physical disability) (https://www.old.nvf.cz/spps/dokumenty/2008_12.pdf, 19. 3. 2019).

5. IMPLEMENTATION OF THE EUROPEAN SOCIAL FUND IN THE CZECH REPUBLIC

The Czech Republic is a unitary state and in terms of the form of government it is a parliamentary republic with a bicameral parliament. The unemployment rate is in average 2,5%.

The Ministry of Labour and Social Affairs as well as the Labour Office are the main executive bodies in the labour market. Active and passive employment policy and its main instruments are enshrined primarily in the Employment Act.

Regarding the link with the European Union *the Operational Programme Employment of the Czech Republic (OPE)* is a crucial programme for employment. It aims to meet the strategic objectives that the Czech Republic committed itself to in the areas of combating unemployment, developing vocational education, promoting social inclusion, equal opportunities for women and men and increasing the efficiency of public administration. The OPE is based on the Partnership Agreement for the programming period 2014–2020, which is a key document setting out the priorities of the Czech Republic in the area of drawing funds from the European Structural and Investment Funds in the given programming period. The total allocation for the operational programme is EUR 2.1 billion, which is approximately CZK 67 billion according to the current development of the EUR/CZK exchange rate. The OPE funding should support up to 585,000 people in total. More than 60% of the total allocation of the OPE funding are intended to support the employment, especially of the most disadvantaged groups of the population. Funding from the Youth Employment Initiative, which is integrated into the OPE is used to support the employment of young people. The role of the OPE Managing Authority is conducted by the Ministry of Labour and Social Affairs. It is thus responsible for both the effective management and implementation of the operational programme and its compliance with the principles of a sound financial management.
The aim of the program is to contribute to the three thematic objectives:

- promoting sustainable employment, quality of jobs and labour mobility - under this objective, the interventions will be supported to help increase the employment of hard-to-reach groups through AEP tools and personalized employment services. Furthermore, higher participation of people in further professional education, development of adaptability of the workforce and compliance of employees' competencies with current labour market requirements will be supported. The OPE will contribute to improving the reconciliation of work and private life and the equality of women in the labour market.
- promoting social inclusion and combating poverty and discrimination – this objective will contribute to activating people at risk of social exclusion;
- strengthening the institutional capacity of public authorities and stakeholders and an efficient public administration – the effectiveness of public administration will be promoted by improving the training of officials and improving their professional qualities. It also aims to contribute to reducing red tapes and administrative burdens. To develop eGovernment services and increase transparency, openness and communication of public administration towards the public (https://www.dotaceeu.cz/getattachment, 21. 4. 2019).

The Operational Programme Employment significantly intervenes in support of increasing the employment and integrating disadvantaged groups into the labour market. It thus fulfils the specific objective of "Increasing the employment rate of supported persons, especially the elderly, low-skilled and disadvantaged" and contributes to overcoming the 75% employment rate of persons aged 20–64. The Czech Republic has been succeeded in fulfilling this objective in the long term (https://www.esfcr.cz/programy/op-zamestnanost.pdf, 22. 4. 2019).

Specific regional problems at the regional level are addressed by regional projects driven by the Labour Offices, which provide their clients with an individual approach and a combination of AEP tools tailored to the specific needs of both the job seekers and job applicants. In addition to supporting new jobs, it also offers job trials, individual or group counselling, balance diagnostics and, if necessary, retraining. A special care is given to the target group of young people under the age of 30, supported by a so-called Youth Guarantees project that offers internships, short-term job opportunities and the possibility of changing existing qualifications or returning to education. Despite the fact that the Czech Republic has the lowest unemployment rate in the EU, there remains a small group of persons (especially the long-term unemployed) in the LO register, who would in all likelihood be dependent on passive unemployment benefits without these projects. In general, these projects ensure a rapid integration of the unemployed into the labour market and prevent unemployment of specific groups of people who are expected to have a lower chance of get employed (e.g. in terms of health, education, etc.). By joining one of the implemented projects, this endangered group of people will increase the chances of future employment on the labour market.

Specialized and individual approach to clients offer not only the LO projects, but also smaller competition projects focused on supporting the employment (the OPE reserves a funding of around CZK 2.4 billion on this purpose). The projects are initiated at either regional or local level and the beneficiaries are generally non-profit organizations, educational and consulting companies, schools, regions and municipalities. In addition to supporting the employment, they enable innovative approaches to work with clients and to develop community and partnership cooperation at the local level.

The evaluation criteria are used to assess the success of a particular project, which, in addition to the 3E principle (economy, efficiency and effectiveness), evaluate the aspects of usefulness and sustainability under the aggregate abbreviation 5U (effectiveness, efficiency, economy, usefulness, sustainability).

Due to the regional disparities, we have set several research goals to evaluate the selected issue. The objectives of the research have four objectives:

- to find out whether employment aid in the view of the employers helps to remove for disadvantaged people barriers to entry into the labour market;
- to verify whether the employers perceive the intervention of European funds in the field of employment aid;
- to map out the benefits from the employers' point of view and vice versa the negative aspects of employment aid;
- to find out whether employers have a strategy for further employment of persons after the end of granting the employment aid.

As for research units and respondents, there were several of them chosen across the state. As for the first objective, we conclude that employment aid can better help to place people otherwise disadvantaged in the labour market, however, as such it is not an institute that would in itself help in a long-term to remove barriers to entry into the labour market.

In terms of the next objective it is to say unequivocally that distinguishing whether the source of subsidies is national or of European funding or even what European fund project is involved, is either difficult for employers and above all it is not important at all for them. They perceive employment interventions primarily in the form of active employment policy instruments, but other areas, such as the promotion of continuing vocational training and the possibilities of promoting social entrepreneurship, are completely unknown to them and they have almost no information on them.

The third objective was evaluated so that, from the point of view of employers, it is an assessment of only two instruments of active employment policy, namely community services and socially useful jobs. The interviews show that representatives of municipalities and other public benefit institutions have a somewhat different view of how to use both instruments and that the view of the entrepreneurs is somewhat different, too.

Overall, all employers agree that, in particular, the better use of the active employment policy tools is hampered by an excessive administrative burden that employers have to overcome in obtaining contributions but also in employing workers themselves. These are, in particular, activities related to the personal agenda of a worker who, for example, has a distrain and the employer must make various deductions from wages and communicate with the courts and executors. Control activities are also more demanding, including compliance with health and safety policy at work.

As for the last goal, we conclude that they do not usually have a strategy of further employment of persons after the end of granting the employment aid. For most of the addressed municipal representatives they do not count on the subsequent employment of these persons, because the conditions of subsidies do not allow them to employ workers repeatedly and for a longer period of time, so the preparation of the strategy does not give too much logic and they take rather as a welcome help. If a worker proves successful in the case of employment with an entrepreneur, he has a chance to obtain a permanent job and is perceived as an experienced and proven workforce. Even in that case, however, it is not possible to speak directly about the employment strategy, but rather about a logical consequence of the employer's thinking, who are willing to employ high-quality and reliable workers even without financial support, moreover in times of lacking skilled labour in the labour market.

6. CONCLUSIONS

In the area of employment, the European Union focuses primarily on promoting cooperation between Member States under the open method of coordination, which also includes incentives to exchange information and best practices. And the financial aid also holds a prominent place among the instruments, especially interventions from the European Social Fund.

The amount of money spent in the area we are focusing on in this study inevitably brings along the need to evaluate whether these resources are used efficiently and also whether their benefits are visible in the long term. It is precisely in the field of evaluation that the European Commission emphasizes, and in connection with the use of these subsidies, a number of evaluation reports and research studies have been created, mapping the benefits not only for the target group of unemployed people but also for employers.

From the point of view of employers' involvement, it would be of a great benefit to enable the institute of so-called job trials, to offer more part-time jobs (e.g. for carers or people of pre-retirement age) and also to emphasize social entrepreneurship. Last but not least, a major challenge is to increase the knowledge and skills of workers, which is facilitated by employee retraining and further vocational training carried out directly in companies. They contribute to addressing the mismatch between employers' requirements and the skills of employees, thus reducing the risk of layoffs by investing in their training. All these activities undoubtedly contribute to the improvement of the position of disadvantaged people in the labour market; moreover, they can be financially supported by the European Social Fund.

The EU seeks to increase the number of jobs, particularly in areas with a high educational and skills requirement. As advanced European countries, we are not able to compete with the countries of the so-called cheap economies, especially in the area of labour costs, production costs or the prices of materials. Therefore, we cannot lead our efforts to create competition for these economies through identical parameters. At the moment, the pressure on higher education is an effective competitive tool. Focusing on production with higher added value and services is therefore a logical step for Member States with the EU support. The initiatives supported by the EU thus focus on education and the acquisition of new skills, which is linked to the demands for investment in production innovation, together with investment in research and development. It is not only the individual EU Member States who are responsible for ensuring that the objectives are financed, but also the European money is used to invest in human resources, primarily through EU structural funds. The employment policy needs are mainly financed from the European Social Fund. Thanks to the tremendous amount of money in each Member State, we can find concrete examples of ESF funded projects and its tangible impact on employment across the Union.

One of the aims of this study was to indicate good practice in the implementation of employment policy by selected Member States. In the center of our attention were three states.

Austria has long been below the EU average with an overall unemployment rate of around 4.4%. The long tradition of regional cooperation between employers and all other actors in the labour market is, in our opinion, a great profit and has a lion's share in high employment. Many years earlier, without regional financial support or advice from the EU, regional projects were launched in Austria, which, in terms of both the form and objectives, correspond to territorial employment pacts. Each of the Lander of Austria has individual employment policy objectives.

The United Kingdom is a world power that has a large share of the history that has shaped the European order to this day. Economically, the UK is by far the strongest EU country. The largest employer is the service sector and industry. Great Britain goes through the transfer of professional consulting activities to external specialists. This British model is also very efficient and allows a higher degree of individual specialization for individual professional advisors. If the client is already in a group of hard-to-place persons and has serious health or personal problems that moved him / her to socially excluded persons, the professional expertise of the assigned advisor is crucial.

On the other hand, it is Ireland that places the greatest share of personal responsibility on the unemployed. Ireland adopted this model despite the fact that, according to the population composition, there is a greater likelihood of need for surveillance and individual approach for a wider range of people. This can also be seen as an effort to free the hands of employees in the employment services system just to cope with the greater onslaught of people who are disadvantaged in their efforts to enter the labour market. According to the Irish approach, better management of the employment services situation can be predicted if the so-called easy-to-place clients in the system are given some time to deal with their situation completely independently.

In our opinion, the long tradition of regional cooperation between employers and other actors in the labor market in Austria is a great asset and has a significant share in high employment. As far as the British model is concerned, it can certainly be inspired by the involvement of external specialist experts in professional consulting activities. Employment policy consists of both active and passive measures and envisages the involvement of jobseekers or persons employed, who are at risk, for example due to the low qualification of exclusion from the labor market. In connection with Ireland, the question is, whether to take into account the Irish approach to working with easy-to-place clients in this respect. This approach corresponds to the liberal social model and can be beneficial by some of its elements, precisely in terms of increasing their own responsibility for addressing the social situation.

We believe that the instruments used by the European Union to promote employment from the European Social Fund, as well as the adoption of appropriate measures at Member State level in line with the guidelines set by the EU institutions, are currently an adequate and appropriate instrument to increase employment and competitiveness of the European Union.

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BIBLIOGRAPHY

Anderson, K. M. (2015). *Social policy in the European Union.* Palgrave Macmillan. pp. 111–133, 207–221. [European Union Series].

Čajka, P., Olejárová, B., Čajková, A. (2018). Migration as a factor of Germany's security and sustainability. In: *Journal of Security and Sustainability Issues* 7(3): 399–408. https://doi.org/10.9770/jssi.2018.7.3(2)

Dohoda o partnerství pro programové období 2014 - 2020 Česká republika 21. prosince 2016 – 4. revize schválená EK. [online]. Dostupné z: https://www.dotaceeu.cz/getattachment. [cit. 2019-04-21].

Dvořáková, Z., a kol. (2007). *Management lidských zdrojů*. 1. vydání. Praha: C. H. Beck. s. 363.

Esping-Andersen, G. (1990). *Three Worlds of Welfare Capitalism*. Cambridge: Blackwell Publishing. s. 12–20.

Fajmon, H. (2008). *Slovníček evropských levicových pojmů*. 1. vydání. Brno: Centrum pro studium demokracie a kultury. Politika a společnost. s. 36. ISBN 978-80-7325-160-4.

Fiala, P., Pitrová, M. (2009). *Evropská unie*. 2. vydání. Brno: Centrum pro studium demokracie a kultury. s. 654.

Francová, H., Novotný, A. (2008). *Sociální politika v základech*. Praha: Triton. s. 187. ISBN 978-80-7387-125-3.

Fuchs, M., Cornelissen, R. (2015). *EU Social Security Law. A Commentary on EU Regulations 883/2004 and 987/2009.* Baden-Baden, München, Oxford: Nomos, C. H. Beck, Hart Publishing.

Growing Regions, growing Europe. Fourth report on economic and social cohesion. Evropská komise [online]. Dostupné na: https://ec.europa.eu/info/index_cs [cit. 2018-07-12].

Chvátalová, I. (2016). *Sociální aspekty volného pohybu pracovníků po Evropské unii z pohledu judikatury Soudního dvora EU*. In: Klíma, K. a kol. *Veřejná subjektivní práva*. Praha: MUP Press. s. 234. ISBN 978-80-87956-48-9.

Jankurová, A. (2016). Integrácia migrantov a prístup k jej riešeniu. In: *Multikulturalizmus v migračných tokoch*. Děd. Marián a kol. Praha: DecPro Media. s. 20. ISBN 978-80-270-0478-2.

Kaczor, P. (2013). *Trh práce, pracovní migrace a politika zaměstnanosti ČR po roce 2011*. 1. vyd. Praha: Oeconomica, 2013. 242 s. ISBN 978-80-245-1930-2.

Mirvald, M. (2015). Possible Impacts of Information Asymmetry in the Mobile Phone Accessory Market. In: LÖSTER, Tomáš, PAVELKA, Tomáš (ed.). *The 9th International Days of Statistics and Economics (MSED 2015)* [online]. Praha, 10. 9. 2015 - 12. 9. 2015. Slaný: Melandrium, 2015, s. 1138–1144. ISBN 978-80-87990-06-3. Dostupné z: http://msed.vse.cz/msed_2015/article/210-Mirvald-Michal-paper.pdf (6. 2. 2016).

Mirvald, M., Tománková, M. (2018). The Determinant of Success in Basic Economics Courses Taught by the Department of Economics at the University of Economics in Prague. In: *International Journal of Economic Sciences*. Vol. VII(1), pp. 82–90. DOI: 10.20472/ES.2018.7.1.005. Dostupné na http://iises.net/international-journal-of-economic-sciences/publication-detail-1849. [cit. 23. 5. 2018].

Olejárová, B., Čajka, P. (2016). Third countries migration and the immigrant investor programs in the EU – the case of chinese immigrants in Portugal. In: *ICEI 2016: proceedings of the 3rd international conference on European integration 2016*. Ostrava: VŠB Ekonomická fakulta. s. 689–697. ISBN 978-80-248-3911-0.

Operační program zaměstnanost 2014–2020, revize č. 2 [online]. Dostupné z: https://www.esfcr.cz/programy/op-zamestnanost.pdf [cit. 2019-04-22].

Poruba, J. *Vybrané aspekty sociální politiky EU* [online]. Dostupné na: http://www.evropskehodnoty.cz/vybrane-aspekty-socialni-politiky-eu/#_ednref3 [cit. 2017-07-02].

Poskytování poradenských služeb ve veřejných službách zaměstnanosti ve vybraných zemích EU (Finsko, Irsko, Německo, Rakousko a Velká Británie). [online]. Dostupné na: Dostupné z: https://www.old.nvf.cz/spps/dokumenty/2008_12.pdf [cit. 2019-03-19].

Rasmussen, N., Delors, J. *Nová sociální Evropa*. [online]. Dostupné na: http://www.pes.org [cit. 2017-07-02]. s. 3, 134.

Regional GDP per Inhabitant in EU-28. *Eurostat* [online]. Dostupné na: http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_at_regional_level [cit. 2019-07-12].

Sapir, A. (2005). *Globalisation and the Reform of European Social Model*. Brusel: Breugel. s. 10–44.

Scharpf, F. W. (2002*). The European social model*. JCMS: Journal of Common Market Studies, 40(4), 645–670.

Šimanová, J., Kocourek, A. (2015). Nominal vs. Real Regional Income Disparities in Selected Cities of the Czech Republic. In: *Liberec Ekonomic Forum 2015*. 2015. s. 192–200. ISBN 978-80-7494-225-9. Dostupné na: http://www.lef-tul.cz/sekce/LEF_2015.pdf. (9. 2. 2016).

Smutek, M. (2005). *Sociální stát (úvod do studia)*. Hradec Králové: Gaudeamus. s. 82.

Svobodová, M. (2015). Proces přistupování Evropské unie k Evropské úmluvě o ochraně lidských práv a základních svobod. In: Klíma, Karel a kol. *Veřejná správa a lidská práva.* Praha: Metropolitan University Prague Press. s. 45–57.

Terem, p., čajka, p., rýsová, L. (2015). Europe 2020 Strategy: evaluation, implementation, and prognoses for the Slovak Republic. In: *Journal of Scientific Papers ECONOMICS & SOCIOLOGY*. Dostupné na: http://economics-sociology.eu/?339,en_europe-2020-strategy-evaluation-implementation-and-prognoses-for-the-slovak-republic (21. 10. 2015). ISSN 2071-789X. Vol. 8, No 2. Pp. 154–171.

Teritoriální pakty zaměstnanosti-horizontální evropeizace na česko-rakouském příkladu, středoevropská politická studie. [online]. Dostupné na: https://journals.muni.cz/cepsr/rt/printerFriendly/4596/6154 [cit. 2019-03-19].

Tichý, L. a kol. (2014), *Evropské právo. 5. vyd.* Praha: C. H. Beck, s. 571 a násl.

Trubek, D. M., Trubek, L. G. (2005). Hard and soft law in the construction of social Europe: the role of the open method of co-ordination. *European Law Journal*,11(3), pp. 343–364

Ušiak, J., Ivančík, R. (2014). Economy and defence in the NATO member states. In: *Economic Annals – XXI*. Kyjev: Institute of Society Transformation. 2014. s. 8–12. ISSN 1728-6220.

Zaměstnanost a chudoba v zemích Evropské unie (rok 2015). *Eurostat* [online]. Dostupné na: https://europa.eu/european-union/topics/employment-social-affairs_cs [cit. 2017-07-12].

Zaměstnanost podle pohlaví. *Eurostat* [online]. Dostupné na: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_10&plugin=1 [cit. 2017-07-12].

Žofčinová, V. (2016). *Realizácia práva na sociálne služby v kontexte axiologických princípov práva* (příklad Košického kraje). [online]. Dostupné na: https://download.upce.cz/fes/vs/vs2016.pdf [cit. 2017-09-04].

CRUCIAL PROBLEM OF FIRMS IN THE CZECH LABOUR MARKET WOULD BE A PUZZLE FOR ARTHUR OKUN

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Abstract
The aim of this paper is to assess the validity of Okun´s law for the situation of firms in the economy of a country, where the actual rate of unemployment is lower than natural rate of unemployment. Example is the contemporary situation in the Czech Republic. The rate of unemployment lower than natural rate of unemployment affects production and sales of firms and the economic growth of the country negatively. Okun's law is not outdated but its validity is limited. It cannot be applied to solve imbalances in the labour market generally. In the Czech Republic the market needs both, actions on the part of companies and government assistance in its macroeconomic policy. Situation in the labour market is an important "leading" economic indicator. Imbalance in the market as higher demand for labour than supply is a challenge for firms (higher wages are a competitive advantage but lead also to higher costs) and for government institutions (support for firms is expensive and can be controversial, e.g. support for immigrants as a workforce). Reducing the analysis of the economic growth on the influence of one factor (unemployment) is dangerous. In addition to the labour market, another important macroeconomic indicator should be considered, Firms profitability is influenced by other factors as well, namely changes in the price level.

Keywords: *NAIRU, Okun's law, real GDP, regression analysis, unemployment rate*

1. INTRODUCTION

Arthur Okun[7] is known as the author and advocate of the rule called Okun's law[8]. Okun turned his attention to the relationship between the growth of the output of a country and the unemployment and stated general conclusions of his empirical observations. This is the reason why we meet in scientific sources instead of the expression "Okun's law" the expression "Okun's rule of thumb".

The starting point of his analysis was the perception of one elementary economic principle (cost-benefit principle) applied on unemployment: the basic economic cost of unemployment is forgone output. Forgone output is a pure loss for the society. Okun considered unemployment being one of two main evils of the market economy (the second one is inflation).

Okun's law is in recent decades applied as the statement that one percentage point increase in the cyclical unemployment[9] rate is associated with two percentage points of negative growth in real gross domestic product[10] (briefly total output)[11].

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[7] Arthur Melvin Okun (1928-1980), an American economist, a professor at Yale University, a fellow at the Brookings Institution in Washington, D.C, Fellow of the American Statistical Association, the chairman of the Council of Economic Advisers between 1968 and 1969.

[8] It is not commonly known that he is also the author of a special economic indicator called "Misery index". The indicator is calculated by adding the seasonally adjusted unemployment rate to the annual inflation rate.

[9] Cyclical unemployment is the extra unemployment that occurs during periods of recession. Two other types of unemployment are frictional unemployment (associated with the process of matching workers with jobs) and structural unemployment (long-term and chronic unemployment resulting from long-term mismatch between skill of workers and available jobs or barriers in the labour market).

Arthur Okun was an advocate of Keynesian economics and economic government policies based on Keynesian conclusions. He believed in positive effects of using fiscal policy to stimulate employment and economic growth.[12]

After a half of the century the Okun's law has been still a topic of many studies and articles.

Okun's law must be permanently tested with regard to changing factors influencing the labour market and the development of the economy of individual countries and the world economy, as well.

The labour market in the Czech Republic in last years brings a new problem. The demand for labour is higher than the supply of it and firms are facing lack of workers resulting in limiting output and cancelling some orders. Economists ask the question if Arthur Okun could help in this particular situation.

2. THE CORE OF OKUN´S LAW

When analysing the relation of the economic growth and unemployment, the problem might be discussed in two difference modes and we may set the appropriate question accordingly:

"What will be the economic growth in the country with stable unemployment rate?" or in other words "What is the necessary growth rate of the output to maintain the same level of unemployment?"

"What will be the decrease in the rate of growth of the output caused by the increase of the unemployment rate by 1 percentage point?"

Arthur Okun described two versions of the relationship between the unemployment rate and real output growth in his article in 1962 (Okun, 1962). One of them was the gap version where he studied the relationship linked to the level of unemployment above the natural unemployment rate and output gap measured by the difference of potential output and actual output. This version has more complicated usage as the potential output and level of natural unemployment rate cannot be directly measured. This approach generally gives similar results as the other version that will be used in this article (see Knotek, 2007).
The used form of Okun´s law is the difference version in this paper

$$DU_t = a + b*DY_t + e_t \qquad (1)$$

where
a – intercept of the line
b – slope of the line called the Okun´s coefficient
e_t – error or random part of the equation
t – number of quarter, so t = 1, 2, …, T
DU_t – change of the unemployment rate from the previous quarter, $U_t - U_{t-1}$
DY_t – output growth in quarter t, calculated as $(Y_t - Y_{t-1})/ Y_{t-1}$

[10] Gross Domestic Product of the country is the market value of the final goods and services produced in a country during a given period. Real GDP is GDP in constant prices.
[11] According to Abel (2016) the estimates are based on data of the 21century. Arthur Okun originally considered that under 3 percent rise in the rate of economic growth above the economy's long-term potential growth rate, unemployment would decrease by 1 percent and these data can be applied only on the US economy when the unemployment rate is between 3% and 7.5%.
[12] Okun is also credited with defining a recession as two consecutive quarters of negative economic growth.

This formula of this regression model explains changes of the unemployment rate from one quarter to the next one with the quarterly growth of real output. Okun used the growth rate of GNP in his article but this analysis uses GDP due to its current use as a measurement of the country output.

It was shown that a is positive when the economy stagnates (GDP growth is 0), so this value is expected in the analysis (Lee, 2000). The Okun´s coefficient b is expected to be negative, so the output growth is connected with decrease of the unemployment rate. Economists use the rule created from Okun´s law as 1/b that when the unemployment rate grows by 1 p.p., taking previous quarters as given, it leads to 3,3 % less GNP[13] (Okun, 1962). The ratio of -a/b shows the growth rate of the output with stable unemployment rate in other words the necessary growth rate of the output to maintain the same level of unemployment.

Authors of many articles in different journals and proceedings pay attention to statements of the Okun's law. There are numerous examples of the validity of the Okun's law in recent decades in some papers on one hand and also examples that find the Okun's law obsolete and outdated on the opposite side. Many countries and groups of countries in different periods were investigated. It would be wrong to set the question if Okun could be the guide for the assessment of the labour market in any country at any time. There are so many factors that disturb the pure relation of unemployment and economic growth! We take the Okun's law as the guide for observing the unemployment rate as an indicator important for the economic growth of a country and a warning signal if the observed unemployment rate exceed the natural rate.

Let us show couple of examples of positive approach to the Okun's law.

Gurvich and Vakulenko (2017) confirmed the applicability of Okun's law on Russian labour market and took it as the sign of the maturity of Russian labour market. Daly (2014) stated that rumours of the death of Okun´s law during the Great Recession were greatly exaggerated. Elshamy (2013) tested the Okun's coefficient in Egypt in the period 1970–2010 and found the coefficient statistically significant.

Doğru (2013) investigated the whole Eurozone area in the period 2000–2012 and came to the conclusion that Okun's law is valid but coefficients are less than Okun's coefficient for USA.

Ball (2013) presented the examination of data for the United States since 1948 and 20 advanced countries since 1980 and their principal conclusion was that „Okun´s law is a strong and stable relationship in most countries. Deviations from Okun's law occur, but they are usually modest in size and short-lived."

3. MAIN FACTORS INFLUENCING THE VALIDITY OF OKUN'S LAW

Any economic law cannot be applied at any time and on any economy. Specific features of individual countries and periods should be considered as they may modify resulting values. For Okun's law it is especially true as Okun's law represents a very simple relation of two variables. There are numerous factors that modify resulting numbers of the analysis. The following factors play the decisive role:

[13] Gross National Product of the country is the market value of the final goods and services produced by national bodies of the respective country during a given period.

A) The position of the country in the business cycle[14].

• *Lagged periods of expansion and periods of recession*

It was discussed by Novak (2019) and Gordon (2010). Among all factors influencing resulting values of indicators in a country the position in the business cycle is dominant. Nevertheless, the unemployment reaction to the change in product is not equivalent but different in periods of expansion and periods of recession and is not immediate, but usually in periods of expansion lagged[15].

The above conclusion deserves an explanation. At the beginning of the period of growth (the expansion) higher output is produced by increasing productivity or rising working hours of existing workforce. We may conclude that the economic growth has only a modest effect on a decline in unemployment. Later the ongoing growth requires input of additional labour. Additional labour comes either from the stock of unemployed people and reduces the unemployment rate or from the group of people "out of labour force" which does not influence the unemployment rate. In the period of recession, the situation is not only the opposite one but differs in some aspects. Firms react usually more sensitively to an economic downturn. Their reaction is quicker and often they react before the recession is declared and obvious as there are forecasts or predictions made by many institutions available and published. It means that lay-offs in recessions are more common than the employment of additional workers when production is growing.

In several sources (for example, Novak, 2019), authors speak about different reaction of unemployment to changes in the gross domestic product in the pre-crisis and post-crisis periods.

Another approach compares the growth of the GDP and changes in the rate of unemployment in relation of the growth of actual output to the potential output. "Look at the data over the last 40 years suggests that there may be some asymmetry in the relationship over the business cycle. Even though empirically there seems to be a strong correlation between output growth when it is below potential and increases in the unemployment rate, this relationship disappears when output is growing above potential."[16]

• *Jobless recovery*

It means that output growth in the recovery phase is not accompanied with relevant decrease of unemployment rate. It was to be seen especially in the Great Recession in the period 2007–2009. There are numerous points mentioned in different papers, namely growing labour productivity but two factors play the decisive role. First, firms substitute labour by capital as labour became too costly and prices of capital means tend to decrease. Second, workers in many countries have strong legal protection and a worker once hired is very costly when being dismissed.

B) Changes in the labour market

• *Changing labour market as to the age, professional and industrial structure of labour*

[14] Regular fluctuation in the economic performance of the countries with a market economy that can be observed in ups and downs of different duration. The **recession** is a phase characterized by a slowdown of the output growth rate leading to its possible fall, higher unemployment, inventories rise, raw material prices drop together with possible growth of finished products prices. The sales difficulties result in bankruptcies of enterprises and subsequently banks. A long and deep recession is called **depression**. The **recovery** is characterized by increasing the output growth rate, diminishing unemployment and rising employment. A significantly favourable economic situation is called a **boom**.

[15] Each cycle has unique duration, intensity of recession or level of prosperity, side effects and indicators values. (Fialová, 2008).

[16] Federal Reserve Bank of Cleveland. (2012). Economic Trends – April 2012.

Young people start working later as they study for more years and seniors stop working later as well or they work part-time. With growing share of tertiary sector more women enter the labour market working in services and many people have more than one job.

• *Changing working conditions*
Gross domestic product may increase or decrease at higher or lower rate than the number of unemployed people as working time may change (in last decades people work shorter hours) and labour productivity on the contrary increases.

• *Growing unemployment of young people*
The structure of unemployed people is changing and in "favour" of young people. The number of people in the group "out of the labour force" is growing as well.

• *Growing number of temporary workers*
Temporary workers suffer greater unemployment during the downturn. Temporary contracts increase employment during upturns but less than regular contracts and temporary workers find fewer jobs.

C) Labour market and price level
• *Unemployment is closely linked to inflation*. Instead of NRU[17] economists recommend to apply NAIRU[18]. The indicator is without any doubt a useful tool for any macroeconomic analysis. Changes in the labour market (in both groups of workers, employed or unemployed) are influenced by changes in prices in the economy and vice versa. To consider "non-accelerating inflation rate" is a good method.

Nevertheless, problems that can be seen in measuring the changes in the price level strongly exceed problems linked to other main economic indicators. Inflation published in statistical sources is an imperfect indicator for measuring changes in price level. The indicator used for measuring inflation is CPI (Consumer Price Index). It is obvious that it is limited to measuring changes of prices of consumer basket items only. It means that it does not include prices of securities and real estates, which influence strongly economic growth of the country and which may be the starting factor of a recession as was the case of the Great Recession in 2007–2009. When considering consumer basket as a representative of products and services demanded by consumers, the basket has many weak features. It covers only a part of all goods and services demanded, it is constant for a period of several years and being constant it fixes quantities of goods demanded without respecting consumers substitution of products and preferences in consumption.

4. OKUN'S LAW APPLIED TO THE CZECH DATA 2009 TO 2019

The purpose of this article is to show the current situation of the Czech economy and study whether the Okun´s law holds in this very unusual situation which the Czech Republic faces in last few years. From this reason we limited the data used from the first quarter of 2009 until the first quarter 2019. Calculation were made on the quarter to quarter basis as in the original Okun´s article from 1962 for the comparison. The situation in the Czech Republic was studied by Durech (2014) where important differences from the Okun's law were found.

[17] Natural rate of unemployment – the name given to a key concept in the study of economics by Milton Friedman and Edmund Phelps in the 1960s. An economy is in a steady state of "full employment".
[18] Non-accelerating inflation rate of unemployment refers to a theoretical level of unemployment below which inflation would be expected to rise.

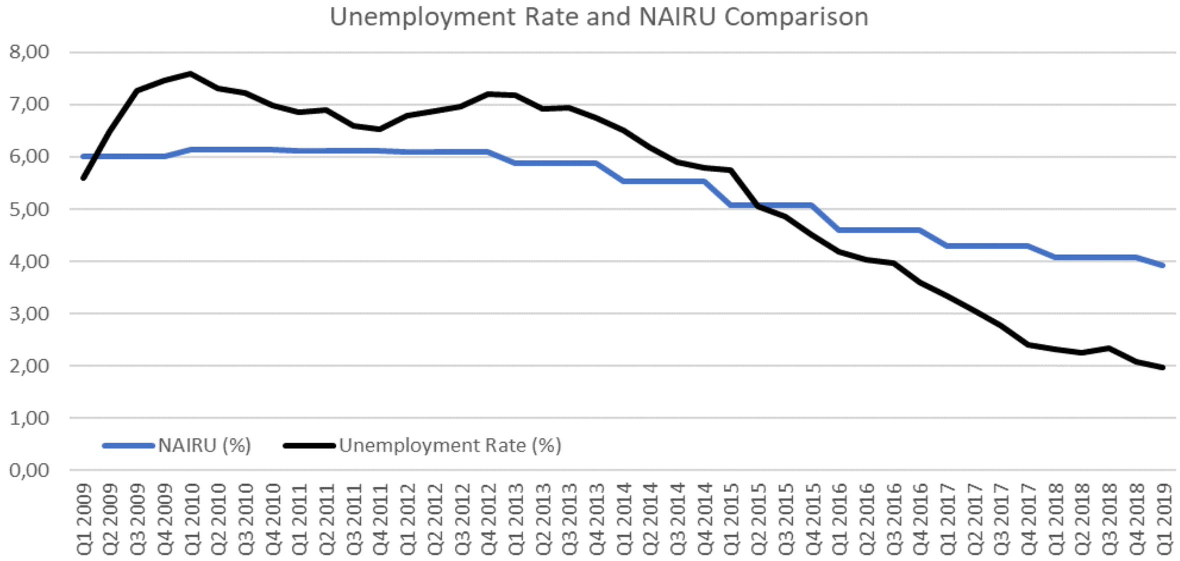
The data used in the analysis come from two sources, CZSO and OECD, that calculates NAIRU, the equilibrium unemployment rate[19] on the yearly basis.
NAIRU is used in last years as another measure of the natural rate of unemployment that is connected with the potential product. When the economy is operating on long-run level of production (GDP is called "potential"[20]), it is associated with an unemployment level known as "natural rate of unemployment"[21].

Figure 1. Data used

Variable	Description	Source
GDP	Chain-linked Volumes of 2010, Seasonally Adjusted (CZK mill.)	CZSO, National Accounts
Unemployment	Unemployment Rate (%), Quarterly Data, Seasonally Adjusted, % of Active Population	CZSO, Labour Force Survey
NAIRU	Equilibrium Unemployment Rate as a Percentage of Labour Force	OECD Economic Outlook

Source: Authors' work

Figure 2. Comparison of the Unemployment rate and NAIRU of the Czech Republic, Q1 2009–Q1 2019



Source: Authors' work based on data from CZSO and OECD (NAIRU), www.czso.cz, www.oecd.org

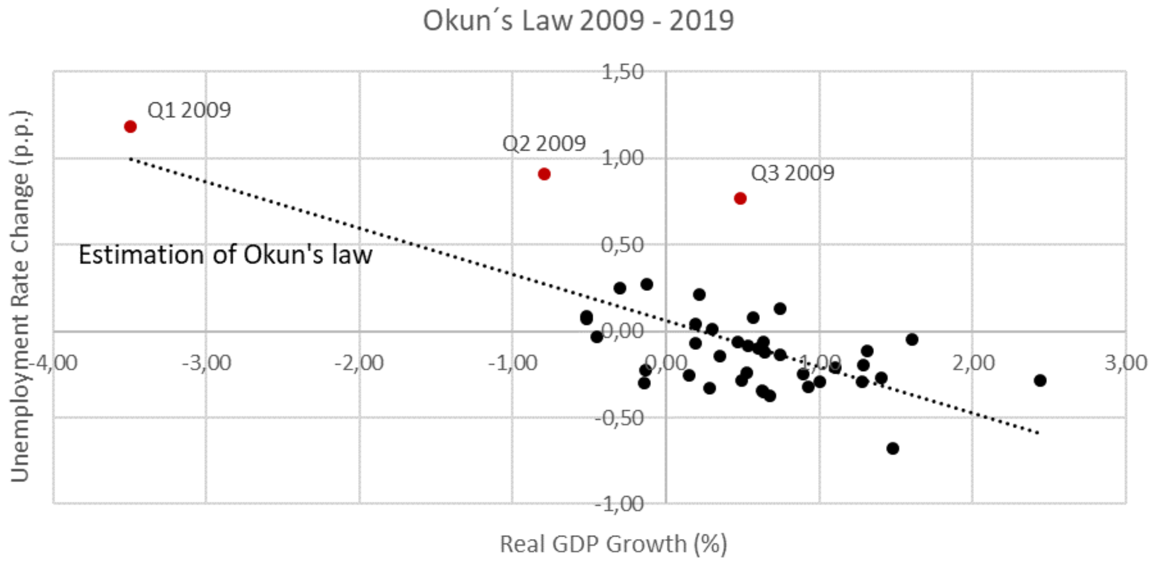
Data used for the calculation of the Okun's law between all studied period 2009–2019 is pictured in the following graph.

[19] The equilibrium unemployment rate (code NAIRU) is estimated using a Kalman filter in a Phillips curve framework which assumes inflation expectations are anchored at the central bank's inflation target. The NAIRU is then projected forward from the last estimated period using a simple autoregressive rule, exceptionally modified to account for recent labour market reforms, until the end of the forecasting horizon. More details on methodology in Rusticelli (2015)

[20] Potential output or full-employment output is the amount of real gross domestic product that an economy can produce when using its resources, such as capital and labour, at normal rates. The term "potential output" is not the same as maximum output, because capital and labour can be utilized at greater-than-normal rates, at least for a time. Country's actual output can exceed its potential output. Frank & Bernanke (2004, p. 651)

[21] Natural rate of unemployment is the part of total unemployment rate that is attributable to frictional and structural unemployment. Frank & Bernanke (2004, p. 653)

Figure 3. Okun's law results in the Czech Republic, Q1 2009–Q1 2019

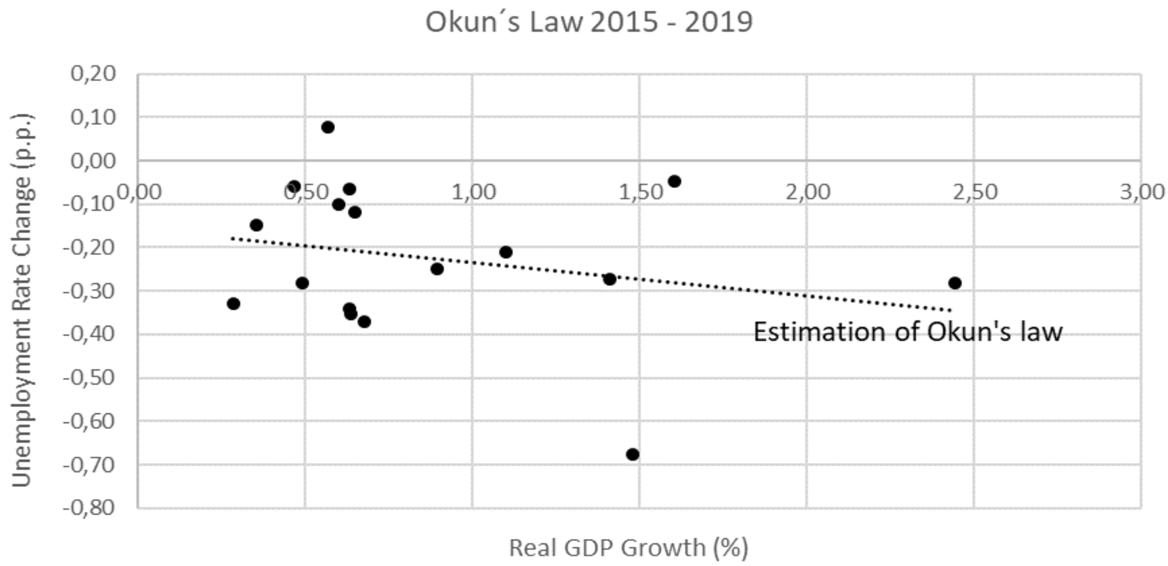


Source: Authors' work based on data from CZSO, www.czso.cz

Values of the regression coefficients of the Okun´s model (1) estimated by OLS and results are shown in following figures. The figure 3 shows that the data from 2009 draw the regression line up and all the rest of the data is much lower. The intercept a of the regression line is therefore positive (0,06). It corresponds with the Okun findings that the rate of unemployment grows when the economy stagnates.

After taking into account the last five years, the picture shows completely different features as it can be seen in the next figure.

Figure 4. Okun's law results in the Czech Republic, Q1 2015–Q1 2019



Source: Authors' work based on data from CZSO, www.czso.cz

The intercept a of this regression line is negative (-0,16) so with zero GDP growth the unemployment rate decreases. This is the opposite finding than the original difference Okun's law therefore these two periods were chosen, all parameters calculated and are shown in the figure 5.

Figure 5. Parameters of the Okun's law in chosen periods, the Czech Republic

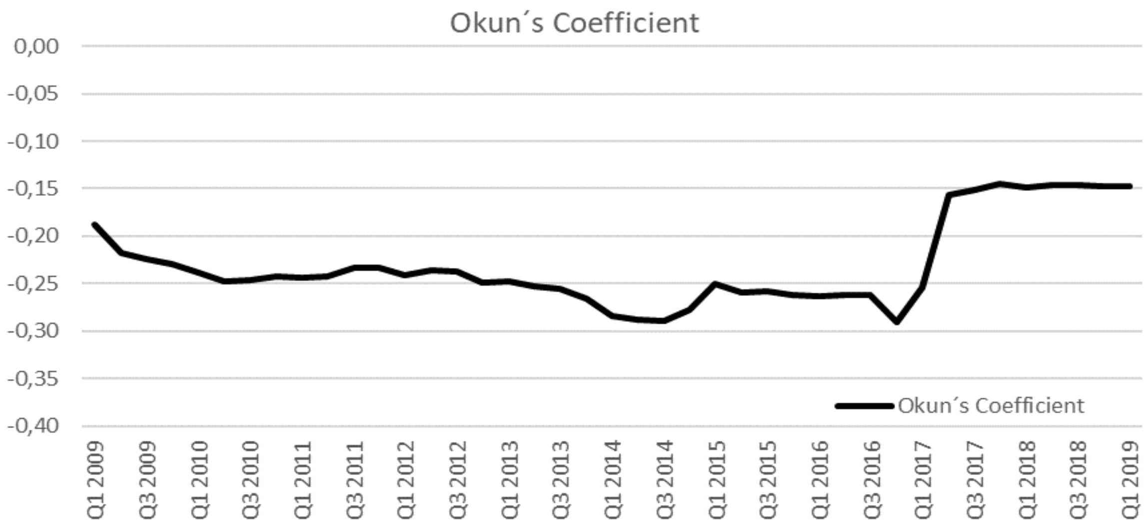
Period	a	b	1/b	-a/b
2009–2019	0,06	-0,27	-3,74	0,22
2015–2019	-0,16	-0,08	-13,14	-2,08

Source: Authors' work based on data from CZSO, www.czso.cz

For the entire period under investigation, 2009 - 2019, Okun's law applies, even the expected decline in GDP with a 1 pp increase in the unemployment rate is reasonable (3,74%). Over the last 4 years, the expected decline in GDP at unit growth of U is already -13,14, i.e. with the unemployment rate growth of one percent, GDP should decline (quarterly) by 13,14%. The -a/b value shows of how much the economy must grow for the unchanged unemployment rate. For the first period the requested GDP quarterly growth by 0,22 % is reasonable while for the second period the decline of GDP is (according to the calculation) expected (-2,08).

In recent papers the authors used the rolling regression approach for the evaluation of the Okun's coefficient development (for example see D'Apice, 2014 or IMF, 2010). The same approach is used in this article for the comparison. The 8 years of quarterly data were used with the Q1 of 2009 starting point.

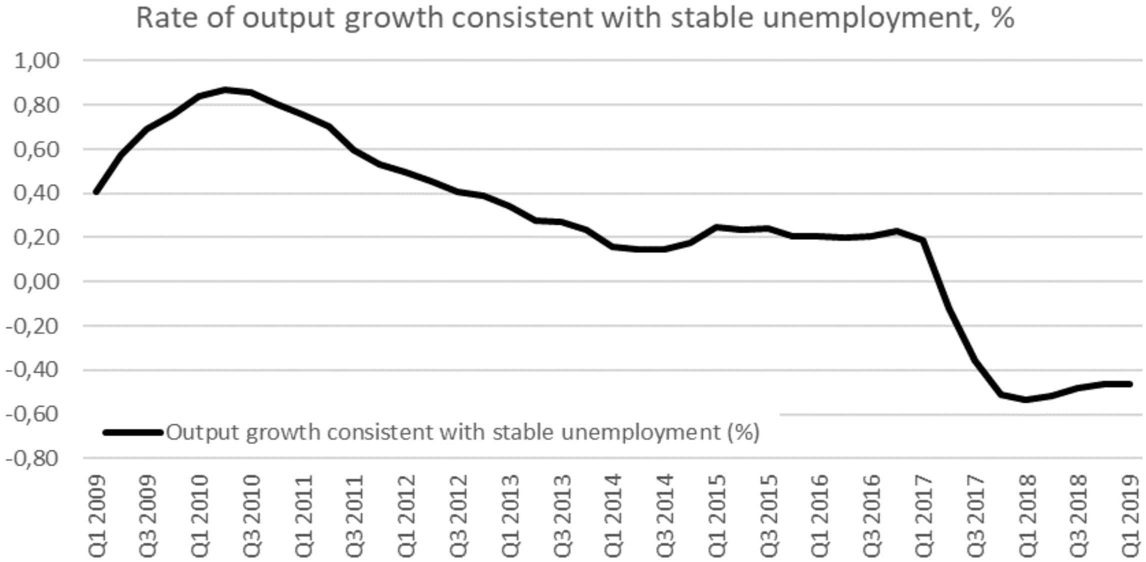
Figure 6. Okun's coefficient, rolling regression approach, window of 8 years of quarterly data of the Czech Republic



Source: Authors' work based on data from CZSO, www.czso.cz

Dates along the horizontal axis denote the last quarter in the sample period for each rolling regression. The Okun´s coefficient had stable behaviour until the first quarter 2017 and after that quarter it increased to the value of -0,15.

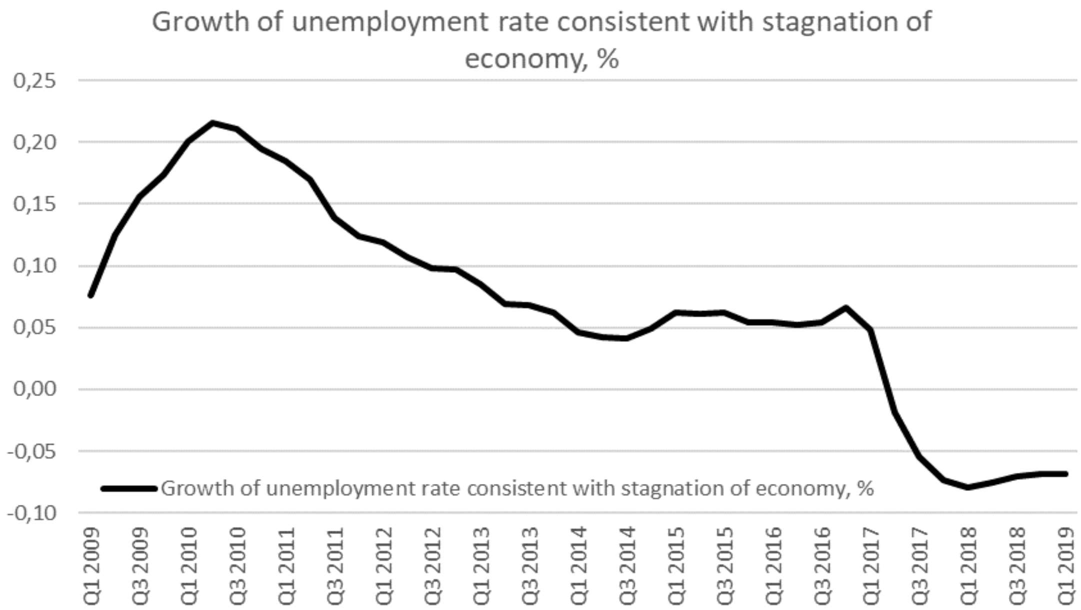
Fig.ure 7. Rate of output growth consistent with stable unemployment, in %, rolling regression approach, window of 8 years of quarterly data of the Czech Republic



Source: Authors' work based on data from CZSO, www.czso.cz

Figure 7 shows expected quarterly GDP growth for the unchanging unemployment rate. Until the first quarter 2017 the rate was positive as stated in the Okun's law but after that period it became negative, therefore it is expected the GDP drop for the unchanged unemployment rate.

Figure 8. Growth of unemployment rate with stagnation of economy, in %, rolling regression approach, window of 8 years of quarterly data of the Czech Republic

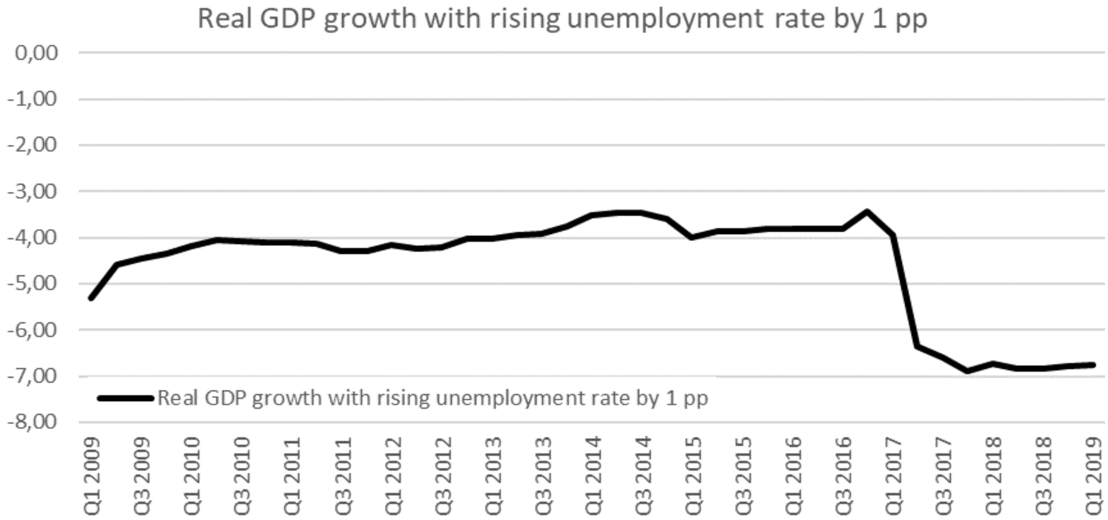


Source: Authors' work based on data from CZSO, www.czso.cz

The opposite view to the Okun's law also discussed in papers is shown in the Figure 8. The expected quarterly growth of the unemployment rate when the economy stagnates, i.e. GDP growth is zero. The results are very similar to those in previous figures. The behaviour of the economy from the investigated perspective was normal but it changed after the first quarter

2017. After this period the model expresses the unemployment rate decrease in the situation when the economy stagnates.

Figure 9. Real GDP growth with rising unemployment rate by 1 pp, rolling regression approach, window of 8 years of quarterly data of the Czech Republic



Source: Authors' work based on data from CZSO, www.czso.cz

The warning coming from the Okun's law is connected with this indicator, of how much the GDP will decrease if the unemployment rate increases by 1 pp. The typical value calculated by Okun is between -3 and -4. This range can be seen in the figure 9 in the most of the values but again the significant drop occurs after the first quarter 2017 when the value is almost double. This indicator can be taken also in the opposite perspective, of how much the GDP must grow for the 1 pp decrease of the unemployment rate. In the last 2 years the expected growth of the Czech economy according to the results is enormous (almost 7% GDP growth).

All the results show the unusual situation of the Czech economy in last years, so the discussion about the application of Okun's law in such situation is very actual. There are two main routes the scientists can go. One of them is to use a modification of the Okun's model and these are already tested and offered in various papers. One of the options is to use the second (gap) version of the Okun's law (Okun, 1962). The previous research offers more complex models such as the dynamic model with the lagged rate of unemployment and lagged real GDP growth (see Gordon, 2010; Ball, 2013). Lee (2000) tests the usage of HP and Kalman filtering on the OECD data. The IMF study (IMF, 2010) uses additional explanatory variables such as the type of unemployment, employment protection legislation, unemployment benefits or share of temporary workers.

The second approach to such situation as described in the paper is to note that this type of combination of factors was not expected when studying the relationship of the output and the unemployment. Therefore, the difference version of Okun's law might have limited usage and the conclusions of such situations should be taken with caution.

5. CONCLUSION

Economics is a social science. It studies the behaviour of people and institutions applying the basic economic rule “the cost-benefit principle”[22]. Economic science uses numerous laws: law of demand, law of supply, law of diminishing marginal utility, law of diminishing returns etc. Economic laws are defined with “ceteris paribus”[23]. Economists do not expect laws to be applied “universally”. On the contrary, they have to turn attention to them in “rainy days”, when they serve as warning and help to avoid unfavourite situations. Okun’s law is an excellent example of it. When choosing specific situations, we have to exclude specific factors and pay attention to main principles and relations as Okun did. Okun turned his attention to mitigating negative results in the development of macroeconomic indicators. We should take the Okun’s law as a rational and useful tool for a government facing growing unemployment or decreasing rate of growth of the economy. It should serve as a warning signal when unemployment in the country is growing that should motivate the government to take steps to stop it and avoid much higher disaster in the economic growth of the country.

Okun’s law is simple as the original version considers only two macroeconomic indicators. On one hand, this simplicity is an advantage (conclusions may be done easily and fast), but on the other hand it may lead to wrong decisions when ignoring important specific modifications.

Unlike microeconomics, where MAXIMA (profit) or MINIMA (costs) are the goal, OPTIMA pay for the government macroeconomic policy. It is true for the economic growth (not only recessions but also the “overheating” of the economy is dangerous), price level (the threat of inflation became replaced also by deflation), labour market (the lack of labour is a new phenomenon) and other fields as well.

This article paid attention to the special situation in the labour market of the Czech Republic with the demand for labour exceeding the supply of labour and gave the evidence that this is not the situation where Okun’s law could be applied. The situation in the labour market in the Czech Republic in recent years is obviously a unique one. It attracts the attention of economists and poses new questions. The competition of firms in the Czech market on the demand side is severe and the labour market obviously needs government involvement.

This new phenomenon does not deny Arthur Okun conclusions. It should serve as a tool for rational macroeconomic policy in the field of labour market with high or growing unemployment. Unemployment is still an alarming problem in many countries and there is no guarantee that the Czech Republic will not be facing this problem in the future. Imbalance in the market as higher demand for labour than supply is the challenge for both, firms (higher wages are a competitive advantage but also higher costs) and for government institutions (support for firms is expensive and can be controversial, e.g. support for immigrants as a workforce). In addition to the labour market, another important macroeconomic indicator should be considered, namely changes in the price level (inflation and especially deflation). Reducing the analysis of the labour market on a factor influencing economic growth is dangerous. Inflation needs to be added.

Unemployment is a general evil in market economies. Firms struggling for survival in recessions have to dismiss workers. The contemporary situation in the Czech Republic is raising new questions and needs new solutions of firms but it needs the help of government on the macroeconomic level urgently, too.

[22] “An individual (or a firm, or a society should take an action if, and only if, the extra benefits from taking the action are at least as great as the extra cost).” Frank & Bernanke (2004, p. 4)
[23] This commonly-used phrase stands for 'all other things being unchanged or constant'.

There must be other tools and ways of solution the imbalance in the labour market in favour of supply found and applied. In the Czech Republic the contemporary "imbalance" in the labour market cannot be taken as the long run change and it should not serve as the rejection of Arthur Okun approach. The situation is a challenge for firms' managers in their activities and for the government to take steps in the macroeconomic policy to help to solve it. The situation in the Czech labour market may seem like a pure microeconomic problem that should be solved by managers of firms in their marketing and organization policies but without the government involvement only some of them will succeed.

BIBLIOGRAPHY

Abel, A. B. & Bernanke, B. & Croushore, D. (2016). *Macroeconomics*, Pearson, 9th Edition, pg. 672. ISBN 978-0134167398.

Ball, L. & Leigh, D. & Loungani, P. (2013). Okun's law: fit at fifty? *NBER Working Paper 18668*.

Frank, R. H. & Bernanke, B. S. (2004). *Principles of Economics*, McGraw-Hill Irwin, 2nd edition, pg. 896. ISBN 9780072503302.

Daly, M., C. & Fernald, J. & Jorda, O. & Nechio, F. (2014). Interpreting Deviations from Okun's Law. *FRBSF Economic Letter, 12*.

D'Apice, P. (2014). The Slovak Labour Market in the Wake of the Crisis: Did Okun's Law Hold? *ECFIN Country Focus*, *3*.

D'Apice P. (2014). Path dependence and the persistence of high unemployment in the Slovak Republic, *ECFIN Country Focus, 4*.

Doğru, B. (2013). The Link between Unemployment Rate and Real Output in Eurozone: A Panel Error Correction Approach. *Procedia - Social and Behavioural Sciences, 99,* 94–103.

Durech, R. & Minea, A. & Mustea, L. & Slusna, L. (2014). Regional evidence on Okun's law in Czech Republic and Slovakia. *Economic Modelling 42(C)*, 57–65.

Elshamy, H. (2013). The Relationship Between Unemployment and Output in Egypt. *The Procedia - Social and Behavioral Sciences*, *81*, 22–26.

Federal Reserve Bank of Cleveland. (2012). Economic Trends - April 2012, *Economic Trends (Federal Reserve Bank of Cleveland)*.

Fialová, H. & Fiala, J. (2008). *The concise dictionary of economic terms*, A plus, pg. 160. ISBN 978-80-903804-2-4.

Gordon, R. J. (2010). Okun's Law and Productivity Innovations, A*merican Economic Review: Papers & Proceedings, 100(2)*, 11–15.

Gurvich, E. & Vakulenko, E. (2017) Macroeconomic and structural properties of the Russian labour market: A cross-country comparison. *Russian Journal of Economics, 3,* 411–424.

Harris, R. & Silverstone, B. (2001). Testing for Asymmetry in Okun's Law: A Cross-Country Comparison. *Economics Bulletin. 5(2)*. 1–13.

IMF (2010). Unemployment dynamics during recessions and recoveries: Okun's Law and beyond, *World Economic Outlook, Chapter 3: Rebalancing Growth*.

Knotek, E. S. (2007). How Useful Is Okun's Law? *Federal Reserve Bank of Kansas City, Economic Review,* Fourth Quarter, 73–103.

Lee, J. (2000). The robustness of Okun's law: evidence from OECD countries, *Journal of Macroeconomics*, *22(2)*, 331–356.

Mankiw, N. G. (2011). *Principles of Macroeconomics*, South-Western Cengage Learning, 6th edition, pg. 576. ISBN 978-0538453066.

Novák, M. Darmo, L. (2019). Okun´s Law over the Business Cycle: Does it Change in the EU Countries after the Financial Crisis? *Prague Economic Papers, 28(2).*

Okun, A. M. (1962). Potential GNP: Its Measurement and Significance, *American Statistical Association, Proceedings of the Business and Economics Statistics Section*, 98–104.

Prachowny, M.F.J. (1993). Okun's Law: Theoretical Foundations and Revised Estimates. *Review of Economics and Statistics, 75(2)*, 331–36.

Rusticelli E. & Turner D. & Cavalleri, M. C. (2015). Incorporating anchored inflation expectations in the Phillips Curve and in the derivation of OECD measures of equilibrium unemployment, *OECD Economics Department Working Papers, 1231*.

Interdisciplinary Works

VALUE PERCEPTION BY HUMAN BRAIN AND THE Ψ-RATIONAL COMPONENT OF ECONOMIC DECISION MAKING

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Abstract
In this paper we set beyond the numbers, discussing how human brain interprets values in real life and how this conceptually relates to economic decision making. Our text builds on existing research, we synthesize and analyze results provided by other authors to induce and discuss outcomes. Although empirical trials in general falsify the assumption of normative rational decision making, we induce that core economic principles, such as the cost / benefit principle, inherency of opportunity cost and decision making at the margin do apply on the bio-cybernetic level. Human brain uses it´s own intrinsic currency to interpret values and memorized data allow to relate the expected to the experienced. It is necessary to distinguish between the "rational" cognitive process and the "economically rational" outcome, as these are two fundamentally different concepts. We furthermore propose to distinguish between the "truly irrational" and what we call "Ψ-rational" within the set of all non-rational components of human decision making. The irrational components, such as missing, unreliable data or cognitive deficit to interpret and process such data always harm the decision making process and lead to economically inefficient outcomes. The Ψ-rational components, such as authentic and pretended altruism, unselfish cooperation, or perception and anticipation of fairness in distribution, contribute to economically efficient decisions within the human society, yet blatantly violating the normative conditions of rational decision making.

Keywords: *decision making, neural correlate, Ψ-rational, rational, value perception*

1. INTRODUCTION

Today we can hear the opinion that the new classical concept of rational economic decision making is incomplete, insufficient and, indeed, inadequate. The applicability of normative theories based on axiomatic economic rationality, such as the Expected utility theory by von Neumann and Morgenstern (von Neumann, 1944) has been challenged by countless empirical trials, the published critique sometimes takes the form of scorn. The descriptive behavioral approach offers examples of non-rational determinants, course and outcomes of economic decision making, but does not offer anything like a consistent theory. The prospective theories, such as the Prospect theory by Kahneman and Tversky (Kahneman, 1979 and 1984) use sound formal models whilst not ignoring the key non-rational components. Still, it does not provide a complete and universally applicable characteristic of the decision making process, namely it may be falsified with empirical data obtained in a trial of trivial design.

On the other hand, the Bounded rationality by Herbert Simon (1957) finds it´s use in different fields, including technical cybernetics, artificial intelligence and machine learning, whilst explicitly breaking down some cornerstones of the normative models, such as optimization or probability calculation (Gigerenzer, 2002). At the time, we have no single theory that could provide a consistent model of economic decision making encompassing all the rational and non-rational determinants, proof against simple empirical falsification.

In this paper, we induce, using analysis and synthesis of information published by other authors and our own (Fiala, 2016 and 2017), that the core new classical economic principles (cost / benefit principle, opportunity cost, decision making at the margin) indeed do apply on the bio-cybernetic level of human economic decision making. Human brain uses it´s own intrinsic currency and the way human brain perceives and interprets value fills at least some gaps between theoretical models and empirical observation. We strive to provide neural correlates published by other authors, where applicable and available.

2. RATIONALITY

The concept of economic rationality should not be confused with the process of rational thinking, as these are fundamentally different phenomena. The economic rationality is a final concept, defined by the best, optimal, most efficient outcome in the first place. By definition it does not matter whether the decision making process leading to such outcome happens in a computer, human brain or a black box. Rather defined conditions must be fulfilled, should the economically rational optimum result from a decision making process, such as availability of reliable, complete, eventually perfect information, flawless ability to understand and use this information, often in mathematical optimization, stable and clear value system allowing the establishment of preference in cardinal, or at least ordinal way. Economic rationality is typically associated with selfish orientation on one´s own benefit (Smith, 2000; Persky 1995). In the new classical models, economically rational decisions are made at the margin, provide benefits not smaller than the costs and do not ignore the opportunity cost. Rational thinking, on the other hand, is a causal, cognitive mental process, typically happening in human brain, that may, but apparently need not lead to an economically rational outcome.

Rational decision is than a decision an agent, more or less human, makes in order to achieve the economically rational outcome, fulfilling the necessary conditions. Game theory provides simple models demonstrating how rational decisions need not deliver the best choice in real life, or even in theory.

Figure 1. Prisoners´ dilemma payoff matrix

Player 2

		α	β
Player 1	α	C , C	A , D
	β	D , A	B , B

Symmetrical normal form game, complete information. Players 1, 2. Strategies α, β. Payoffs A > B > C > D; 2B > (A+D). Source: own processing.

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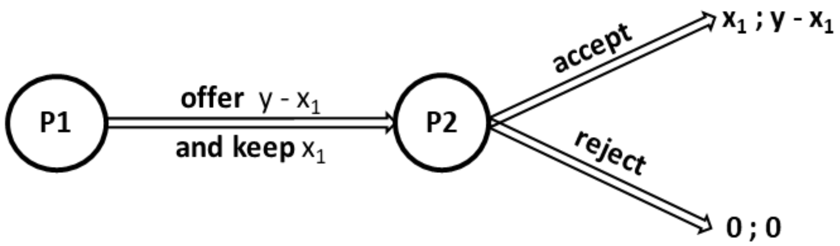
In the Prisoners´ dilemma, for example, the Nash equilibrium provides less than the maximum payoff to both rational players, who inevitably choose the dominant strategy α (Shafir, 1992). It is the strict strategic domination and mutual expectation of rationality that prevent rational players to cooperate, to choose the dominated strategy β. In the iterated Prisoners´ dilemma experiment, Anatol Rapaport achieved the best, although not yet possibly optimal score, relying on the dominated strategy cooperation and the rudimentary communication based on mimicking his opponents strategy in the previous game (Axelrod, 1984).

Figure 2. Ultimatum



Source: Own processing according to Güth (1982).

Extensive form game. Player 1 receives the endowment y and offers a share to Player 2. P2 either accepts, or rejects the offer.

In the Ultimatum game, rational first player offering the smallest possible share will typically achieve zero payoff, that is the least economically effective outcome, in real life. Instead of accepting any share greater than zero, which would be rational, a typical second player expects a "fair" offer and refuses rational offers, again nullifying her payoff (Güth, 1982 and 2014; Nowak, 2000; Oosterbeek, 2004).

The process leading to economically rational outcome does not have to be conscious by definition. Milton Friedman offers his famous example of billiard players (Friedman, 1952). A spinal reflex may serve as another example (Druga, 2011), since to pull away automatically from the source of pain and corporeal damage is faster, therefore more economically efficient, without conscious thinking and considering how to mathematically optimize the process. In a wider sense, the neo-darwinist concept of evolution, where random mutations are tested the hard way to either reproduce, or extinct, may be considered a perfectly economically rational process, in it´s vast majority independent on human conscious thinking. Still, we can safely assume that what we typically consider economic decision making in applied situation, such as buying and selling, setting business processes in order to achieve profit or even record keeping and accounting in order to avoid penalty, depends on human thinking, more or less "rational", i.e. it results from human brain function.

3. HUMAN BRAIN

Human mental processes, including cognitive functions such as thinking and conscious decision making, depend on structure and function of the human brain. Approximately 100 000 000 000 neurons interconnected in complicated tracts and webs, finally forming the complex connectome (Seung, 2012), provide this structure and electrochemical function. Functional imaging methods, such as fMRI, DTI, PET and others, provide convenient tools to associate respective brain areas with specific and defined functions and the reported results, based on such methods, are widely accepted. These methods also have quite stern critiques and objective limitations (Bennet, 2009; Margulies, 2011; Stark, 2001; Vul, 2009). It is important to stress that classical global psychological constructs such as "thinking", "emotions", "consciousness" etc. only partially correspond to the identified electrochemical structures and the functional anatomy is rather complex and complicated (over 11 000 studies identify functional connectivity in more than 150 000 brain areas so far).

There can be no doubt that most real life decisions are not based on reliable, complete or perfect information. The cognitive ability to use information differs from brain to brain (Voracek, 2007) and it is typically far from flawless, which may simply be regarded as cognitive deficit. It is safe to assume that human value system is not stable and sometimes not even clear to the decision maker, as anyone who had married the love of their life and divorced them within 24 months can testify. In other words, in most cases the prerequisites of rational decision making process are presumably not met. In a controlled experiment, the economically rational outcome is often not achieved either (Fiala, 2016).

Would we, as a species, benefit from more economically rational decisions in general? Such idea sounds very tempting, at least to an economist. May be the economic models are not deficient just because it does not accurately describe the reality. May be us, the decision makers, should improve our cognitive ability, should become strictly rational in the normative sense? So far the evolution has tested us the hard way and we are still here, with all our non-rational decision making, that is what we can say for sure here and now. Shall we extend our existence and prosperity, or shall we contribute to it´s termination? What role will the selfish economic rationality play in this process? What role will our altruism and other non-rational human determinants play respectively? It is of course impossible to provide scientifically correct answers to such complex questions, staying away from indoctrination of any kind. We will try to induce some answers, at least partial, later in the text.

4. NEURAL CORRELATES OF VALUE PERCEPTION AND INTERPRETATION

According to Samuelson, an agent with consistent value system behaves as if she converted all alternatives to a common value scale (Samuelson, 1983). To decide between two alternatives, human brain needs to attribute each of these with a value, or an (expected) individual utility. Both quantity and quality aspects matter in this process. The ability of human brain to choose from alternatives of different quality leads to the concept of own, intrinsic universal currency, to which all alternatives get converted (Montague, 2002).

Numerous trials have been conducted in human probands and reported by multiple authors within the last 15 years, correlating the activity of various brain areas with different steps in the decision making process. Several areas have been identified, whose activity probably reflect the individual utility, the intrinsic value given to choice alternatives. These areas are mainly the orbitofrontal cortex (OFC) and ventromedial prefrontal cortex (VMPFC), also ventral striatum (especially ncl. accumbens), cingulate cortex and insula.

The network involving these (and other) areas is in an experiment activated by stimuli of various quality, such as food, drink, money, something pleasant, somebody attractive. Incentives of different quality, monetary or not, correlate with subjective positive or negative utility, profit or loss (Knutson, 2003; Levy, 2012). Using functional diagnostic methods and detecting the activations of the key areas, we may elicit the subjective values associated with respective choice alternatives and therefore establish which alternative the agent will choose (Fitzgerald, 2009).

In trials, where fulfilling various tasks generated uniform monetary rewards authors demonstrated that VMPFC and OFC probably code the subjective utility of money (Glascher, 2009; Levy, 2012). In an experiment where subjects decide between monetary and non-monetary rewards, the subjective value perception of stimuli of different quality may be studied. The authors demonstrate positive correlation between the individual utility and VMPFC / OFC activation and negative correlation with insula activation. Both correlations apply in both profit and loss situations (Fitzgerald, 2009). Both monetary reward and "social reward" in form of improving reputation activate the same area in left striatum (Izuma, 2008). Lin (2012) demonstrated activity in VMPFC / OFC correlating with both monetary and social reward.

According to Levy, we can thus induce, that the VMPFC / OFC activation bilaterally significantly correlates with subjectively perceived utility in humans, expressed in an intrinsic currency, an expected subjective value. Such correlation is parametric and has been confirmed for practically all tested qualities of stimuli. Namely, two incetives of the same subjective value will induce the same activity in the said areas (Levy, 2012). Neural correlates of such intrinsic currency were also detected in the parietal cortex and mesencephalic dopaminergic neurons of the Macacus Rhesus monkey and other non human primates (Klein, 2008; Matsumoto, 2009). The findings obtained in human studies and trials involving non-human primates allows us to induce that valuation is indeed one of the core bio-cybernetical processes happening in our brains, providing data to many different neuronal networks, among others being a constituent of the so called reward system (see later).

In an experiment, it is possible to model costs in the form of waiting time. A necessary waiting between the decision formulation and the administration of the reward significantly reduces the attractivity of the given alternative (Ainslie, 1975). The effect of costs in the form of waiting time on the activation of VMPFC, ventral striatum, cingulate cortex and lateral parietal cortex was demonstrated repeatedly (Kable, 2007; Peters, 2009).

Extensive attention has been paid to behavioral studies of costs in the form of physical and cognitive struggle, as its´ potential to reduce the subjective expected utility of an action is probably clinically relevant in the symptoms of major depressive disorder, schizophrenia, burnout syndrome and even cardiovascular disorders (Bonelle, 2015; Fervaha, 2013; Siegrist, 2010). Behavioral observation was coupled with detection of neural correlates. In accordance with the expectations, calculation of costs and benefits involves different areas in case of physical, respectively cognitive struggle (Botvinick, 2009; Massar, 2015).

Kim supplemented the results comparing the neural correlates of monetary gain / loss and enforced drinking of tasty / distasteful liquid (Kim, 2011). Talmi reported his study, where subjects gained monetary reward at the cost of pain inflicted with a given probability. Insula activation correlated with the behavioral effect of expected pain and negatively correlated with the activation of VMPFC / OFC (Talmi, 2009).

An experience of “benefits” and “costs” associated with previously made decisions is required to involve the principle of opportunity cost into the construction of the subjective expected value, which embodies the memory. Anterior cingulate cortex probably plays the key role in this process (Holroyd, 2013; Silvetti, 2012).

Neuroscience, using functional diagnostic methods, thus detects the “activations” of specific brain areas. Despite the quite widespread misunderstanding, these activations do not detect the electrochemical activity directly, but rather indirectly reflect it´s metabolic consequences. Direct and extremely precise detection of neuronal electric and / or chemical activity is possible, but technically and ethically more complicated. Many neuroimaging studies in humans have thus been directly inspired by the previous studies on rodents and non human primates.

5. NEURAL CORRELATES OF DECISION

In a trial on macaques, Shadlen and Newsome studied the decision making process involving cognitive interpretation of objective information. The monkeys observed dots moving on a screen. If they identified the movement correctly, they got reward in form of their favorite juice. The task was complicated with perceptive noise in form of other, randomly moving dots. The authors detected electric activity of individual neurons and identified groups of neurons in lateral intraparietal area (LIP), whose activity correlated with the dots moving in the right, respectively left direction. The discharge frequency of the respective groups of neurons correlated with the amount of the moving dots. If the difference in frequencies exceeded a certain threshold, the animal made the decision and marked the direction (Shadlen, 2001).

There are multiple trials studying decision formulation depending on cognitive interpretation of objective information. These trials provide consistent results. Groups of neurons of sensory motor tracts, representing the decision alternatives, accumulate the signal, whilst the power of this signal determines the subsequent choice. Information about the consequences of previous decisions, contained in the memory, modulates the signal power during the decision making process (Platt, 2002).

In decision making under risk, or uncertainty, the human, or the animal work with information from multiple sources. This includes subjective interpretations, for example weights given to probabilities (Kahneman, 1992; Prelec, 1998). Memorized experience matters in this process, associating previous decisions and behavior with reward and punishment (Camerer, 2003). Several frontal and parietal cortical areas show increased fMRI activation if the tested subject solves problems involving uncertainty. The activity of lower parietal cortex correlates with the volume of information the subject gets about the previous decisions consequences (Miller, 2005).

Parietal cortex shows increased activity associated with performing cognitive tasks and focusing attention. Some authors therefore consider it´s increased activity associated with decision making under uncertainty a confounding of cognitive processes in a more general sense. Vickery and Jiang demonstrated increased activation of the lower parietal lobulus under uncertainty, compared to decisions made under certainty. They also demonstrated increased activation of the same area when the subject was informed about the consequences of previous decisions, compared to the situations when such information was not given. Such experimental design increased the demands on attention and decreased the area activation in decision making under uncertainty, effectively filtering out the confounding. The authors verified the differences in activation delivering the information in different forms, both direct and indirect, both visual and auditory. The activation of g. frontalis superior, on the other hand, correlated with the cognitive load of attention. The authors induce that solving tasks under uncertainty can be discriminated from general attention on the neurobiological level (Vickery, 2009).

Oliveira studied which hand will a human subject use to touch an instantly visually marked area on a table desk. The decision involves interpretation of memorized information, proprioceptive awareness of the actual position of both hands and spacial interpretation of the marked area. The decision making process in brain involves two simultaneously activated action plans, one for each hand. When the activity of one plan prevails, the respective hand will be sent to the target area by the primary motoneurons of g. praecentralis. Single pulse transcranial magnetic stimulation (TMS) focused on the left posterior parietal cortex can modify the decision making process in favor of the left hand choice. TMS focused on the same area on the right side does not generate a corresponding effect, indicating asymmetry in hemispheral involvement in decision making resulting in motoric action (Oliveira, 2010). The role of posterior parietal cortex in decision making involving memorized data in humans was reported by multiple different trials.

Such neural correlates complement the concept of Bounded rationality (Simon, 1957) and heuristic decision making involving previous experience. Formulation of a decision depends on interpretation of available (neither complete, nor reliable) information both extrinsic and intrinsic, both new and memorized. Trials based on objective behavior, such as movement, are valuable, since we do not have to rely on verbalized interpretation and individual attribution providing unreliable data, representing significant burden to any trial involving humans. The reported data also allow to induce the existence of marginal values playing key role in decision making.

6. THE NON-RATIONAL FAIRNESS

In a behavioral experiment, the first players in Ultimatum typically offer approximately 40–50% of the initial endowment, resigning on the rational play (Güth, 2014). This intuitive, not rational play usually brings the first player a positive payoff. We have already mentioned, that the rational play on the other hand almost always grants zero payoff to the offering player. We have extensively analyzed both players´ behavior in Ultimatum (Fiala, 2016 and 2017), using the existing decision making theories. In the Dictator game, which is a degenerate model similar to Ultimatum, where player 2 only takes passive role and must accept any share offered by player 1, even there the first player offers more than the rational zero, typically something around 20% share (Camerer, 2003; Kahneman, 1986).

The concept of fairness (Rabin, 1993), both expected and anticipated, represents a key non-rational determinant at least partially explaining the players´ behavior in Ultimatum. Player 1 intuitively expects Player 2 refusing unfair offers and presents herself with an approximately fair share. Instead of the normative mutual knowledge of rationality, axiomatic for game theory models, we meet something like "mutual knowledge of inequity aversion". Several inequity aversion models have been presented by various authors (Bolton, 2000; Fehr, 1999). Fair, selfish or illogical behavior in the game correlates with the players´ typology (Levine, 1998).

In games such as Ultimatum, or Dictator, it matters whether the other (or opposite) player is a human, or not. Standard protocol typically requires strictly anonymous, one-off play. It is possible to design the protocol as single-blinded (Fiala, 2016). An offer otherwise interpreted as unfair is accepted by the second player in Ultimatum more probably, if this player was informed that the offering player is not a human, but a computer (Sanfey, 2003). We, humans, treat other subjects and anticipate their behavior with respect to what they are. Typical real world social interactions are neither anonymous, nor one shot games. The anonymization, round limitations and randomization are necessary tools of rigorous protocol standardization, but in real life, we expect the interaction to repeat, we remember others and we understand others will remember us. Still, even in one shot strictly anonymous games we seem to care whether our counterpart is at least a human, or not.

7. THE NON-RATIONAL ALTHRUISM

Fehr reports the behavior of a third, uninvolved, observing player in Ultimatum and Dictator. This third player receives her own endowment and remains directly unaffected by the strategic decisions of P1, or P2. She can either keep her endowment, or spend (a part of) it on punishing one or both the original players, usually in the form of reducing their payoff. In other words, P3 will burn (a part of) her payoff to punish another player for whatever reason. In effect, P3 regularly punishes the "social parasite", the player offering unfair share in Ultimatum and Dictator. Such behavior is called altruistic punishment (Fehr, 2002 and 2004) and definitely represents another non-rational determinant of decision making verified by multiple empirical trials.

In the literature, altruistic punishment is commonly associated with the development of social, ethical and moral norms, widely extrapolated to the fields of family, social, political and economic interactions. Studies describe different behavior of the punishing player depending on whether all players belong to the same ethnical, racial, language etc. group, or not. According to Bernhard, the subjects violating a social norm expect less punishment if the subject with the power to punish belongs to the same group (Bernhard, 2006). Altruistic behavior, favorizing the members of own group (which may be defined in various ways) is often called Parochial altruism. The social behavior norms ensue on interaction between members inside the group (Bornstein, 2003).

In biology, by altruism we mean increasing fitness of an other on the account of decreasing one´s own fitness (Bell, 2008). Such interpretation of altruism does not necessarily imply any conscious ethical categories. Family relations serve as a natural focus of biological altruism, where the parents, altruistically supporting their offspring, this way facilitate the transfer of their own genes.

According to Boyd, the ability to punish significantly influences the evolution of cooperation. Without the possibility to punish, cooperation will only survive in smaller groups, if there are subjects of both types present, cooperative and selfishly non-cooperative. Altruistic punishment will then expand the cooperation to larger groups. Greater punishment grants more cooperation, variability in the punishment severity is effective in the development of cooperation. Altruistic punishment bears it´s evolutionary potential even in anonymous one-off interactions (Boyd, 2003). Lotz demonstrates the relation between the concepts of altruistic punishment and fairness by giving the third players the ability to not just punish the unfair, but also reward, or compensate the ill-conditioned player (Lotz, 2011).

Fehr confirmed the applicability of altruistic punishment for the Prisoners´ dilemma, where 46% third players punish the rational player playing her dominant strategy against the other player´s cooperation. 21% third players punish both rational players in the case of Nash equilibrium, though they punish less severely than in case of the betrayal against cooperation strategic vector (Fehr, 2004).

Altruistic punishment has been reported across various human populations. The respective groups feature differences when it comes to the share of own endowment spent on punishment. The populations expressing more altruistic punishment also express more of other forms of behavior perceived as altruistic (Henrich, 2006). Members of larger and more complex societies punish altruistically more, than members of smaller groups (Marlowe, 2008).

8. THE RATIONAL, Ψ-RATIONAL AND IRRATIONAL COMPONENTS IN HUMAN DECISION MAKING

As already mentioned, conditions must be fulfilled to allow rational economic decision making. An economically rational outcome, such as maximum profit, may theoretically occur randomly, as it sometimes happens to students who had not mastered the optimization calculation, but still luckily guess the right quiz answer. Nevertheless, the rational decision making as a process depends on reliable, complete (or perfect) information, the ability to process the information and a clear, stable value system. These, and potentially others, are the rational components of decision making.

The inability to read or understand the information, to use it in calculation, the missing, unreliable and false data, the inability to understand own value system, it all prevents rational decision making process and the decision maker should seek to eliminate such errors and imperfections in the conditions to make her decisions more economically efficient, more economically rational. Such imperfect components and the resulting process indeed should be called irrational, as it always prevents rational economic optimization and only pure luck may save the decision maker, misunderstanding and miscalculating some devious data, from disastrous effects on their decisions.

Some phenomena, closely connected to human social nature and human social evolution, e.g. the fairness, cooperation and altruism discussed above, clearly do not belong to the rational components. Models such as Prisoners´ dilemma or Ultimatum effectively explain why decisions determined by such phenomena are not rational, at the same time they demonstrate how such components contribute to better payoffs compared to purely normative rational decisions, between human players. No decision maker can ignore these phenomena if they want to make economically efficient decisions among other humans, nobody can eliminate these components in order to achieve more economically rational outcomes. That is why we propose to distinguish such components, call it "Ψ-rational" and discriminate it from those "truly irrational" in human decision making.

We therefore induce that economically efficient decision making in human social environment requires involvement of both the rational and the Ψ-rational components.

9. NEURAL CORRELATES OF THE Ψ-RATIONAL COMPONENT

The so called "reward system" of human brain is a complicated network involving cortical areas, basal ganglia and thalamus. The activity of this network reflects the motivational and rewarding aspects of various incentives, it induces behavior and desire, as well as subjective delight and satisfaction (Schultz, 2015). Such network exists in humans and animals, it gives us satisfaction from eating and makes us eat, it gives us satisfaction from sex and makes us reproduce. It also gives us satisfaction from monetary gain, from perception of fairness, from administering the altruistic punishment, from virtually all rewarding phenomena representing explicit or implicit benefit, observed and described in behavioral experiments.

In humans, the following structures form the reward system: *ventral tegmentum, ventral striatum, esp. ncl. accumbens, dorsal striatum (ncl. caudatus and putamen), substantia nigra, prefrontal cortex, anterior cingulate cortex, insula, hippocampus,* some nuclei of *hypothalamus,* many nuclei of *thalamus, ncl. subthalamicus, ventral pallidum, ncl. parabrachialis* and *amygdala.* Rather complicated is the functional anatomy of the anterior cingulate cortex, divided into it´s *dorsal part* participating rather in cognitive processes and the *ventral part,* participating rather in affective processes (Berridge, 2015; Grall-Bronnec, 2014). Here we meet some previously discussed brain areas involved in value perception and interpretation. Indeed, the reward expectation, valuation and decision making are functions very closely connected in human brain.

Authors generally agree on the involvement of *mesencephalic dopaminergic system* in processing satisfaction and reward. Dopaminergic projections go from ventral tegmentum to ncl. accumbens, which has many bilateral connections with the prefrontal cortex, amygdala and hippocampus (Posner, 2005). Hypoactivation of the mesolimbic system correlates with various negative emotions (Goldstein, 2002). Studies on non-human primates indicate direct involvement of mesencephalic dopaminergic neurons in value and even probability perception (Sirigu, 2016). Serotoninergic projections from ncl. raphe to ventral striatum contribute to the modulation of dysphoric feelings (Daw, 2002).

Data reported by McCabe demonstrate activation of the medial part of gyrus frontalis medialis and the frontal pole (both belong to the prefrontal cortex) correlating with cooperation in many game theory models. Activity in the prefrontal areas is higher in case of playing against a human, compared to playing against a computer, but only in players attempting to cooperate. In the group of non-cooperating players there were no differences in the activation of the said areas. McCabe´s reported data demonstrate involvement of prefrontal cortex in anticipating the opponent´s strategy and involvement of mentalization in the decision to cooperate (McCabe, 2001).

Rilling´s study demonstrates activation of ncl. accumbens, ncl. caudatus, VMPFC, OFC and the ventral anterior cingulate cortex correlating with the strategic set of cooperation in Prisonners´ dilemma (Rilling, 2002). Further studies show activation of frontal insular cortex, DLPFC (dorsolateral prefrontal cortex) and anterior cingulate cortex, correlating with unfair offers in Ultimatum. An unfair offer made by a human correlates with higher activation, than the same offer made by a computer (Sanfey, 2003).

Zink reports different activation of striatum depending on whether the monetary reward follows a correct answer, is therefore well-deserved, or if it is windfall. This nuance is important for the second player perception of fairness in Ultimatum. Activation of ncl. caudatus and ncl. accumbens is associated with well deserved reward, as confirmed by measuring the skin resistance and collecting the subjective interpretation from the evaluated agents. Activation of striatum was not present, if the money was replaced with an insignificant reward without any subjective expected utility. According to the author, striatum contributes to the decision making process mainly evaluating the intensity (value) of the incentive in general (Zink, 2004).

De Quervain demonstrated the activation of dorsal striatum in real second-party punishment in the Trust game (model in extensive form, where non-rational cooperation depends on trust), as opposite to just symbolic punishment. The subjects with higher activation dedicated higher value to gain the ability to punish. The author induces that the punishment is thus accompanied with individual satisfaction (de Quervain, 2004). Fujiwara studied the interpretation of gaining and losing by cingulate cortex. Monetary gain correlated with activation of the foremost and the posterior cingulate cortex. Monetary loss correlated with activation in between these two areas. The activation in the dorsal and middle cingulum probably reflects focusing the attention. The areas processing gain and loss overlap with the areas processing positive, respectively negative emotions (Fujiwara, 2009). Processing the gain and loss by different networks sounds consistent with its´ asymmetrical perception detailed in the Prospect theory (Kahneman, 1979).

Strobel reports activation of ncl. accumbens correlating with punishment in the Dictator game. Activation was present in case of third-party (althruistic) punishment, and in case of second-party punishment it was even higher (Strobel, 2011). These findings imply the difference in processing the punishment between an uninvolved, respectively involved subject. Whilst in case of the third-party punishment we consider althruism to be the key determinant, in case of the second-party punishment there is probably a strong effect of retribution, or revenge. Strobel´s data also imply the common causality of neural processing of satisfaction in both cases. The rate of punishing non-cooperating subjects is higher in groups with higher level of cooperation, which correlates with higher activation of anterior insula and DLPFC (Kodaka, 2012).

Dell´Acqua induces that general perception of fairness is specifically processed by anterior insula, whilst the emotional reaction based on personal involvement in a game is processed by the medial prefrontal cortex. Both processes, i.e. interpretation of (un)fairness in general and interpretation of (un)fairness against self are thus separable (Corradi Dell´Acqua, 2013).

The activation of ventral tegmentum, substantia nigra and ncl. accumbens correlate with processing reward and punishment. Activation of insula increases with the intensity of the punishment in a linear way. Activation of hippocampus and parahippocampal cortex predicts successful retrieval of memorized data. The activity of the areas processing the reward and punishment significantly correlates with the hippocampus activity. Successful memorization is supported by reward and punishment, probably because of the connections between the areas processing memory and the reward system (Shigemune, 2014).

10. CONCLUSION

The rational, Ψ-rational and irrational components contribute to the decision making process in humans, leading to observable behavior. The rational components provide necessary conditions for achieving an economically efficient payoff. The irrational components weed the process and decrease it´ economic efficiency. The Ψ-rational components increase the economic efficiency in human social environment, where purely rational decisions provably fail to provide the best payoffs.

The concept of fairness, manifested as inequity aversion, and the concept of altruism, manifested as altruistic punishment, are examples of such Ψ-rational determinants. The existence of human altruism represents a problem for traditional, deterministic, single round game theory models, that prefer rational play. Human altruism would make no sense if the unit of natural selection was a single human with her ambition to survive and procreate (Okasha, 2006). In his study, based on single round anonymous Ultimatum, using stochastic model in which agents make mistakes in interpretation of strategic choices and payoffs of other players, Rand demonstrates that the natural selection prefers fairness. A parallel behavioral research supports this presumption empirically. Uncertainty about strategic choices of the receiving players and their inconsistent behavior leads to higher offers in Ultimatum. *In this unfair world, myopic self-interest is vanquished whereas fairness triumphs* (Rand, 2013, p.2585). Other authors model the evolutionary advantage of fair and altruistic players (Krasnow, 2015; Wang, 2015).

Were the authors of the new classical economic models and the normative decision making models really so naïve, so blinded by the axiomatic presumption of rationality, that they simply did not fathom the discrepancy between their theories and real life? Could they have not foreseen the army of behaviorists falsifying their theories with experiments of trivial design?

Going deep down to the neural level, we can see human brain craving benefit higher than cost, comparing expected against experienced involving the opportunity cost, making the decisions at the margin. The valuation processes of human brain are integral part of the reward system, responsible for motivation, satisfaction and decision making, it provides data to great many neuronal networks allowing their various and diverse functions.

The intrinsic currency, to which our brain converts and in which it expresses all expected and experienced benefits and costs is of course not identical with the payoff used in normative models or accounting systems. Money, so simple to count, is just one of the incentives of diverse quality, converted to the intrinsic value, together with all others, possibly representing reward or punishment, positive or negative benefit, primary or reinforced.

At this point, it would not be correct to state that at the neuronal level, decision making is indeed economically rational and the difference against the new-classical theory lies in a different currency, re-defining the meaning of “explicit” and “implicit” in value perception. The simplicity of normative models cannot be plainly transferred to the vast, complex and complicated connectome of human brain. The concert of rational, Ψ-rational and irrational components in human decision making proposed in this paper is nothing more than a conceptual utility used to deal with the notorious controversy between the theoretical and the empirical in human economic decision making.

BIBLIOGRAPHY

Ainslie, G. (1975). Specious reward: a behavioral theory of impulsiveness and impulse control. *Psychological Bulletin*, 82 (4), p. 463–496.

Axelrod, R. (1984). The Evolution of Cooperation. New York, *Basic Books*. ISBN 0465021212.

Bell, G. (2008). Selection: The Mechanism of Evolution. Oxford, *Oxford University Press*, p. 367–368. ISBN: 0198569726.

Bennett, C.; Miller, M. (2009). Wolford, G. Neural correlates of interspecies perspective taking in the post-mortem Atlantic Salmon: An argument for multiple comparisons correction. *NeuroImage*, 47, p. 125.

Bernhard, H.; Fischbacher, U.; Fehr, E. (2006). Parochial altruism in humus. *Nature*, 442, p. 912–915.

Berridge, K.; Kringelbach, M. (2015). Pleasure systems in the brain. *Neuron*, 86(3), p. 646–664.

Bolton, G.; Ockenfels, A. (2000). ERC: A theory of equity, reciprocity, and competition. *American Economic Review*. 90, p.166–93.

Bonnelle, V.; Veromann, K.; Burnett Heyes, S.; Lo Sterzo, E.; Manohar, S.; Husain, M. (2015). Characterization of reward and effort mechanisms in apathy. *Journal of Physiology – Paris*, 109 (1–3), p. 16–26.

Bornstein, G. (2003). Intergroup Conflict: Individual, Group, and Collective Interests. *Personality and Social Psychology Review*, 7 (2), p. 129–145.

Botvinick, M.; Huffstetler, S.; Mcguire, J. (2009). Effort discounting in human nucleus accumbens. *Cognitive, Affective and Behavioral Neuroscience*, 9 (1), s. 16–27.

Boyd, R.; Gintis, H.; Bowles, S., Richerson, P. (2003). The evolution of altruistic punishment. *Proceedings of the National Academy of Sciences of the U.S.A.*, 100 (6), p. 3532–3535.

Camerer, C. (2003). Behavioral game theory: Experiments in strategic interaction. Princeton, New Jersey: *Princeton University Press.* ISBN 9780691090399.

Daw, N.; Kakade, S.; Dayan, P. (2002). Opponent interactions between serotonin and dopamine. Neural Networks, 15(4-6), p. 603–616.

Druga, R.; Grim, M. (2011). Anatomie centrálního nervového systému. 1. ed. Praha, *Galén*, ISBN 9788024618951.

Fehr, E.; Schmidt, K. (1999). A theory of fairness, competition and cooperation. *Quarterly Journal of Economics*, 114, p. 817–851.

Fehr, E.; Gachter, S. (2002). Altruistic punishment in humans. *Nature, 415*, p. 137–140.

Fehr, E.; Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior*, 25 (2), p. 63.

Fervaha, G.; Graff-Guerrero, A.; Zakzanis, K.; Foussias, G.; Agid, O.; Remington, G. (2013). Incentive motivation deficits in schizophrenia reflect effort computation impairments during cost-benefit decision making. *Journal of Psychiatric Research*, 47 (11), p. 1590–1596.

Fiala, J.; Starý, O.; Fialová, M.; Holasová, A.; Mejzlíková, T.; Bemš, J. (2016). *Value perception in the Ultimatum Game: A Blinded Randomized Trial.* Ekonomický časopis, 64 (6), p. 519–538.

Fiala, J.; Starý, O.; Fialová, H.; Holasová, A.; Fialová, M. (2017). *Ekonomická racionalita ve hře Ultimatum.* Acta Oeconomica Pragensia, 1, p. 64–78.

FitzGerald, T.; Seymour, B.; Dolan, R. (2009). The role of human orbitofrontal cortex in value comparison for incommensurable objects. *Journal of Neurosciece*, 29(26), p. 8388–8395.

Friedman, M.; Savage, L. (1952). The Expected-Utility Hypothesis and the Measurability of Utility. *Journal of Political Economy*, 1952, LX (December), p. 463–74.

Fujiwara, J.; Tobler, P.; Taira, M.; Iijima, T.; Tsutsui, K. (2009). Segregated and integrated coding of reward and punishment in the cingulated cortex. *Journal of Neurophysiology*, 101(6), p. 3284–3293.

Gigerenzer, G.; Selten, R. (2002). Bounded Rationality: the adaptive toolbox. Cambridge, *MIT Press*. ISBN 0262571641.

Gläscher, J.; Hampton, A., O´Doherty, J. (2009). Determining a role for ventromedial prefrontal cortex in encoding action based value sinals during rewardrelated decision making. *Cerebral Cortex*, 19(2), p. 483–495.

Goldstein, R.; Volkow, N. (2002). Drug addiction and its underlying neurobiological basis? Neuroimaging evidence for the involvement of the frontal cortex. *American Journal of Psychiatry*, 159(10), p. 1642–1652.

Grall-Bronnec, M.; Sauvaget, A. (2014). The use of repetitive transcranial magnetic stimulation for modulating craving and addictive behaviours: a critical literature review of efficacy, technical and methodological considerations. *Neuroscience and Biobehavioral Reviews* 47, p. 592–613.

Güth, W.; Schmittberger, R.; & Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization, 1982, 3(4),* p. 367–388.

Güth, W., & Kocher, M. (2014). More than thirty years of ultimatum bargaining experiments: Motives, variations, and a survey of the recent literature. *Journal of Economic Behavior and Organization*, 108, p. 396–409.

Henrich, J.; McElreath, R.; Barr A.; Ensminger, J.; Barrett, C.; Bolyanatz, A.; Cardenas, J.; Gurven, M.; Gwako, E.; Henrich, N.; Lesorogol, C.; Marlowe, F.; Tracer, D.; Ziker, J. (2006). Costly Punishment across Human Societies. *Science. New Series*, 312 (5781), p. 1767–1770.

Holroyd, C. (2013). Theories of anterior cingulated cortex function: Opportunity cost. *Behavioral and Brain Sciences,* 36 (6), p. 693–695.

Izuma, K.; Saito, D.; Sadato, N. (2008). Processing of social and monetary rewards in the human striatum. *Neuron*, 58(2), p. 284–294.

Kable, J. (2011). The cognitive neuroscience toolkit for the neuroeconomist: A functional overview. *Journal of neuroscience, psychology and economics,* 4 (2), p. 63–84.

Kahneman, D.; Tversky, A. (1979). Prospect theory: analysis of decision under uncertainty. *Econometrica.* p. 263–291.

Kahneman, D.,; Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39, p. 341–350.

Kahneman D.; Knetsch J.; Thaler R. (1986). Fairness as a constraint on profit seeking: Entitlements in the market. *American Economic Review.* 76, p. 728–741.

Kahneman, D.; Tversky, A. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5 (4), p. 297–323

Kim, H.; Shimojo, S.; O´Doherty, J. (2011). Overlapping responses for the expectation of juice and money rewards in human ventromedial prefrontal cortex. *Cerebral Cortex*, 21(4), p. 769–776.

Klein, J.; Deaner, R.; Platt, M. (2008). Neural correlates of social target value in macaque parietal cortex. *Current Biology*, 18 (6), p. 419–424.

Knutson, B.; Fong, G.; Bennett, S.; Adams, C.; Hommer, D. (2003). A region of mesial prefrontal cortex tracks monetarily rewarding outcomes: characterization with rapid event-related fMRI. *Neuroimage*, 18(2), p. 263–272.

Kodaka, F.; Takahashi, H.; Yamada, M.; Takano, H.; Nakayama, K.; Suhara, T. (2012). Effect of cooperation level of group on punishment for non cooperators: a functional magnetic resonance imaging study. *PLoS One*, 7(7), p. 413–438.

Levine, D. (1998). Modeling altruism and spitefulness in experiments. *Review of Economic Dynamics*. 1, p. 593–622.

Levy, D.; Glimcher, P. (2012). The root of all value? A neural common currency for choice. *Current Opinion in Neurobiology*,, 22(6), p. 1027–1038.

Lin, A.; Adolphs, R.; Rangel, A. (2012). Social and monetary reward learning engage overlapping neural substrates. *Social Cognitive and Affective Neuroscience*, 7(3), p. 274–281.

Lotz, S.; Okimoto, T.; Schlösser, T.; Fetchenhauer, D. (2011). Punitive versus compensatory reactions to injustice: Emotional antecedents to third-party interventions. *Journal of Experimental Social Psychology*, 47(2), p. 477–480.

Margulies, D. (2011). The Salmon of Doubt: Six Months of Methodological Controversy within Social Neuroscience. Published: In Choudhury, S.; Slaby, J. Critical Neuroscience: A Handbook of the Social and Cultural Contexts of Neuroscience. Oxford, *Wiley – Blackwell*, p. 273–285. ISBN 9781444333282.

Marlowe, F.; Berbesque, J.; Barr, A.; Barrett, C.; Bolyanatz, A.; Cardenas, J.; Ensminger, J.; Gurven, M.; Gwako, E.; Henrich, J.; Henrich, N.; Lesorogol, C.; McElreath, R.; Tracer, D. (2008). More 'altruistic' punishment in larger societies. *Proceedings of the Royal Society B: Biological Sciences*, 275 (1634), p. 587–590.

Massar, S.; Libedinsky, C.; Weiyan, C.; Huettel, S.; Chee, M. (2015). Separate and overlapping brain areas encode subjective value during delay and effort discounting. *NeuroImage,* 120, p. 104 –113.

Matsumoto, M.; Hikosaka, O. (2009). Two types of dopamine neuron distinctly convey positive and negative motivational signals. *Nature*, 459(7248), p. 837–841.

McCabe, K.; Houser, D.; Ryan, L.; Smith, V.; Trouard, T. (2001). A functional imaging study of cooperation in two-person reciprocal exchange. *Proceedings of the National Academy of Sciences of the U.S.A.,* 98, p. 11832–11835.

Miller, M.; Valsangkar-Smyth, M; Newman, S.; Dumont, H.; Wolford, G. (2005). Brain activations associated with probability matching. *Neuropsychologia*, 43, p. 1598–1608.

Montague, P.; Berns, G. (2002). Neural economics and the biological substrates of valuation. *Neuron*, 36(2), p. 265–284.

von Neumann, J., Morgenstern, O. (1944). Theory of Games and Economic Behaviour. Princeton. *Princeton University Press*. Originally published 1944. As a resource used the edition 2007. ISBN 9780691130613.

Nowak, M.; Page, K.; Sigmund, K. (2000). Fairness versus reason in the Ultimatum game. *Science*, 289 (5485), p. 1773–1775.

Okasha, S. (2006). Evolution and the Levels of Selection. Oxford. *Oxford University Press*. ISBN 9780199267972.

Oliveira, F.; Diedrichsen, J.; Verstynen, T.; Duque, J.; Ivry, R. (2010). Transcranial magnetic stimulation of posterior parietal cortex affects decisions of hand choice. *Proceedings of the National Academy of Sciences of the U.S.A.,* 107(41), p. 17751–17756.

Oosterbeek, H.; Sloof, R.; van de Kuilen, G. (2004). Cultural differences in Ultimatum game experiments: Evidence from a meta-analysis. *Experimental Economics, 7(2)*, p. 171- 188.

Persky, J. Retrospectives: The Ethology of Homo Economicus. *The Journal of Economic Perspectives*, 1995, 9 (2), s. 221–231.

Peters, J.; Büchel, C. (2009). Overlapping and distinct neural systems code for subjective value during intertemporal and risky decision making. *Journal of Neuroscience,* 29 (50), p. 15727–15734.

Platt, M. (2002). Neural correlates of decisions. *Current Opinion in Neurobiology*, 12(2), p. 141–148.

Posner, J.; Russell, J.; Peterson, B. (2005). The circumplex model of affect: An integrative approach to affective neuroscience, cognitive development and psychopatology. *Development and psychopathology*, 17(3), p. 715–734.

Prelec, D. (1998). The probability weighting function. *Econometrica*, 66, p. 497–527.

de Quervain, D.; Fischbacher, U.; Treyer, V.; Schellhammer, M.; Schnyder, U.; Buck, A.; Fehr, E. (2004). The Neural Basis of Altruistic Punishment. *Science*, 305 (5688), p. 1254–1258.

Rabin, M. (1993). Incorporating fairness into game theory and economics. *American Economic Review*. 83, p. 1281–1302.

Rand, D.; G., Tarnita, C.; Ohtsuki, H.; Nowak, M. (2013). Evolution of fairness in the one-shot anonymous ultimatum game. *Proceedings of the. National Academy of Science, 110*, p. 2581–2586.

Rilling, J.; Gutman, D.; Zeh, T.; Pagnoni, G.; Berns, G.; Kilts, C. (2002). A neural basis for social cooperation. *Neuron*, 35, p. 395–405.

Samuelson, P. (1947). Foundations of Economic Analysis (Enlarged edition). Originally published: Cambridge, 1947. *Harvard University Press*. As the resource used the edition: Cambridge, 1983. *Harvard Economic Studies*. ISBN 9780674313033.

Sanfey A.; Rilling J.; Aronson J.; Nystrom, L.; Cohen, J. (2003). The neural basis of economic decision-making in the ultimatum game. *Science*, 300, p. 1755–1758.

Seung, S. (2012). Connectome: how the brain´s wiring makes us who we are. New York. *Houghton Mifflin Harcourt Publishing Company*. ISBN 9780547678597.

Shadlen, M.` Newsome, W. (2001). Neural basis of a perceptual decision in the parietal cortex (area LIP) of the rhesus monkey. *Journal of Neurophysiology*, 2001, 86, p. 1916–1936.

Shafir, E.; Tversky, A. (1992). Thinking through uncertainty: nonconsequential reasoning and choice. *Cognitive Psychology*, 1992, 24, p. 449–474.

Shigemune, Y.; Tsukiura, T.; Kambara, T.; Kawashima, R. (2014). Remembering with gains and losses: Effects of monetary reward and punishment on successful encoding activation of source memories. *Cerebral Cortex*, 24(5), p. 1319–1331.

Schultz, W. (2015). Neuronal reward and decision signals: from theories to data. *Physiological Reviews*, 95(3), p. 853–951.

Siegrist, J. (2010). Effort-reward imbalance at work and cardiovascular diseases. *International Journal of Occupational Medicine and Environmental Health*, 23 (3), p. 279–285.

Silvetti, M.; Verguts, T. (2012). Reinforcement learning, high-level cognition, and the human brain. Kapitola z knihy: Neuroimaging – Cognitive and Clinical Neuroscience, editoval: Bright, P. Rijeka, *InTech*, ISBN 9789535106067.

Simon, H. (1956). Rational Choice and the Structure of the Environment. *Psychological Review*, 63 (2), p. 129–138.

Sirigu, A.; Duhamel, J. (2016). Reward and decision processes in the brains of humans and nonhuman primates. *Dialogues in Clinical Neuroscience*, 18 (1), p. 45–53.

Smith, A. (2000). The Wealth of Nations. Originally published as two volumes of: An inquiry into the nature and causes of the wealth of nations. London, 1776. As the resources used the edition: New York, 2000. *Modern Library*. ISBN 0679783369.

Stark C.; Squire, L. (2001). When zero is not zero: the problem of ambiguous baseline conditions in fMRI. *Proceedings of the National Academy of Sciences of the U.S.A.*, 98 (22), p. 12760–6.

Strobel, A.; Zimmermann, J.; Schmitz, A.; Reuter, M.; Lis, S; Windmann, S.; Kirsch, P. (2011). Beyond revenge: Neural and genetic bases of altruistic punishment. *NeuroImage*, 54 (1), p. 671–680.

Talmi, D.; Dayan, P.; Kiebel, S.; Frith, C.; Dolan, R. (2009). How humans integrate the prospects of pain and reward during choice. *Journal of Neuroscience*, 29(46), p. 14617–14626.

Vickery, T.; Jiang, Y. (2009). Inferior Parietal Lobule Suports Decision Making under Uncertainty in Humans. *Cerebral Cortex*, 19(4), p. 916–925.

Voracek, M. (2007). Something old, something new, something borrowed and something blue: National IQ and the integration of cognitive-ability research. *European journal of personality*, 21(5), p. 757–759.

Vul, E.; Harris, C.; Winkielman, P.; Pashler, H. (2009). Puzzlingly High Correlations in fMRI Studies of Emotion, Personality, and Social Cognition. *Perspectives on Psychological Science*, 4 (3), p. 274–290.

Wang, L.; Ye, S.; Jones, M.; Ye, Y.; Wang, M.; Xie, N. (2015). The evolutionary analysis of the ultimatum game based on the net-profit decision. *Physica A*, *430*, p. 32–38.

Zink, C.; Pagnoni, G.; Martin-Skurski, M.; Chappelow, J.;, Berns, G. (2004). Human striatal responses to monetary reward depend on saliency. *Neuron*, 42(3), p. 509–17.

ARE THERE ANY DIFFERENCES IN THE PERCEPTION OF FINANCIAL REPORTING AND ACCOUNTING PROFESSION IN DIFFERENT ACCOUNTING MODELS? COMPARISON OF THE CZECH REPUBLIC AND GREAT BRITAIN

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Abstract
Aim, idea: Our research aims to establish whether there are any differences in the perception of financial reporting and the role of accountants in two different environments: in the Czech Republic and Great Britain. We wanted to reveal if there are any differences in two countries representing two different accounting models: Anglo-Saxon and continental, more specifically Anglo-Saxon and mixed model of accounting.
Data and method: To achieve this goal we have used the method of a questionnaire survey which included a set of questions and model situations. The questions and situations were targeted to problems and situations where different attitudes can be expected. The respondents were the students of the university/faculty with economic orientation in the Czech Republic and Great Britain and Ireland. All students were at the beginning of their university studies, having passed the comprehensive secondary school or secondary vocational school, coming from larger cities. The responses obtained were statistically evaluated. We have used the F-test was to verify the significance of differences between two sets of responses.
Results: The results confirmed our hypothesis: we have revealed that significant differences in both the perception of the accounting profession and financial reporting and in solutions of accounting situations. The differences were confirmed as statistically significant.
Limitation: The findings have many limitations. The greater one lies in the extent of the respondents and their representativeness. However, they are indicative and can be used for future research.
Contribution: The results can be a contribution to the long-term debate concerning the differences in the national character of accounting standards and the potential and real effects of IFRS implementation.

Keywords: *financial reporting, the accounting profession, continental model, Anglo-Saxon model*

1. INTRODUCTION

1.1 Differences in national accounting systems

In the process of financial reporting harmonization, many differences in national accounting systems around the world have been identified. These differences became the base for the accounting systems classification. An effective tool for identifying and measuring the differences between national systems of accounting provided "the cultural differences" defined by Hofstede and then Gray´s accounting value dimensions (Hofstede, 1980; Gray, 1988; Hofstede et al., 2010). At the last stage of the classification four models have been defined: 1. the Anglo-Saxon model, 2. the Continental model, 3. South American model. 4. The „Mixed model". The „Mixed model" has been defined in the transition countries of central and eastern Europe where the accounting and its role in the economy undergoing a process of changes as a part of the transforming process to the market principles.

The following research confirmed the characteristics of an accounting system and differences in accounting practices are attributable to differences in socio-economic, historical, cultural and political contexts. And in this context the main role has the type of legal system, i.e. code law and the common law.

In Common law countries, typically Anglo-American countries, it can be observed some specific features: Developed equity markets which serves as the major source of companies funding, legislation system which is oriented on protecting the interest of shareholders, the accounting and financial statements which report the economic reality (substance over form) in a transparent and reliable manner, with the aim to support investors decision making more than firm governance. The accounting standards-setting boards in these countries are generally independent organizations of professional accountants and are not in any connection to tax collection: tax legislation and financial accounting are considered as separate functions and tax aspects do not influence on accounting procedures.

In the code law countries with the Continental model of accounting, the capital flows and company funding have traditionally been provided by banks. The financial reporting is aimed to ensure the interests of creditors, mainly of banks, and credit protection. At the same time, it serves for the tax collection and the accounting procedures are defined with regards to the tax calculation. The tax system and accounting system are interdependent, and tax legislation has a substantial influence on accounting and accounting procedures (Nerudová, 2011). Financial reporting practices are less transparent, more form over substance with an emphasis on rigid compliance with the legislation (Sucher, Jindřichovská, 2004). Accounting standards-setting is under the strong supervision of state authorities (Borker, 2013), the accounting profession has only an advisory position.

To ensure comparable, reliable and transparent information in the transnational environment, across the border of national economies, is a mission of International Financial Reporting Standards (IFRS). For more than two decades, IFRS has been implemented in the national environments of many countries. The form of the implementation differs: IFRS is a second system alongside the national one, or IFRS are the only system-substitution of the national one, or IFRS was only partially implemented: it is obligatory only for selected firms or only selected standards (Nobes, Parker, 2012). As is confirmed by numerous studies the originally transnational standards in this process are acquiring national features and local way of application and provide information only to a limited extent comparable. Significant differences between accounting standards in the countries both in Europe and in the world thus remain and the effect of the IFRS introduction on the financial data comparability is controversial.

At this stage, the attention shifts from the standards and standard-setting to the area of its practical application and the accounting profession in real, national conditions, and at the same time to the economic practice and their readiness to assess the economic processes as foreseen by IFRS. The conflict between the results of IFRS application in the national conditions and the intention of IFRS setters can be seen in the origin of IFRS. It lies in the Anglo-Saxon conditions based on the common law system and the rules-based approach to the solution of accounting situations. It requires a fundamentally different approach to keep accounting records and financial statements compilation.

In emerging economies, the implementation of IFRS is a part of the overall transformation of the economy into market principles. In the area of the accounting system, the two types of changes are observed. The first one relates to institutional accounting changes: restriction of the role of the Ministry of Finance in accounting regulation, emerge of the accounting profession, switch towards IAS/IFRS, multiplication of accounting information users, improvement of the accounting training system and transformation of State control into independent audit activities. The second type concerns accounting system change that includes: the creation of accounting legislation for private companies, adaptation of accounting nomenclature to the market economy, implementation of capitalistic accounting principles, transformation of financial statements and of accounting concepts such as capital, assets, profit, intangibles and goodwill (Le & Barbu, 2010).

1.2 Accounting and accounting profession in the Czech Republic and Great Britain

The accounting system and position of the accounting profession in the Czech Republic have its roots in the historical development of the economy and the Czech nation and state as a whole. Manufacturing tradition, relatively high developed industries together with a significant role of small businesses formed a base for financial reporting. Financial reports have developed with the orientation to the information needs of good management and stewardship of companies. The stewardship can be considered as a typical feature of business management for the german speaking countries, in a broad sense for the countries in central Europe. In these countries, the accounting is focused on the information needs of banks, managers and the state. The accounting profession plays a quite weak role. The only regulatory body of accounting is the Ministry of Finance. Accounting is regulated by the Act prepared by the Ministry of Finance and approved by the Parliament. The Ministry of Finance issued also detailed guidance for accounting in the form of degree and standards. Although they are not a part of the Act, it became obligatory and are strictly required by tax authorities. Academic staff (VSE Prague), specialized professional organizations (KDP, KA) and the National Accounting Council established in 1999 cooperate in the preparation of accounting legislation. However, their position is subordinate to the interests of the Ministry of Finance.

The accounting and accounting profession in Great Britain has developed under the influence of the different types of business law and a different system of equity redistribution and financing. Business law was developed as a common law, i.e. based on precedents and legal customs, although the normative sources of law are also used. Accounting is only to a limited extent regulated by law. Accounting practice, represented by professional associations, has a primary impact. These associations issue standards that summarize the best solutions and practices in the bookkeeping and preparation of financial statements that are conveyed in this form for general use. The purpose of accounting statements is to provide suitable and reliable information primarily to participants in capital markets.

1.3 The aim of the research

Our investigation aims to find out if there are any differences in the perception of financial data and accounting profession in different national environments. We have used the questioning and the respondents were the students of the first-year university study representing the Anglo-Saxon and Continental model, specifically the Czech Republic and Great Britain and Ireland. The reason for questioning the young people-students of the universities was the supposition they are the most representative of the national traditions and common views.

We want to identify if the way of thinking in selected areas of reporting is different compared to this one rooted in the rule-based environment. The method used for this purpose was based on the comparison of solutions to selected situations. These model situations were designed to reflect the differences between the two systems. The reason for questioning the young people-students of the universities was the supposition they are the most representative of the national traditions and common views.

The method used for this purpose was based on the comparison of solutions to questions and selected model situations which were designed to reflect the main differences between the perception of the accounting and accounting profession and in the solution of simple accounting procedures in the two systems. The reason for questioning the young people-students of the universities was the supposition they are the most representative of the national traditions and common views. Based on the previous research we supposed that there will be significant differences between the responses and solutions of the two groups of students in all of the assessed areas.

The text of the paper is structured as follows: In section two a brief overview of the results of similar research is performed, in section three set of the respondents and the questionnaire are described. In section four the results and partial findings are presented. In section five conclusions and potential topics for future research are proposed.

2. LITERATURE REVIEW

The problem of the differences in the financial reporting and accounting profession is a topic of many research projects focused to the issue of IFRS implementation. Most of them turn the attention to the national and cultural specifics as a source for the explanation of the obstacles observed in the process of the IFRS use in national condition. The perception of accounting and accounting profession as a part of accounting model characteristics has been recently examined in many countries. The researches were conducted mostly in developed societies of Western Europe and North America. The researchers investigate the perception of accounting and accounting profession in the USA (Allen, 2004), in Ireland (Byrne & Willis, 2005, Buchan, 2005). Comparative and historical analyses of the development of accounting and accounting profession as a part of the transition to a market economy was done by Baker et al. (2015).

The reasons for the different positions of accountants and accounting profession were also investigated in connection with the different systems of corporate governance when the two different systems of corporate governance, Anglo-American and Continental European models are distinguished. These two systems differ significantly and influenced the structure, behavior of the economic subjects. The difference is arising from the separation of ownership from control which has to be solved through different mechanisms (the board of directors). The accountants and accounting perform different functions in these two systems (Wenger & Kaserer, 1997; Goergen et al., 2008), but these aspects are still only partially investigated.

How do the professional accountants assess the IFRS procedures and how they are prepared to use them has examined J. Strouhal and C. G. Bonaci (2014). However their findings document the willingness of the accountants to follow international standards, the results also confirmed little different views and attitudes compared to the ones expected in IFRS. These results correspond to the findings of some other researchers (Baker et al., 2015; Albu et al., 2014; Kubíčková & Jindřichovská, 2016; Pavlát, 2016). They stressed the tradition and historical experience are firmly rooted in the national conditions and represent a significant barrier in the IFRS application.

The features of the accounting system and accounting profession in conditions of the Czech Republic were recently characterized by Žárová et al. (2014), Albu et al. (2013), Strouhal and Bonaci (2014), Sucher et al. (2005), Albu et al. (2014), Jindrichovska & Kubickova D. (2017) and some others. Their findings confirmed that the national system of financial reporting has changed significantly, but more from the institutional point of view (legislature, professional organizations), and less from real accounting practice (Le & Barbu, 2010). The professional organizations (Chamber of Auditors, Chamber of Tax Advisors) were established and it slightly increased the weight of the accounting profession. Due to the weak capital market and ownership structure of Czech companies (60 percent of enterprises owned by foreign owners or as a subsidiary of foreign companies) accounting is still viewed more from the perspective of taxes rather than from the perspective of investor and management decisions. The way of thinking of accountants in the accounting practice has changed only slightly. It was assessed in the previous stage of research (Jindrichovska & Kubickova, 2016; Kubíčková & Nulíček, 2018).

3. DATA SET AND METHODOLOGY

Our research aimed to find out whether there are any differences in the perceived status of financial reporting and the accounting profession in different national environments – in the conditions of the Czech Republic and Great Britain together with Ireland. We wanted also to discover whether there are any distinctions in approaches to solving selected accounting situations. The research was based on the assumption used in prior literature (Le & Barbu, 2010; Kubíčková et al., 2014) that the rule-based accounting when to be converted to the principle-based system has to overcome the tacit behavioral patterns and solutions and the inertia of accountants´ thinking as well as of accounting practice. We also supposed that there are differences in the assessment of the role of the accounting profession and accounting information.

To achieve the aim we have used the questioning method. The enquiring we realized in the two groups of students at the beginning of their university studies. The first group was formed by the students from the Czech Republic (but also from Russia and other countries of the former Soviet Union living in the Czech Republic for a long time). The second group consisted of students from Great Britain (but also from Poland) and Ireland (but also from Malaysia and China). The conditions in Great Britain and Ireland can be assessed as similar due to the close economic cooperation and the similar accounting system. In total, we have got the responses from the 60 students from the Czech Republic (Continental-Mixed model) and the 33 students from the GB and Ireland (Anglo-Saxon model).

Students in both groups were predominantly high school graduates, only a few ones were graduates of vocational schools. When finishing their studies the students want to work in management positions in the company or financial institution. It was therefore plausible to assume that the respondents have a certain knowledge of economic issues and thus it can be supposed their own opinion on the questioned issues.

The questions and model situations in the questionnaire were formulated based on the hypothesis: In the thinking of the Czech people still dominate the features corresponding to the continental model of accounting, i.e.

a) the accounting and financial reporting is subject to tax purposes,
b) the position of accountants is assessed less important than the other manager positions,
c) in case of variant solutions tax optimization is preferred over accounting data reliability.

The questionnaire contained four parts: The first part included the question concerning the description of the respondent (their age, completed education, economic and financial reporting experience). The following part was aimed at the perception and evaluation of accounting data in business management. In the third part, the approach to the solution of selected accounting situations was tested. In the fourth part, we investigated the attitude of respondents to earnings management and tax optimization. In the fifth part, the opinion on the accounting solution of financial leasing was examined.

In the construction and formulation of the questions and model situations, we used the findings presented in the articles, e.g. Tsakumis (2003), Ryan (2006), Prochazka (2006), Strouhal & Bonaci (2014) and in the previous stage of research. Some questions were constructed using the Lickert scale assessment, the solution of model situations consisted of choosing one from several proposed options representing different attitudes to financial reporting.

Data collected using the questionnaire were then coded and subsequently analyzed using descriptive statistics (i.e. mean, standard deviation) to analyze their structure and value.

To measure the degree of similarity of the two sets of responses we employed the correlation coefficient and the F-test to confirm or reject the similarity of the two sets of answers.

4. RESULTS

In the first step of the questionnaire, we investigated how the students perceive and evaluate the role and the position of accounting in business management and how they understand the role of data in financial statements. We wanted to find out the perception of accounting and the importance of financial statements and its role in the economy. Two questions in the questionnaire focused on these areas. In the first one, the seven assertions were formulated and the respondents have to assign - based on the Lickert scale - one of the five proposed values when the 1 means the highest importance and the 5 means no importance. The answers and the average values reached in the two groups of respondents are presented in Table 1.

Table 1. The main goal of financial statements´ information is:

		GB+I	CZECH GROUP
A	Providing information about processes in the company for its management and administration	1,61	**1,67**
B	Providing information on the company´s financial situation and its performance for the stock exchange transactions and other investors activities	**1,45**	1,90
C	Providing information for determination of the amount of tax liability	1,58	1,87
D	Providing information for staff evaluation and remuneration	2,36	2,47
E	Providing information for managers´ evaluation	2,18	2,50
F	Providing information for banks and other creditors for the purpose to assess the borrowers´ creditworthiness	1,63	2,08
G	Others	x	x
CORRELATION		0,896108	
F-TEST		0,838871	

Source: own investigation

The main goal of the accounting information was most often seen in the Czech group in the use for companies´ management and administration (a), in the Great Britain group in the use for the stock exchange transactions and other investors´ activities. As can be seen the results in the two groups are different: in the Czech group, the purpose of financial information is considered in the company´s management and administration, while in the Great Britain group the purpose of financial information is seen in the investors decision making and assessment of company´s performance. These results are not surprising. They reflect the main differences between the Anglo-Saxon and the continental (or “mixed”) model of accounting and confirm the differences in the role of accounting in the companies governance. This conclusion is confirmed by the value of the F-test, but the correlation of the results confirms only a little differences.

The next question was aimed to reveal the opinion on the significance of financial statements and financial information for a particular set of users. The significance was classified in five degrees: a) exclusive importance, b) very important, c) indifference d) minor or negligible importance, and e) no importance). The answers in the two groups of students are presented in Table 2.

Table 2. The importance of financial statements for a particular set of users

		GB+I	Czech group
a	Top managers of the company	1,55	1,69
b	Managers at various management levels	2,00	2,08
c	Investors - interested in buying shares in a company	1,55	1,64
d	Owners of the company, shareholders	**1,51**	**1,49**
e	Banks and other financial institutions providing credit and other financial services	1,55	1,78
f	Suppliers	2,12	2,29
g	Customers	2,73	2,56
h	Local and regional authorities	2,54	2,39
i	Financial and tax authorities	1,64	1,64
j	Employees	2,48	2,81
k	Other institutions	x	x
Correlation		0,942542	
F-test		0,896789	

Source: own investigation

Note: the interpretation: the lower the number, the higher the importance.

In the structure of answers to the second question, some differences between the two groups can be seen. However, in both groups, the most frequent solution is the same. It was the one, declaring the accounting data as the most important for owners and shareholders (d). The significance of accounting data for other users was assessed differently. In the Czech group, the significance for the company´s managers and investors´ decision making was assessed as less significant (value of 1,69 and 1,64 respectively) than in the GB group (value of 1.55 and 1,55 respectively). In the GB group, relatively high importance of accounting data was assessed for banks and financial institutions. In the Czech group, the importance for the banks and financial was assessed lower compared to the tax and financial authorities. The least importance was attributed to the use of accounting data by employees (Czech group) and customers (GB group).

In summary, the importance of financial data is seen by Czech students higher for owners, the GB students for owners too, but relatively at the same extent for the investors, managers, and banks. This fact can be seen as a reflection of the two types of economy and accounting systems and correspond to the specific development of both countries.

In the following part of the questionnaire, we tested whether there are any differences in the proposed solutions of simple accounting situations. We used three model situations, the solutions of which differed not only in the procedure but in the reason of this solution. In these suggested solutions we tested the willingness to adjust the accounting data for various reasons (true and fair view, tax savings, etc.). The reason for the selection was the most important. The model situation and its suggested solutions were described as are follows:

"You are in a position of company´s accountant and you have to solve the following issue: The customer has to pay to your company for the products´ delivery. However, the customer got into the uneasy financial situation and asks for the extension of the due date. Is the financial situation is becoming difficult and it is possible that he will not pay the full amount. The end of the reporting period is approaching and the value of the receivables will be reported in your balance sheet. What accounting treatment of this situation you will suggest?" *(mark the solution a), b) or c)).*

The answers of both groups of students are presented in Table 3.

Table 3. The accounting rules of reporting and their compliance

		GB+I		**Czech group**	
		Number	%	Number	%
a	You reduce the amount of Receivables (creating adjustment), because the original amount of Receivables would be improperly expressed the volume of the firm´s assets concerning the risks that emerged.	21	**64%**	23	35%
b	You reduce the amount of Receivables (creating adjustment) because the reduction in the amount (adjustments) can reduce the tax base and tax obligations.	5	15%	17	**40%**
c	You do not reduce the amount of Receivables (you do not create the adjustment) because the reduction in the item did not occur and only future development will show what will have to be recorded in the books.	7	21%	10	25%
Correlation		0,77572			
F-test		0,71549			

Source: own investigation

The responses-suggested solutions in both groups differ significantly. The most frequently proposed solution in the Czech group was solution b, which was chosen by 40 percent of respondents. In this solution, the reason to reduce the amount of Receivables is the possibility of tax reduction, which represents the low respect to accounting rules and the reliability of financial data. In the group of GB, the solution with the highest frequency was the first one (a), which was proposed by 64 percent of responses. In this solution, the accounting rules – true and fair view, the principle of prudence, the reliability of accounting data – is respected. The frequency of the third solution which represents the insufficient understanding of accounting rules is similar in both groups. In this model situation and its suggested solution, the differences between the two groups and two different national backgrounds are most evident.

The next model situation was aimed to test the role of accounting in the economy that is reflected in the accountant's thinking and decision-making. Again, the five proposed solutions differ mainly because of the reason why they should be chosen. The reason reflects the different perceptions of accounting data and its role in the economy. The model situation was as follows.

"The chief accountant of the company has decided to use all available opportunities given within the accounting rules to report the lowest possible earnings. His efforts to report the lowest profit you consider as: ... *(mark the most appropriate suggestions in table below).*"

The results of both the groups of students are presented in table 4.

Table 4. The accounting rules and their compliance

		GB+I		Czech group	
		Number	%	Number	%
a	reasonable, because it will not need to pay large dividends,	2	6,1%	4	6,8%
b	reasonable, because you will not have to pay high taxes	11	33,3%	30	**50,8%**
c	unwise because it decreases the share price of the company on the stock exchange,	1	3,0%	11	18,6%
d	unwise because will worsen the company credibility in the eyes of banks and credit availability	13	**39,4%**	7	11,9%
e	unwise because it will worsen the company's reputation in the eyes of all stakeholders.	6	18,2%	7	11,9%
Correlation		0,4155			
F-test		0,2178			

Source: own investigation

The responses in the two groups of students are – similar to the previous situation – completely different. The most frequent answer in the Czech group was the second solution (b) which justifies the selected solution by reducing the tax liability. It represents the prevailing attitudes to accounting and its role in the company management of most of the economy practitioners in the Czech Republic. The most frequent answer in the GB group was the fourth solution (d), in which the reducing of earnings is considered as unwise because it will worsen the company´s credibility in the eyes of banks. The attention to the external users and external providers of funds is typical for accounting in the Anglo-Saxon countries.

The solutions of this situation in both groups confirmed the differences between the assessment of the accounting and financial reports in the economy in conditions of the two countries, which can be assessed as representatives of the Anglo-Saxon and continental model of accounting, more preciously the Anglo-Saxon and "mixed" model. The differences in the two sets of answers are also confirmed by the value of correlation and corresponding F-test.

5. CONCLUSIONS AND LIMITATIONS

The results of our research reveal significant differences in the assessment of the role of accounting and accountants in the economy depending on the national background of respondents. The answers confirmed that there are still great differences in the opinion on the role of accountants and accounting data in the economic systems. The differences were also found out in the attitudes to the accounting data and its users and reliability. Despite the two decades of implementation of IFRS, significant differences between national accounting systems persist. The individual attitudes revealed and proved in the questionnaire survey, are transferred outside the institutional changes (changes in legislature, in accounting standards, in professional institutions, in education). The changes in personal attitudes may be the biggest obstacle to harmonization.

The answers varied significantly in all of the three questions on attitude to the accounting information and the role of accountants. The key differences were revealed in the perception of the nature of financial information and its role in the business, in the approach to distortion of financial information. The results can be considered as clearly demonstrated differences reflecting the two different national backgrounds of respondents.

The findings have many limitations and have to be assessed mainly as indicative. On the other side, the results present and describe the core differences in the thinking of economic practitioners in the two countries, Great Britain and the Czech Republic, i.e. between the Anglo-Saxon and Continental and "mixed" model of accounting.

Limitations of our findings lay in several aspects. The first limitation lies in the number of the respondents and the structure of both groups. The limitation can be seen also in the selection of the respondents - the first-year university students may not be reliable representatives of the national environment. They can be seen as quite young and without a firm opinion on some economic and accounting issues as well as on the issues of manager positions and managers´ task and information needs. The second limitation lies in the construction and wording of the used questions and model situations. Their reliability to capture researched characteristics ought to be verified in the pre-research phase as well as the questions´ and model situation´s formulation as well as the wording of suggested answers or solutions.

To ensure more precious findings we recommend to repeat the research in the future and the different countries. Also, the groups of respondents should be more preciously and intentionally defined and the questioning should be accompanied by the explanation of the tasks.

Despite these limitations, the results obtained can be considered as very interesting and useful and reflecting the two different accounting environments. The results, as well as the method-questionnaire, can be the base for the forthcoming researchers.

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BIBLIOGRAPHY

Albu C., Albu N. & Alexander D. (2014). When global accounting standards meet the local context – Insights from an emerging economy. *Critical Perspectives on Accounting*, 25(6), 489-510. DOI: 10.1016/j.cpa.2013.03.005

Allen, C. L. (2004). Business students' perception of the image of accounting. *Managerial Auditing Journal*, 19(2), 235–258.

Baker, R. C., Barbu, M. E. & Le T. N. (2015). A Historiographical review of research concerning accounting changes in post-communist economies. *The Accounting Historians Journal*, 42(1), 1–36.

Borker, D. R. (2013). Is There A Favorable Cultural Profile For IFRS?: An Examination And Extension Of Gray's Accounting Value Hypotheses. *International Business & Economics Research Journal* (IBER), 12(2), 167–178. https://doi.org/10.19030/iber.v12i2.7629

Byrne, M. & Willis, P. (2005). Irish secondary students' perceptions of the work of an accountant and the accounting profession. *Accounting Education*, 14(4), 367–381.

Buchan, H. F. (2005). Ethical Decision Making in the Public Accounting Profession: An Extension of Ajzen's Theory of Planned Behavior, *Journal of Business Ethics*. 61(2), 165–181.

Goergen, M., Manjon, M. C. & Renneboog, L. (2008). Is the German system of corporate governance converging towards the Anglo-American model? *Journal Manage Governance* (2008) 12, pp. 37–71., DOI 10.1007/s10997-007-9040-7)

Gray, S. J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, (3), 1–15.

Hofstede, G. (1980). Culture's consequences – international differences in work-related values. Beverly Hills, London: Sage Publications.

Hofstede, G., Hofstede, G. J., & Minkov M. (2010). *Cultures and Organizations: Software of the Mind*. 3rd ed. New York: McGraw-Hill.

Jindřichovská I., & Kubíčková D. (2016), Perception of Accountants and Accounting Profession in two Countries: Different Terms Economy and Culture. *International Journal of Economics and Business Administration. 4(*3), 60–79.

Jindrichovska I., & Kubickova D. (2017), The Role and Current Status of IFRS in the Completion of National Accounting Rules – Evidence from the Czech Republic. Accounting in Europe, 14(1–2), 1–11. DOI: 10.1080/17449480.2017.1301671.

Kubíčková D., & Jindřichovská I. (2016). The comparability and reliability of financial information in the sector of Czech SMEs (ten years of IFRS as a part of the Czech accounting context). *European research studies journal*. 19(4), 64–77.

Kubíčková D. & Nulíček V. (2018). Financial Reporting and its Perception in Different National Environments: the Case of the Czech Republic and the China Republic. In: Proceedings of the conference "INTED 2018", Valencia (Spain), pp. 520–529. DOI: 10.21125/inted.2018.

Kubíčková D., Jindřichovská I., & Kocmanová Š. (2014), *Globalization and cultural differences in financial reporting*. In: proceeding of the international conference "The 8th International Days of Statistics and Economics", (MSED), Slaný: Melandrium, 785–794.

Le T. N. & Barbu, E. (2010). Accounting as Catalyst of Economic Transition: An Overview of the Twenty-year Progression from a Communist to a Capitalist Accounting System, *CAHIER DE RECHERCHE 2010-02 E2.*

Nerudová, D. (2011), *Harmonizace daňových systémů zemí Evropské unie.* 3. vyd. Praha: Wolters Kluwer ČR, 2011. 319 s.

Nobes, C. & Parker, R. H. (2012). *Comparative International Accounting*. 12th ed. London: Pearson Education.

Pavlát V. (2016), *On Pitfalls of Standard-setting*. In: Proceedings of the international conference "IFRS-global rules and local use", AAUni Praha, 90–96.

Procházka, D. (2006). Approaches to the Regulation of the Accounting". *European Financial and Accounting Journal,* 1(2), 30–48.

Ryan, S. G. (2006). Identifying Conditional Conservatism, *European Accounting Review*, 15(4), 511–525.

Strouhal, J. & Bonaci C. G. (2014). *Accounting Harmonization trends from the Perspective of Czech Professional Accountants.* In: Conference on Business, Economics and Social Sciences, Dubai, UAE, 56–69. 2014.

Sucher P., Jindřichovská, I. (2004). Implementing IFRS: A Case Study of the Czech Republic. *Accounting in Europe*. 1(1), 109–141. DOI:10.1080/0963818042000262757

Sucher, P., Kosmala, K., Bychkova, S., & Jindrichovska, I. (2005). Introduction: Transitional economies and changing notions of accounting and accountability. *European Accounting Review*, 14(3), 571–577.

Tsakumis, G. T. (2007). The Influence of Culture on Accountants' Application of Financial Reporting Rules. *ABACUS,* 43(1), 27–48. Doi: 10.1111/j.1467-6281.2007.00216.x2007.

Wenger, E. & Kaserer, C. (1997). The German System of Corporate Governance – A Model Which Should Not Be Imitated, Papers 14, *American Institute for Contemporary German Studies*.

Žárová, M., Procházka, D., & Roe, J. (2014). *Financial reporting in the Czech Republic*. Praha, Oeconomica.

FINANCIAL SOLUTIONS TO A COMPANY'S FOREIGN MARKETS EXPANSION

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Abstract
This paper focuses on the forms of financial and accounting options that might be used by companies when expanding abroad. The author made a hypothesis that the choice of appropriate financial tools can substantially reduce potential losses from international sales contracts. The qualitative methods of in-depth insights into specific concepts and phenomena were used together with the empirical data showing the amount and importance of their use in selected international markets. A practical case study illustrates the findings at the end of the text. The author is of the opinion that the role of financial solutions in international trade constantly increases and that the deep knowledge and practical experience can significantly optimize a cash flow of traders according to the level of prices, interest rates, exchange rates, taxation and transaction cost.

Keywords: *factoring, forfaiting, leasing, switch, financial derivatives, round-tripping*

JEL Classification: *M41, G15, P45*

1. INTRODUCTION

To succeed on a global market against foreign competitors, companies shall offer their customers attractive delivery terms supported by appropriate means of payment. The aim for each export transaction is getting paid in full and on time. International trade presents a spectrum of risks causing uncertainty about the timing of payments between a seller and a buyer. An appropriate means of payment should be chosen in order to minimize the payment risk and accommodate the needs of the buyer. A proper method, mutually desirable for both seller and buyer, should be agreed upon during contract negotiations. For exporters, any deal is successfully done only "when they see the colour of money", i.e. until payment is received. The exporters want to receive payment as soon as possible, preferably at the moment of placing the order or prior to send the goods to the importers. The importers, on the contrary, want to receive the goods as soon as possible, but to delay the payment – preferably until the goods is sold and generate enough income to pay the exporter. From the financial point of view, the decision about advance payment, payment at delivery or transfer of money after delivery implicates who credits the deal. It is a matter of time value of money, so companies carefully optimize their cash flow according to the level of prices, interest rate, exchange rate, taxation and transaction cost. The following text focuses on five basic forms how to avoid or decrease the financial loss from the international sales contracts. The aim is to properly describe their basic characteristics, show the way of using them, and bring some empirical evidence about their current occurrence and importance in international markets. The simulation case study has been attached to illustrate the findings.

2. RESEARCH METHODOLOGY

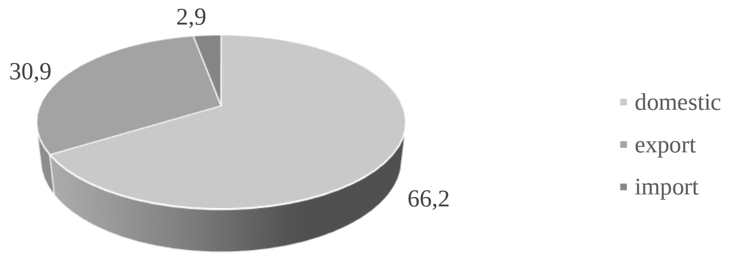
The research methodology used within this paper is both, qualitative and quantitative. To achieve the first objective (i.e. to explain and describe the steps a company should follow in order to avoid or decrease the financial loss from international sales contracting), the qualitative methods were used: description, interpretation, contextualization, and bringing in-depth insights into specific concepts and phenomena. The second objective (i.e. to illustrate how the different forms of financial and accounting options that can remove or at least mitigate the risks) was achieved through the practical case study using simple simulated calculations and practical outcomes appraisal.

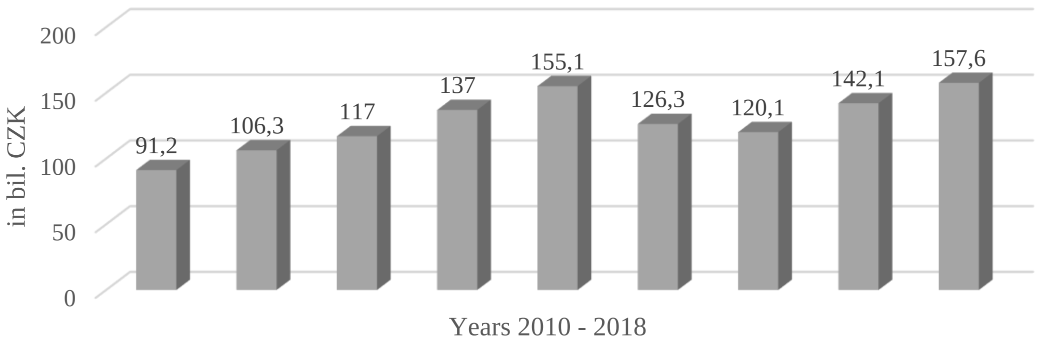
3. FACTORING & FORFEITING

Factoring is a way of financing and securing of short-term credits provided by the deliveries of goods and services. It is based on the cession of unpaid short-term receivables from the sale of goods to a specialized factoring company that takes over their collection. The cession of receivables is usually done without a recourse (regression) of the original creditor (supplier), their duration is usually 30–90 days (in exceptional cases up to 180 days). The supply of consumers' goods, fabricated engineering products, electronics etc. are financed. Factoring is dealt with by specialized financial institutions or legally independent subsidiaries or affiliated societies of large banks. The legal basis for the relationship between the factor and its client (the exporter) is a factoring contract whereby the seller undertakes to cede its receivables to the factor and the factor undertakes to provide the agreed services such as financing of trades, collecting debts from debtors, assuming liability for the payment of receivables by customers, assessment of customers' creditworthiness, providing information, administrative services etc. If the factor assumes liability for the payment of receivables by the customers, he also fulfils the function of the guarantor for the risk of insolvency and payment unwillingness of the debtor. For this, he shall be entitled to a special reward, so called delcredere. Some factoring companies ensure this risk. In general, the remuneration for the services provided by the factor is an agreed percentage share of the invoiced price. Its amount depends on the extent of services provided and the risks assumed, the customers' creditworthiness, the achieved amount of turnover, the riskiness of the territory etc. The use of factoring in the international trade is suitable especially for repeated supplies of goods to a stable range of customers on the target market. With factoring, the company may obtain financing easier and fast compared to asking funding from banks. It also gets the full support of an experienced staffs taking care about its credit management, so the company can concentrate better on its production and sales activities[24].

According to the Czech Leasing and Finance Association, factoring deals in the Czech Republic are quite popular and their annual volume is around CZK 150 billion a year. The following chart shows the development of factoring transactions of CLFA members in the period 2010–2018[25].

[24] Badriyah, Siti Malikhatun & Hum, M. & Siti Mahmudah, S. H. & Susilowati, D. I. (2017). Factoring as a financing alternative of business development for small and medium enterprises. International Journal of Mechanical Engineering and Technology, Vol. 8, No. 11, pp. 918–931, ID: IJMET_08_11_093.
[25] Czech Leasing and Financial Association (2019). Annual Report CLFA 2018. Act. 1st April 2019.





From the point of view of direction of factoring transactions, most of them are in used domestically, one third in export and only minimum in import areas[26].

Forfeiting is a method of financing of medium-term and long-term receivables provided in connection with the export of machinery, equipment and investment units of a relatively high value. The receivables must be safely secured by bank instruments, without regress of the original creditor (exporter). Forfeiter assumes all the risks associated with the credit. Specialized financial institutions and commercial banks' branches act as the forfeiter (similarly as in the case of factoring). Forfeiting is effected by a contract between the exporter and the forfeiter, whereby a proper security of the customer's obligation is required, mostly through securities that represent the receivable. Drafts co-accepted by a reliable bank are mostly used for this purpose. The advantage of forfeiting for the exporter is especially the fact that he frees himself of all credit risks and often obtains up to 100% of the financing of export credit from foreign sources without having to burden his balance, which has a positive influence on his liquidity. The disadvantage is relatively high costs including a discount derived from the rate at which the respective currency at the due date is traded on international markets or remuneration for prompt security of sources (commitment fee) and other fees such as option fee, management fee, a risk surcharge in the range of 1–8% p. a., or a reward for prompt security of sources in the range 0,5–1,5% p. a. from the financed amount. Forfeiting allows accelerating the collection and transferring the impact of credit risks to specialized financed institutions.

4. LEASING

Leasing is an analogy of a lease relationship, helping to solve the investment activity of enterprises, such as the need for modernization under the conditions of rapid obsolescence of investments or the possibility to extend the production potential without the need of own

[26] Ibid.

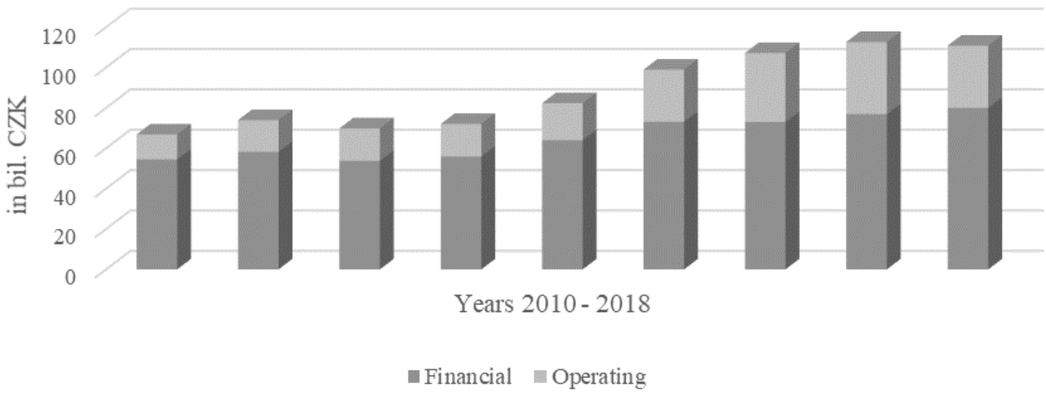
funds and negatively affecting the liquidity of the enterprise. By concluding a leasing agreement, the lessee (user) obtains the right to use the goods of investment character, which he has chosen himself for fixed fees and for a predetermined period. The investment goods include machinery and equipment (e.g. computer and office technology, production facilities, in-house transport equipment), further means of transport (airplanes, ships, passenger cars etc..) and real estate (buildings, production halls, garages, warehouses etc.). Leasing services are provided by specialized financial institutions, subsidiaries of big banks or subsidiaries of significant producers or sellers (especially on the market of means of transport or machinery and equipment). It is common that individual companies cooperate within national and international associations. From an accounting point of view, the leasing is advantageous in the case of depreciation of investment assets, the payment of value added tax or the equity tax.

In some countries, including the CR, the regulations stem from the ownership of the leasing object, then this object is registered and depreciated by the leasing company. In other countries, they stem from the conception of use of the leasing object, the registration and the lessee does depreciation. In terms of the financing method, the leasing is advantageous because it allows financing often up to 100 % of the value of the leased object from foreign sources (whereas only 80-90% of this value is obtained by the supply credit), the leasing fees are often paid only after the facility is put into operation, while the acquired investment already increases the revenues of the company (therefore it is possible to better coordinate the costs and revenues if accurately estimated and the investment was chosen appropriately), the acquisition of an investment within leasing does not burden the balance of the enterprise by the debt (it does not adversely affect the creditworthiness and does not limit the possibility of obtaining credit from other sources), the leasing fees are fixed (thus providing a basis for the calculation of future costs), they are usually considered as operating costs of the lessee and as a cost item reduce the basis for the calculation of profit tax (they are mostly taxed by the income tax of the lessor), the receiver of leasing does not become the owner of the facility, but he only uses the facility which allows him to adapt more flexibly to the market requirements. Finally, yet importantly, there is also the possibility to use a wide range of leasing companies' services (such as insurance, servicing etc.) Under more advantageous conditions than in individual negotiation. Depending on the range of services and the time for which it is negotiated, leasing is divided usually into three basic groups – financial, operational and so-called lease back.

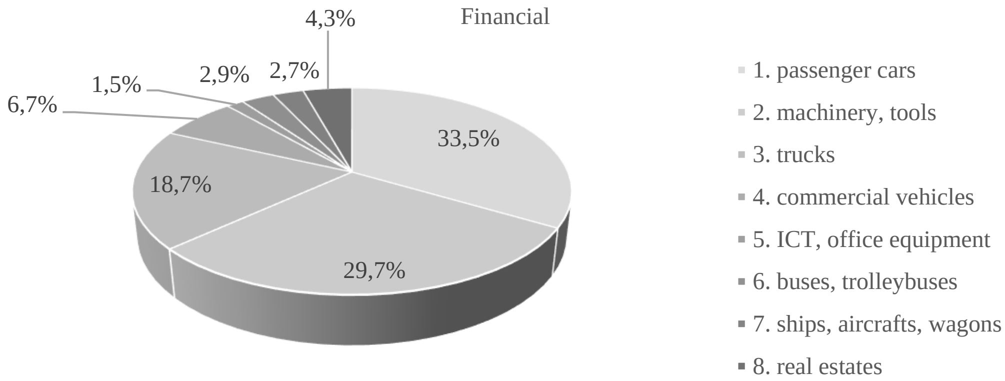
Financial Leasing is usually concluded for a longer period, for which the leased object is fully depreciated, mostly for 3–4 years. After expiration of this period, the lessee for a relatively low residual price usually purchases the object of leasing. The fees cover the purchase price, interests, risk premium (in the case of insolvency of the lessee) and remuneration of the leasing company; they are payable monthly or quarterly. Also, in this type of leasing, the providers usually offer insurance of the entire transaction.

Operating Leasing is agreed for a shorter period than the amortization period of the object of leasing which entails the risk that the lessor may not acquire another person for the lease after the leasing relationship is over. Various mass-produced products, such as means of transport, computers etc. are leased. The leasing companies provide preferably so-called *full-service leasing*, e.g. in the case of means of transport they offer management of the entire fleet of the client. *Sale-and –Lease Back* is concluded for equipment already bought and operated by the user. The leasing company purchases the equipment and leases it back to the original owner. He thus frees up financial resources for other entrepreneurial projects. On international markets, the leasing contracts are influenced by the differences in the laws of the participated countries (in tax deductions and customs duties), territorial risks (political instability etc.) and exchange rate risks (it the payments are remitted abroad in different currencies). The leasing companies prevent these risks by an effort to change the international leasing relationship into a national one, e.g. by setting up subsidiaries abroad or using the membership in leasing companies' associations.

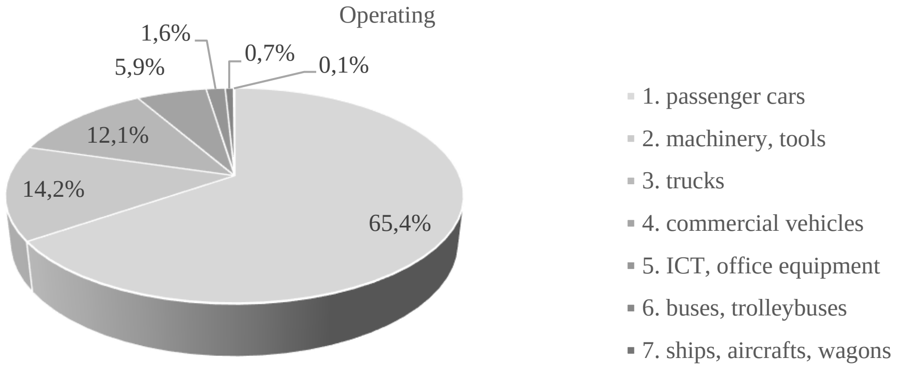
According to the Czech Leasing and Finance Association, the leasing deals in the Czech Republic perform rising trend and their combined annual volume is more than CZK 100 billion a year. The following charts show the development of financial and operating leasing transactions of CLFA members in the period 2010–2018[27].



In terms of commodity focus, the financial leasing of passenger cars and machinery and tools continued to dominate, followed by the leasing of trucks, commercial vehicles and real estates. The operating leasing performed almost double volume in passenger cars, while only half volume in machinery and tools. The leasing of commercial vehicles and trucks remains on the same level, the real estates do not use this form at all[28].



[27] Czech Leasing and Financial Association (2019). Annual Report CLFA 2018. Act. 1st April 2019.
[28] Ibid.



5. SWITCH

Switch operations are used by an expanding company in the event the currency is not directly convertible on the target market[29] into a currency in its own country or into a into another hard currency[30], in which the company would like to do business. Therefore, it cannot use the form of pure foreign exchange arbitrage[31]. In such case, it will use the already mentioned form of re-export over a third country, whose currency is convertible both with the currency of the exporter's country and with the currency of the target country and will use so called foreign exchange arbitrage bound to the exchange of goods or switch. The transaction is based on the differences between the official exchange rate of a certain foreign exchange and its exchange rate on free market, so called agio or disagio as well as the differences in price levels of the same goods on different markets. In many cases, the differences are increased also by the interventions of the state, e.g. through various forms of export support, restrictive import measures or foreign exchange restrictions[32].

A simple switch operation may look as follows. An importer in a country with inconvertible currency (a developing country or a country with controlled economy) wants to purchase goods from a developed country using hard currency. It enters into an agreement with a switch company which signs with the importer and exporter two-purchase contracts and makes sure they are kept. It is important that the contracts are linked in terms of time and facts (in the subject of purchase, delivery date, delivery parity, liability for the quality of goods, stipulating the sanctions for non-performance etc.) and that their performance does not bring unnecessary risks for the switcher. After both contracts are implemented, there is paid a remuneration which is composed of a fixed fee for the transaction and a bonus which is deducted (in percentages) from the positive conversion of foreign currency and the positive difference between the export and the import price. The bonus fee amount is agreed with both

[29] The most famous non-convertible currencies include e.g. Chinese Yuan, Indonesian rupees, Indian rupees, South Korean won, Malaysian ringgit, Philippine peso, Taiwanese dollar, Vietnamese dong, Egyptian pound, Kazakh tenge, Argentine peso, Brazilian real, Chilean peso, Colombian peso, Guatemalan quetzal, Peruvian sol, Uruguayan peso, Venezuelan Bolívar etc.

[30] The currencies having a long-term stable market rate, being freely convertible and therefore attractive for trading, investment, long-term deposits or the creation of foreign exchange reserves are considered as hard currencies.

[31] Foreign exchange arbitrage is the purchase and sale of foreign exchange on international currency markets, using the exchange rates differences to archive a maximum foreign exchange gain.

[32] Foreign exchange restrictions (foreign exchange limitations, the tying status of foreign exchange) are a set of measures, by which a central institution, usually government or central bank, influences the payment and credit relationships with abroad with the aim to limit the outflow of foreign exchange from the country and, on the contrary, to increase their income. The key legal standard for foreign exchange regulation in the Czech Republic is Act No. 219/1995 Coll., the Foreign Exchange Act, as amended.

parties so that all participates parties earn from the transaction. The switch operation may take place sometimes without the switcher having to purchase the goods physically and resale it. The conditions of the purchase contract are agreed directly between the supplier and end customer and the switcher secures the transaction only in terms of payments. The switcher cedes the rights to particular receivables by a special agreement with both partners in the form of cession[33]. The switcher does not bear common business risks arising from the purchase and sale of goods.

The companies like Coca Cola, Microsoft or General Motors usually operate in many foreign countries. The currencies of these countries often do not move in the same direction at the same time. Instead of firms' financial hedging the *firms' operational hedging* activities might decrease the currency risk. They are based on four proxies: 1) the number of countries in which the company operates, 2) the number of regions in which it is located, 3) the geographic dispersion of its subsidiaries across target countries, and 4) target regions, it operates. According to recent studies[34] most of these measures of operational hedging strategies are significantly positively correlated. So the companies can manage the exchange rate exposure by time-optimisation of their "in house" transactions within the network. The same studies show, however, that once the Herfindahl–Hirschman Index (HHI)[35] is close to 1, companies prefer financial hedging and buy more derivatives.

Swith operations become more important at present as the Central and Eastern European countries increase the volume of exports having the form of "goods in transit[36]", "re-export[37]" and/or "indirect exports[38]" due to their deep involvement in global supply chains. For example, in 2004–2007 the share of re-exports on the total export from the Czech Republic to Germany increased by more than 5%, which consequently resulted in increase of total exports from the Czech Republic to China by more than one fifth[39] – see the following charts.

[33] At the cession, the present creditor grants to another entity entering his/her place the entitlement to enforce the existing receivable of the censor as his own receivable (in his name and for hiss benefit) and the cessionary agrees with it. In the Czech Republic, governed by the Civil Code No. 89/2012 Coll., Section 1879–1887.

[34] Allayannis, G. & Ihrig, J. & Weston, J. (2001). Exchange-Rate Hedging: Financial versus Operational Strategies. American Economic Review. 91. 391–395. 10.1257/aer.91.2.391.

[35] Matsumoto, A., Merlone, U. & Szidarovszky, F. (2012), Some notes on applying the Herfindahl–Hirschman Index, Applied Economics Letters, 19:2, 181–184, DOI: 10.1080/13504851.2011.570705

[36] This category denotes goods which merely travel through a port of a third country but is not unloaded, nor further processed, but forwarded to the destination. Goods from this category is neither purchased nor further sold by a trader in a third country, i.e. does not change owner during its journey, and therefore, it is not reported in official statistics.

[37] Re-export differs from goods in transit by the fact that it changes ownership during a visit to a third country, thus it is reported in international trade statistics. Other characteristics remain the same.

[38] In this case, not only a particular product changes the owner in the third country, but it is even a subject to further processing. A simple example can be the different components imported to produce a car that is then exported further.

[39] Based on data from Eurostat and ComExt 2004–2007 (latest data are not available)

6. FINANCIAL DERIVATIVES

Switch forms sometimes use so-called financial derivatives to reduce the risk of exchange rate movement, which allows fixing conditions under which a certain foreign currency will be sold or purchase in the future. An expanding company than calculates more reliably costs and revenues of its foreign operations. Common financial derivatives are divided into unstandardized (forwards, swaps and options) and standardized (futures). For a better illustration, let us mention brief characteristics of each of them.

Forward is an agreement between two parties to purchase or to sell an asset at a certain time in the future for a certain price set at present time (spot = purchase/sale at present time). The difference between the present (spot) and future (forward) price is called a forward premium or forward deduction and is calculated based on interest rate differential. The manner of its settlement is given by an agreement of both contractual parties.

Let us take an example of the commodity forward contract. Usually, the commodity itself is not delivered and only the price differences are cleaned after the contract expires. The farmer who harvests wheat sets the forward price with the bank and this is compared with the closing price of the commodity on the reference day (it refers mostly to the local cash price). In case of a difference the party in the disadvantageous position covers the loss. The following equation can be used to determine the level of settlement for the given reference period[40]:

$$LS = CA \times \text{abs}\,(LCP - FP)$$

where:
LS = level of settlement
CA = agreed amount of commodity
LCP = closing price (local cash price)
FP = agreed fixed price

In case the reference day price is lower than the fixed price, the farmer gains the price difference corresponding to the actual amount of commodity. In this way he is protected against the local cash price decline. In the opposite situation he loses.

[40] Taušer, J., Čajka, R. (2014), Hedging techniques in commodity risk management. Agricultural Economics [online], Vol. 60, No. 4, pp. 174–182. ISSN 0139-570X.

Swap means depositing one currency and borrowing another currency in the counter value set by the exchange rate (a combination of spot and forward trade). By default, swap is used to overcome a temporary liquidity shortage in one currency while there is a liquidity surplus in another currency. Exchange risk is covered at the same time.

Option provides the right to buy or to sell a predetermined underlying asset for a predetermined price and as of a predetermined date. Basically, you determine the price today at which you want to buy a stock, a commodity or a currency in the future. The fundamental difference in comparison with other derivatives consists in the fact that the option gives only a right, which you may or may not exercise, whereas, forwards or futures imply the duty to fulfil the conditions of the contract.

Futures represents an agreement of both parties to exchange a certain amount of cash in one currency for a previously unknown amount or a debt security, in the same currency (interest rate futures) in the future, further to exchange a fixed amount in cash in once currency for a fixed amount in cash in another currency (currency futures), for a stock instrument (stock futures) or a commodity instrument (commodity futures). Futures may not be traded Over the Counter, they are tradeable only on organized markets, i.e. stock exchanges.

In the 1990s new interesting types of financial products were introduced – the weather derivatives. They provide an opportunity to hedge against the sub-optimal weather conditions at reasonable costs[41].

For example, the Weather Heating Degree Day (HDD) Futures which are traded on the Chicago Mercantile Exchange (CME) are based on contract standardized in terms of size, trading hours, contract moths and settlement procedures. The value of the HDD contract is been calculated by the following index:

$$HDD = \max\left(FRT - \frac{(Tmax - Tmin)}{2}, 0\right)$$

where:
FRT = fixed reference temperature (e.g. an arbitrary temperature of 18°C, from which households usually start to operate their heating devices),
Tmax = maximum temperature of the day,
Tmin = minimum temperature of the day.

The index is cumulated over the lifetime of the contract, so the final value of the contract depends on the supply and demand and reflects the expectations about the final value of the cumulative HDD at the end of the contract maturity[42]. The major advantages is that there is no risk of misusing the insider information, as the values of
HDD are computed by nationally acknowledged and independent weather authority. According to the Weather Risk Derivative Survey by the PricewaterhouseCoopers released in 2011, the majority of inquires of the potential users of weather instruments comes from energy (46%), construction (23%) and agriculture (12%). The business is growing and the

[41] Taušer, J, Čajka, R. (2014), Weather derivates and hedging the weather risks. Agricultural Economics [online]. Vol. 60, No. 7, pp. 309–313. ISSN 0139-570X.
[42] Chincarini L. (2011), No chills or burns from temperature surprises: An empirical analysis of the weather derivatives market. Journal of Futures Markets, 31: 1–33; DOI 10.1002/fut.20463.

major providers of hedging programs are banks, other financial institutions and also specialized companies.

7. ALLER-RETOUR OPERATION (ROUND-TRIPPING)

In the expansion of a company to foreign markets, the problem with the exchange of non-convertible currency for a convertible currency can be solved also by means of Aller-Retour operation (English Round-Tripping). The designation Aller refers to the purchase of non-convertible currency, the designation Retour refers to its sale. Both transactions take place at the same time, when a company from a developed country sells goods for non-convertible currency and immediately spends that currency for the purchase of other goods it needs or resells for a convertible currency. The Aller-Retour operation can be entrusted to a broker company, which obtains a commission for its work. The time operation is timed so that the price difference of the mutually exchanged goods is maximal at the time of realization and can cover at least the expenses and remuneration of the intermediary company. If the prices on the market with non-convertible currency increase substantially, the exporter from the developed country will make a profit on the transaction. Some countries consider the Aller-Retour operation as an undesirable means allowing manipulating with the values of so-called market capitalization (expressing the market value of a joint-stock company). This is so that two companies registered in different countries provide each other with capital resources with the outgoing capital being expressed as income and the incoming capital as an investment. By this way, the profit is artificially increased, the assets of both companies remain unchanged and the stock market price increases.

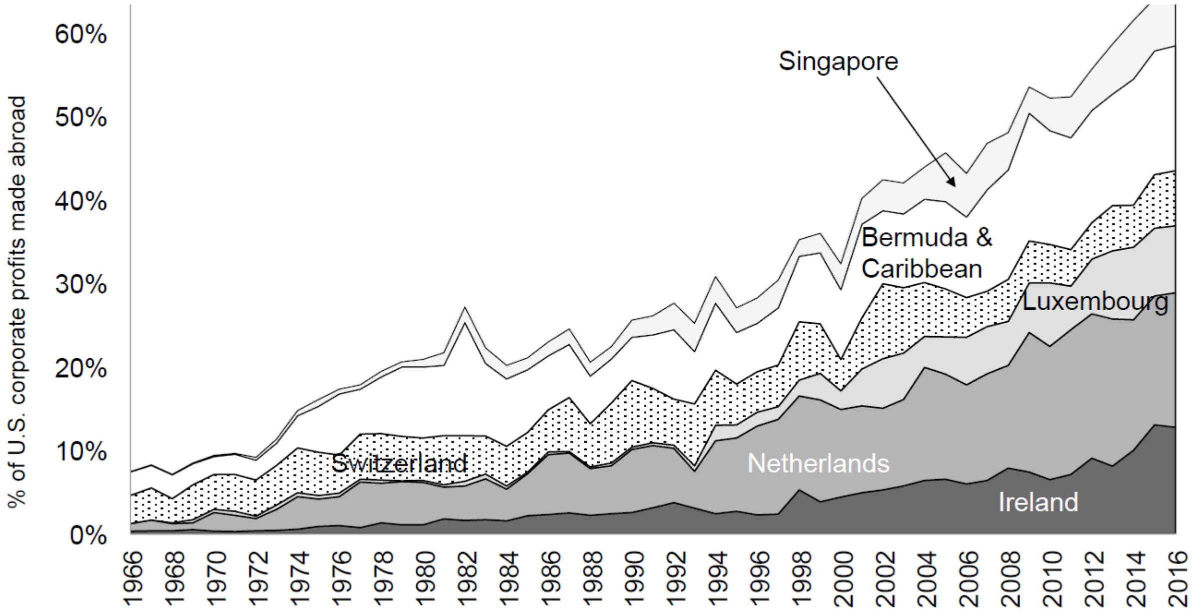
The operation can be also abused for tax evasion or money laundering by using offshore accounts and making transactions across the area of tax havens. *Tax Haven* is the name for a country, which provides extraordinary tax credits to foreign companies. These companies are frequently completely exempt from paying taxes and customs duties and in return, they deposit deposits and pay fees to the local banks or state administration bodies. Thus, the target country becomes a significant financial and economic center, although its size and population are in fact negligible. A company operating on the domestic market while having its registered office and holding its representative in the tax haven pays a flat, usually very low tax to the local government is called offshore company. For this, it receives privileges such as ensuring compete anonymity and confidentiality concerning the data on owners, accounts, transactions, clients, property conditions etc., in addition exemption from the obligation to file a tax return, to conduct an audit and to issue annual reports, also total exemption from the usual law obligations and the promise of noninterference to the company's activities by the authorities. *The most famous tax havens worldwide include Bahamas, Belize, British Virgin Islands, Seychelles, Bermuda, Madeira, the Isle of Man, Jersey a Guernsey, Cyprus, Liberia, Panama, Hong Kong, Monaco and Liechtenstein*. *Cayman Islands* is one of the largest global conduits for investment into the USA, either via American round-tripping or from Japan and Hong Kong. Luxembourg, Switzerland, and the UK. They reach trillions US dollars every year[43]. According to the National Bureau of Economic Research[44], the share of tax havens in U.S. corporate profits made abroad substantially increases. As the following chart shows, in 2016, total equity income on U.S. DI

[43] Fichtner, J. (2016), The anatomy of the Cayman Islands offshore financial center: Anglo-America, Japan, and the role of hedge funds, Review of International Political Economy, 23:6, 1034-1063, DOI: 10.1080/09692290.2016.1243143

[44] Wright, T. – Zucman, G. (2018), The Exorbitant Tax Privilege, NBER Working Paper 24983

abroad was about $420bn, while the highest shares account to the Netherlands, Bermuda & Caribbean, Ireland, Luxembourg, etc.

Chinese MNEs have been found to use round-tripping channels for direct investment through offshore financial centers (OFCs) or via Hong Kong in order to minimize taxes, and also to conceal the ownership of assets to gain better access to foreign capital markets[45]. The Aller-Retour operations (Round-Tripping) are frequent especially in the fields of energy industries *(e. g. companies Enron, CMS Energy, Reliant Energy, and Dynegy)* a telecommunication *(e. g. AOL and Sun Microsystems or Global Crossing and Qwest Communications)*.



8. CASE STUDY

The company Czech Camping Tools (CCT) produces and exports folding camping shovels. It received four inquiries and wants to compare them from the point of view of the best net total collection (export price), payment risk and ability to repeat similar business in the future. There is high exchange rates turbulence in the marketplace, and discount rates in banks also change substantially. The company is to decide in which out of two periods and to what out of four potential clients will finally sell its products.

The basic data are the following:
Customer No. 1: Vamos, Madrid, Spain
quantity - 9 800 pcs, price - 3.20 EUR, delivery - DDU Madrid, freight - 32 600 CZK, agent's commission - 3%, payment - D/A due 60 days after acceptance
Customer No. 2: Travel Service, Casablanca, Morocco
quantity - 25 000 pcs, price - 4.85 USD, delivery - CFR Casablanca, freight - 2 100 USD, confidential commission - 5%, payment - L/C at sight
Customer No. 3: French Way, Paris, France
quantity - 6 600 pcs, price - 3.15 EUR, delivery - FOB Le Havre, freight - 26 080 CZK, insurance - 0.2%, payment - invoice 60 days after due

[45] Vlcek, W. (2013), From road town to Shanghai: Situating the Caribbean in global capital flows to China, British Journal of Politics & International Relations 16(3): 534–53. ISSN: 1467-856X,1467-856X,1369-1481.

Customer No. 4: Nomago Travel, Ljubljana, Slovenia
quantity - 4 500 pcs, price - 3.20 EUR, delivery - DAF Slavonice/Fratres, freight – 16 840 CZK, insurance - 0.2%, broker's commission - 4%, payment - D/A due 60 days after acceptance
Exchange rates:
1st period: 1 EUR = 32 CZK, 1 USD = 26 CZK, discount rate 4 % p.a.
2nd period: 1 EUR = 26 CZK, 1 USD = 18 CZK, discount rate 2% p.a.

Solution 1st period – Net total collection in CZK per unit:

CUSTOMER	CALCULATION	RESULT
NO. 1	(1 003 520 – (32 600 + 30 106 + 6 724)) / 9 800	95.00
NO. 2	(3 152 500 – (546 000 + 157 625)) / 25 000	98.00
NO. 3	(665 280 – (26 080 + 1 331 + 4 457)) / 6 600	96.00
NO. 4	(460 800 – (12 840 + 992 + 18 432 + 4 608)) / 9 800	94.00

Solution 2nd period – Net total collection in CZK per unit:

CUSTOMER	CALCULATION	RESULT
NO. 1	(815 360 – (32 600 + 24 461 + 2 691)) / 9 800	77.00
NO. 2	(2 182 500 – (378 000 + 109 125)) / 25 000	68.00
NO. 3	(540 540 – (26 080 + 1 081 + 1 784)) / 6 600	77.50
NO. 4	(374 400 – (12 840 + 749 + 14 976 + 1 872)) / 4 500	76.50

Conclusions

a) According to net total collection (export price) the winner is the customer from Morocco in the 1st period, and the customer from France in the 2nd period. The change was caused by the fall of US dollar that was faster than fall of euro towards the Czech currency. Or, seen from other side, the Czech crown appreciated faster to the US dollar than to euro. The second factor was the falling discount rate, so that the loss associated with delivery credit became smaller in the 2nd period. The company CCT should then evidently keep selling in the 1st period and aim it to the customer from Morocco. The biggest volume of the sale should be considered, too.

b) According to the payment risk the preferred customer is the one from Morocco again. In spite of the fact, that CCT pays confidential commission to an unknown intermediary, the letter of credit is the most secured tool of payment. The most risky seems to be the customer from France. Bank transfer against invoice is not secured at all unless there is high level of mutual trust. The delivery FOB Le Havre indicates that the client will probably pay after he re-sells overseas. The Czech company, however, has no guarantee this is going to happen.

c) According to the ability to repeat similar business in the future we must look at the way the deal was mediated. In Spain, a commission agent has been operating, usually on long-term basis. We can expect repeated business from him then. The most unlikely customer to bring more business is that from Morocco. He wants to stay concealed, and also, the proverb „you can never catch big fish twice" holds.

d) Factoring and forfeiting are suitable forms of financing the continuous export operations, which fit with the customers from Spain and Slovenia. Leasing has no use in this case because the folding camping shovels are not a type of investment goods where depreciation matters. Switch might be used in Morocco to overcome trade policy obstacles of the local government. Financial derivatives can basically be used in all four cases to reduce the exchange rate risk. It might pay off in case of the Morocco client the most, because he trades in US dollars and reaches the biggest volumes.

9. SUMMARY

The aim of this paper was to analyse and overview the forms of financial and accounting options that companies use in international trade to reduce potential losses occuring due to different prices, interest rates, exchange rates, taxation and transaction costs. The hypothesis that the choice of appropriate financial tools can substantially reduce these losses was proved by in-depth insights into how these instruments work and by empirical data showing the amount and the importance of their use in selected international markets, primarilyy in Central and Eastern Europe.

Factoring and forfeiting are classical examples of a complete financial service that combines export capital financing, credit protection, foreign accounts receivable bookkeeping, and collection services. Leasing allows financing different objects from foreign sources, while the acquired investment increases the revenues of the company and does not burden the balance of the enterprise by the debt. Switch is useful in case the expanding company deals with partners from non-convertible currency territories. In combination with re-export operations it can comfortably avoid risky foreign exchange arbitrage, restrictive import measures or foreign exchange regulations. Financial derivatives can reduce the risk of exchange rate by fixing conditions under which a certain foreign currency will be sold or purchase in the future. Swaps, options and futures are standard financial instruments helping to overcome a temporary liquidity shortage. Aller-retour operations can help in trade with developing world, but also might be abused for tax evasion or money laundering by using offshore accounts and making transactions across the area of tax havens.

The paper highlighted the broader context implying the use of these methods. In the end the practical case study was attached. It illustrated the major findings and supported the statement that the role of financial solutions in international trade constantly increases and that their deep knowledge and practical experience can significantly optimize a cash flow of international traders.

BIBLIOGRAPHY

Act No. 219/1995 Coll. - *The Foreign Exchange Act, CZ.*

Act No. 89/2012 Coll. - *The New Civil Code, CZ*

Allayannis, G. & Ihrig, J. & Weston, J. (2001). Exchange-Rate Hedging: Financial versus Operational Strategies. American Economic Review. 91. 391–395. 10.1257/aer.91.2.391.

Badriyah, Siti Malikhatun & Hum, M & Siti Mahmudah, S.H. & Susilowati, D.I.. (2017). Factoring as a financing alternative of business development for small and medium enterprises. International Journal of Mechanical Engineering and Technology, Vol. 8, No. 11, pp. 918–931, ID: IJMET_08_11_093.

Chincarini L. (2011), No chills or burns from temperature surprises: An empirical analysis of the weather derivatives market. Journal of Futures Markets, 31: 1–33; DOI 10.1002/fut.20463.

Czech Leasing and Financial Association (2019). Annual Report CLFA 2018. Act. 1st April 2019.

Černohlávková E., Sato A., Taušer J. (2007), *Finanční strategie v mezinárodním podnikání*, ASPI Publishing, Prague, CZ. ISBN 978-80-7357-321-8.

Daniels J.D., Radebaugh L.H., Sullivan D.P. (2019), *International Business – Environments & Operations*. 16th Ed., Pearson Education Limited, Harlow, UK. ISBN: 978-0134200057

Fichtner, J. (2016), The anatomy of the Cayman Islands offshore financial center: Anglo-America, Japan, and the role of hedge funds, Review of International Political Economy, 23:6, 1034–1063, DOI: 10.1080/09692290.2016.1243143.

Halík J. (2017), *Market Entry Strategy – The Lessons from Central and Eastern Europe*. Key Publishing/Metropolitan University Press, Prague, CZ. ISBN 978-80-7418-288-4.

ICC (2012), *Uniform Rules for Forfaiting*. ICC Product No. 800, Paris, FR. ISBN 9789284201846

ICC (2013), *Uniform Rules for Bank Payment Obligations*. ICC Product No. 751E, Paris, FR. ISBN 9789284201914.

Janatka F., Bohm A., Hándl J. (2001), *Komerřní rizika v zahraničním obchodě a ochrana proti nim*, ASPI Publishing, Prague, CZ. ISBN 80-86395-14-6.

Johnson T.E., Bade D.L. (2010), Export Import Procedures and Documentation, 4th Ed., American Management Association, New York, USA. ISBN 9780814415504.

Matsumoto, A., Merlone, U. & Szidarovszky, F. (2012), Some notes on applying the Herfindahl–Hirschman Index, Applied Economics Letters, 19:2, 181–184, DOI: 10.1080/13504851.2011.570705.

Ramberg J. (2008), *ICC Guide to Export-Import Basics*, 3/E, ICC, Paris, FR. ISBN: 978-9284200344.

Sato A., Halík J., Hinčica V. (2016), *International Business Operations*. Economica Publishing House, University of Economics Prague, 1/E, Prague, CZ. ISBN 978-80-245-2205-0.

Šubert M. (2006), *Vzorová kupní smlouva*, ICC Czech Republic, Prague, CZ. ISBN 80-903297-5-6.

Taušer, J., Čajka, R. (2014), Hedging techniques in commodity risk management. Agricultural Economics [online], Vol. 60, No. 4, pp. 174–182. ISSN 0139-570X.

Taušer, J, Čajka, R. (2014), Weather derivates and hedging the weather risks. Agricultural Economics [online]. Vol. 60, No. 7, pp. 309–313. ISSN 0139-570X.

Vlcek, W. (2013), From road town to Shanghai: Situating the Caribbean in global capital flows to China, British Journal of Politics & International Relations 16(3): 534–53. ISSN: 1467-856X,1369-1481.

UNCITRAL (2011), *United Nations Convention on Contracts for the International Sale of Goods*, UN, New York, USA.

Wright, T. – Zucman, G. (2018), The Exorbitant Tax Privilege, NBER Working Paper 24983.

IS VOLUNTEERING A WAY HOW STUDENTS GET THE PRACTICE?

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Abstract
The paper discusses the topic of the volunteering. The motivation of volunteers consists of several motivators, which are individually different. The motivator of students can be to acquire the practice to current focus of study. Is volunteering linked to training for future careers? The relationship between school and volunteer orientation is compared among respondents preparing for the future labor market, i.e. students of secondary schools and universities of different orientation who study in the Czech Republic. The result of the questionnaire survey is the answer whether there is a link between the focus of the school and the focus of the volunteering. The result of the survey brings benefits for managers. The result can help to them to prepare recruitment in connection with addressing volunteers for socially responsible projects or other projects where volunteers are involved. The survey was considered at a particular time without a repetition. The limitation is that it is not known whether students of a particular field are interested in studied subject or prefer volunteer activities different from their orientation in the later practice.

Keywords: *Volunteer, Student, Motivation*

1. INTRODUCTION

Volunteers are willing to devote their free time and energy to other people through their volunteer work. Volunteer work is made up of beneficial activities for society that the volunteer performs without an expecting financial or other material rewards. The voluntary work of a volunteer needs to be led like all organized activities. The managing and the organizing volunteers are important not only for the effectiveness of volunteer work, but also for their evaluation and opportunity of self-development. Volunteer managers can be volunteers themselves or they can be professional leaders. The work of the volunteer manager is specific. Volunteers need to be encouraged in order not to diminish their internal motivation to work. Employee management is different from volunteer management. (Lourens & Daniels-Felix, 2017)

Proper management of the volunteer leads volunteers to participate in volunteer projects. The volunteer manager needs to know the group and recognize their individual motivation to be able to lead them better. A specific case is the above-mentioned volunteer administration, where the manager is the volunteer himself. As already mentioned, volunteering is very closely related to motivation. (Fisher, 2009)

The volunteering is an opportunity to develop own education and other skills. It has been found that education, which leads to the development of students in conceptual and procedural knowledge, is mostly based on practices not related to so-called spreadsheet education. (Gerdeman et al., 2007) Other areas in which students could improve are scientific rationale (Reynolds et al., 2012), and critical thinking skills (Quitadamo and Kurtz, 2007), communication (Clase et al., 2010) and it is mostly based on students' involvement in practice. One of the functions of education is for students from repeating knowledge to translate it into practice to transform knowledge. (Bereiter and Scardamalia, 1987) Students should acquire knowledge and skills primarily through their active involvement in teaching. Their involvement in the field will help them to gain information about how organizations work, how theoretical knowledge is used in practice.

The research Carini, Kuh and Klein (2006) shows that the initial motivation of a volunteer plays an important role in the process and outcomes of learning, lessons and training. Personal engagement can be critical to the effectiveness of education and the future performance of any worker. (Cui, Yao, Zhang Guo Li & Yao, 2016; Chris 2009; Miller, Greene, Montalvo, Ravindran & Nichols, 1996; Schaufeli, Martinez, Pinto, Salanova & Bakker, 2002)

This article answers the question: Is the motivation of volunteers dependents on the field of education, Is there a dependency between teaching students and choosing a volunteer project? The results described are based on primary research, which was carried out in the form of a questionnaire survey. The research compares the branches of study and the focus of volunteer projects. Volunteering management is closely related to the project administration. The research results show whether volunteers want to participate in administrative volunteering too.

2. MOTIVATION, MOTIVATION FOR PERSONAL DEVELOPMENT

Motivation is based on an internal motivation that comes from personal behavior and action that leads to the goal. (Alderman, 2013, p. 53) Volunteer managers have the task of recognizing the motivation of a volunteer for the better management. The volunteer management plan is used to recruit volunteers (Weinbach, 1998; Fisher, 2009). The motivation is the reason for doing some action. The motivation can be divided into internal and external motivation. The Internal motivation is based on the fact that it is interesting or entertaining for us. The external motivation of people is based on the motive that leads to the achievement of remuneration or, in general, to external demand. The position of a person over time reflects a measure of personal motivation. (Ryan and Deci, 2000) The internal motivation is the process which a person comes to the value of activities, evaluates them by making the activity itself a part of it. (Vallerand, 1997) The volunteer competence supports motivation to educate. (Faye and Sharpe, 2008; Ryan and Deci, 2000) The internal and the external motivation also applies to personal goals. Personal goals are associated with each individual's preferences.

The motivation (stimulation) of management could be called a process. When compared to production, a series of steps are interconnected to produce the final product. The whole process may break down if any step becomes unstable or faulty. (Pritchard, Ashwood, 2008) Everything leads to a certain goal. When focusing on performance in education, there are two types of goals: a performance goal and a championship goal. (Archer, 1994) People who focus on performance goals most want to show their ability or hide their inability from others. They strive to achieve their goal with minimal effort. (Archer, 1994) People who focus on master goals want to develop their skills. They are willing to exert greater strength in engaging in the goal. They perform activities to better understand the subject or area of interest. (Archer, 1994; Mudjanarko, 2017; Frankl, 1985). The goal-oriented management can be used to develop learning strategies. The management which is focus on performance goals, is mainly related to surface learning, where it is necessary to be mechanically educated. (Archer, 1994) The internal motivation is associated with the mastery orientation and the external motivation is associated with the performance orientation. (Dowd, Thompson, Schiff, Haas, Roy, Reynolds, 2019)

The motivation and the recognition all motivators are not easy things. The motivation is also based on a hierarchy of needs. The volunteer management based on the motivation is also complicated by the fact that each person's position in the hierarchy of needs is not constant and changes over time. It changes at situation of personal or working conditions. Volunteer coordinators (volunteer managers) should be aware that all volunteers can work at different levels of the hierarchy of needs. They should be aware of the differences and adapt the style of management. (Lewis et al., 2011, Drucker 2010)

Volunteer managers should understand the needs of their co-workers and managers could know which level in hierarchy of needs volunteers are. They should adequately focus their incentives to support of the volunteer individual motivation. (Fisher, E., 2009, p. 354). The communication between volunteers, employees and employers should also be set up. (Lourens & Daniels-Felix, 2016) De Wit et al. (2017) says how organizations can increase volunteer contributions to the production, development, deployment and dissemination of social innovation. If there is considerable local autonomy and ownership, volunteers can be motivated to contribute to projects that fall outside their real responsibilities.

The motivation, beliefs and self-management change over time. The individual's interpersonal interest affects performance and the desire to educate and develop. The behavior of an individual, which is based on a characteristic behavior that is not innate but acquired, is influenced by the acquired knowledge, abilities and skills. Dispositions are related to tendencies to behave in a certain way. (Shum and Crick, 2012) Recently, dispositions have been separated that are separate from cognitive abilities, including openness of mind (Facione 2015), faith and motivation. (Ritchhart and Perkins, 2005) The dispositions of misleading are considered to be the psychological characteristics of the reflective mind that underlie rational thinking and the action (Stanovich et al., 2011) and the motivation. (Ritchhart and Perkins, 2005) Individual goals and cognitive values are characterized as widespread tendencies towards the pragmatism and the epistemic self-regulation. Thinking dispositions are considered reflective mind dispositions that support the rational thinking and the action. (Stanovich, 1999)

People are convinced of the meaning of their actions. Their actions affect surroundings. (Bandura, 1997). Confidence in the effectiveness of one's own actions is based on past experience in a particular area. Belief in self-efficacy also has an impact on self-education (Bandura, 1997). Belief in the effectiveness of one's own actions was also found to have an impact on performance, including cognitive and motivational processes that lead to efforts in education and learning. (Bartimote-Aufflick et al., 2016) Performance prerequisites, proxy experiences, social persuasion, and physiological responses are prerequisites for behavioral efficiency. (Bandura, 1977, 1997) People are more confident about their self-sufficiency and ability to influence their surroundings with better academic or professional performance. (Di Giunta et al., 2013) If students improve their academic performance or employees' professional performance, they also increase their chances for better future employment or professional advancement. Volunteering is one way to gain new experience and knowledge to improve your status in the future. Approaches involving opportunities to gain masterful experience are key to developing self-efficacy and self-sufficiency. (Jansen et al., 2015)

3. VOLUNTEERING

Volunteering work to improve the society or the environment without entitlement to financial reward is an act of volunteer. The volunteer freely offers time and effort from his altruism. There are many different kinds of voluntary activities, from formal to informal. The formal volunteering is managed. The informal volunteering is considered to be more individually reactive. Examples of volunteer work include environmental awareness and redevelopment, advocacy, religious activities, animal welfare improvement, community welfare, special assistance to the needy, adult education, political causes, and fundraising. (Elrod, 2019) Volunteers have complex reasons for volunteering, ranging from altruistic reasons for help to various personal reasons. (Nichols, Hogg, Knight, & Storr, 2019) Other reasons for volunteering can be establishing collective relationships, health benefits, new knowledge and compensation, and expect professionalism and good organization. (Kost et al., 2011; Mook, Handy, Ginieniewicz, & Quarter, 2007) A volunteer may become a person in the Czech Republic pursuant to Act No. 198/2002 Coll., On Volunteer Service, Section 3, Para 1. A volunteer is a person who is over 15 years old for volunteering in the Czech Republic and over 18 years of age for volunteering abroad.

4. RESEARCH

A total of 154 questionnaires on this article were completed. The questionnaire was composed of several questions. Some of them are mentioned here.

The hypothesis was formulated: “People who would like to be a volunteer have a dependency between the field they study and their volunteer activity.” Respondents answered questions whether they were studying or working. Respondents answered the question of what focus is their study. The last question was what kind of volunteering they would choose for their volunteering. There were several options which respondents could choose from. The respondents who met our criteria for further comparison were 96. Respondents are students from secondary schools, they are 45 students and students from high schools, they are 51 students. The answers were grouped into several groups. The respondents' answers are shown in the following table. Table 1 describes students' answers. The columns show the focus of volunteer projects. The lines show the fields of study fields. The fields of study were grouped into: General with 13 respondents, which are students in general grammar school or general grammar school with a focus on foreign languages. Another group is sociological and psychological focus with 19 respondents. Humanities, administration and management focus are 23 respondents. 14 respondents are in the financial, accounting and economic groups. There are 8 respondents in the creative group.

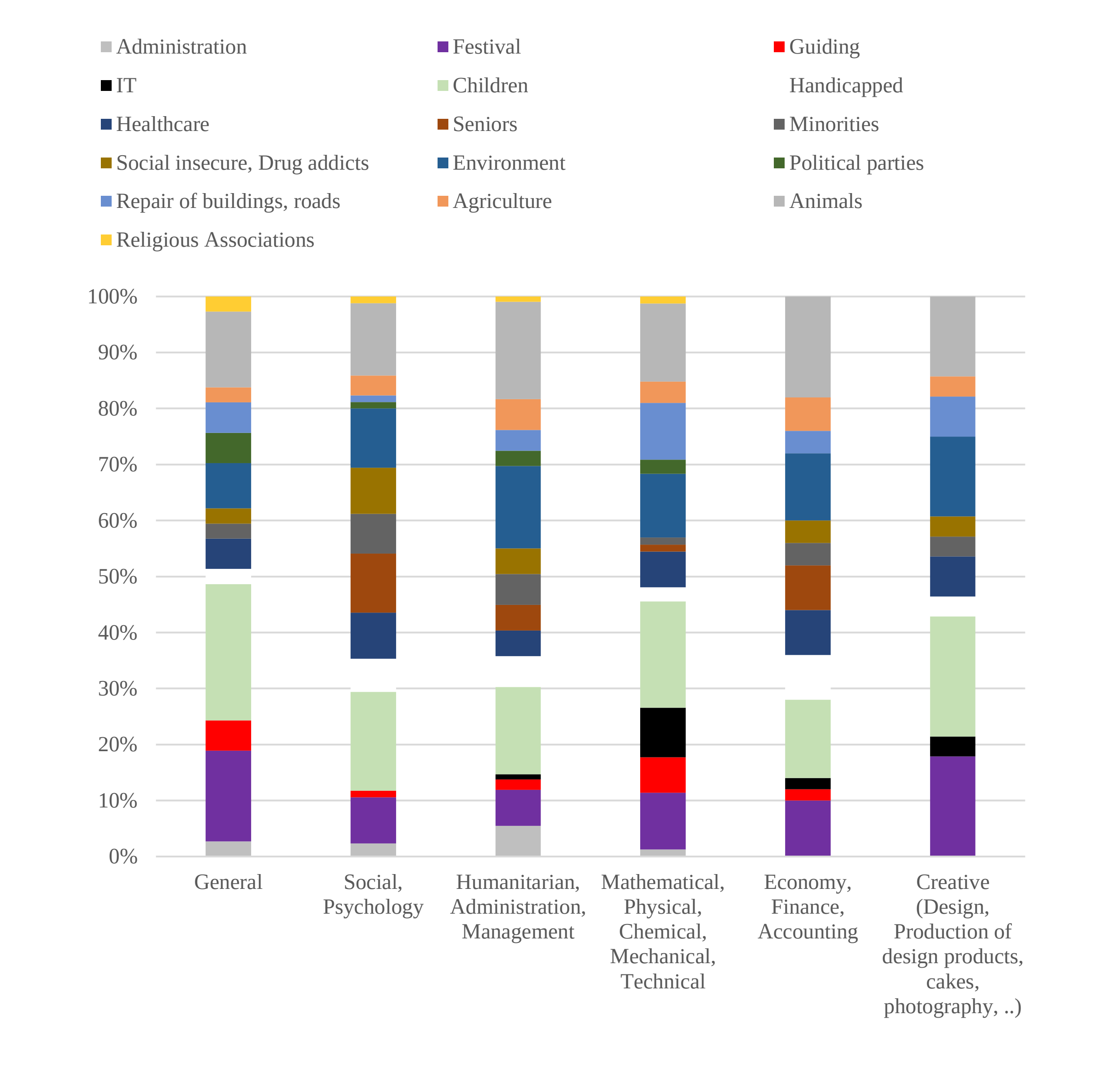
The groups need to be normalized in order to compare the values. Adjusted values can be seen in the figure 1, which shows the distribution of volunteer focus in percentage conversion for a given field of study.

Table 1. Focus of study and volunteering

Education\ Volunteering	Administration	Festival	Guiding	IT	Children	Handicap	Healthcare	Seniors	Minorities	Social insecure, Drug addicts	Environment	Political parties	Repair of buildings, roads	Agriculture	Animals	Religious associations
General	1	6	2	0	9	1	2	0	1	1	3	2	2	1	5	1
Social, Psychology	2	7	1	0	15	5	7	9	6	7	9	1	1	3	11	1
Humanitarian	6	7	2	1	17	6	5	5	6	5	16	3	4	6	19	1
Technical	1	8	5	7	15	2	5	1	1	0	9	2	8	3	11	1
Economy	0	5	1	1	7	4	4	4	2	2	6	0	2	3	9	0
Creative	0	5	0	1	6	1	2	0	1	1	4	0	2	1	4	0

Source: author research

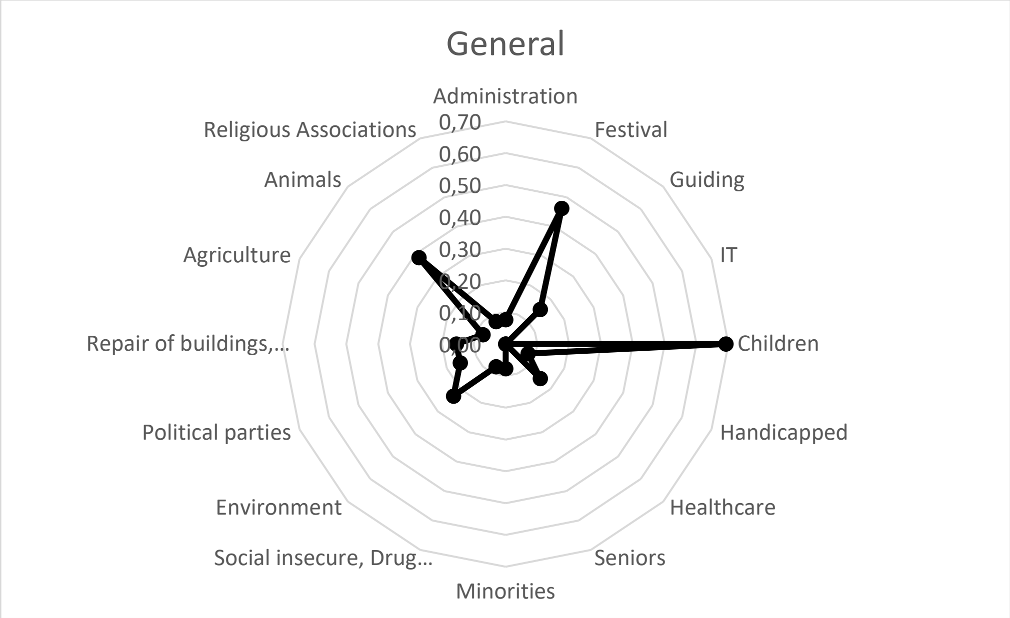
Figure 1. Focus of study and volunteering



Source: author research

The figure 2 shows the general orientation of volunteer studies. The greatest interest in volunteering arouses work with children. The second place is the festival environment, follows by work with animals, the environment. The last is place the interest in the information technology and work with them.

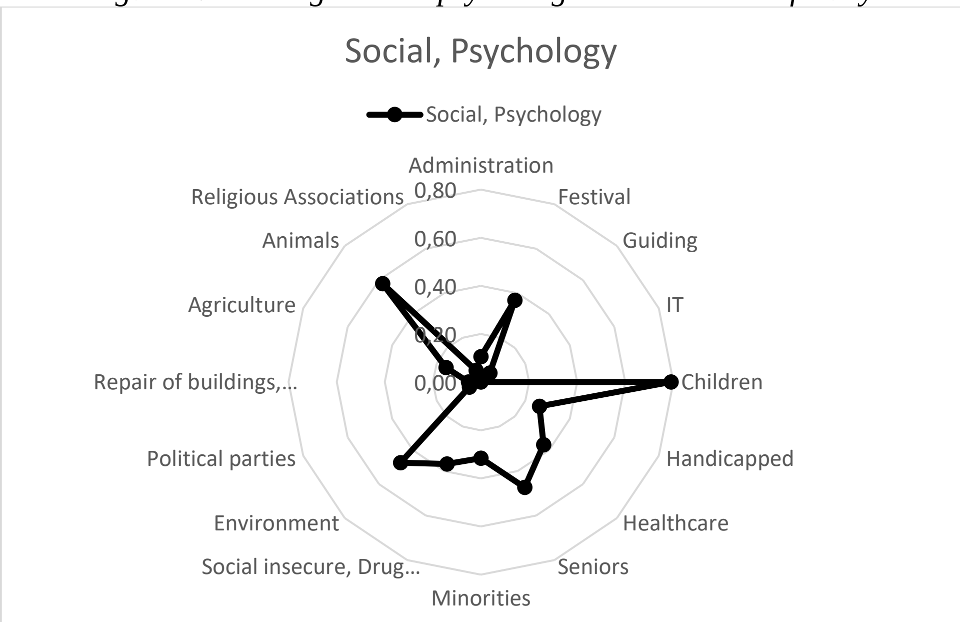
Figure 2. General orientation of study



Source: author research

The figure 3 shows the social and psychological orientation of the study volunteers. The greatest interest in volunteering has aroused work with children. The second place is work with animals, followed by work with seniors and the environment, followed by the festival environment. The last place is an interest in the information technology and work with them.

Figure 3. Sociological and psychological orientation of study



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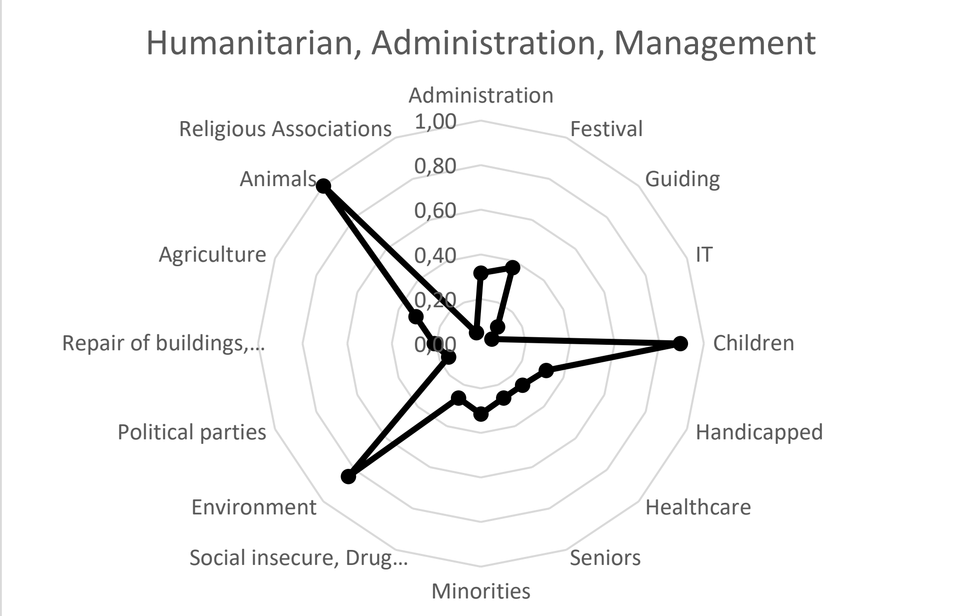
The figure 4 shows the focus of volunteer studies in the field of humanities, administration and management. The greatest interest in volunteering arouse work with animals. Work with children and work on the environment come second. The last ones are an interest in information technology and work with them, along with religious volunteer projects.

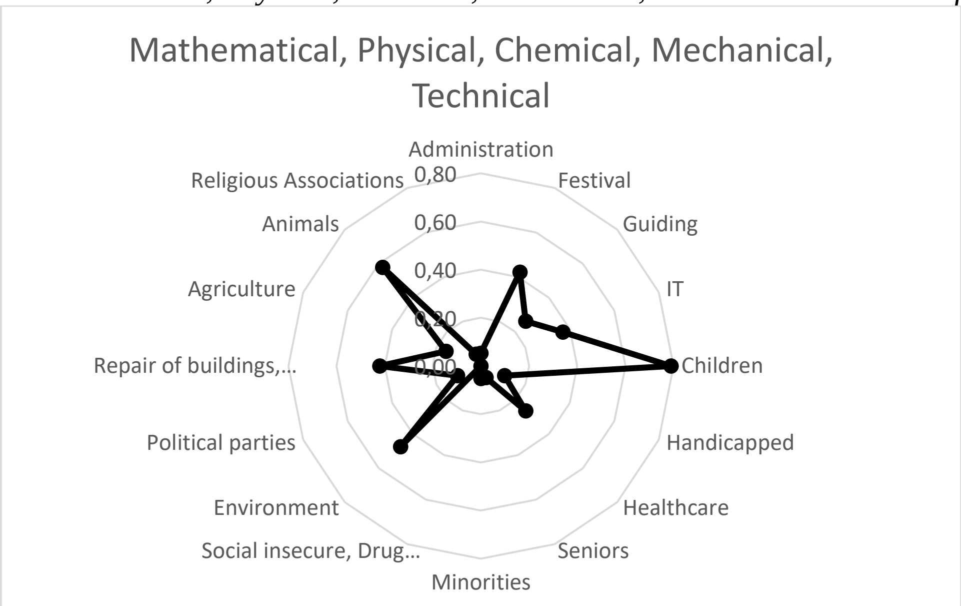
Figure 4. Humanitarian, Administration, Management orientation of studies



Source: author research

The figure 5 shows the focus of volunteer studies in the fields of mathematics, physics, mechanics and technology. The greatest interest in volunteering arouse work with children. The second place is the work with animals, followed by work with a focus on the environment, then the festival environment, followed by a focus on information technology. There are work with minorities, seniors, religious activities at the penultimate place. The last thing is working with socially disadvantaged people and drug addicts.

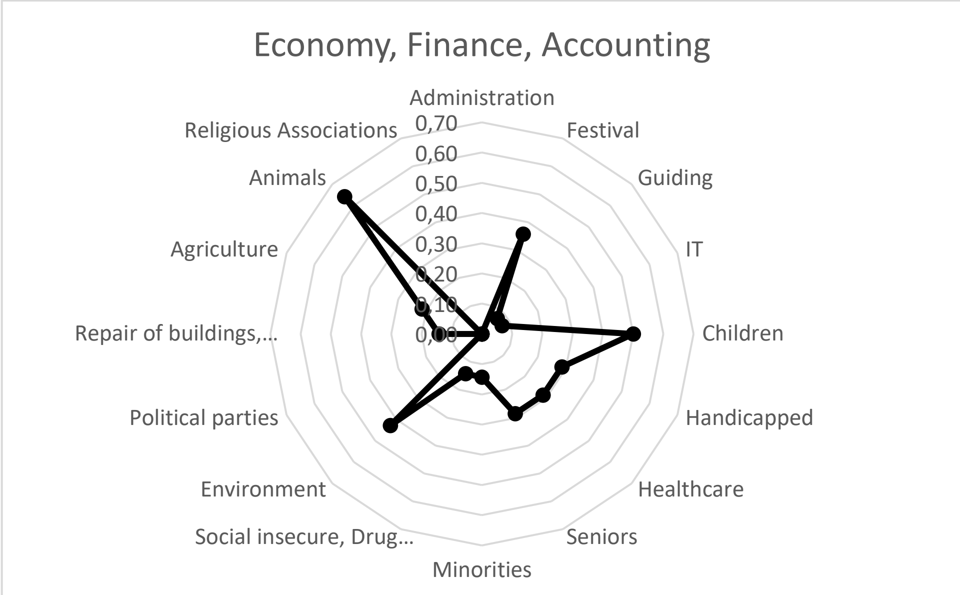
Figure 5. Mathematical, Physical, Chemical, Mechanical, Technical orientation of studies



Source: author research

The figure 6 shows the focus of volunteer studies in the field of economics, finance and accounting. The greatest interest in volunteering arouse work with animals. Work with children, work with the environment are in second place, there follow by the festival environment. Lastly, there is an interest in administratively oriented volunteer projects along with a focus on religion and political parties.

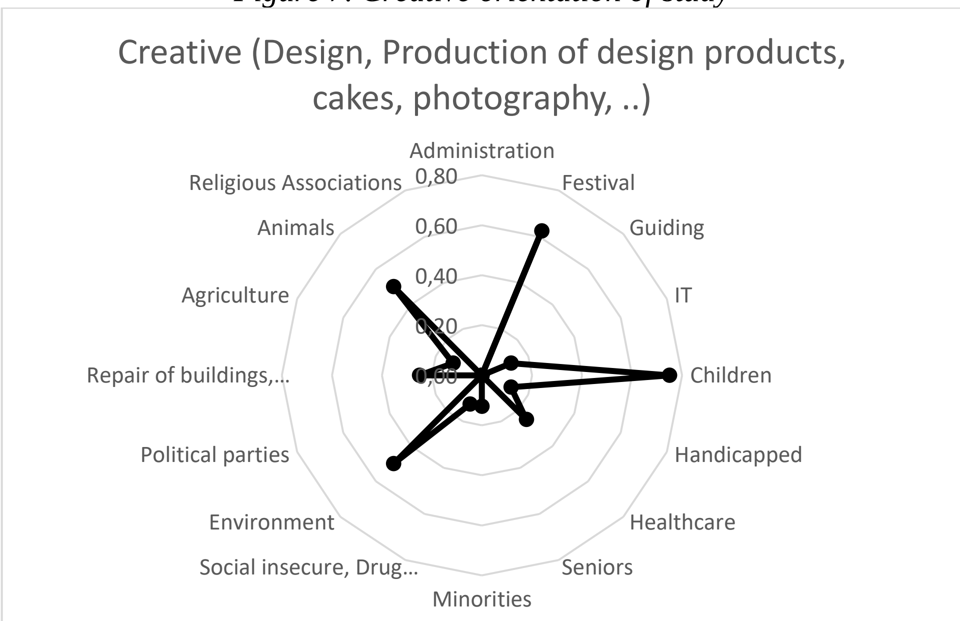
Figure 6. Economy, Finance, Accounting orientation of studies



Source: author research

The figure 7 shows the focus of volunteer studies in the field of creative fields. The greatest interest in volunteering arouse work with children. The second place is the festival environment, followed by work with animals, the environment. The last places include an administrative work along with the guiding, working with the seniors, the volunteering like the cooperation with political parties and the religiously oriented volunteering.

Figure 7. Creative orientation of study



Source: author research

It is clear from figures 1–7 that the most interesting voluntary sector is repeated, namely the work with children, the work with animals, the work in the environment and the work in the festival environment. As the least popular volunteer projects could be consider the focusing on promoting religious issues. The Humanities section showed an interest in the administrative work, but the other fields of study are uninterested. Social, humanities and general orientations are not interested in volunteering in IT. Social, economic and creative sections are not interested in working with political parties. These statistics are based on a set of respondents. It is not possible to generalize them for a small number of respondents.

The Chi-square ($\chi 2$) test was used to test the hypothesis: "People who would like to be a volunteer have a dependency between the field they study and their volunteer activity". Input data are shown in Tab. 1 for the mentioned categories of respondents. The test is performed at a significance level of 5%. The value of $\chi 2$ is 109, 67 and with 80 degrees of freedom, the critical value of $\chi 2$ is 101.88. This means that the dependence between the groups can be confirmed. Therefore, it is hypothesized that people who would like to be a volunteer have a dependency between the field their study and their volunteer activity can be confirmed.

5. CONCLUSION

Many authors note that the motivation of those who want to be a volunteer depended on various factors that the volunteer experiences. Although every field of study groups still follow the favourite topics of volunteer activities, their preferences differ slightly. The $\chi 2$ test did not refute the hypothesis that there is an interdependence between the field of study and hence the hypothesis could be confirmed. Baruch, May and Yu, D. (2016) report that the passion for volunteering is dependent on age, personal experience, and inherited assumptions. This research mainly reflects the age and the experience they are trying to acquire. The result confirms the intangible opportunity to attract the attention and motivate potential volunteers to the organization. (Stankiewicz, et al., 2017) Unfortunately, we could not confirm or rebut on the basis of research that people choose volunteer activities to increase their practice.

Allan (2019) said, that "hope labour promises that exposure and experience will possibly lead to employment in the future". There is a tendency for a group of disciplines to consider volunteering activities that are in line with the discipline but inconclusive. The size of the group is not large enough for the results to be considered authoritative and generalizable. One of the surveyed volunteer projects is an administrative group. As we can see from the research results there are not too many students who would like to be the volunteer in administration. There can be a reason that there are no opportunities. People in the administration usually would go for some short term a job assignment that is paid. Also, administration does not "sound very exciting" for a young person, who wants to devote his or her free time to some useful activity.

For further research, it would be interesting to find out if popular activities differ for people who do not want to be volunteers, for example if they choose the focus of the part-time work that is in line with their study focus. There are other perspectives that would be interesting to find out and lead to other interesting results. In the discussion of this topic, it would be appropriate to expand the sample of respondents and its analysis, depending on other factors such as age, form of volunteering, etc. We believe that personality types, the way of communication, also influence the willingness of a person to engage in volunteering. Research in this respect can bring interesting conclusions on this subject. In this research, theoretical reasoning of the respondents was observed at some time.

BIBLIOGRAPHY

Alderman, M. K. (2013). Motivation for achievement: Possibilities for teaching and learning. Routledge.

Allan, K. (2019). Volunteering as hope labour: the potential value of unpaid work experience for the un-and under-employed. Culture, Theory and Critique, 60(1), 66–83.

Archer, J. (1994). Achievement goals as a measure of motivation in university students. Contemporary Educational Psychology, 19(4), 430–446.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191–215.

Bandura, A. (1997). Self-efficacy: The exercise of control (1st ed.). New York: W. H. Freeman & Company.

Bartimote-Aufflick, K., Bridgeman, A., Walker, R., Sharma, M., & Smith, L. (2016). The study, evaluation, and improvement of university student self-efficacy. Studies in Higher Education, 41(11), 1918–1942.

Baruch, A., May, A., & Yu, D. (2016). The motivations, enablers and barriers for voluntary participation in an online crowdsourcing platform. Computers in Human Behaviour, 64, 923–931.

Bereiter, C., & Scardamalia, M. (Eds.). (1987). The psychology of written com-position. Mahwah, NJ: Erlbaum.

Carini, R. M., Kuh, G. D., Klein, S. P. (2006). Student engagement andstudent learning: testing the linkages. Res High Educ; 47: 1–32.

Chris, D. C. (2009). Immersive interfaces for engagement and learning. Science; 323: 66–9.28.

Clase, K. L., Gundlach, E., & Pelaez, N. J. (2010). Calibrated peer review for computer-assisted learning of biological research competencies. Bio-chemistry and Molecular Biology Education, 38(5), 290–295.

Cui, G., Yao, M., Zhang, X., Guo, Y., Li, H., & Yao, X. (2016). The effects of initial participation motivations on learning engagement in transition training for future general practitioners in rural China: perceived deterrents as mediator. Medical Education Online, 21(1), 30998.

De Wit, A., Mensink, W., Einarsson, T., & Bekkers, R. (2017). Beyond Service Production: Volunteering for Social Innovation. Nonprofit and Voluntary Sector Quarterly, 48(2_suppl), 52S–71S.

Di Giunta, L., Alessandri, G., Gerbino, M., Kanacri, P. L., Zuffiano, A., & Caprara, G. V. (2013). The determinants of scholastic achievement: The contribution of personality traits, self-esteem, and academic self-efficacy. Learning and Individual Differences, 27, 102–108.

Dowd, J. E., Thompson, R. J., Schiff, L., Haas, K., Hohmann, C., Roy, C., … Reynolds, J. A. (2019). Student Learning Dispositions: Multidimensional Profiles Highlight Important Differences among Undergraduate STEM Honors Thesis Writers. CBE-Life Sciences Education, 18(2), ar28.

Drucker, P. F., & Institute, F. H. L. (2010). The Five Most Important Questions Self Assessment Tool: Participant Workbook. Wiley.

Elrod, L. M. M. (2019). Volunteering. Salem Press Encyclopedia.

Facione, P. A. (2015). Critical thinking: What it is and why it counts. Insight Assessment.

Faye, C., & Sharpe, D. (2008). Academic motivation in university: The role of basic psychological needs and identity formation. Canadian Journal of Behavioral Science/Revue Canadienne Des Sciences Du Comportement, 40(4), 189–199.

Fisher, E. (2009). Motivation and Leadership in Social Work Management: A Review of Theories and Related Studies. Administration in Social Work, 33 (4), 347–367.

Gerdeman, R. D., Russell, A. A., & Worden, K. J. (2007). Web-based student writing and reviewing in a large biology lecture course. Journal of College Science Teaching, 36(5), 46–52.

Jansen, M., Scherer, R., & Schroeders, U. (2015). Students' self-concept and self-efficacy in the sciences: Differential relations to antecedents and educational outcomes. Contemporary Educational Psychology, 41, 13–24.

Kost, R. G., Lee, L. M., Yessis, J., Coller, B. S., & Henderson, D. K. (2011). Assessing Research Participants' Perceptions of their Clinical Research Experiences. Clinical and Translational Science, 4(6), 403–413.

Lewis, J. A., Packard, T. R., & Lewis, M. D. (2011). Management of Human Service Programs. Cengage Learning.

Lourens, G. M., & Daniels-Felix, D. K. (2017). Hospital volunteerism as human resource solution: Motivation for both volunteers and the public health sector. SA Journal of Human Resource Management, 1(2).

Meizlish, D., LaVaque-Manty, D., Silver, N., & Kaplan, M. (2013). Think like/write like: Metacognitive strategies to foster students' development as disciplinary thinkers and writers. In Thompson, R. J. (Ed.), Changing the conversation about higher education (pp. 53–73). Lanham, MD: Rowman & Littlefield.

Miller, R. B., Greene, B. A., Montalvo, G. P., Ravindran, B., Nichols, J. D. (1996). Engagement in academic work: the role of learning goals, future consequences, pleasing others, and perceived ability. Contemp Educ Psychol; 21: 388–422.27.

Mook, L., Handy, F., Ginieniewicz, J., & Quarter, J. (2007). The value of volunteering for a nonprofit membership association: The case of ARNOVA. Nonprofit and Voluntary Sector Quarterly, 36(3), 504–520.

Nichols, G., Hogg, E., Knight, C., & Storr, R. (2019). Selling volunteering or developing volunteers? Approaches to promoting sports volunteering. Voluntary Sector Review, 10(1), 3–18.

Pritchard, R. D., & Ashwood, E. L. (2008). Managing motivation: A guide to diagnosis and improving motivation. New York, NY: Routledge.

Quitadamo, I. J., & Kurtz, M. J. (2007). Learning to improve: Using writing to increase critical thinking performance in general education biology. CBE—Life Sciences Education, 6(2), 140–154.

Reynolds, J. A., Thaiss, C., Katkin, W., & Thompson, R. J. (2012). Writing-to-learn in undergraduate science education: A community-based, conceptually driven approach. CBE - Life Sciences Education, 11(1), 17–25.

Ritchhart, R., & Perkins, D. N. (2005). Learning to think: The challenges of teaching thinking. In Holyoak, K. J., & Morrison, R. G. (Eds.), The Cam-bridge handbook of thinking and reasoning (pp. 775–802). New York: Cambridge University Press.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology, 25(1), 54–67.

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova M., Bakker, A. B. (2002). Burnout and engagement in university students: a cross-national study. J Cross Cult Psychol; 33: 464–81.26.

Shum, S. B., & Crick, R. D. (2012). Learning dispositions and transferable competencies: Pedagogy, modelling and learning analytics. In Buckingham, S., Gasevic, D., & Ferguson, R. (Eds.), Proceedings of the 2nd international conference on learning analytics and knowledge (pp. 92–101). New York: Association for Computing Machinery.

Stankiewicz, J., Seiler, B., & Bortnowska, H. (2017). Motivation of management students to engage in volunteering (in the light of research results). Management, 21(1), 179–190.

Stanovich, K. E. (1999). Who is rational? Studies of individual differences in reasoning. Psychology Press.

Stanovich, K. E., West, R. F., & Toplak, M. E. (2011). Intelligence and rationality. In Sternberg, R. J., & Kaufman, S. B. (Eds.), Cambridge handbook of intelligence (pp. 784–826). New York: Cambridge University Press.

Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. Advances in Experimental Social Psychology, 29, 271–360.

Weinbach, R.W. (1998). Social worker manager: A practical guide to success. Boston: Allyn and Bacon.

OPPORTUNITY COST IN ECONOMICS AND FINANCE: WHO HAS IT RIGHT?

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Abstract
A review of textbooks in the BA in Business Administration shows that the concept of opportunity cost must be distinguished from the principle of forgone-opportunity-based assessment. The latter is shared and undoubted; the former is used only in economics and finance, and it is not well defined. A review of best-selling textbooks in economics and in finance reveals that there are two major discrepancies in economic definitions: (1) Opportunity cost may be defined as forgone goods, or forgone achievement of goals. (2) Opportunity cost compare the desired outcome of a course of action with a benchmark that may be ambiguous. Compared to economics, opportunity cost seems to be a non-issue in finance. All the reviewed finance textbooks use the concept of opportunity cost consistently. The field of finance better upholds the scientific and educational standard of clarity and consistency of delivery of knowledge.

Keywords: *explicit cost, implicit cost, opportunity cost, textbook*

1. INTRODUCTION

There is a widespread belief among economists that the concept of opportunity cost is a fundamental economic concept, crucial for all decision making. One would expect it to be omnipresent in the Business Administration college curriculum, as business administration is about (economic) decisions. Quite the opposite is true. When I checked the textbooks in the bachelor Business Administration program at my home university, most of them did not even mention the concept. This holds for all managerial and marketing textbooks, including strategic planning. A few others mention opportunity cost without using it or building on it. Only textbooks from the field of economics or finance use the concept and only some of those do so extensively.

To make the situation worse, it seems that even economic practitioners do not use the textbook concept. In a series of surveys, Ferraro & Taylor (2005) were giving economic experts, teachers and students exercises about opportunity cost. The exercises were arguably simple and straightforward like this one:

"Please Circle the Best Answer to the Following Question: You won a free ticket to see an Eric Clapton concert (which has no resale value). Bob Dylan is performing on the same night and is your next-best alternative activity. Tickets to see Dylan cost $40. On any given day, you would be willing to pay up to $50 to see Dylan. Assume there are no other costs of seeing either performer. Based on this information, what is the opportunity cost of seeing Eric Clapton? A. $0 B. $10 C. $40 D. $50." (Ferraro & Taylor, 2005, p. 3)
(Before reading further, I suggest that readers answer the question for themselves and try to realize how strongly they believe that another answer is not possible. This will be relevant to the further progress of the article.)

The received answers were almost equally distributed over all possible options. This does not indicate a good job on the side of past educators of the respondents which is also the conclusion of Ferraro & Taylor. Since they believe that the concept of opportunity cost is fundamental, simple and clearly defined, and since they consider their exercises straightforward (leading to the answer of $10), they conclude that the ignorance of the concept is caused by inadequate attention given to it in undergraduate economic courses and almost complete lack of attention in graduate courses.

Ferraro & Taylor's assumptions have been contested by other scholars. Indeed, if opportunity cost is a fundamental and simple concept, it is hard to believe that economic experts would not understand it or that economic instructors would be unable to teach it effectively. It is more likely that the exercise is phrased in a way that is confusing or artificial. Or maybe opportunity cost is not a well-defined concept. Or the concept is actually not simple or not fundamental.

This article tries to shed light upon this dilemma by inspecting the textbook use of the concept of opportunity cost. Unlike scholar discussions in academic journals, textbooks capture what students really learn. Directly or indirectly, they also serve as the primary source of knowledge for general public. Therefore, it makes sense to ask whether and how they address the concept of opportunity cost. Do economics-related textbooks include the assessment of a forgone opportunity when dealing with decision making problems? Do they use the concept of opportunity cost? If yes, do they define it consistently?

The structure of the article is as follows: In the second section, an overview of the recent scholarly discussion is provided. The next section describes the method used and data collected. Section 4 distinguishes between the concept of opportunity cost and the principle of forgone-opportunity-based assessment and analyzes their occurrence in the textbooks from the curriculum of Business Administration. Section 5 analyzes the best-selling economic and finance textbooks, revealing a major discrepancy in the definition of opportunity cost. The next section explains why the discrepancy cannot be neglected as irrelevant. Section 7 reveals another inconsistency in the definition of opportunity cost and argues that there is unlimited number of methods how to calculate it. Section 8 concludes and assesses the position of economics and finance with regards to clarity and consistency of use of the concept of opportunity cost.

2. LITERATURE OVERVIEW

Ferraro & Taylor's (2005) article provoked an intensive discussion among economists. O'Donnell (2009) believes that the findings of Ferraro & Taylor actually contradict their assumption. According to him, the concept of opportunity cost is not simple which can be seen in classes where students find this concept peculiar when they are exposed to it for the first time. It is also not fundamental (see how little it is used in advanced economics) which also means that it is not needed in economists' profession (which can again help to explain the variety of answers to Ferraro & Taylor's survey). And he reminds that from a certain (for example, Austrian) perspective, the survey would be deemed inappropriately formulated. Based on these comments, he suggests that maybe the concept is not necessary and can be abandoned.

For Potter & Sanders (2012), the problem lies more in operationalization of the concept. In economic literature, they seem to find two competing "accounting methods" of opportunity cost. The difference between them is where the price that was not paid is counted. The first accounting method, used by Ferraro & Taylor, subtracts $40 from the benefit of seeing Dylan's concert, concluding that the opportunity cost of seeing Clapton is $50-$40=$10. The other accounting method takes the forgone expense of $40 not as part of the forgone benefit; on the contrary, it is part of the realized benefit in a form of saved resources. Therefore, the opportunity cost of Clapton is full $50 (and the benefit of Clapton is increased by $40). Potter & Sanders stress that both accounting methods are plausible and both arbitrary too.

Besides, Potter & Sanders claim that the willingness to pay mentioned in the exercise ($50 on any given day) may not be relevant for a decision making that is concrete and not "on any given day". Willingness to pay is situational and must be taken as variable. For example, in a situation when the viewer is indifferent between Clapton's and Dylan's concert, the willingness to pay for Dylan's concert is $40, and thus the opportunity cost of seeing Eric Clapton is $40. To make the list of possible answers complete, they even provide justification for the opportunity cost of $0 which is connected to the ambiguity of the concept of willingness to pay: If a viewer chooses Clapton's concert, it means that he/she is not willing to pay $40 for Dylan's concert. The willingness to pay must be lower than $40, for example $0. Hence, Potter & Sanders conclude that the survey question simply does not "succeed in measuring professional understanding of opportunity cost" (2012, p. 255).

Stone (2015) shares the view that there are indeed two definitions, and comes up with a solution: instead of focusing on opportunity cost, we can easily exploit the concepts of economic cost, explicit cost and implicit cost which do not face ambiguities in their use. Explicit cost is a direct cost, i.e. expenditure, or more generally, a reduction in the agent's goal caused by the action itself (independent on an alternative). Implicit cost is an indirect cost, i. e. alternative improvement in the agent's goal reduced by the relevant explicit cost of the alternative action. These two concepts are enough to analyze human decisions. Opportunity cost shall be used as a principle but not as a technical term anymore.

Parkin (2016a) together with other participants of a symposium[46] about opportunity cost moves the discussion further when analyzing another source of ambiguities of the concept of opportunity cost – a discrepancy of the so called "quantity definition" and "value definition". According to the quantity definition, opportunity cost is represented by the *goods* that could have been achieved but have been forgone; according to the value definition, opportunity cost is represented by the *value* of the forgone goods.

In the history of economics, he finds influential proponents on both sides. However, he believes to show persuasive arguments to favor the quantity definition only. In any case, he claims that economic textbooks are always clear about what side they adhere to.

This claim did not seem persuasive enough to all participants of the symposium, e.g. O'Donnell (2016). Relevant arguments have been raised for both sides and no common agreement among economists has been reached.

3. METHOD AND DATA

The lack of agreement in the literature was a motivation for me to make another review. While other scholars have focused on economic textbooks only, I enlarged the scope to include all textbooks in the curriculum of business administration.

As a case study, I analyzed the curriculum of the BA in Business Administration at Anglo-American University. I collected the textbooks prescribed as required in official syllabi of all relevant courses: *Introduction to Microeconomics* (Mankiw, 2012b), *Introduction to Macroeconomics* (Mankiw, 2012a), *Financial Accounting* (Weygandt, Kieso, & Kimmel, 2010), *Managerial Accounting* (Hermanson, Edwards, & Maher, 2010), *Business Statistics* (Berenson, Levine, & Krehbiel, 2012), *Corporate Finance* (Ross, Westerfield, & Jaffe, 2010), *Introduction to Management* (Jones, George, & Barrett, 2017), *Introduction to Marketing* (Kotler & Keller, 2014), *Business Ethics* (Carroll & Buchholtz, 2000; Ferrell, Fraedrich, & Ferrell, 2011), *Project Management* (De Ceuster, 2010), *Human Resources Management* (DeNisi & Griffin, 2011), *Operations Management* (Johnston & Clark, 2005), *Marketing*

[46] Colander (2016), Parkin (2016a), Arce (2016), O'Donnell (2016), Stone (2016) and Parkin (2016b).

Research (Zikmund, 2010), *Introduction to Econometrics* (Studenmund, 2001; Wooldridge, 2003), *Strategic Planning* (Black & Gregersen, 2003; Grove, 2013; Magretta, 2012; Thompson, Peteraf, Gamble, & Strickland, 2016), *International Business* (Rugman & Hodgetts, 2003), *International Economics* (Pugel, 2016), *International Trade* (Krugman & Obstfeld, 2009).

I was looking for any occurrence of the concept of opportunity cost, be it explicitly named, or at least implicitly used. The findings (discussed in detail below) showed that while the principle of forgone-opportunity-based assessment is present in most textbooks, it is rarely stressed and treated thoroughly. Only the textbooks in economics and textbooks in finance use the concept of opportunity cost more. However, they are far from being uniform in their definitions and approach.

In order to track the discovered inconsistency of the use of opportunity cost, I reviewed the best-selling textbooks of economics and of finance. It is legitimate to believe that the best-selling textbooks have a major impact on student body and that they represent the common ground experts in the field build on.

I chose the first four books that performed the best in terms of sales on Amazon.com in September 2019. I limited the review only to books written in English and only to books that can serve as a textbook. The first four books in the discipline of economics were:

1. Sowell, T. Basic economics: a common sense guide to the economy
2. Samuelson, W., & Marks, S. G. Managerial economics
3. Krugman, P. R., & Wells, R. Microeconomics
4. Mankiw, N. G. Principles of microeconomics

The first four books in the discipline of finance were:

1. Berman, K., Knight, J., & Case, J. Financial intelligence: a manager's guide to knowing what the numbers really mean
2. Bodie, Z., Kane, A., & Marcus, A. J. Investments
3. Brigham, E. F., & Houston, J. F. Fundamentals of financial management
4. Ross, S. A., Westerfield, R., & Jordan, B. D. Fundamentals of corporate finance

Again, I collected all occurrences of the opportunity cost concept, both explicit and implicit[47]. I compared them with each other and with the academic literature. The findings of the comparative analysis can be found below.

4. PRINCIPLE OF FORGONE-OPPORTUNITY-BASED ASSESSMENT

The basic economic understanding of human action and the way its effectiveness should be assessed, can be summarized as follows:

We live and act in a world where resources are scarce and do not allow for full achievement of all our goals. As long as we use scarce resources to achieve our goals, our action includes trade-offs: a particular use of a resource precludes its alternative uses.

Economics and finance claim that desirability of a particular course of action is given by its comparison with alternative courses of action. It is not enough to assess how it contributes to the achievement of our goals; *a course of action is to be chosen if its contribution is better than a contribution of the next-best alternative course of action*.

[47] In my review, I used older edition of the textbooks, assuming that the recent revisions do not significantly modify the way opportunity cost is treated there.

We can call this claim the principle of forgone-opportunity-based assessment. Is this principle shared by the textbooks of the business administration curriculum? And do they conceptualize it via the concept of opportunity cost?

Starting with the latter question, only some textbooks actively use the concept of opportunity cost which represents an explicit adherence to the principle of forgone-opportunity-based assessment. It is the textbooks from economics *(Introduction to Microeconomics*, *Introduction to Macroeconomics*, *International Economics*, *International Trade*) and from finance and managerial accounting (*Corporate Finance*, *Managerial Accounting*). Some other textbooks mention the concept of opportunity cost without addressing in further (*Business Ethics*, *Introduction to Econometrics*, *International Business*). The rest does not even mention the concept.

Still, it does not mean that the principle of forgone-opportunity-based assessment would not be present. It just takes a different form. The discipline of finance (and managerial accounting) is rich on different forms of the principle:

– *Time value of money*: "[A]ssume … a zero-interest bond (pays no interest) with a face value of $1,000,000 due in 20 years. … A million dollars received 20 years from now is not the same as a million dollars received today. The reason you should not pay a million dollars for …[the] bond relates to what is called the **time value of money**. If you had a million dollars today, you would invest it. From that investment, you would earn interest such that at the end of 20 years, you would have much more than a million dollars." (Weygandt et al., 2010, p. 457)
– *Capital budgeting*: "[T]he amount of funds available for investment is limited. Thus, once a company makes a capital investment decision, alternative investment opportunities are normally lost. The benefits or returns lost by rejecting the best alternative investment are the **opportunity cost** of a given project." (Hermanson et al., 2010, p. 234)
– *Relevant cost*: "**Relevant costs** are those that will occur in the future and that will vary across the alternatives being considered. HDX-treme's investment to refurbish the manufacturing facility was a one-time cost that will not reoccur in the future. Such past costs are *sunk costs* and should not be considered in future analyses." (Kotler & Keller, 2014, p. A12)
– *Differential analysis*: "**Differential analysis** involves analyzing the different costs and benefits that would arise from alternative solutions to a particular problem. **Relevant revenues or costs** in a given situation are future revenues or costs that differ depending on the alternative course of action selected. **Differential revenue** is the difference in revenues between two alternatives. **Differential cost or expense** is the difference between the amounts of relevant costs for two alternatives." (Hermanson et al., 2010, p. 107)
– *Net present value* and *discount rate*: "Conceptually, the discount rate on a risky project is the return that one can expect to earn on a financial asset of comparable risk. This discount rate is often referred to as an opportunity cost because corporate investment in the project takes away the stockholder's opportunity to invest the dividend in a financial asset." (Ross et al., 2010, p. 193)
– *Cost of capital*: "The appropriate discount rate on a new project is the minimum expected rate of return an investment must offer to be attractive. This minimum required return is often called the **cost of capital** associated with the investment. It is called this because the required return is what the firm must earn on its capital investment in a project just to break even. It can thus be interpreted as the opportunity cost associated with the firm's capital investment." (Ross, Westerfield, & Jordan, 2003, p. 470)

– *Incremental cash flows*: "In calculating the NPV of a project, only cash flows that are *incremental* to the project should be used. These cash flows are the changes in the firm's cash flows that occur as a direct consequence of accepting the project. That is, we are interested in the difference between the cash flows of the firm with the project and the cash flows of the firm without the project." (Ross et al., 2010, p. 226)

This indicates the subordination of the concept of opportunity cost to the principle of forgone-opportunity-based assessment. Clearly, the concept of opportunity cost is not the only way how to conceptualize it.

If it is not the concept of opportunity cost, is it at least the principle of forgone-opportunity-based assessment that is shared and conceptualized by textbooks from outside economics and finance? Some of them do not use it for good reasons. For example, *Business Statistics*, *Introduction to Econometrics* or *Financial Accounting* are about gathering and interpreting data. Their outcomes serve as an input for decision making; the principle of forgone-opportunity-based assessment is reflected there only through a reference to the users of their outcomes.

We would expect the principle to be reflected in disciplines that focus on decision making. Indeed, textbooks in *Introduction to Management*, *Business Ethics*, or *Strategic Planning* do understand that there are alternative courses of action that need to be thoroughly evaluated before a decision is made. Some of them mention the opportunity or implicit cost in their exercises but do it only incidentally as something that needs not be specifically addressed. This lack of attention may be surprising. How could it be explained? Is the principle of forgone-opportunity-based assessment so established, that it needs not be reminded of?

I offer a different explanation. When alternative courses of action are analyzed, the principle of forgone-opportunity-based assessment is redundant. All alternatives are addressed and analyzed, so there is no need to implant one into the other. On the other hand, the principle can help in situations when only one course of action is paid attention to, like when a new economic-policy measure is about to be introduced, or when a new investment project is pondered. Then there is a risk of forgetting about the next-best alternative, and the forgone benefit should be implanted as a cost in the assessed project.

These situations are the domain of economics and finance. Let us therefore continue to explore these two disciplines. Do they use the concept of opportunity cost? And do they use it in the same way?

5. WHAT IS OPPORTUNITY COST? LABYRINTH OF MEANING

Surprisingly, there is no order. Sowell (2011), the author of the best-selling textbook in economics, doesn't use the term "opportunity cost" at all. Some other authors, like Bodie et al. (2001) use the term only to give a name to the principle of forgone-opportunity-based assessment. They do not use it as a *tool* to assess effectiveness of human action. Still, even the authors who define and use the term "opportunity cost", are not consistent in their answers to a basic question: What is opportunity cost?

The simplest definition says that the opportunity cost of something is what you give up to get it. (See Krugman & Wells (2004, p. 7) or Mankiw (2012b, p. 5).) What does "what" mean in this regard? There are three options at hand, and each of them can be found in the reviewed textbooks:

(a) You give up resources as they must be used to get the desired goods[48] and achieve your goals.
(b) You give up the goods that you could have got if you had chosen the next-best alternative course of action.
(c) You give up the achievement (satisfaction) of your goals that you could have got if you had chosen the next-best alternative course of action.

These three options are three layers of the same decision making. A course of action includes a use of resources – layer (a) – which allows us to get the desired goods – layer (b) – which are desired because they allow us to achieve our goals – layer (c). Which layer is opportunity cost associated with? It is only clear that it should not be layer (a). Resources used in a particular course of action do not depend on any alternative, so it would not make sense to call them "opportunity" cost.
On numerous places, all reviewed economic textbooks explicitly adhere to the third option:[49]

- "The cost of watching a television sitcom or soap opera is the value of the other things that could have been done with that same time." (Sowell, 2011, sec. Incremental Substitution)
- "The opportunity cost associated with choosing a particular decision is measured by the benefits forgone in the next-best alternative." (Samuelson & Marks, 2012, pp. 227–228)
- "So the opportunity cost of the History of Jazz class is the enjoyment you would have derived from the Beginning Tennis class." (Krugman & Wells, 2004, p. 7)
- "Ed spends an hour studying instead of watching tv with his friends. The opportunity cost to him of studying is
  a. the improvement in his grades from studying for the hour,
  b. the improvement in his grades from studying minus the enjoyment of watching tv,
  c. **the enjoyment he would have received if he had watched tv with his friends,**
  d. zero. Since Ed chose to study rather than to watch tv, the value of studying must have been greater than the value of watching tv." (Mankiw, n.d., p. 12)

Unfortunately, they allow for other definitions at other places. Sowell provides definitions (b) and (c) in the same paragraph: "The real costs of building a bridge are the other things that could have been built with that same labor and material. [Definition (b)] This is also true at the level of a given individual, even when no money is involved. The cost of watching a television sitcom or soap opera is the value of the other things that could have been done with that same time. [Definition (c)]" (Sowell, 2011, sec. Incremental Substitution).

Krugman & Wells go even further claiming that definitions (a) and (c) are equivalent: "The increased time spent commuting is a cost you will incur if you accept the new job. That additional time spent commuting—or equivalently, the benefit you would get from spending that time doing something else—is an opportunity cost of the new job." (Krugman & Wells, 2004, p. S-1) In this case, however, I believe it is rather an unfortunate formulation than an intention to establish definition (a) as plausible.

Mankiw starts with the satisfaction definition (c) but opts for definition (b) once he comes to the problem of production trade-offs: "The production possibilities frontier shows the opportunity cost of one good as measured in terms of the other good." (Mankiw, 2012b, p. 27) "The opportunity cost measures the trade-off between the two goods that each producer faces." (Mankiw, 2012b, p. 54) The same is true for Krugman & Wells: "If Tom were to catch

[48] To be precise, we should write "state of the world" instead of "goods" but "goods" sound more common.
[49] The third option is the "value definition" and the second option is the "quantity definition" according to Parkin (2016a).

30 fish instead of 20, he would be able to gather only 20 coconuts instead of 25. So the opportunity cost of those 10 extra fish is the 5 coconuts not gathered." (Krugman & Wells, 2004, p. 24)

The only economic textbook that is consistent in the use of the concept of opportunity cost, is Samuelson & Marks (2012) which allows only for definition (c). I suppose that this is due to its focus – unlike the rest of the top four economic textbooks, this one adopts the managerial perspective (see its name: "Managerial Economics") which focuses on financial satisfaction.

Indeed, in the discipline of finance, definitions (b) and (c) often converge. If the goals are defined in monetary terms (like the goal of "maximize profits") and the goods given up is money, then goods in definition (b) and goal-achievement in definition (c) are the same thing. This may be a reason why only some of the reviewed finance textbooks define opportunity cost; all of them adhere to definition (c):

- "In business, opportunity cost often means the potential benefit forgone from not following the financially optimal course of action." (Berman, Knight, & Case, 2006, sec. Required Rate of Return)
- "Opportunity Cost. The return on the best alternative use of an asset, or the highest return that will not be earned if funds are invested in a particular project." (Brigham & Houston, 2004, p. 552)
- "[O]pportunity cost. The most valuable alternative that is given up if a particular investment is undertaken." (Ross et al., 2003, p. 313)

When it comes to concrete examples and measurement of opportunity cost, all of them refer to financial value, consistent to what goal is at hand:

- "One factor is the opportunity cost involved. … That 2 percent return is unattractive because the company could do better just by buying a treasury bill, which might pay 4 percent or 5 percent with almost no risk." (Berman et al., 2006, sec. Required Rate of Return)
- "[P]lowing back funds into the firm increases share value only if the firm earns a higher rate of return on the reinvested funds than the opportunity cost of capital, that is, the market capitalization rate." (Bodie et al., 2001, p. 621)
- "Shareholders give up the opportunity to invest funds elsewhere when they provide capital to the firm. The return they could earn elsewhere in investments of equal risk represents the cost of equity capital. This cost is an opportunity cost rather than an accounting cost, but it is quite real nevertheless." (Brigham & Houston, 2004, p. 58)
- "When a firm holds cash in excess of some necessary minimum, it incurs an opportunity cost. The opportunity cost of excess cash (held in currency or bank deposits) is the interest income that could be earned in the next best use, such as investment in marketable securities." (Ross et al., 2003, p. 674)

6. DOES IT MATTER WHAT OPPORTUNITY COST IS?

One might be tempted to say that when the convergence of definitions works fine in finance textbooks, the difference in the definitions is not of importance. But this would be a short-sighted conclusion. In many cases the ends are defined in other units than the relevant goods, and the difference has material consequences. Consider this simple situation: "Annie and Carrie successfully finished a children knight trail. As a reward, each of them can take either a helmet, or a sword. Annie already owns a sword but not a helmet, Carrie already owns a helmet but not a sword. Both want to own both a helmet and a sword."

According to definition (b), opportunity costs for both are the same: if any of them chooses a helmet, she gives up a sword; if she takes a sword, she gives up a helmet. According to definition (c), opportunity costs are different: Annie's opportunity cost of taking a sword is higher than her opportunity cost of taking a helmet; Carrie's opportunity cost of taking a sword is lower than her opportunity cost of taking a helmet. Logically, therefore, the opportunity costs of one girl cannot equal the opportunity costs of the other.[50]

Definition (b) includes only the objective side of trade-offs (alternative uses), whereas definition (c) includes also the subjective layer (valuation). Obviously, without the subjective layer, the decision-making problem is not fully defined. (It suffices to say that without assigning value to alternatives, it wouldn't be possible to identify the next-best alternative at all!)

Still, this doesn't mean that all three layers of the decision-making problem (resources, alternative uses, valuation) must be always analyzed together. For example, the theory of consumer choice explicitly proceeds in three steps: it assumes a budget (layer of resources), it constructs a budget constraint (layer of alternative uses) and indifference curves (layer of valuation). This is not a justification for mixing the definitions up, though. On the contrary, as each of the layers can be treated separately, they would benefit from having independent names.

To be precise, it would be students who would benefit from clear definitions. They come equipped with everyday language which is not clear in this regard. For most them, "costs" are linked to resources. Economic instructors spend a lot of time teaching that the "real" cost is different. They teach them that resources themselves do not incur any costs and that it is only their alternative use that incurs costs. But when it comes to testing, they come with questions like this:

"2. You make $45,000 per year at your current job with Whiz Kids Consultants. You are considering a job offer from Brainiacs, Inc., which will pay you $50,000 per year. Which of the following are elements of the opportunity cost of accepting the new job at Brainiacs, Inc.?
a. The increased time spent commuting to your new job
b. The $45,000 salary from your old job" (Krugman & Wells, 2004, p. 11)

Option a. is about spent resources, i.e. definition (a), whereas option b. is about forgone goods, i.e. definition (b). An accurate and alert student could find this incompatible. Still, the expected answer is Yes in both cases:

"2. a. Yes. The increased time spent commuting is a cost you will incur if you accept the new job. That additional time spent commuting—or equivalently, the benefit you would get from spending that time doing something else—is an opportunity cost of the new job.
b. Yes. One of the benefits of the new job is that you will be making $50,000. But if you take the new job, you will have to give up your current job; that is, you have to give up your current salary of $45,000. So $45,000 is one of the opportunity costs of taking the new job." (Krugman & Wells, 2004, p. S-1)

The confusion of resources and forgone opportunities can be found in other textbooks as well:
"When computing the opportunity cost of attending a concert you should include

a. the price you pay for the ticket and the value of your time.
b. the price you pay for the ticket, but not the value of your time.
c. the value of your time, but not the price you pay for the ticket.
d. neither the price of the ticket nor the value of your time." (Mankiw, n.d., p. 11)

The price paid for the ticket, as well as the time spent, are resources. What is given up, is the best course of action that could be conducted otherwise, and the appropriate achievement of

[50] O'Donnell (2016, p. 28) claims that definitions (b) and (c) are not two *definitions* of the concept but two ways how to *measure* the same concept. I believe that my example proves him wrong.

goals. Naturally, resources spent are reflected in the goods (actions) that were given up, and goods that were given up are reflected in the satisfaction that was given up. However, for the reasons stated above, there is a strong argument for not mixing them up.

7. WHAT IS OPPORTUNITY COST? RESOURCES STRIKE BACK

Although we saw that all three layers of opportunity cost can be discovered in economic textbooks, it may well be argued that examples of definition (a) are likely to be an outcome of a clumsy formulation rather than intention. All authors are clear that it is the alternative use that incurs opportunity cost, after all. Building on this line of thought, we will not focus on definition (a) anymore.

Still, resources find their way back and we may find them included in both (b) and (c). This peculiar situation happens when resources are not only used to allow for a particular course of action but when they are also *part of the desired outcome* (and thus measured in the same units).

Consider this example: "You can spend the next two hours either by playing mobile game Angry Birds or by playing mobile game Super Mario Run. Both actions start and end at the same time. The aim is playing enjoyment. In both cases, you would spend $10 for paid game features. If you decide to play Angry Birds, what is your opportunity cost?"

In this case, all textbooks would agree that the opportunity cost is the forgone opportunity to play Super Mario Run – definition (b) – or the forgone satisfaction derived from playing Super Mario Run – definition (c). Resources used ($10, time, body energy, cloths etc.) would not be included in the answer; the resources have allowed action to be taken, but they are not a source of satisfaction.

Consider a different example: "You can spend the next two hours either by trading cryptocurrencies or trading commodities. Both actions start and end at the same time. The aim is to increase your financial wealth. In both cases, you would spend $10; the expected risk is the same. Cryptocurrencies promise a revenue of $11; commodities promise a revenue of $12. If you decide to trade commodities, what is your opportunity cost?"

If we stick to the logic above, the opportunity cost is $11. It is so in definition (b) because $11 is the amount of goods there are forgone; and it is so in definition (c) because money is also the goal of both actions, so the amount of money directly measures the satisfaction of the goal.

But $11 would be the correct answer for only two textbooks: Krugman & Wells (2004) and Mankiw (2012b). The others – Samuelson & Marks (2012) and all finance textbooks – would claim that the opportunity cost is $1. How is it possible?

The difference is caused by the way the satisfaction is measured. While the first group focuses on the forgone *level* of satisfaction ("you could have $11"), the latter group focuses on the forgone *change* of satisfaction ("you could have $1 more than before"). In financial terms, the first group focuses on revenues, while the latter on profits: "Opportunity Cost. The return on the best alternative use of an asset, or the highest return that will not be earned if funds are invested in a particular project." (Brigham & Houston, 2004, p. 552)

This difference is *fundamental*, yet easy to overlook in introductory chapters of economic textbooks. It is because the examples there are usually framed as situations from everyday life (watching tv, choosing an elective class…) when resources (time, money) are usually not part of the desired outcome. Then the "forgone level of satisfaction" and "forgone change of satisfaction" are the same because (1) no level of satisfaction is explicitly assumed at the beginning and (2) resources do not represent satisfaction. (Compare Stone, 2015, pp. 23–24)

In later chapters, economic textbooks deal with the theory of firm. Then, the expected goal is financial (typically profit maximization), so the difference between the level and change of satisfaction is material. In a sense, economic textbooks capture the difference by introducing the concept of "explicit" and "implicit" cost. Explicit costs are expenditures which are part of the satisfaction.[51] Therefore, change in satisfaction (profit) equals level of satisfaction (revenues) minus explicit cost (expenditures). Implicit cost is simply a change in satisfaction stemming from the alternative course of action – returns from a possible alternative use of own resources. Going back to the trading example, the explicit cost of trading commodities would be $10, and the implicit cost would be $1, together $11.

This new terminology highlights the difference in definition of opportunity cost. Samuelson & Marks are quite clear that opportunity cost is implicit cost: "[T]he total cost of taking an MBA degree is the explicit, out-of-pocket tuition cost plus the implicit (but equally real) opportunity cost." (Samuelson & Marks, 2012, p. 228) On the other side, Krugman & Wells and Mankiw are equally clear that opportunity cost = implicit cost + explicit cost, or in other words, that all costs are opportunity costs: "All costs are opportunity costs. They can be divided into explicit costs and implicit costs." (Krugman & Wells, 2004, p. 164) "Because these opportunity costs require the firm to pay out some money, they are called explicit costs. By contrast, some of a firm's opportunity costs, called implicit costs, do not require a cash outlay." (Mankiw, 2012b, p. 261)

The conflict in definition cannot be more outspoken. Who has it right then, economics or finance?

In the recent debate about opportunity cost, Potter & Sanders (2012) were the first to acknowledge the difference between the forgone level of satisfaction versus the forgone change in the level of satisfaction. For them, they are two possible "accounting methods" of opportunity cost. Polley (2015) strongly disagrees claiming that only the forgone-change-of-satisfaction definition is possible: "There is no other interpretation that allows for a meaningful comparison of the value of the two choices…" (Polley, 2015, p. 13)

When mentioning "comparison of the value of the two choices", Polley hits the correct point but makes a false conclusion. What is the purpose of opportunity cost? To help assess whether the course of action at hand is worth conducting. Does it matter, what value the opportunity cost has? No, only the difference from the assessing alternative matters. It is like weighing items on balance scales – weights that you add to both sides do not matter. Therefore, any "accounting method" works if it correctly identifies the difference.

We saw above that the discrepancy in definition is linked to a benchmark that is used to measure the desired outcome of actions. Do we compare the outcome with the initial level, with no level or something else? The number of possible benchmarks is unlimited and each of them leads to the same result. Arbitrary as they may seem, all benchmarks can serve their purpose perfectly if they recognize and build on the principle of forgone-opportunity-based assessment to identify the best course of action. If an expert uses one of them, he or she cannot be blamed for lack of economic reasoning.

8. CONCLUSION. WHO HAS IT RIGHT?

A review of textbooks in the BA of Business Administration has shown that we must distinguish between the principle of forgone-opportunity-based assessment and the concept of

[51] To define explicit costs as resources that are part of satisfaction of goals is more general than the common definition of "direct outlay of money". I believe that it is a justified generalization. Stone (2015, pp. 22, 24) makes the same point with a similar definition.

opportunity cost. While the principle is implicitly included in the courses that focus on decision making, only economics and finance address it explicitly.

The concept of opportunity cost, claimed to be fundamental in economics, is almost unused outside economics and finance. Also, finance is rather creative and comes with other concepts building on the principle of forgone-opportunity-based assessment (discount rate, net present value, etc.). Still, even with a clear focus on a single concept, economics faces awkward problems: A review of best-selling textbooks in economics and finance revealed that there are at least two major discrepancies in defining the concept of opportunity cost in economics:

1. Opportunity cost may be defined as forgone goods, or forgone satisfaction of ends.
2. Opportunity cost compare the desired outcome of a course of action with a benchmark that may be ambiguous.

Compared to economics, opportunity cost seems to be a non-issue in finance. All the reviewed textbooks use the concept of opportunity cost consistently – opportunity cost is the forgone satisfaction of goals, measured as the difference of the level of satisfaction from the current state of affairs in various courses of action.

Does this mean that finance has it right? In terms of choosing the right definition of opportunity cost, I would be hesitant to answer Yes. There might be good reasons for using the concept of opportunity cost in different ways, and generally speaking, it is not uncommon that different disciplines use the same term in different meanings. Even abandoning the term “opportunity cost” is an option that might work for some scholars and students. We do not all have to choose the same way. (For example, Frank, Bernanke & Johnston (2009, p. 7) explicitly inform students that some economists define opportunity cost in a different way than they do.)

But if the question above focuses on consistency of presenting the concept, I would agree that finance beats economics. Clarity and consistency should be a virtue in science, and even more in a classroom. Unlike in finance, economic textbooks do not live up to this standard. They treat opportunity cost inconsistently (even within one textbook) and present exercises that are ambiguous. Going back to the survey of Ferraro & Taylor (2005), it is not the fault of students or economic practitioners that they are not able to answer the question correctly. It is the fault of economic instructors that they do not ask well-defined test questions.

BIBLIOGRAPHY

Arce, D. G. (2016). Opportunity cost and the intelligence of economists: A comment. *The Journal of Economic Education, 47*(1), 23–25. https://doi.org/10.1080/00220485.2015.1106367

Berenson, M. L., Levine, D. M., & Krehbiel, T. C. (2012). *Basic business statistics: Concepts and applications* (12th ed). Boston: Prentice Hall.

Berman, K., Knight, J., & Case, J. (2006). *Financial intelligence: A manager’s guide to knowing what the numbers really mean*. Boston: Harvard Business School Press.

Black, J. S., & Gregersen, H. B. (2003). *Leading strategic change: Breaking through the brain barrier*. Upper Saddle River, N.J: FT Press.

Bodie, Z., Kane, A., & Marcus, A. J. (2001). *Investments* (5th edition). Boston, Mass.: McGraw-Hill/Irwin.

Brigham, E. F., & Houston, J. F. (2004). *Fundamentals of financial management* (Concise 4th edition). Thomson.

Carroll, A. B., & Buchholtz, A. K. (2000). *Business & society: Ethics and stakeholder management* (4th ed). Cincinnati, Ohio: South-Western College Pub.

Colander, D. (2016). Introduction to symposium on opportunity cost. *The Journal of Economic Education*, *47*(1), 11–11. https://doi.org/10.1080/00220485.2015.1106370

De Ceuster, L. (2010). *Focus on project success: Tools and techniques for successful projects*. Praha: APraCom.

DeNisi, A. S., & Griffin, R. W. (2011). *HR* (Student edition). Mason, OH: South-Western Cengage Learning.

Ferraro, P. J., & Taylor, L. O. (2005). Do Economists Recognize an Opportunity Cost When They See One? A Dismal Performance from the Dismal Science. *Contributions in Economic Analysis & Policy*, *4*(1). https://doi.org/10.2202/1538-0645.1469

Ferrell, O. C., Fraedrich, J., & Ferrell, L. (2011). *Business ethics: Ethical decision making and cases* (8th ed). Mason, OH: South-Western Cengage.

Frank, R. H., Bernanke, B., & Johnston, L. (2009). *Principles of microeconomics* (4th ed). Boston: McGraw-Hill Irwin.

Grove, A. S. (2013). *Only the paranoid survive: How to exploit the crisis points that challenge every company*.

Hermanson, R. H., Edwards, J. D., & Maher, M. W. (2010). *Accounting Principles: A Business Perspective. Volume 2 Managerial Accounting* (First Global Text Edition). Textbook Equity.

Johnston, R., & Clark, G. (2005). *Service operations management: Improving service delivery* (2nd ed). Harlow, England ; New York: FT/Prentice Hall.

Jones, G. R., George, J. M., & Barrett, M. (2017). *Contemporary management*.

Kotler, P., & Keller, K. L. (2014). *Marketing Management*.

Krugman, P. R., & Obstfeld, M. (2009). *International economics: Theory and policy* (8th ed). Boston: Pearson Addison-Wesley.

Krugman, P. R., & Wells, R. (2004). *Microeconomics*. New York: Worth Publishers.

Magretta, J. (2012). *Understanding Michael Porter: The essential guide to competition and strategy*. Boston, Mass: Harvard Business Review Press.

Mankiw, N. G. (2012a). *Principles of macroeconomics* (6th ed). Mason, OH: South-Western Cengage Learning.

Mankiw, N. G. (2012b). *Principles of microeconomics* (6th edition). Mason, OH: South-Western Cengage Learning.

Mankiw, N. G. (n.d.). *Chapter 01 Test Bank*. Cengage Learning.

O'Donnell, R. (2009). The concept of opportunity cost: Is it simple, fundamental or necessary? *Australasian Journal of Economics Education*, *6*(1), 21–37.

O'Donnell, R. (2016). Complexities in the examination of opportunity cost. *The Journal of Economic Education*, *47*(1), 26–31. https://doi.org/10.1080/00220485.2015.1106368

Parkin, M. (2016a). Opportunity cost: A reexamination. *The Journal of Economic Education*, *47*(1), 12–22. https://doi.org/10.1080/00220485.2015.1106361

Parkin, M. (2016b). Opportunity cost: A reply. *The Journal of Economic Education*, *47*(1), 35–39. https://doi.org/10.1080/00220485.2015.1106366

Polley, W. J. (2015). The Rhetoric of Opportunity Cost. *The American Economist*, *60*(1), 9–19. https://doi.org/10.1177/056943451506000102

Potter, J., & Sanders, S. (2012). Do Economists Recognize an Opportunity Cost When They See One? A Dismal Performance or an Arbitrary Concept? *Southern Economic Journal*, *79*(2), 248–256. https://doi.org/10.4284/0038-4038-2011.218

Pugel, T. A. (2016). *International economics* (16. ed., international student edition). New York, NY: McGraw-Hill.

Ross, S. A., Westerfield, R., & Jaffe, J. F. (2010). *Corporate finance*. New York: McGraw-Hill/Irwin.

Ross, S. A., Westerfield, R., & Jordan, B. D. (2003). *Fundamentals of corporate finance* (Alternate 6th edition). New York, NY: McGraw-Hill Education.

Rugman, A. M., & Hodgetts, R. M. (2003). *International business* (3. ed). Harlow: Financial Times/Prentice Hall.

Samuelson, W., & Marks, S. G. (2012). *Managerial economics* (7th edition). Hoboken, N.J: Wiley.

Sowell, T. (2011). *Basic economics: A common sense guide to the economy* (4th ed). New York: Basic Books.

Stone, D. F. (2015). Clarifying (Opportunity) Costs. *American Economist*, *60*(1), 20–25.

Stone, D. F. (2016). Comments on "Opportunity cost: A reexamination": A case in point of no free lunch. *The Journal of Economic Education*, *47*(1), 32–34. https://doi.org/10.1080/00220485.2015.1106369

Studenmund, A. H. (2001). *Using econometrics: A practical guide* (4th ed). Boston, Mass: Addison Wesley.

Thompson, A. A., Peteraf, M. A., Gamble, J. E., & Strickland, A. J. (2016). *Crafting and executing strategy: The quest for competitive advantage ; concepts and cases* (Twentieth Edition, international edition). New York: McGraw-Hill Education.

Weygandt, J. J., Kieso, D. E., & Kimmel, P. D. (2010). *Financial accounting* (7th ed). Hoboken, NJ: Wiley.

Wooldridge, J. M. (2003). *Introductory econometrics: A modern approach* (2nd ed). Australia ; Cincinnati, Ohio: South-Western College Pub.

Zikmund, W. G. (Ed.). (2010). *Business research methods* (8th ed). Mason, OH: South-Western Cengage Learning.

Management and Economic Policy II

TAX UNCERTAINTY. THE CASE OF ROMANIA

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Abstract
Romania's corporate tax rate is 16% since 2005, applicable to the taxable profit. However, the effective tax rate can be significantly higher due to non-deductible expenses (e.g. non-deductible provisions, sponsorships, amortization booked according to accounting regulations). It can also be lower, due to tax credits (such as tax incentive for reinvested profit) and non-taxable revenues (e.g. revenues from dividends obtained from other Romanian entities). We can argue that the difference from the standard tax rate and the effective tax rate is one of the main reasons why entreprenours have a difficult time deciding whether to invest in Romania or not, but there are other factors to be taken into account. One if these factors is tax uncertainty. During 11,5 months of 2018 (from January 2018 to mid December 2018), 139 articles of the Romanian Tax Code have been changed/updated, according to a summary published by CNIPMMR (CNIPMMR, 2018). Moreover, starting with January 2018, 97 articles of the Tax Code were updated/changed by an Ordinance published in the Official Gazette in November 2017, therefore, a total of 236 articles were different in 2018 from 2017. And these are only the numbers related to Romanian Tax Code. Our hypothesis is that there are other factors that create tax uncertainty, not only the numerous changes of the Tax Code. In this research we investigate the factors that create and sustain tax uncertainty in Romania. The research is based on a questionnaire, which was distributed to social network groups of financial and accounting professionals and tax professionals. The results are that tax uncertainty is created and sustained by the numerous and frequent changes of the legislation, the political environment, a legislation difficult to understand, vague and open to interpretation.

Keywords: *investments, tax avoidance, tax changes, tax compliance, tax uncertainty*

1. INTRODUCTION

Tax uncertainty is considered a significant factor when thinking to invest in a country. Though the tax burden in terms of the amount of taxes to be paid is most likely to weight more in the decision making process for an investor, the predictability and stability of the tax environment will have also an impact on the decision.

Romania is a country not characterized by stability and predictability of the tax environment as changes in the tax rules occur quite often.

Tax uncertainty, however, is not common only in Romania. In a report issued by the OECD and IMF (OECD and IMF, 2017), upon the request of the G20 Leaders at the Summit in Hangzhou, China on September 2016, it was discussed the influence of the tax uncertainty on investments, and was highlighted that there is a risk that tax uncertainty is discouraging investment.

We consider tax uncertainty caused by the numerous and frequent changes of the legislation and other factors, to be affecting investors as well as accounting and tax professionals in Romania.

The results of our survey show that tax uncertainty in Romania is caused by the frequent changes of the tax legislation, the open to interpretation character of the legislation, the political environment, the inconsistent and unpredictable interpretation of the tax regulation of tax authorities, the tax regulators' lack of knowledge.

Another subject of the questionnaire which is the basis of this research was whether the mechanisms implemented by tax authorities are of help in terms of decreasing tax uncertainty caused by the open to interpretation character and the complexity of the legislation. The results show that these mechanisms do not decrease tax uncertainty and tax and accounting professionals prefer to ask for opinions amongst peers rather than use them.

This paper is structured as follows. The first section represents a review of the literature in the area of tax uncertainty. In the second part we described the methodology used in this paper. The third section covers the main results of the survey and in the last part we presented our conclusion.

2. LITERATURE REVIEW

As the effects of tax uncertainty on investments are ambiguous in theory, in this section of the paper we have summarized the researchers' findings in this area.

Tax uncertainty is caused by many factors and is affecting both tax payers, as well as governments/tax administrations.

Some of the factors that create tax uncertainty as highlighted also in the OECD/IMF Report are: bureaucracy to comply with legislation, inconsistent and unpredictable approaches in application of tax rules of tax authorities, frequency of legislative changes, complexity of the tax code, the flaws of the process of pursuing a tax change/reform.

Though theoretical literature concludes that the impact of tax uncertainty on investment is still unclear, according to Devereux (2016) uncertainty of the effective tax rate on profit is the third most important factor in terms of investment and location decisions. This opinion is supported by many, as effective tax rates are now being used by a wider range of stakeholders, not only investors, to discover if unacceptable tax avoidance is taking place (Lynne Oats, 2019).

Though tax uncertainty should be decreased as to not negatively affect investment, uncertainty caused by the open to interpretation character of the legislation might be an inevitable feature of language, as words are capable of many meanings, as Pagone (2009) highlighted.

There are also researchers that argue that lawmakers should not hurry to decrease tax uncertainty as it will change taxpayers behavior. For instance, Lawsky (2009) states that if some taxpayers have an aversion to uncertainty, then the uncertainty to whether certain questionable transactions are permitted may itself reduce the number of taxpayers who perform such transactions.

Furthermore, tax uncertainty might not always affect negatively the investments. Niemann (2007) found that if tax uncertainty is small compared to cash flow uncertainty while both processes are positively correlated, then increased tax uncertainty will accelerate investment.

Also, Bohm and Funke (2000), using models of irreversible investment under uncertainty, have demonstrated that by reducing tax policy uncertainty, private investment spending will not necessarily increase.

In terms of reducing tax uncertainty, there are various recommendations possible, such as: reducing complexity of the Tax Code, improving tax policy design, increasing predictability and consistency by tax authorities, coordination and cooperation between countries.

Ernesto Zangari (2017) argues that tax certainty might be improved through a proper planning of the tax changes, as well as through a clear communication of their content and timing, as they found that one of the main sources of tax uncertainty is the flawed tax policy process.

Tax uncertainty is an important issue in Romania as well. According to EY's Romanian business environment barometer (2019), the most important obstacles in business development for managers and entrepreneurs in Romania in 2019 are still related to public policies and factors controlled by state institutions, such as fiscal uncertainty (72% of the respondents), lack of political stability (58% of the respondents) and bureaucracy (53% of the respondents). The latter, together with the state of the national economy, but also the level of taxation are of concern for many of the Romanian executives, registering an increase of 4–7 percent compared to the previous year. Furthermore, the fiscal and legislative uncertainties of the last year affected the investment plans for 57% of the Romanian companies. 38% of respondents, business leaders in the country, say that their investment plans have been affected to a large or very large extent by fiscal and legislative uncertainties. In order for the country strategy to be successful, the interviewed Romanian businessmen consider that the most important factor to be considered is the legislative and / or fiscal coherence as well as the stability that Romania lacks for many years.

In our questionnaire we asked our respondents which are the factors that create tax uncertainty in Romania and how they consider tax uncertainty can be decreased.

3. METHODOLOGY

For this paper we used survey method. The survey was distributed to tax and accounting professionals, and to business owners, on social network (Facebook groups). 58 respondents completed the survey, from 20 different counties. The data was collected in the period May – July 2019. The total number of questions on the survey was 22.

Table 1 presents the counties of the business headquarters of the respondents. Most responses were received from Bucharest.

Table 11. Number of respondents from each county

The county where your business is based:	
Arad	1
Arges	1
Bacau	1
Baia mare	1
Bihor	1
Braila	1
Bucuresti	32
Cluj	2
Constanta	3
Covasna	1
Hunedoara	3
Ilfov	2
Mures	1
Neamt	1
Olt	1
Prahova	2
Salaj	1
Suceava	1
Timis	1
Valcea	1
Total	**58**

Source: Authors' own research

As shown in Table 2, most of respondents have more than 10 years of working experience in tax and/or accounting area.

Table 12. Number of respondents by seniority

Seniority in financial accounting and/or tax (no. of years)	
5-10 years	19
More than 10 years	26
Under 5 years	13
Total	**58**

Source: Authors' own research

To understand the scale of the business involved, respondents were asked to provide the number of the employees of the company they work for, the 2018 turnover of the business and 2018 value of the total assets. As Tables 3 shows, the respondents cover all types of companies, from small enterprises to medium and large companies.

Table 13. Number of respondents by business size[52]

Number of employees:		Turnover of your business in 2018 (RON)		Total assets of your business in 2018 (RON)	
Between 1 and 9	23	Between 0 and 100.000	24	Between 0 and 100.000	26
Between 10 and 250	35	Between 100.001 and 5.000.000	30	Between 100.001 and 5.000.000	28
More than 250	0	More than 5.000.000	4	More than 5.000.000	4
Total	**58**	**Total**	**58**	**Total**	**58**

Source: Authors' own research

81% of the respondents work in a company owned only by Romanian investors, 12% in a company owned only by foreign investors, and 7% in a company with mixed share capital (foreign and local investors).

4. RESULTS AND DISCUSSIONS

The purpose of the survey was to discuss if there is tax uncertainty in Romania or not. Also, if there is, which are the factors that created the tax uncertainty and how can it be decreased.

The general response is that Romania has tax uncertainty and there are many sources for it.

91.4% of the respondents consider that the economic environment in Romania is unpredictable and unstable from the point of view of the tax legislation, while 96.6% of the respondents think that the decision-making process regarding the changes of the tax legislation in Romania is not transparent and predictable.

Regarding the factors that lead to tax uncertainty, the most frequently mentioned among our respondents are:

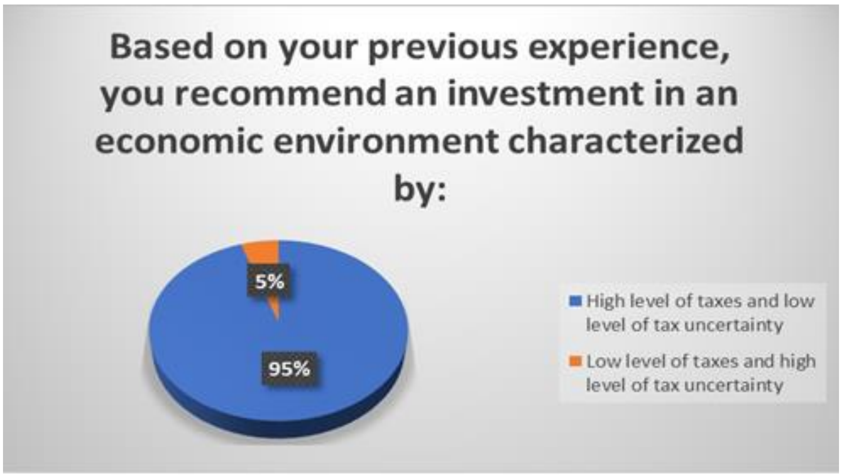
- The influence of the political environment / political interests;
- Uncertain, unpredictable, difficult to understand legislation (lack of implementing rules), the open to interpretation character of the legislation;
- Lack of professional knowledge of the lawmakers;
- Frequent changes in legislation;
- Unpredictability and instability;
- Excessive bureaucracy;

[52] Medium exchange rate valid as at December 31st, 2018 is 4,6639 EUR/RON.

- Flaws in the decision-making process – lack of transparency, legislative changes occur without prior consulting the business environment and without analyzing the potential impact on the business;
- Inconsistent treatment / interpretation (different interpretation of the law between the members of the authorities);
- The pressure exerted by Romania's EU membership.

When asked which economic environment they would recommend for an investment, our respondents preferred an environment characterized by high level of taxes and low level of tax uncertainty, as shown in Figure 1.

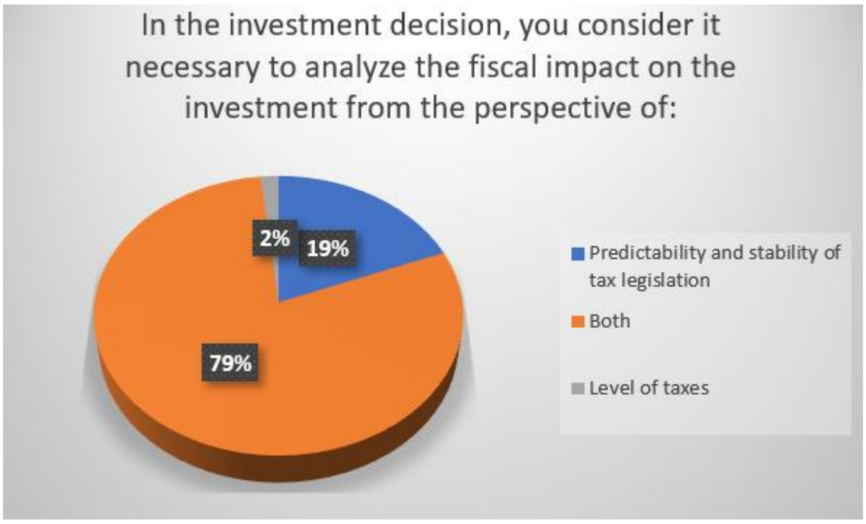
Figure 1. Type of economic environment preferred



Source: Authors' own research

However, when asked what impact on the investment is necessary to analyze, 79% of the respondents consider it is important to look at both level of taxes, as well as predictability and stability of tax legislation, as shown in Figure 2.

Figure 2. Fiscal impact on the investments



Source: Authors' own research

This might be the case as an increased tax burden in terms of level of taxes is considered to generate a decrease in the investments.

60.34% of the respondents consider that the main factor that determines the tax uncertainty in Romania is the excessive modification of the tax legislation (frequent and inconsistent changes).

In terms of tax uncertainty generated by the complexity of the tax rules, according to Romanian Tax Procedure Code (Law no. 207/2015 regarding the Tax Procedure Code), a taxpayer has various mechanism at his disposal that should be of help:

The anticipated individual tax solution (ro. SFIA)
SFIA represents the administrative document issued by the central fiscal body in order to solve a taxpayer's request regarding the regulation of future fiscal situations. Thus, the situation for which the taxpayer requests the tax solution must be subsequent to obtaining the solution. SFIA is opposed and obligatory to the tax authorities, if the subsequent fiscal situation coincides with the one presented at the issuance of the application. The term for issuing an anticipated individual tax solution is 45 days and the tariff is currently 5,000 euros for large taxpayers and 3,000 euros for other categories of taxpayers, increasing compared to the initially introduced tariff of 1,000 euros, valid for all categories of taxpayers.

Since the solutions must be received prior to performing the transaction for which the taxpayer requested clarification, many taxpayers do not use this mechanism. Furthermore, if the quantified risk of performing a transaction without receiving any guidance from fiscal authorities is less than the cost of receiving such guidance, the taxpayer will most likely choose not to request the guidance.

Unilateral and bilateral / multilateral advance price agreements (ro. APA)
The advance price agreement is the fiscal administrative document issued for the purpose of resolving a taxpayer's request, regarding the establishment of the conditions and modalities in which, during a fixed period of time, the transfer prices will be determined, in the case of transactions between affiliated parties.

The APA is opposable and obligatory to the fiscal bodies, if the subsequent fiscal situation coincides with the one presented at the issuance of the application.

The unilateral advance price agreement is the one issued only by the fiscal authorities in Romania, respectively by the fiscal authority in a single jurisdiction.

Bilateral or multilateral advance price agreements apply if the transactions with affiliated parties for which the application is submitted involve several jurisdictions (countries), respectively issued jointly by the competent tax authorities of several states. In order to issue a price agreement in advance bilaterally or multilaterally, there must be a Convention for the avoidance of double taxation signed between Romania and the other states involved.

The agreement is issued for a maximum period of five years, but agreements can be issued for a longer period, in the case of long-term contracts.

The deadline for issuing an advance price agreement is 12 months in the case of an unilateral agreement, respectively 18 months in the case of a bilateral or multilateral agreement, as the case may be.

The fee for issuing an advance price agreement is 20,000 euros for large taxpayers. In case of modification of the agreement, a fee of 15,000 euros is charged.

For other categories of taxpayers, the tariff for APA is 10,000 euros, and in case of modification of the agreement, a tax of 6,000 euros will be charged. If the consolidated value of the transactions included in the agreement exceeds the value of 4,000,000 euros, or the taxpayer falls under the category "large taxpayers" during the validity period of the agreement, the issue fee and the modification fee of the agreement are those valid for large taxpayers.

According to National Agency for Fiscal Administration, the status for solving SFIA and APA requests for the period 2015–2017 is the presented in Figure 2.

Figure 3. SFIA, APA – status

Year	2015		2016			2017		
Requests	Solved	Rejected	Pending	Solved	Rejected	Pending	Solved	Rejected
APA unilateral	1		12	1		14	5	
APA bilateral / multilateral	3		9			11		
Total APA	*4*	*2*	*21*			*25*	*5*	
SFIA	*33*	*4*		*49*	*15*		*36*	*16*

Source: Authors' own research

There is also the possibility of submitting non-chargeable requests to fiscal bodies, for the purpose of receiving clarifications on a certain tax rule applicable on a certain transaction. The fiscal body can respond in 45 days, but in some cases, the answer fails to be given. These requests can be either submitted on paper, through phone at a designated number, or through social network (e.g. Facebook) on the designated days.

We argue that these mechanisms are not used by taxpayers because of various reasons, such as: the term for receiving a response is to high, the taxpayers have lost their trust in the fiscal body therefore they do not consider the response will be of help or the fee for receiving such response (in case of SFIA or APA) is to high for them.

In the questionnaire we asked our respondents whether they have used these mechanisms or not.

Of the respondents, 19% did not use any mechanisms and 81% used the tools made available free of charge.

The respondents consider that SFIA and APA are not used for causes such as: the complexity of the process of obtaining an answer (53,4%), the term of obtaining a response (27,6%), their cost (17,2%). The other respondents (1,7%) are not informed about these tools. To be used more often, the respondents consider that the mechanisms made available by fiscal bodies should be improved by reducing the time to solve them, and by providing professional training of the specialists involved in this process.

When encountering difficulties in understanding the legislation, respondents (48,3%) prefer to use specialized forums (groups of specialists on social networks, specialized forums), external consultants (39,7%) and only 10,3% prefer to use the mechanisms made available by the tax authorities.

In terms of decreasing tax uncertainty, our respondents consider that the following measures should be taken: changes of the tax code to be more predictable and to occur less often, the legislation to be more clear and less open to interpretation, the process of pursuing a tax change/reform to be more transparent, the lawmakers and tax inspectors to have a relevant professional experience and knowledge of the tax rules.

5. CONCLUSIONS

This paper provides an insight on how tax and accounting practitioners in Romania are dealing with tax uncertainty. Overall, our study shows that business owners and tax and accounting professionals in Romania are affected by the tax uncertainty, as they consider this factor has a significant impact on investment plans.

The most important factors that create and sustain tax uncertainty in Romania seem to be the open to interpretation character of the legislation and the frequent changes that occur, according to our respondents. In order to mitigate these issues, the Ministry of Finance could provide guidelines for taxpayers in order to better understand the regulations. Furthermore, the political factor should not get involved in the tax system, in order to decrease the number of tax changes. Another aspect is that the accounting professionals have to adopt a life-long learning approach. In this regard, the professional bodies have an important role in Romania, as their members have to attend a number of hours of lectures each year. By providing high quality lectures, the professional bodies will help the professionals understand the regulations better.

Furthermore, taxpayers do not trust the fiscal bodies to help them understand the legislation in order for them to comply and they rather ask for guidance among their peers or pay an external consultant. This might be the case because based on their experience, the professionals from fiscal bodies have proved to not be reliable as their responses where in contradiction to a tax inspector in the case of a tax audit or they have received contradictory answers from different fiscal bodies.

Tax uncertainty in Romania could be decreased if the frequency of the changes of the tax rules will be lowered and the legislation will be less open to interpretation. These changes could also have a positive impact on the compliance of taxpayers therefore providing more funding to state budget.

It would be interesting to discuss about the tax uncertainty from the point of view of the tax authorities in Romania. Do they consider tax compliance in Romania is affected by the tax uncertainty? Do they take advantage of the tax uncertainty? Taxpayers might not benefit from a tax relief because the legislation is not clear on how to apply it, therefore they might pay more taxes than they should have. However, they could also apply for a tax credit though they do not met the necessary criteria because the legislation is not clear on how to apply it, therefore the same complexity of the legislation in this case affected the tax compliance in a negative way for the government.

BIBLIOGRAPHY

CNIPMMR. (2018, 12 18). Retrieved from CNIPMMR.RO: https://cnipmmr.ro/2018/12/18/bilantul-modificarilor-codului-fiscal-in-anul-2018-236-modificari/

Devereux, M. (2016). Measuring corporation tax uncertainty across countries: Evidence from a cross-country survey. *Working paper series*. Oxford University Centre for Business Taxation,.

Ernesto Zangari, A. C. (2017, March). Tax Uncertainty: Economic Evidence and Policy Responses. *Taxation Papers*.

Hjalmar Bohm, M. F. (2000). Optimal investment strategies under demand and tax policy uncertainty. *CESifo Working Paper Series*.

Law no. 207/2015 regarding the Tax Procedure Code. (2015, July 23). *Official Gazette, Part I, no. 547*. Romania.

Lawsky, S. (2009, April). Probably? Understanding Tax Law's Uncertainty. *University of Pennsylvania Law Review, Volume 157*, pp. 1017–1074.

Lynne Oats, P. T. (2019). Corporate tax avoidance: is tax transparency the solution? *Accounting and Business Research, 49:5*, 565–583.

Niemann, R. (2007, August). The impact of tax uncertainty on irreversible investment. *CESIFO Working Paper No. 2075, Category I: Public Finance*.

OECD (Organisation for Economic Co-operation and Development), IMF (International Monetary Fund). (2017). *Tax Certainty IMF/OECD Report for the G20 Finance Ministers* . Baden-Baden, Germany: OECD.

Pagone, G. T. (2009). Tax Uncertainty. *Melbourne University Law Review, Volume 33*, pp. 886–907.

Romania, E.Y. (2019, January 31). *The Romanian Business Environment Barometer 2019 (Ro: Barometrul mediului de afaceri romanesc)*. Retrieved from https://www.eyromania.ro/studii-and-articole/barometrul-mediului-de-afaceri-romanesc-2019/

DIVERSITY MANAGEMENT. ANALYSIS OF THE IMPACT OF NATIONAL CULTURE ON ORGANISATIONAL CULTURE

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Abstract
The article deals with issues relating to diversity management in a multicultural environment and its application in selected enterprises, as well as shows the impact of diversity on management and the impact of national culture on organisational culture. It is an interesting topic related especially to the atmosphere in an enterprise and interpersonal relations in the workplace. The second part of the article is based on theoretical analysis and practical research. The main content of this part of the article is constituted by description and analysis of intercultural management in the context of an international IT enterprise. On the basis of results of qualitative research and information presented in article, the graphic model of diversity management was created. When selecting enterprises, I was guided not only by the industries they represent, but also the geographical factor; therefore, I decided to opt for American, Korean, German and Czech enterprises. Such a choice of enterprises allowed me to compare the approach of selected European, American and Asian enterprises to intercultural management, and helped me to check to what extent the national culture affects the organisational culture of these enterprises.

Keywords: *diversity management, management, national culture, organisational culture*

1. INTRODUCTION

Organisational culture is an expression of established forms of behaviour which are desirable in a given enterprise. In particular, it includes norms, values and individual behaviour patterns. Organisational culture may become a factor influencing the enterprise's success in the market. In today's globalised world, the specificity of nations influencing organisational culture should also be taken into account. It is associated with typical features of individual nations, which are also expressed during work. It is these characteristic features which I will devote my attention to in this article.

Considering the issue of the impact of national culture on organisational culture, I noticed that new books and articles related to it have recently started to appear, apart from a book by Hofstede (2000) being the key reference for this topic. I will mention such authors as: Saxen (2014), Mader (2013), Cox (2001), Kulik (2014), Mayers, Vallas (2016), and many others. This is the result of the fact that more and more enterprises and institutions are aware of the importance of diversity and cultural differences as well as their impact on their organisation and their performance. These authors, especially Saxen, note that diversity determines the enterprise's potential, its proper use and management can improve the productivity of a given enterprise. By dealing with this topic, I was trying to go beyond the conventional description by adding new issues and threads, and, in particular, highlighting the growing role of human capital in managing organisations.

2. ORGANISATIONAL CULTURE

Organisational culture has been defined as "a set of norms, values and behaviour patterns describing social relations in a formal organisation" (Marshall, 1998). Tureckiová (2004) gives organisational culture the role of a keystone which connects and oversees existing relations of power, relationship and information among individuals. From this point of view, it may be understood as a certain management tool. According to Schein (2010), a group acquires culture while confronting with specific problems. At the same time, he distinguishes three basic levels of culture – artefacts, values and basic assumptions. In this respect, Hofstede et al. (2010) distinguishes only two levels. The first of them is a dimension visible to an external observer. These are usually symbols, heroes and rituals. The second dimension is imperceptible and is visible only to members of a given culture. It mainly concerns values.

Let us look more closely at individual elements:

- Symbols: images, gestures and words combined with a meaning known only to members of a given culture. For example, it may be jargon, dressing style, flag, sign, etc.;
- Heroes: a person with characteristic features highly valued by a given culture – it may be a living, imaginary or dead person;
- Rituals: these are the least obvious elements of culture, activities perceived by the culture as necessary - it may be, for instance, a way of greeting.

Summarizing, organisational culture is a set of dominating norms and values typical for a given organisation, and supported by the premises of the nature of reality and surfacing by dint of artefacts, i.e. external, artificial constructs of a given organisation (Brdulak, Banasik, 2015).

3. RELATIONSHIP BETWEEN NATIONAL CULTURE AND ORGANISATIONAL CULTURE

Each enterprise creates its own culture. Bedrnová and Nový (2002) believe that an enterprise can be considered a miniature community of individuals, having its own values, norms, attitudes, patterns and ways of behaviour of people. When assessing the organisational culture of a given enterprise, one should consider the impact of the social environment in which it operates on its elements.

At least a part of organisational culture derives from the national culture of a given country. Cultural differences which result from this have an impact on the functioning of a particular organisation. For example, national culture defines what society considers normal or abnormal, good or bad, etc. Changes in the area of national culture are slow. On the other hand, organisational culture results to a large extent from an organisational practice. Organisational culture is usually adopted by imitating the behaviour of leaders. If selected aspects of organisational culture are in conflict with national culture, they will not be fully adopted. In this context, it should be stated that what is absolutely normal for one culture may be completely unacceptable for another. According to Hofstede et al. (2002), national culture always plays a more important role than organisational one. Therefore, it is not surprising that, in his opinion, organisational culture is built to be compatible with the cultural needs of employees.

In the literature on the subject, three views on the relationship between national culture and organisational culture may be encountered. Based on Bedrnová and Nový (2002), these are the following approaches:

- The first theory is based on the assumption that national culture is a source of basic cultural patterns which are deeply rooted in the employees of a given enterprise. Individual persons acquire them in the process of socialisation. Therefore, it has definitely an impact on the nature of organisational culture. Basically, it may be said that organisational culture is a reflection of national culture. This is clearly visible in, for example, Japanese enterprises where cultural traditions are strongly present (Bedrnová and Nový, 2002);
- In the second theory, the starting point is the fact that within one national culture one may find the whole range of different organisational cultures. It is therefore important to realise that organisational culture is somewhat independent of national culture. This is primarily expressed in independent content and form (Bedrnová and Nový, 2002);
- The last theory is based on the assumption that within one national culture one may encounter different organisational cultures of their own identity. According to this theory, the environment is more important than issues originating from national culture. National culture and organisational culture are understood as two independent areas (Bedrnová and Nový, 2002).

4. DIMENSIONS OF NATIONAL CULTURE

While analysing the impact of national culture on organisational cultures, scientists were primarily using the studies of social anthropologists. According to them, a fundamental role in forming and maintaining organisational culture is played by solving the same problems by community members. These problems are universal, but the way they are solved is characteristic of this community. In Kluckhohn and Strodtbeck's (1961) opinion, the following problems are mentioned:

- What is the essence of human nature?
- What should be the attitude of a human towards nature?
- What should be the attitude of a human towards time? Should a human focus first on the past, present or future?
- What is the essence of human actions? Should a human focus on survival, a specific way of behaviour or self-development?
- What should be the attitude of a human towards other people?

When determining the individual dimensions of national cultures in relation to organisational culture, the scientists relied on the questions mentioned above. As part of this research, not only specific dimensions were determined, but also tools were created to assess the position of individual countries. Dimensions of national cultures can be defined as certain characteristic features that contradict each other. While assessing the position of a particular country, a process of mapping of the occurrence of individual features is being carried out (Bělohlávek, 1996).

Hofstede et al. (2010) was also dealing with the issue of dimensions of national cultures. He posited that cultural differences exist across national boundaries and that these differences affect people's views on personal values, ethics, the meaning of success and accomplishment, work ethic, leadership, authority, power, social ties, family relations, attitudes towards risk, the future, the past, and even views on the environment. He determined the individual dimensions of national cultures on the basis of a survey conducted in 1984 among employees of the IBM. Hofstede's longitudinal study across 53 nations sought to investigate crosscultural differences in business management. In the survey, he was examining the values of respondents and their opinions on selected aspects of professional life. He indicated the following dimensions of national culture: distance to power, degree of avoiding uncertainty, individualism – collectivism, masculinity – femininity (Musambira, Matusitz, 2015).

Large power distance v. small power distance

This dimension expresses the degree of inequality accepted by a given community. It essentially removes ordinary employees from the management of enterprise. Large power distance is characteristic of the Asian, Eastern European and Latin American countries. In these countries, such inequality is perceived as something completely natural. Therefore, employees do not consider differences in the amount of remuneration and privileges typical of a senior position as a problem. The hierarchy imposed within the enterprise is a natural ordering of facts for them. Power and authority are formal. Smaller distance may be found in the Romance (France, Belgium), African and Arab countries. Very low values may be reported for the German-speaking countries, Northern Europe, Great Britain, Australia, Canada and the USA. In these countries, a great emphasis is put on equality because inequality is assessed as injustice. Differences in the amount of remuneration are not so considerable, and social status is not so significant. Enterprise hierarchy is created solely on the basis of specific organisational needs (Hofstede et al., 2010).

Individualism v. collectivism

Individualism describes a situation in which relations between members of society are unhampered. Everyone cares only about themselves. In collectivism, members of society are part of strongly connected groups from an early age. Individualism is characteristic of Great Britain, the USA, Canada and other English-speaking countries. Within organisational culture, individualism is manifested in the fact that internal regulations apply to all employees to the same extent. This situation is similar in trade relations in which the approach to all customers is identical. Collectivism is typical of the Asian and Latin American countries. In this type of organisational culture, a strong emphasis is placed on meeting specific requirements. If an individual is unable to fulfil them, he or she "loses respect" and social position. This relationship also implies a difference in employees' rights and is subject to separate regulations. Customers are also approached in a differentiated way (Hofstede et al., 2010).

Masculinity v. femininity

Analysis of the answers given by the IBM employees to the question: "Imagine that you have to determine the ideal workplace for you, which of the factors would you describe as the most important?" was as follows:

The factors most often mentioned by men were (Hofstede, 2000):

- Earnings - possibility of achieving high income;
- Recognition - getting due recognition for a well-done job;
- Promotion - possibility of promotion to higher positions;
- Challenge - motivating and ambitious work.

Women's attention was focusing on:

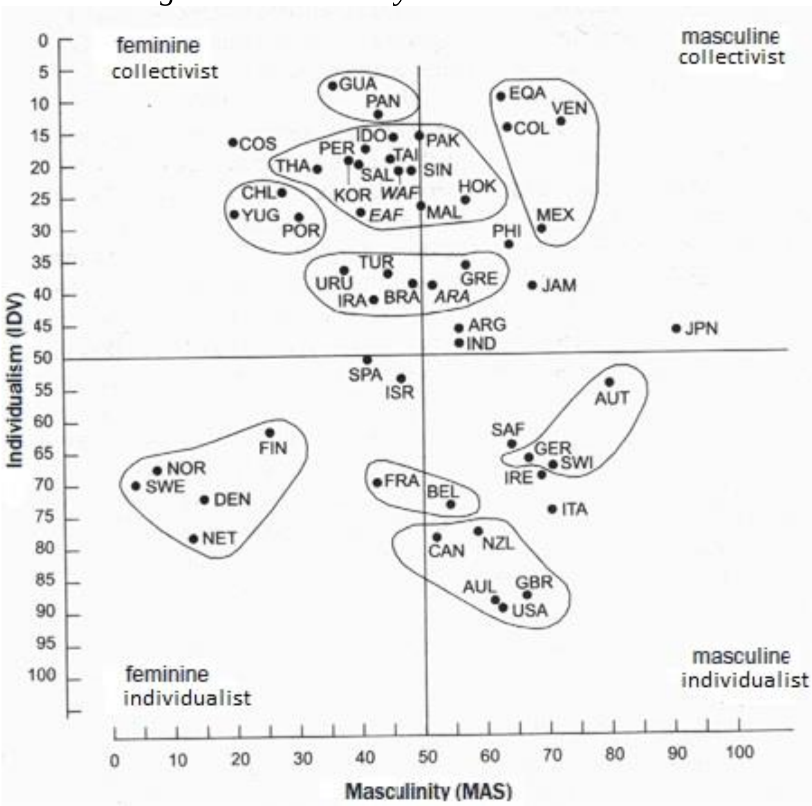
- Relations with superiors - good relations with a direct superior;
- Cooperation - working with cooperation-oriented people;

- Place of residence - work giving the opportunity to live in a place suitable for an employee and his or her family;
- Employment guarantee - sense of security associated with permanent employment.

This data indicates that men attach great importance to earnings and promotion, while women – to relations with superiors and cooperation. The importance of earnings and promotion corresponds to the assertive competitive-oriented male social role. Women's declarations, in turn, confirm the role of women as a caregiver caring for good relations with the environment. In this dimension of the analysis of individual countries, the approach to material success, quality of life and interpersonal relations is primarily assessed. The ability to be tolerant and the ability to give way to others are also assessed. Male societies are such societies in which gender-related social roles are clearly defined, i.e. assertiveness, hardness and focusing on material success are expected from men, while women are expected to be modest, tender and caring. "Femininity" is typical of those societies in which social roles interpenetrate themselves, i.e. both women and men are expected to be modest, tender and caring for the quality of life. In the IBM survey, the masculinity index (MAS) was calculated for 50 countries and 3 regions. The analysis of factors was used and its result was to place each country on a scale. The results obtained were multiplied by 20 and added to 50 in order to get a range from 0 for the most feminine countries to 100 for the most masculine countries (Hofstede, 2000).

The higher the masculinity index in a given country, the harder the values of both men and women. In most "feminine" countries, such as Sweden and Norway, the values declared by women and men coincided with each other to a great extent. In Japan and Austria, where societies are the most "masculine", men showed extremely masculine features, while women showed moderately masculine ones. Masculinity and femininity are not related to the wealth of a country. Among rich countries, there are both masculine and feminine countries. Masculinity is typical of Slovakia, Japan, Austria and Hungary. For this type of organisational culture, an emphasis is put on material success. High demands are placed upon employees who are expected to be feisty and ruthless. At meetings, employees should push their own opinions and be noticeable. Conflicts are resolved directly. Feminine countries mainly include the Northern European countries, Chile and Costa Rica. In the enterprises operating there, an emphasis is put on quality of life. To solve a conflict, solutions acceptable to all concerned are used, and they are chosen as a result of deliberations (Hofstede et al., 2010). The four most feminine countries (positions from 50 to 53 – the more distant the position, the less "masculine" the country) Sweden, Norway, the Netherlands, and Denmark. A high or medium degree of femininity is also found in some Latin countries: Costa Rica (position 48), Chile (46), Portugal (45), Guatemala (43), Uruguay (42), Spain (37), France (35). Other countries close to the pole of femininity are as follows: Serbia, Montenegro, Thailand (44), South Korea, East and West Africa (39 and 31), Iran (35), Taiwan (33), Turkey (32), and Indonesia (31). Japan (1) and some countries of continental Europe excel at masculinity: Austria (2), Italy and Switzerland (4), Germany (9). Several Latin American countries are also characterised by a high masculinity index, especially those located around the Caribbean Sea: Venezuela (3), Mexico (6), Colombia (11) and Ecuador (13) (Hofstede, 2000). These countries were placed in a coordinate system, on which one axis was an indicator of individualism in a given country, and the other one was an indicator of masculinity:

Figure 1. Masculinity versus Individualism



Source: Hofstede, Hofstede & Minkov (2010)

High degree of avoiding uncertainty v. low degree of avoiding uncertainty

The uncertainty avoidance dimension refers to the extent to which members of a society tolerate and/or avoid ambiguous situations, their attempts to control the future, and whether or not they have developed institutions and beliefs that help them avoid and manage uncertain situations (Mansson, 2016). In other words, in this dimension, the degree to which an individual feels the threat of uncertainty is assessed. A high degree of avoiding uncertainty is characteristic of the Latin American, Romance, Mediterranean countries, as well as South Korea and Japan. In these countries, this dimension, as part of organisational culture, is manifested in the form of pressure on compliance with internal regulations, and there are many of them in enterprises. The goal of the enterprise's employees and management is to stay in the enterprise for as long as possible. Moderately high values are found in the German-speaking countries. English-speaking, Asian (apart from those mentioned above), North European and African countries show low values. In enterprises operating in these countries, there is a negative attitude to formal principles. They are adopted when necessary and are not formulated in detail (Hofstede et al., 2010).

Short-term orientation v. long-term orientation

In this dimension, it is analysed whether the focus is on quick results or on results which will appear after a long time. Long-term orientation is typical of the Asian countries. It is also most strongly present in South Korea, China, Taiwan, Hong Kong, Japan and Vietnam. In the professional environment, great importance is attached to hard work, honesty, responsibility, respect for skills and self-discipline. European countries get average values. Short-term orientation is characteristic of the English-speaking and African countries, as well as of Pakistan and the Czech Republic. In the professional environment, such values as independence and achieving noticeable results are mainly prized (Hofstede, 2010).

5. ORGANISATIONAL CULTURE AND ORGANISATION'S SUCCESS

It is widely said that a successful enterprise needs a high level of organisational culture. It should constitute a kind of organisational "soul". In practice, one may often encounter a situation where a given enterprise has a distinctive product and an excellent trading strategy, but it lacks a good organisational culture. In such an enterprise, there is simply no life and it is a kind of empty shell. This enterprise simply does not work (Brooks, 2003).

In this area, most authors focus on the power of organisational culture. Strong organisational culture is stable, has defined frameworks, is transparent and has high quality communication within the organisation. The content of organisational culture also has an impact on efficiency. From this point of view, it is important whether a given culture activates employees, and whether it cares of obeying and sharing its values and goals (Lukášová et al., 2004). However, the unanswered question is to what extent the aspects of national culture affect the enterprise's success.

Generally, it is impossible to state that one of the "national" organisational cultures is more successful than another one. In today's global world, one should focus on understanding the difference among individual nations and the manifestations of this specificity in trade relations. Table 1 indicates selected characteristic features of individual nations from the point of view of organisational culture. These features should be taken into account in trade talks because non-compliance may lead to a number of misunderstandings that can seriously affect mutual trade relations. This not only applies to relations between contractors, but also to the approach to employees. Currently, many enterprises establish branch offices in countries where they do not have their registered offices. These enterprises tend to use elements of their own organisational culture in branch offices, which may cause strong reluctance among employees. Let us give as an example the Japanese Denso Corporation which has a production plant in the city of Liberec (the Czech Republic). A direct application of elements of the organisational culture typical of Japan in the Czech Republic simply did not take hold and it was necessary to modify them. Those enterprises which, in turn, are aware of these differences are successful in global markets.

Table 1. Characteristic features of individual nations from the point of view of organizational culture

	China	India	Japan	Russia	USA
main values	respect for family, education, humility, self-discipline, openness to new ideas	harmony, tolerance, human solidarity, trust, respect	harmony, perfection, discipline, diligence, kindness	intense interpersonal relationship, trust, respect, education, empathy	freedom, respect for principles, success, strength, profit
main motivation sources	family success, face saving, sense of duty to fulfil obligations	harmonious environment of mutual trust, pride, promotion	family success, face saving, sense of duty to fulfil obligations	good relations in workplace, superior's natural authority (strong leader)	vision of victory, success, and wealth
organisation's typical features	enterprise is a family, benefits from group work and collective responsibility, possibilities of using the changing conditions to its advantage, relationship orientation, team success as a goal	reluctance to planning, strong bureaucracy, relationship orientation, harmony as a goal	enterprise is a family, benefits from group work and collective responsibility, relationship orientation, employees' security as a goal	excess of regulations which are not obeyed, clearly defined hierarchy, people-oriented approach, strong collective and cooperation as a goal	frequent organisational changes, rivalry among individuals, emphasis on process standardisation, focus on tasks, profit as a goal
reconciliation of personal and professional lives	yes	yes	no	yes	no

perfect manager	father, educated, hard-working, having moral principles, ensuring harmony and showing respect to subordinates	elder, educated, kind, with a human approach and understanding	elder, experienced, knowing subordinates' work perfectly, ensuring harmony, advising and supportive	elder, educated, paragon of behaviour, appreciating employees' work, providing them with support	young, energetic, effective - quick results
perfect employee	submissive, reliable, loyal, executing commands without own initiative	executing commands without discussion, strictly following procedures	proactive, creative, communicating very well - providing accurate information	loyal to superiors, listening to orders, only doing own work, accurate, showing no initiative, unable to risk	active, allowing to be led but able to be independent at work, loyal
communication	strongly based on context, great importance of non-verbal communication, personal conversation plays an important role	strongly based on context, dependent of emotions, personal conversation plays an important role	strongly based on context, great importance of non-verbal communication, personal conversation plays an important role	context plays a small role, emotional, flowery speech, personal conversation plays an important role - enjoying debates	context plays a small role, mainly based on words, it is normal to do everything by mail
what will not work?	humour, criticism, impatience, ignoring activity outside work	acting in a hurry, pressure, impatience	assertiveness, need for accurate commands, surprises, jokes	pressure, impatience, underestimation of skills	negative approach, complaints, passivity, modesty
what will help to make an impression?	respect for hierarchy, very modest behaviour, being silent if not asked	respect, no conflicts, flexibility	activity at work, kindness, calmness, ability to get along in a friendly manner	kindness, caring for relationships, respect, hierarchy	optimism, confidence, initiative
what not to forget about in a conversation?	intermediary indispensable, completely different way of communication, time has a secondary role; if they consider themselves as the weaker side, they count on many compromises	intermediary at hand, patience in building trust, talking about money only at the end, conclusion of contracts	intermediary indispensable, completely different way of communication, do not like changing agendas, advisable objectivity	they negotiate very well and are reluctant to give in, refusal should be expressed in other words - an insult	punctuality, spectacular presentation, factual discussion, positive approach

Source: Kolibová, 2004

6. DESCRIPTION OF THE RESEARCH DESIGN

The subject of the executed research is diversity management in a multicultural environment, the impact of diversity management on management processes in these enterprises, as well as the analysis of the impact of national culture on organisational culture and, finally, application of diversity management in selected enterprises. The research should identify not only the character of diversity management application in these enterprises, but also generally in business environment or IT field (in which the investigated organisations operate). This field of research is given by the context of this article, whose objective is to create a diversity management model. The research was preceded by literary reviews examining the opinions of experts in diversity management, in particular the outputs from secondary research that deal with the solved issue. The research purpose was to obtain a sufficient amount of data so that a graphic model of diversity management could be created. The research takes the form of primary data collection, using qualitative methods of data collection.

7. RESEARCH, IN-DEPTH INTERVIEW (IDI)

Profile of surveyed organisations

All surveyed organisations operate in the field of information technology. In their selection, emphasis was placed on their geographic diversity so that different approaches to diversity management across different geographical areas can be compared. Thanks to such a selected sample, one can also compare the impact of national culture on organisational culture of the enterprises selected for this research (each of these enterprises has its registered office on another continent, but operates in the Czech Republic). However, it may happen that there would be no differences. This can be caused, for example, by centralisation of the management of a parent enterprise and similar factors. Each enterprise from the USA, South Korea, Germany and the Czech Republic was deliberately chosen for the qualitative research. All enterprises were guaranteed anonymity, so they are referred either by letters (A, B, C, D) or words: American enterprise, Czech enterprise, German enterprise, Korean enterprise. Adjectives “American”, “Czech”, “German” and “Korean” are used solely for clarity within the article. In no case it is an attempt to generalise the obtained outcomes to the entire USA, the Czech Republic, Germany, and Korea.

Detail description of selected companies for Qualitative research

Organisation from the United States of America

This American organisation provides IT services in e-commerce sector worldwide. The company makes payment systems and solutions for the creation of e-shops and mediation of online sale. The company is headquartered in Silicon Valley and employs more than 13 000 people worldwide. It offers a solution designed for companies which want to sell effectively through the internet. It's a professional on-line trading system that offers a full range of essential features needed for effective sales ensuring a full integration with other sales and payment systems. The financial performance of the company is very good. The organisation has been generating profit in the long-term and managing to meet its financial objectives. The volume of sales has an upward trend and exceeded the level of 8 592 million US dollars in 2015. The profit before tax was 6 821 million US dollars.

Korean organisation

The Korean company is engaged in the creation and sale of software programs that serve primarily for the protection and backup of data and computers against viruses or unwanted software. Its customers include financial institutions all around the world, that use advanced software solution to protect their data and sensitive corporate data. The clientele of the company comes from 23 different countries from all continents. There are 5 500 employees working in the organisation. The company is headquartered in South Korea where also 98% of its employees work. The organisation’s financial situation is stabilised. The enterprise manages to generate profit, although it fluctuates on a yearly basis. For example, its profit before tax was 1 210 million US dollars in 2013. In 2015, it was on the level of 150 million US dollars.

German organisation

The German company is engaged in the production of software solutions for the segment of B2B enterprises, in the area of creation of intranet computing systems. The company is headquartered in Germany, but executes its activities especially through more than 140 regional offices in different parts of the world. There are only 32% of employees working at the headquarters. The total number of employees exceeds 32 000 persons. The total sales of the German company reached the level of 1 435 million US dollars in 2015. However, no profit has been generated before tax since 2012, when the enterprise was regularly at loss. This result is caused by the high level of annual investments.

Organisation from the Czech Republic

The primary activity of the Czech organisation is the development of tailored software solutions, which involves hundreds of related activities, whether software development, implementation, testing, support or service. The company belongs among the largest organisations of this type in the Czech Republic and has a strong and stable position on the European market. It supplies its products to more than 23 countries of the world. Financial performance is stable. The turnover exceeds 100 million Euro and profit before tax has been in the range of 5 to 10 million Euro in the last three years.

Diversity Management in Organisations

Diversity Management in the US Organisation

This organisation originally comes from the United States of America. More than 95% of workers is employed in the company headquarters in Silicon Valley. Others work in branches in Ireland, Spain, China, Australia, France, South Africa, Germany, Czech Republic and Argentina. Priorities in the organisation's diversity management are especially gender and ethnic diversity. According to the latest information, 25% of employees are of Asian origin, 8 % of Black origin and 5% of Hispanic origin. The rest of the employees are white. The top management adopted and communicated a very strong commitment to maintain diversity in the workplace. According to this policy, integration of various minorities into work teams leads to better performance of the organisation. Support of diversity is becoming one of the organisation's priorities and progress is monitored using quantitative statistical data. In the past, among others, the organisation implemented the project to improve gender diversity during which the number of women in leading positions was doubled. The current projects focus on the support of other types of diversity. There are 72% of Whites and 23% of Asians working in top management, the remaining 5% consists of Blacks and Hispanics. A special human resources department directly deals with the implementation of diversity programs.

Diversity management in the Korean organisation

The Korean organisation comes originally from South Korea. When looking at more detailed statistics about employees, it is obvious that the organisation employs especially workers from South Korea (there are approximately 90% of them working in the enterprise). Other nationalities are represented in the remaining ten percent. Also this organisation committed to the management of diversity of employees. Although the number of workers from other cultures is lower, it is necessary to care for their integration into the collective. The management in its commitment to diversity management declares that diversity in the workplace contributes to the generation of new idea and creation of better relations with the customers and other interest groups. The global program of diversity is focused on the area of gender diversity management in the enterprise. The objective of the enterprise in this area is to achieve a more balanced ratio between men and women in managing positions. Other types of diversity are supported by various related sub-projects. Central human resources department takes care of diversity management, there is no specialised department that would deal only with the issues of diversity.

Diversity management in the German organisation

This organisation comes originally from Germany, however, as was said, it is operating worldwide. For this reason, the management is actively engaged in diversity management in the workplace. According to the commitment of senior management, creation of diverse work environment is an opportunity to create a better organisation and get inspiration for innovations. Diversity leads to the creation of new experiences that enable the achievement of success in fast-changing world. The commitment to diversity in the workplace plays the key role in the achievement of success. There are more than 150 different nationalities working in the company, whose authenticity must not be suppressed in any way. Within the diversity management program, the organisation focuses on gender diversity, cultural diversity, racial diversity, ethnic diversity, age diversity, physical and psychic condition and the current life situation. The enterprise believes that if people can freely express their personality, culture and origin, the results of the enterprise are better. Cooperation with different people then leads to gaining new perspectives of work problems, generation of new ideas and innovations. Currently, there are many projects supporting diversity in the organisation, mostly covering gender diversity, intergenerational diversity, cultural diversity, integration of persons with health problems and handicapped people. The company's emphasis placed on diversity naturally results from having customers in different countries and cultures, so it is necessary to adapt to them. Diversity projects are managed by a special department for diversity management, which is part of the top management in the organisation.

Diversity management in the Czech organisation
This organisation comes originally from the Czech Republic. Human Resources department manage diversity, two employees in the subunit care for diversity in the organisation. The approach to diversity is very active and the enterprise continuously tries to implement various programs integrating representatives of minorities to the enterprise. Rather than long-term diversity strategy, there are different operative projects and programs of diversity. Within diversity management, attention is focused on the area of gender diversity and cultural diversity. In recent years, the company has been supporting the employment of disabled and handicapped persons. The enterprise does not have accurate statistics about the proportion of employees coming from different cultures, races, ethnicities, etc. The company only monitors the number of women in the leading positions. It promotes cultural diversity by respecting cultural differences among employees. However, it does not use any quantifiable statistics in its management.

Description of research file

In-depth interviews were carried out with purposefully chosen four managers in selected multicultural IT enterprises. The selection of respondents for this qualitative research was influenced by the willingness of respondents to participate in the research. Four enterprises expressed voluntary willingness to participate and provide data, the same applies to the respondents. Four people participated in the interview, all belonging to the top management, one person per each enterprise.

Data collection within qualitative research was carried out using a recording technical device when each reply of the respondent was entered into a computer via transcript by the author (interviewer). In-depth interviews were carried out via Skype, a software enabling communication on the basis of telephone connection. All communication was performed in the English language.

The main research problem was to examine how national culture affects organisational culture and also analyse the premises of the diversity management in the international environment. The focus was put on the managers working in various enterprises. The following specific issues were addressed:

- To what extent does national culture affect the enterprise's organisational culture?
- To what extent does diversity affect management?
- Is there a point in including cultural aspect in management?
- To what extent should the management based on a cultural aspect be applied?

- What are the benefits of managing cultural diversity?
- Are the management aspects applied in all of the enterprise's links?
- In what way are business processes influenced by culture?

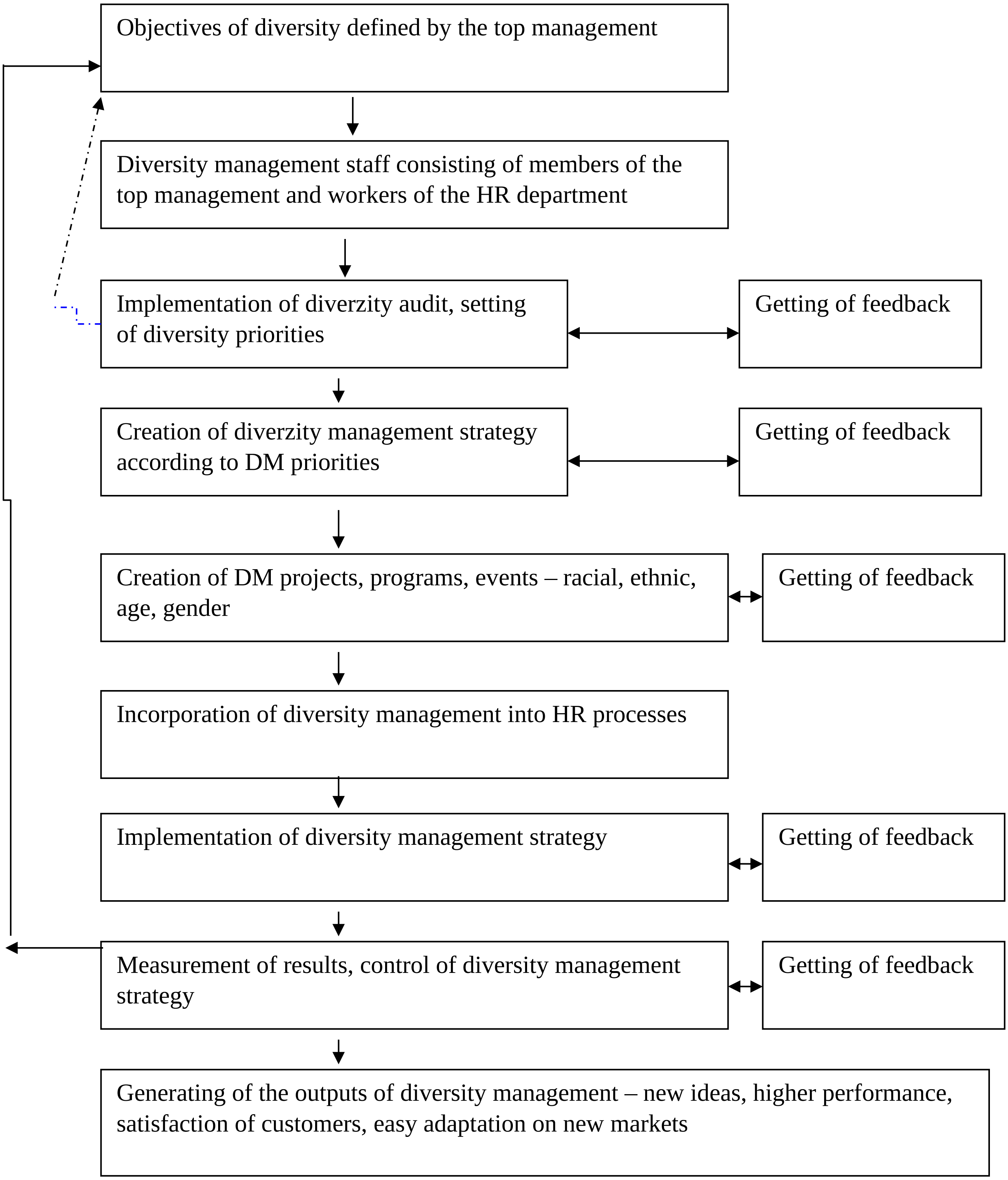
There were five fundamental research questions:
- How does national culture affect organisational culture?
- How is the concept of diversity management understood?
- How is diversity management applied in a corporate practice?
- Are there differences in applying diversity management in domestic and international business environment?
- What are the barriers and benefits of diversity management for a corporate practice?
- Who is responsible for the implementation of diversity management in particular, and what do the processes related to diversity management in the global IT enterprises look like?

Results of data analysis

Qualitative research was conducted, which consisted of executed in-depth interviews with representatives of four global IT enterprises. It was found that the enterprise's organisational culture most often contains in its all levels (layers) elements derived from national culture characteristic of a given country (nation) or region. Knowledge of the issues of national cultures and organisational cultures, and above all, their characteristic features and assumptions by the management team has a decisive impact on the efficiency and effectiveness of enterprise's management. Additionally, the research results show that diversity management is an important part of global organisations. Employees of different ethnicities, races, cultures, ages or gender work in each of the surveyed enterprises; therefore, it is necessary to manage such groups of workers specifically. For these reasons, in all surveyed organisations, diversity management programmes are applied; however, in varying degrees. Moreover, racial and ethnic diversity are neglected in some organisations. This is particularly true about enterprises which have a strong background in some country (particularly in South Korea and the Czech Republic). Naturally, this result cannot be generalised because of the small sample size. Promoting diversity in the workplace provides employees with better self-realisation. According to the participants, additional contributions include in-depth interviews – bringing new ideas or different opinions on solving work problems, and support for achieving higher satisfaction of employees and customers. Diversity management is also an appropriate tool to facilitate operation in the foreign market, because the enterprise better understands differences among individual markets. Various programmes and projects are the main instruments for the implementation of diversity management programmes. A very substantial element of diversity management programmes seems to be the commitment of the top management, which is to set an example in the implementation of diversity management. As a barrier to diversity management, one may consider an employee who might not understand the importance and advantages of diversity management; therefore, it is necessary to continuously inform and motivate for the understanding of diversity management (it is helpful wherever the organisation's top management commits to support diversity management). The most difficult task when managing diversity is to optimise the interests of employees from diverse backgrounds with the interests of organisation and creating an optimal environment for the development of diversity in the workplace (this applies particularly to communication barriers). Effective solutions can only be found through the implementation of programmes, their evaluation and finding the most effective form. When implementing diversity management, the organisation's interests, objectives, resources and feedback made by employees and other interest groups must not be neglected. In enterprises, both strategic and operational (without strategy) approach to diversity management is applied. The presence of other races and ethnicities in the workplace is perceived positively.

8. DIVERSITY MODEL

Based on the information presented in this article, it is possible to put together the following diversity management model.



Diversity objectives defined by the top management
Diversity management must fulfil certain objectives. Otherwise it is not efficient. The necessity of senior management's support of diversity is reflected throughout the article. The company's top management must define the objectives, so that it is clear that the commitment to implement it comes from the highest levels.

Diversity management staff consisting of members of top management and HR workers
Subsequently, a kind of diversity management department should be created, which will take care of the development and the entire management of diversity in the organisation. Members of this department must be recruited from the top management and workers of the human resources department, so that there is connection between top management and HR activities. This team must meet regularly and address the process of implementation and development of diversity management in the organisation.

Implementation of diversity audit and setting of diversity priorities
The current state of diversity management in the organisation is evaluated with this instrument, in order to enable finding the priorities of future development of the whole area. Priorities in the basic view can be searched in the area of gender diversity, age diversity, racial diversity and ethnic diversity. This activity should be supported by feedback from interest groups, especially from employees (like other selected activities). The objective of the feedback is to get a relevant view of the addressed issue.

Creation of diversity management strategy according to diversity management priorities
On the basis of audit and identified diversity priorities it is possible to create a diversity management strategy which the enterprise will apply.

Creation of diversity management projects, programs and events
On the basis of the suggested strategy, it is possible to determine individual steps that will lead to the fulfilment of diversity management objectives in the organisation. Projects can be focused, among others, on informing workers about benefits of diversity management, educational events and training for employees.

Integration of diversity management into HR processes
It is necessary to incorporate diversity management into HR processes. For example, into the process of care for employees as well as to other processes (motivational programs, educational and development programs).

Implementation of diversity management strategy
Diversity management strategy can focus, for example, on the elimination of communication problems and elimination of negative conflicts that are occurring in diverse work teams frequently.

Measurement of results and control
Every strategy must be controlled and measured to continue in the improvement. This applies also to strategy of diversity management.

Generation of outputs from diversity management
Implementation of effective management should lead to new ideas, higher performance, satisfaction of employees and easier adaption of the enterprise on new markets.

Diversity in an enterprise starts with defining the objectives by the company's top management. For the company's management, this step presents an opportunity for mutual discussion about the possibilities of diversity management implementation, about the vision and mission of diversity management. Generally speaking, the basic concept of diversity management is defined. Of course, top management can also use quantitative data about employees or data of qualitative nature (such as reporting of incidents and conflicts between employees). Collection of secondary information is connected with the next step, which is the creation of the diversity staff, consisting of members of senior management and workers of HR department. The staff, which is subordinate to the top management, will emphasise the commitment of top management to fully implement functional diversity management in the organisation. It is necessary that the staff includes HR workers experienced in core HR activities of diversity management (according to the questionnaire survey, this is educating, developing and caring for employees). The staff must be able to come with relevant suggestions how to support the development of diversity management in an organisation through (not only) these HR activities. For this purpose, it is very convenient to take advantage of possibilities offered by implementation of diversity audit and setting of diversity priorities. This activity is naturally included also in the proposed diversity model. For the first time, feedback is collected within the entire model, in particular from employees, but of course also other interest groups can be included. Based on the audit, the key priorities of diversity management should be defined. For example, the enterprise may find out that salary of women in the same positions is 20 % lower, and set the objective to balance the differences in wages until a specific date. There are many possibilities of improvement, it depends on the particular enterprise. A big advantage is that top management will cooperate with HR department in diversity audit, while communicating with employees and other interest groups. Practically every person working in the company will be involved in the audit process. Opinion of each person must be treated equally and must not be underestimated. The interest of the enterprise to implement an effective diversity management must be expressed already during the audit. It can be expected that enterprises of global character or with a high number of workers will identify hundreds of different suggestions for improvement. Then it is up to the members of diversity management staff to choose the really essential priorities. Another option is to create a database of suggestions which they can use continually when seeking new possibilities of improvement. Of course, in this phase of implementation it is necessary to reconsider the set objectives. It might happen that the original objectives (set only by the top management) will not be relevant to the priorities and the actual situation. Therefore the objectives can be re-examined.

On the basis of existing priorities and objectives, it is possible to proceed to the creation of diversity management strategy (priorities match the objectives, as is discussed in the previous text). It is necessary to get feedback to the strategy (or its proposal), again especially from the employees of the enterprise.

When a diversity management theory is created, nothing obstructs the creation of projects, programs and events of diversity management. Their form and appearance can differ; it always depends on the particular enterprise, its sources and current situation, with regard to the implementation of diversity management. However, we can recommend that the enterprise takes care of all main types of diversity, whether racial, ethnic, age or gender diversity. Like every activity of an enterprise, also projects, programs and events of diversity management must be evaluated. It is possible to get feedback for nonfinancial evaluation, especially from customers and other interest groups. After the creation of the proposal of projects, programs and events, it is of course desirable to incorporate diversity management into HR processes. The specific form of this incorporation depends on the specific established processes in given enterprise again. The model shows that diversity management strategy can be implemented after this step. Getting feedback, especially from employees, in included in the following step too. However, everything might not come out as planned within implementation, that is why the model also suggests measurement of the results and control of diversity management strategy, which will again require getting feedback. The system of internal control is different in every enterprise. Subsequently, on the basis of control activities, the enterprise must suggest future improvements. Thus the entire process returns to the beginning and the first step – definition of diversity objectives by the top management. When the strategic phase is over, it will be possible to generate outputs from diversity management. Efficiently implemented steps will lead to improvements in the form of new ideas, increased efficiency, customer satisfaction and adaptation on new markets.

The entire model is interconnected to bring a complex solution for each organisation interested to implement diversity management.

9. COMPARASION OF THE PROPOSED MODEL WITH OTHER DIVERSITY MODELS

I would like to compere the model I proposed in the article with two other models – the model by van Knippenberg, de Dreu and Homan (2004), and the model by Gilbert, Stead and Ivancevich (1999). Compering these models, the advantages of the new model (in addition to advantages mentioned in previous text) can be determined. The model by van Knippenberg, de Dreu and Homan (2004) is not so complex and uses only relation between diversity of the work group and performance. The model proposed in this work takes into consideration various correlations (not only the mentioned relation). Of course, it is possible to build on the model by van Knippenberg, de Dreu and Homan (2004) during diversity management. However, with the implementation of the model proposed in this article, the enterprise gets a more complex approach. The model by Gilbert, Stead and Ivancevich (1999) is noticeably more elaborate than the model by van Knippenberg, de Dreu and Homan (2004). For this reason, the model by Gilbert, Stead and Ivancevich (1999), is more suitable for the elaboration of the dissertation. Nevertheless, the diversity model proposed in this thesis is more up-to-date and relevant, as it reacts to the contemporary market environment better. Also, significant is the necessity of continuous collection of feedback within the proposed model. Much has changed since 1999. It is possible to find points of conformity in both models (in the proposed as well as in the model designed by Gilbert, Stead and Ivancevich, 1999) – for example, that top management must support the implementation of diversity management.

10. CONCLUSIONS

The primary objective was to show the impact of diversity on management processes and also to analyse the impact of national culture on organisational culture. Additionally, I wanted to identify, through professional literature review and conducted research, contemporary approaches to diversity management and to clarify its advantages. Emphasis was placed primarily on the occurrence of individual aspects of national cultures in organisational culture. National culture is strongly rooted in society, so it is not surprising that it penetrates into the professional environment. As a consequence, the enterprise's organisational culture adopts the main features of the country's national culture. The analysis carried out on selected examples of major national cultures and enterprises originating from these countries has confirmed the above article indicating their interdependence. The conducted literature review and scientific research, however, do not allow to clearly determine which organisational cultures are the most successful. One would rather focus on how enterprises are able to respect the specifics of national cultures and transform it into their favour in the global markets.

Another, more practical objective was to identify the specifics of using diversity management in the global IT enterprises which are characterised by a multicultural working environment. The research purpose was to create a graphical model of diversity management for multicultural organisations operating in the information technology industry. The created draft of diversity management model contains the following elements: diversity objectives defined by the top management, diversity staff, diversity audit implementation and search for diversity priorities, creation of diversity management strategy, creation of diversity management tools, incorporation of diversity management into HR processes, implementation of diversity management strategy, measurement of the results, control of strategy, feedback and generation of outputs from diversity management.

As a result of the literature review and conducted research, I can also confirm that market environment is constantly developing and it is desirable to create innovated views of previous management paradigms, especially with regard to the development of information and communication technology. This applies even more to diversity management because globalisation is fuelled by the fast development of information and communication technology and diversity management is a direct consequence of globalisation. An increasing number of global enterprises are turning to diversity management as to a way to manage employees from different cultures, ethnicities, races, genders and age. This is a natural way of development which will continue in the upcoming years. The theoretical as well as practical part of the article confirmed that diversity management is meaningful and brings many positives; any negatives can be eliminated by a complex and systematic approach. Moreover, the research confirmed that diversity management cannot be omitted. Global enterprises are aware of this fact and most of them use this concept actively.

11. RESEARCH LIMITATIONS

Like all research, this one has its limitations as well. The main limitations result from the selected research methods, while other limitations are caused by the phase of research and the current state of knowledge of these issues and by limited interpretation of the collected data. The most significant factor affecting the research can be considered the selection and number of the respondents in this qualitative research, in this case the respondents were chosen intentionally in such a way that the most important managers and directors were represented proportionally.

12. CONTRIBUTIONS OF THIS ARTICLE FOR THE THEORY AS WELL AS PRACTICE

This article was elaborated in order to explore the yet uncharted issues of diversity management, i.e. areas that have not been examined in detail till today. After analysing secondary data, as the most suitable approach proved to be the focus on the issues connected with creation of a diversity management model, because this particular area has remained rather neglected in the existing expert literature. It is true that there are diversity models described in the sources, however, these models are already outdated. Additionally, this article brought insights that may be used by other authors in their own research of this theme.

Readers are offered a comprehensive overview of professional sources dealing with diversity management.

Corporate practice can get inspired by the proposed diversity management model and other findings too. The proposed model can be implemented directly into the corporate processes, depending on the possibilities and resources of individual companies. However, it must be taken into account that the model is based especially on primary collection of data, which involved organisations in IT field. Implementation in another industry might not be smooth. Which opens possibilities for future orientation of the further research.

13. FUTURE ORIENTATION OF THIS RESEACH

In the future, the research can continue in two directions. This means that an extensive research among global companies can be carried out – regardless of industry, number of employees and regional origin. On the basis of these outcomes, it will be possible to get a complete overview of the application of diversity management in contemporary global companies. Based on this new research, it will be possible to prepare a diversity model which would be more responsive to the needs of global organisations. Or, the proposed diversity management model can be used to find out whether it is suitable for the organisations or whether any alterations are needed to improve it for their needs.

BIBLIOGRAPHY

Bedrnová, E. & Nový, I. (2002). *Psychologie a sociologie řízení*. Praha, Czech Republic: Management press.

Bělohlávek, F. (1996). *Organizační chování*. Olomouc, Czech Republic: Rubico.

Brooks, I. (2003). *Firemníkultura: jedinci, skupiny, organizace a jejich chování*. Brno, Czech Republic: Computer Press.

Brdulak, J., Banasik, P. (2015). *Organisational culture and change management in courts, based on the example of Gdańsk area courts*. International Journal of Contemporary Management, 14(2), 33–50.

Fang, Z., Xu, X., Grant, L. W., Stronge, J. H., & Ward, T. J. (2016). *National Culture, Creativity, and Productivity: What's the Relationship with Student Achievement?* Creativity Research Journal, 28:4, 395–406.

Gilbert, J. A., Stead, B. A., Ivancevich, J. M. (1999). *Diversity management: A new organizational paradigm*. Journal of business ethics, 21.1: 61–76.

Hofstede, G. (2000). *Cultures of organizations and management*. Warsaw, Poland: Polish Economic Publishers, 139–161.

Hofstede, G., Hofstede, G. J. & Minkov, M. (2010). *Cultures and organizations: software of the mind: intercultural cooperation and its importance for survival*. New York, USA: Mc Graw Hill.

King, E. B., Dawson, J. F., Kravitz, D. A., & Gulick, L. M. V. Armour, M. P., Bain, B., & Rubio, R. (2012). *A multilevel study of the relationships between diversity training, ethnic discriminationand satisfaction in organizations*. Journal of Social Work Education, 33, 5–20.

Kluckhohn, F. R. & Strodtbeck, F. L. (1961). *Variations in value orientations*. Oxford, England: Row, Peterson.

Kivrak, S., Arslan, G. & Tuncan, M. (2014). *Impact of national culture on knowledge sharing in international construction projects*. Canadian Journal of Civil Engineering. 41:7, 642–649.

Lukášová, R. & Nový, I. et al. (2004). *Organizační kultura: Od sdílených hodnot a cílů k vyšší výkonnost ipodniku*. Praha, Czech Republic: Grada Publishing.

Mansson, D. H., Marko, F., Bachratá, K., Danišková, Z., Gajdošíková Zeleiová, J., Janiš, V., & Sharov, A. S. (2016). *Young Adults' Trait Affection Given and Received as Functions of Hofstede's Dimensions of Cultures and National Origin.* Journal of Intercultural Communication Research. 45:5, 404–418.

Marshall, G. (1998). Organizational culture. *A Dictionary of Sociology*, retrieved at: https://www.encyclopedia.com/social-sciences-and-law/economics-business-and-labor/businesses-and-occupations/corporate-culture#organizationalculture (10.09.2018)

Musambira, G., Matusitz, J. (2015). *Communication technology and culture: Analysing selected cultural dimensions and human development indicators.* International Journal of Technology Management & Sustainable Development. 14:1, 17–28.

Schein, E. (2010). *Organizational Culture and Leadership*. San Francisco, USA: Jossey – Bass.

Tureckiová, M. (2004). *Řízení a rozvoj lidí ve firmách*. Praha, Czech Republic: Grada Publishing.

Van Knippenberg, D., De Dreu, C. KW., Homan, A. C. (2004). *Work group diversity and group performance: an integrative model and research agenda.* Journal of applied psychology, 89.6: 1008.

Woronoff, J. (1993). *Mýtus japonského managementu*. Praha, Czech Republic: Victoria Publishing.

REVENUE MANAGEMENT IN HOSPITALITY INDUSTRY (CASE STUDY OF A SELECTED CONGRESS HOTEL)

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Abstract
The paper focuses on the analyses of the impact of business segmentation on hotel financial performance. Empirical research includes a case study of the Grandior Hotel Prague. The impact of the business segment on the revenue is monitored on the basis of individual shares in the hotel income in the reference periods. The relationship between business mix and revenue optimization is examined on the basis of established statistical criteria. By focusing on a specific business mix, revenue can be maximized through different return, cost and risk characteristics of each segment. As a rule, business segments buy at different average prices and generate different revenues. Research on price elasticity of demand in different segments could help stabilize seasonal prince fluctuations. On the basis of the findings gathered, hotel revenue management optimization procedures are proposed. The methodical procedure is applied to a case study of a particular hotel. It is, however, designed to be generally applicable in the financial performance research of hotels. The theoretical framework is based on revenue and yield management practices in hotel and tourism. The results of this study are confronted with selected realized research.

Keywords: *revenue management, hospitality, case study, business segment*

1. INTRODUCTION

The hotel industry provides a specific type of service that can be sold at different prices according to seasonality, customers, type of sales channel, etc. In practice, there is no ideal customer segment. One shows the highest average price, the other is the least risky, the other is associated with favourable effects on seasonality, etc. Pricing, quantity offered and business mix are becoming important tools for increasing and maintaining hotel revenue. Professional practice and research institutions therefore pay increased attention to defining and methodical approach to revenue and sales channel management. This article represents contribution to the discussion in the field of hotel financial management focusing on revenue management.

The aim of this paper is to analyse the impact of business segmentation on hotel financial performance. The theoretical framework is based on revenue management practices in hotel industry. Empirical research includes a case study of a selected hotel. The study evaluates the problem areas of revenue management and make suggestions for the hotel optimization procedures. The results of this study are confronted with selected realized research.

The impact of the business segment on the financial performance of the hotel is evaluated through revenue management methods. Eight business segments are monitored in the Grandior Hotel Prague case study: individual booking-corporate, individual booking-travel agent, group booking-corporate, group booking-destination management company, group booking-travel agent, group booking-other, individual direct booking, own website, individual booking-reservation systems, walk in, individual booking-wholesaler, unspecified reservation. The financial statements of Le Hotels Group are used as the statistical basis for the analyzes. The period 2016–2018 was chosen for the analysis of business segmentation in relation to revenue management. The methodical procedure is applied to a case study of a particular hotel. It is, however, designed to be generally applicable in the financial performance research of hotels.

2. REVENUE MANAGEMENT: THEORETICAL APPROACHES

The theoretical framework of this study is to clarify the principles and procedures applied in revenue management in the hotel industry. Revenue management approaches are the basis of the methodological procedure of the case study of the selected company.

Revenue management focuses on pricing to increase profits. Revenue management can be defined as management activities that focus on setting different prices for specific customer segments. Prices are based on sales time and product availability. The purpose of price optimization is to increase revenue (Padhi, Ruyken, Das, 2015). The main principle of revenue management is to set the price customers are willing to pay. The set price should achieve financial performance, especially in terms of profitability and economic performance. Revenue management can be described as one of the tools of financial management focused on financial health and financial performance of the company. Revenue management focuses mainly on product, price, quantity, time and market factors. Market factors include, for example, demand developments, market segmentation, or competitive prices (Fiala, 2015).

Revenue management is also a demand management process. By controlling available capacities in individual price categories, sales strategies are set to maximize the revenue and profit of the hotel, congress facilities and restaurants (Burgess, 2010). A number of indicators serve this purpose. These indicators are as follows:

- Average daily Rate (ADR), Revenue per Available Room (RevPAR) and Revenue per Available Set (RevPAS). Average Daily Rate) is a statistical unit that shows the average daily rate per occupied room.
- Revenue per Available Room shows the price of the available room. It is an internationally used indicator that is monitored over a longer period of time. Revenue per Available Room can be calculated in two ways: RevPAR = ADR x Occupancy; RevPAR = Total room revenue/Total rooms available for sale.
- Revenue per Available Set is the sale on the available chair. It is an indicator of restaurant catering, it is the ratio of revenues obtained from restaurant services to the number of permanent chairs of the given facility. The number of permanent chairs does not include seasonal or occasional lounges, gardens, etc.

Revenue management can be characterized as a three-stage system, consisting of structural decisions, quantity and price decisions and corrective decisions. The first stage structural decisions concern mainly product design. Companies design products based on customer preferences, competitive products, or predictions of new competitors' products. In the case of quantitative decision, the financial management procedures apply. On the basis of the evaluation of analytical data, companies must consider decisions on prices and the amount of reserved capacities. In terms of quantity, for example, hotels in ski resorts can commit to a reserved number of rooms, which are only rented to the clients of an agreed travel agency during the season. For example, in relation to the price, the hotel may commit to lower prices for groups of clients from a certain number. The third stage allows flexible responses to changes in market conditions in the form of corrective decisions. Corrective decisions can be both price and quantity. The scope and flexibility of corrective decisions vary by industry and channel used. In hotel companies using reservation systems or global distribution systems such as webres, price changes can be fast and cost-effective. In all three stages, economic determinants play an important role (Fiala, 2015).

Revenue management handles demand management decisions and helps maximize business profits. Revenue management includes all procedures related to demand and price management. These are traditional practices such as capacity allocation, dynamic pricing or overbooking, but also more modern practices such as oligopoly models, forecasting, price negotiation and auctions (Talluri, Ryzin, 2005).

With increasing competition, hotels have started to use demand-based pricing strategies. In revenue management, pricing is not a simple matter either. Financial analysts can use two basic approaches to pricing: deterministic models and stochastic models. Pricing elements include: capacity, product, information and demand (Aziz, Saleh, 2011).

Overbooking is the standard practice of revenue managers. This method means selling and contracting more rooms than the capacity of a hotel (Hayes, Miller, 2011; Ivanov, 2014) Overbooking is mentioned in cases where it is appropriate to extend the capacity utilization in the reservation system, if there is frequent cancellation of reservations. Although at first glance this opportunistic behavior may appear unethical and potentially put the hotel in a vulnerable position, it is a necessary tool to achieve high occupancy. Overbooking strategies can be based on three different principles: service level strategy, cost-oriented strategy, hybrid strategy (Fiala, 2015).

Forecasting is one of the modern techniques in revenue management in the hotel industry. This technique addresses the problems of room allocation. By adjusting volumes, you can assess the impact on profits. For example, forecasting can answer the question of what happens when costs rise by 5% or rates cut by 10%. Forecasting thus helps to determine what happens and then identify the causes and implement the appropriate solution. In practice, there are fundamental reasons for applying this technique. If the hotel manager cannot predict how many rooms he will sell for a particular day, then he cannot sell the available rooms, buy enough supplies, and plan sufficient staff (Burges, 2010). The forecasting model should primarily take into account booking behavior of different market segments at different times and also different seasonal patterns (Křížek, Neufus, 2011). In the forecasting process, it is important to monitor in particular: the number of bookings made and the number of bookings expected; seasonal variation; activities to be carried out in order to maximize occupancy and room rate, number of employees; purchase (especially perishable goods) and cash flow. The essence of cash flow monitoring is a change in the balance of cash. Cash flow is a variable that can be operated both in predictions based on classical methods of calculating financial performance indicators and in forescasting. Cash flow is an important part of the financial management and financial analysis of the hotel. It is directly related to ensuring its liquidity (Čábelková, Abrhám, 2015).

For forecasting, classical statistical methods are used, which include moving averages, exponential smoothing and regression analysis methods. However, in today's rapidly changing market conditions, companies have less historical data. In these cases, any trend that seems obvious from historical data is not reliable to predict future developments (Fiala, 2015). For this reason, revenue forecasting uses methods that do not need to work with large amounts of historical data. These techniques include e.g. Bass diffusion model, Discrete choice models or Lead indicator method. Discrete choice models attempt to quantify statistically the probability that a customer chooses a particular option from a set of choices. For example, the customer chooses a room in hotel X instead of a room in hotel Y. The set of options in the model is finite, complete and the variants are mutually exclusive. Methods of prediction have multiple forms, which allow to demonstrate the benefits for the customer and the hotel management.

A very closely related activity with revenue management is yield management. Yield management is defined as a specific part of hotel management, which uses revenue management outputs, expands analytical activities of all market segments, examines signs of recurring demand situations and uses them to predict development. Part of the anticipation is knowledge of the guest's history and application of this knowledge at the time of decision-making. (Cross, Neufus, 2011). Yield management can also be defined as a set of techniques designed to achieve maximum returns. For this purpose, Yield management procedures can be used to determine which booking is to be accepted by the hotel and which booking will be more economically beneficial to refuse. Yield management charges different rates for the same service to different customers (Kumara, Ramachandranb, 2016). Yield Management, as part of revenue management, represents a set of processes leading to maximum sales. These are price level operations where, depending on the occupancy rate of the hotel, the market situation and the behavior of customers, it is determined which demand to accept and which to refuse (Kimes, 1989).

Business mix and distribution channels are an integral part of revenue management. Clients can use a variety of distribution channels. They can buy the product at the time they want, and are even willing to pay extra for convenience. As a result, the distribution channel can add value to the product. (Hayes, Miller, 2011). Online booking systems are becoming increasingly popular. The indisputable advantage of online sales is the ability to target a large number of customers. Basically, everyone today can open a single website and choose from many hotels in any destination. The danger is, of course, that one hotel may be lost in numerous competition and the fees of these systems reduce turnover (Sigala, 2003). To expand the customer segment, hotels also use wholesalers and travel agents. The main advantage of these channels is bulk sales. A serious partnership with a proven wholesaler or travel agent can bring a number of benefits to the hotel over the long term. The disadvantage is that in addition to bulk sales fees, group discounts are often required. Distribution channels greatly affect the hotel's ability to generate revenue. Optimizing revenue from one-way distribution channels is one of the activities of current revenue management. In an ideal world, revenue manager would choose the channel with the most promising potential return. However, more than costs and returns are to be expected. Each distribution channel also has its specific risks (Aziz et al., 2011; Bitran, Mondschein, 1995; D'Antonio, 2013).

The effect of the business mix can be illustrated on the comparison of individual and group bookings. It can be expected that individual bookings will yield higher average daily rates than group bookings. Therefore, because group bookings are sold with a group discount. Unfortunately, a more profitable individual booking brings a higher risk. Although it generates higher revenues, it is often associated with the possibility of interference. It is difficult to attract individual customers if they are already discouraged by strict booking conditions. On the other hand, group bookings are accompanied by an agreed contract. Although group bookings can reduce average prices, they give revenue managers some form of security. Group booking is a good tool for planning room use. Long-term cooperation with travel agents who bring several groups to the hotel every year has significant advantages. Group bookings serve as a demand stabilizer, giving the revenue manager the certainty that some of the rooms will be sold. In addition to income, the business mix also affects occupancy. Corporate clients significantly contribute to occupancy during weekdays, while recreational tourists fill the hotel on weekends and public holidays. The nature of corporate demand also determines that it is relatively stable throughout the year and can provide extra benefits in terms of group accommodation or meetings and seminars. In such cases, income from food, beverages, banquets and conferences can become an important part of hotel income (D'Antonio, 2013).

3. AN OVERVIEW OF CURRENT RESEARCH

Hotel chains do not publish data due to business secrets. For this reason, it is not possible to compare the results of the case studies in this paper with the average values for the Czech Republic. The same is not possible in an international comparison. Previously conducted surveys are therefore confronted and compared only indirectly. This paper builds on and extends proven research.

In terms of the business mix structure, a number of surveys confirm the increase in hotel reservation portals in accommodation revenues in the Czech Republic and internationally. On the contrary, they report a decline in the share of travel agents. The overall share of intermediaries (travel agencies, agencies and hotel reservation systems) is constantly growing. This is associated with the negative effect of high commissions that hotels have to pay. Many authors and professional associations therefore recommend using direct sales through their own websites (Kalousová, 2015; Padhi, 2015; Mccaffrey, 2016; Rondan-Cataluňa, 2014). The research presented in this paper suggests similar conclusions. In the Le Hotels group, direct sales prices were converted by more than 20% on average over the reporting period. When deciding to reduce the share of financial intermediaries, it is advisable to take into account the impact on the reduction of hotel sales. Hotel reservation portals have high ratings and use effective marketing tools.

Interesting research studies have also been published in terms of applying an overbooking strategy. The 2015 survey of accommodation facilities in the Czech Republic showed that overbooking is not currently a commonly used technology in all types and sizes of accommodation facilities. Most of the interviewed managers who use the overbooking method evaluate its impact positively. Revenue from increased occupancy exceeds the cost of moving guests for most of the interviewed. Overbooking has also had a positive impact on ADR and RevPAR. Almost 30% of accommodation facilities in the Czech Republic reported in a 2015 survey that entities agree that this method led to a year-on-year increase in sales of up to 20%. A questionnaire survey, which took place in 2015, was used as the data base in this survey. Over 500 accommodation facilities were included. (Jenčková, Abrhám, 2016). However, other international research has confirmed that nearly 50% of guests affected by managed relocations report a negative review of relevant portals. Moving as a result of overbooking is more difficult for men to accept. Almost 60% of those who leave a negative rating are male (Short, 2014). Negative impacts can be minimized through quality organization of the process, offering better accommodation and additional services. Almost a third of respondents see a comparable room as the absolute minimum. Therefore, it is advisable to grant maximum benefits or even stay for free (Short, 2014). The authors of this paper find the implementation of the method of overbooking as positive, but of course, while keeping the highest compensation for guests.

4. A CASE STUDY

Empirical research includes a case study of the congress hotel Grandior Prague. The analysed hotel is a part of the Le Hotels Group, which manages five hotels (Grandior Hotel Prague, Grand Majestic Plaza, Grandium Prague, hotel Élite a Hotel Majestic Plaza) in the capital of the Czech Republic, Prague. These are hotels. Le Hotels Group has 350 employees. Grandior Hotel Prague has a capacity of almost 400 rooms. As a case study of the business mix was chosen because of the size. Relatively high capacity, location and conference facilities allow for diversification of the business mix. The hotel offer is aimed at both leisure and corporate clients. Grandior Hotel Prague achieves consistent performance in terms of revenue and occupancy.

The period 2016–2018 was chosen for the analysis of business segmentation in relation to revenue management. The tourism sector was characterized by steady growth in 2016–2018. The demand in the hotel sector was not affected by economic fluctuations in the period under review. The financial statements of Le Hotels Group are used as the statistical basis for the analyzes.

Ten business segments are monitored in the Grandior Hotel Prague case study: individual booking-corporate, individual booking-travel agent, group booking-corporate, group booking-travel agent, group booking-other, group booking-destination management company, individual direct booking, own website, individual reservation-booking portal, walk in, individual booking-wholesaler, unspecified reservation.

The impact of the business segment on the revenue is monitored on the basis of individual shares in the hotel income in the reference periods. When a segment has a 50% share, it means that it generates half of the revenue in the reporting period. The comparison of contributions to average prices is monitored on the basis of average daily rates. Individual segments are thus evaluated according to the relative income. It does not affect total income, but relative influence on prices and revenues. Average daily rate is calculated as a ratio of Total room revenue and Total rooms sold. ADR = Total room revenue/Total rooms sold. To demonstrate the assumption that different market segments have a different income impact, a ratio between contribution to income was established. If the ratio is greater than 1, this means that this distribution channel has contributed to an increase in Average Daily Rate over the given period. On the other hand, if the ratio is less than 1, the distribution channel has a negative effect on the Average Daily Rate. The average of this ratio over a longer period of time will show us a general overview of the impact of a particular distribution channel on ADR. However, it should be noted that increasingly a value of 1 does not mean that it has a greater impact on ADR. Because ADR is average, the distribution channel that generates the greater part of the reception will have more impact. The distribution channel that will generate revenue exactly at the ADR level will have a ratio of 1. The ratio reflects what would happen to ADR if we increased the size of the segment in the business mix. Increasing a segment with a ratio greater than 1 would increase the ADR and vice versa.

The analyses of Grandium Hotel Prague confirmed that different business segments have a differently high income effects. The segment of individual reservations via booking portals (such as Booking.com, Expedia.com or HRS.com) clearly has the highest contribution to the hotel's income. In the analyzed period, the share of bookings through hotel systems accounted for approximately 70%. In the long term, it ranges between 50 and 80%. These statistics correspond to changes in the consumption behaviour of hotel clients in recent years. The second largest share was recorded for group bookings made by travel agencies (on average approximately 12% of revenue). Although this proportion seems relatively small, in absolute terms these are large amounts. This segment is associated with relatively high risks in terms of the payment discipline of travel agencies.The third significant trade channel was sales via wholesale companies. Other distribution channels (including direct sales through their own website) have proved to be less significant in terms of their share of total revenue. These are business partners who buy in bulk and then sell such rooms to their clients.

Other segments under review achieved financial performance of less than 5%. The segment called Destination Management Company contributed slightly more than 3% in both categories. Destination Management Company is an agency that provides additional services. One example is: a travel agency that buys rooms in the Alpine ski resorts in winter and then sells them to clients in packages with ski passes and other services. Similarly, foreign agencies offer their clients additional accommodation packages in addition to accommodation in Prague.

Individual direct bookings (e.g. by phone, mail), bookings made by clients arriving directly from the street (without prior contacting the hotel) and bookings made on the hotel website are less than 3% in both categories monitored. This also applies to other bookings that do not fall into any of the above categories.

Table 1. The share of the business segment in the revenues (2016–2018)

Business segment	Share in the revenues (in %)
individual booking-travel agent	1,03
group booking-corporate	0,43
group booking-travel agent	11,09
group booking-destination management company	3,73
individual booking-corporate	0,76
individual direct booking	1,90
own website	1,80
individual reservation-booking portal	70,40
walk in	0,67
individual booking-wholesaler	8,10
unspecified reservation	0,18

Source: own research

Comparative analysis shows that, from three years apart, the share of individual business segments in income and generated overnight stays is essentially constant, except for reservations made through hotel reservation systems. This segment showed an approximately 10% increase over the period under review. In 2016 compared to the same period in 2018. It is therefore clear that hotel reservation systems play an increasingly important role in revenue management. The shares of individual segments in the income of the Grandior Hotel Prague are illustrated in Table 1.

Table 2. Business segment contribution to ADR (in %) (2016–2018)

Business segment	Contribution to ADR
individual booking-travel agent	1,01
group booking-corporate	1,27
group booking-travel agent	0,90
group booking-destination management company	1,16
individual booking-corporate	1,00
individual direct booking	1,13
own website	1,22
individual reservation-booking portal	1,05
walk in	1,41
individual booking-wholesaler	0,82

Source: own research

The data in Table 2 represents the contribution of the monitored segments to the average daily rate (ADR). The average value of each segment shows us how much it affects the overall average price. If a given segment (e.g. Walk in) has an average value of 1.41, it means that it is 141% of the average price. Thus, the contribution of this segment is 41% higher than the average. Ratios greater than 1 mean that the business segment contributed to the increase in

ADR. The data found shows that placing emphasis on direct channels, own website and walk-ins will have a strong and consistent contribution to improving ADR. This is due to the absence of commissions and other costs. The average ADR less than 1 over the entire reporting period, indicating that the distribution channel had a negative impact on ADR. The lowest revenues (average daily rates less ten 1) could be recorded for individual bookings through wholesalers and group bookings of travel agents.

5. CONCLUSIONS AND IMPLICATIONS

Based on the results of the case study, it can be stated that different business segments have a different income effects. The study confirmed the well-known fact that the largest amount of hotel revenue comes from individual bookings made through hotel reservation systems. In the analyzed hotel company, the share of bookings through hotel systems accounted for approximately 70%. In the long term, it ranges between 50 and 80%. The second largest share was recorded for group bookings made by travel agencies (on average approximately 12% of revenue). The third significant trade channel was sales via wholesale companies. Other distribution channels (including direct sales through their own website) have proved to be less significant in terms of their share of total revenue.

The business segments surveyed show different revenue shares in both absolute and relative terms. Higher incomes in relative terms per overnight stay are reported by guests coming directly through the reception (so-called walk in). Above-average prices also reach direct sales through the hotel's website. While the lowest revenues (contributions to average daily room rates) could be recorded for individual bookings through wholesalers and group bookings of travel agents. The comparative analyzes shows that individual bookings do not contribute to improving the revenue management indicators of monitored hotels more than other reservations. Group bookings cannot be considered as a suitable risk management tool in periods of low demand within the hotel. This is due to failing demand for group bookings.

The case study confirmed that the composition of the business mix significantly determined profitability in the hotel business. Demand identification and business mix optimization are among the main tasks of revenue management. In response to demand, it is appropriate to identify the desired business mix for specific hotel conditions and target specific segments. One of the strategies for achieving a specific business mix is the management of allocations. Setting targets and allocation limits can be recommended as a practical way of achieving the desired business mix. The composition of the business mix must be addressed at the time of the establishment and planning of the hotel. Achieving a well-functioning business mix is not only a question of revenue manager's ability, but also depends on the chosen hotel investor method. Location decisions, the building of a conference center, the size of a restaurant, the availability of rooms play a key role in establishing a functional business mix.

The business mix should be continuously adjusted to market conditions and continually set allocation limits and targets. A functional management tool is to set a time window with specific goals for each business segment. For example, a reservation window with a specific number of allocations for group bookings is set to close one month before the arrival date. If the allocation does not realize, capacity is moved to optimize the business mix. There is no right formula for the perfect business mix or practical revenue optimization. It is the result of understanding the market and the expectations of demand. A key aspect of successful revenue management is to maintain a business relationship that is not too binding. Contract guests can deprive the hotel of the desired price flexibility. On the other hand, reasonable contracts with partners can ensure constant customer demand.

Consistent application of a diversified business mix can bring specific costs and risks. It is necessary to provide technically and personally specific requirements of different segments and maintain function lines between the hotel and distributors. In some cases, it is even necessary to ensure the operation of the whole departments (e.g. MICE).

Time is also a very important factor for revenue management decisions. Revenue manager must decide not only to whom and how to allocate rooms for different segments, but also when. The price for the given date will increase with time. However, the longer the revenue manager waits to sell a room, the more it increases the risk of not selling the room. Overbooking and over-contracting are now becoming a common phenomenon of effective revenue management.

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BIBLIOGRAPHY

Abrhám, J., Bilan, Y., Krauchenia, A., & Strielkowski, W. Planning horizon in labour supply of Belarusian small entrepreneurs. Economic Research-Ekonomska Istraživanja, 2015, 28(1), 773–787.

Aziz, H. A., Saleh, M., Rasmy, M. H., & Elshishiny, H. Dynamic room pricing model for hotel revenue management systems. Egyptian Informatics Journal, 2011; 12(3), p. 177–183. ISSN 1110-8665.

Bitran, G. R., Mondschein, S. V. An Application of Yield Management to the Hotel Industry considering Multiple Day Stays. Operation Research, 1995; 43 (3), p. 427–443. ISSN 0030364X.

Burges, K. Essential Financial Techniques for Hospitality Managers: A Practical Manual. 2. vydání. Goodfellow Publishers Limited, 2010. ISBN 978-19-0688-416-1.

Čábelková, I., Abrhám, J., Strielkowski, W. Factors influencing job satisfaction in post-transition economies: the case of the Czech Republic. International Journal of Occupational Safety and Ergonomics, 2015; 21(4), 448–456.

D'Antonio, S. Market Segmentation: Identifying Where Hotel Demand Comes From. Cornell Center for Hospitality, Global Hospitality Report. 2013.

Fiala, P. Revenue management. Modely a analýzy. 1. vydání. Praha: Professional Publishing, 2015. ISBN 978-80-7431-115-4.

Hayes, D. K., Miller, A. A. Revenue management for the hospitality industry. 1 vydání. Hoboken (New Jersey): Wiley, 2011. ISBN 978-0470393086.

Ivanov, S. Hotel Revenue Management Process. From Theory to Practice. 1. vydání. Varna: Zagragogar, 2014. ISBN: 978-954-92786-3-7.

Jenčková J., Abrhám, J. Smart overbooking in the accommodation facilities in the Czech Republic, Journal of International Studies, 2016, Vol. 9, No 1, p. 265–275.

Kalousová, J. Hoteloví hosté jako základ úspěšného podnikání v podmínkách globalizace. Slezská univerzita v Opavě. In: Aktuální trendy lázeňství, hotelnictví a turismu. 2015.

Kimes, E. S. The Basics of Yield Management. [online] Cornell University School of Hotel Administration. 1989.

Křížek, F., Neufus, F. Moderní hotelový management. 2. vydání. Praha: Grada Publishing, 2011.

Kumara, R., Ramachandranb, P. Revenue management in remanufacturing: perspectives, review of current literature and research directions. International Journal of Production Research, 2016, 54 (7), 2185–220.

Malec, L., Abrhám, J. Determinants of tourism industry in selected European countries: a smooth partial least squares approach. Economic Research-Ekonomska Istraživanja. 2016, Vol. 29, No. 1, p. 66–84.

McCaffrey, D., Walczak, D. *Optimal Dynamic Upgrading in Revenue Management*. Production & Operations Management. 2016, 25 (11), p. 1855–1865.

Padhi, S., Ruyken, P., Das, D. Strategic Revenue Management under Uncertainty: A Case Study on Real Estate Projects in India. Journal Of Multi-Criteria Decision Analysis, 2015; 22(3) 213-229. ISSN: 1099–1360.

Rondan-Cataluña, F. J., Rosa-Diaz, I. M. *Segmenting hotel clients by pricing variables and value for money.* Current Issues in Tourism, 2014; 17 (1), p. 60–71.

Smutka, L., Maitah, M., Svatoš, M. Czech Agrarian Trade Comparative Advantages Distribution in Relation to Developed and Developing Countries. Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis, 2018, 66(4), 1001–1015.

Svobodová, M. On the Concept of Legislative Acts in the European Union Law. The Lawyer Quarterly 2016, 6(1).

Talluri, K. T., Ryzin, G. J. V. The Theory and Practice of Revenue Management. Boston, MA: Springer Science, 2005.

Tittelbachová, Š, Tyslová, I. Destinace turismu – platforma pro spolupráci kultury a turismu. *Ekonomika a management*. 2016, 10 (1).

REAL ESTATE INVESTMENT FUNDS DISCOUNT AND PREMIUM TO NAV

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Abstract
This paper describes the valuation of Real Estate Investment Trusts (REITs) by Net Asset Value using IFRS (NAV under IFRS) and by market capitalization. The main focus is on the difference in the final values derived by both methods. The paper describes a possible explanation of the value differences summarizing literature review and presents examples of the differences. At the end the paper analyzes possible investment strategies using the valuation differences.

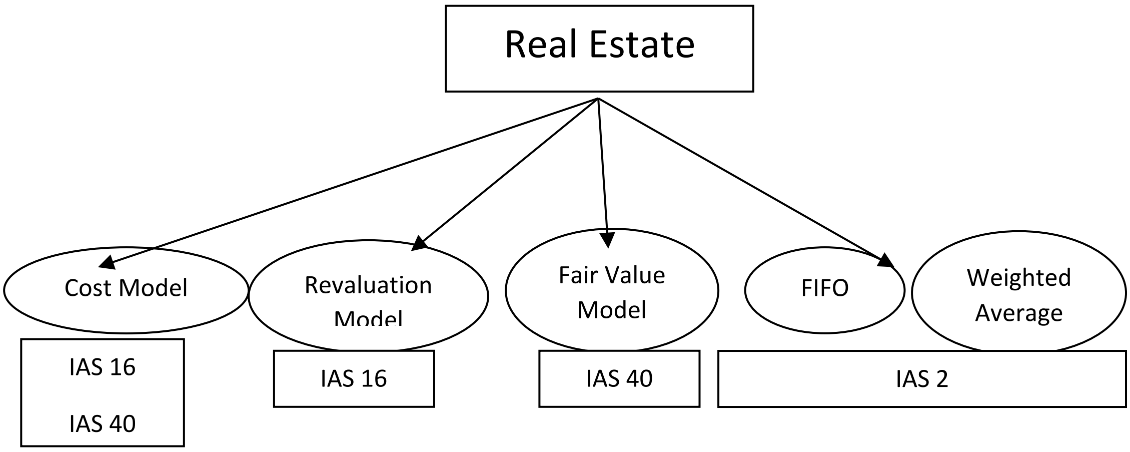
Keywords: *IFRS, Net Asset Value, Real Estate Investment Trusts, Real estate*

JEL Classification: *G30, G210, G230, G28*

1. INTRODUCTION

Net Asset Value represents all assets minus all liabilities. Under IFRS valuation (measurement) method depends on the classification of the real estate. IAS 2, IAS 16 and IAS 40 use several options of valuation methods.

Table 1. Real Estate Valuation



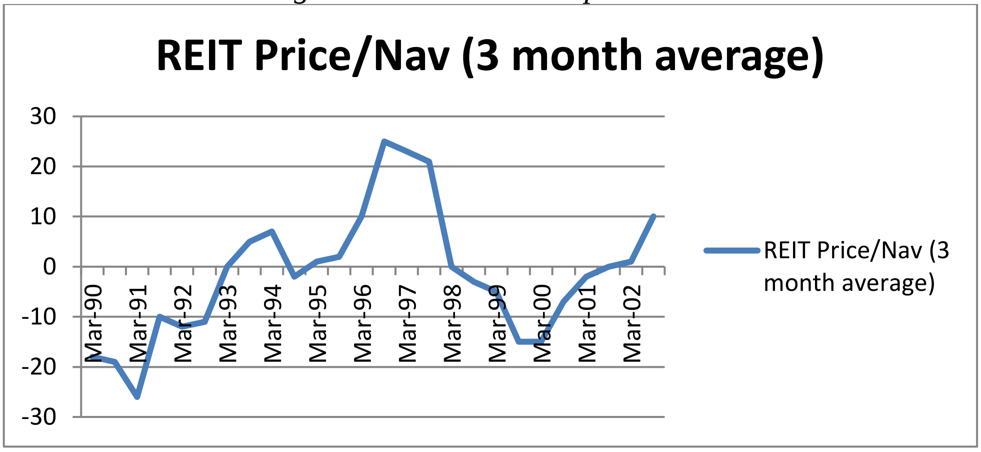
The majority of REIT assets are covered under IAS 40: *investment property as property (land or a (part of a) building or both) held (by the owner or by the lessee under a finance lease) in order to earn rentals and/or for capital appreciation [IAS 40.5]*

If there is significant part of other asset, not measured by fair value model either by selecting cost model under IAS 40 or by classifying real estate with different IAS, this can lead to different value of NAV and market capitalization.

Additional accounting complication occurs with deferred tax asset/liability, which may not always realize (deferred tax liability from the difference between fair value and tax value) and additionally the deferred tax asset/liability is not discounted and therefore does not represent fair value of future cash flows.

Nevertheless the discounts (shares are traded at lower value than NAV) and premiums to NAV (shares are traded with higher value than the NAV) cannot be explained by accounting treatment as there are periods of discounts (see Chart below 1990-1993, 1999-2001) and periods of premiums (1993-1998). The problem is therefore more complicated than simple systematic accounting difference to fair value.

Figure 1. Discounts and premiums to NAV



Source: Green Street Advisors, REITs in USA 1990 2012, NAV adjusted to fair value

2. LITERATURE REVIEW

Many studies tried to analyze and explain the discounts and premiums to NAV, starting with research as far as 1966[53], 1973[54], and 1977[55].

Two different approaches were taken, first being Rational Approach explaining the discount or premium with specific easily explainable factors and second being Noise Approach explaining the difference and the movements with noise information to the investors who are not fussing on the underlining value.

a. Rational Approach

Leverage is one of the factors being tested for effects on the discounts. Several research papers such as Bond and Shilling (2004)[56] or Brounen and ter Laak, (2005)[57] conclude that discounts are positively correlated with high leverage. Based on this research, investors negatively react to the high leverage and high financial risks. Morri et al. (2005)[58] argued that the discount arrases due to accounting bias resulting from the accounting of the loan. If the

[53] Pratt, E.J. 1966. "Myths associated with closed-end investment company discounts", Financial Analyst Journal, Vol. 22 No. 4, pp. 79–82

[54] Boudreaux, K.J. 1973. "Discounts and premiums on closed-end mutual funds: a study in valuation", Journal of Finance, Vol. 28 No. 2, pp. 515–22.

[55] Malkiel, B.G. (1977), "The valuation of closed-end investment-company shares", Journal of Finance, Vol. 32 No. 3, pp. 847–59.

[56] Bond, S.A. and Shilling, J.D. 2004. "An evaluation of property company discounts in Europe", unpublished working paper, EPRA, University of Cambridge, Cambridge.

[57] Brounen, D. and ter Laak, M. (2005), "Understanding the discount: evidence from European property shares", Journal of Real Estate Portfolio Management, Vol. 11 No. 3, pp. 241–52.

[58] Morri, G. (2006), "Leverage and NAV discount in Italian real estate investment funds", paper presented at 22nd ARES Annual Meeting, Key West, FL.

company would issue equity to repay the loan, the discount would be even higher and as result leverage decreases the discount as it increases the equity profitability and tax shield. Such result was confirmed by Giacomo Benedetto (2009)[59].

Liquidity is the advantage of REITs in comparison to the classical direct ownership in the real estate. Real estate has very high transaction costs and relatively low short liquidity, especially when not in prime locations. The advantage of liquidity is increased, when the REITs are traded on liquid markets (for example USA) and the REIT is itself big in comparison to the market. Research by Cherkes and Stanton (2007)[60] analyzed the positive effect of the liquidity and concluded positive effect to the premium.

Management is by REITs run on professional level and the shareholder does not have to take active part but the management is connected with substantial costs. Kallberg, Liu and Trzcinka (2000)[61] come to positive effect of professional management resulting in premium to NAV. Cherkes, Sagi and Stanton (2007)[62] concluded that the costs in general have negative effect of the value resulting in the discount.

General problem with the rational approach is that as shown in the *Fig. 1:Discounts and premiums to NAV*, there are both periods of premiums and periods of discounts. The market value of REITs is moving together without the change in accounting rules, management costs, liquidity or other factors such as past performance or ownership structure.

b. Noise Approach

Noise approach[63] argues that the investors are not focusing only on the underlining value of the real estate but receive many information from the capital markets and news not related to REITs. Institutional investors cannot predict behavior of investors misled by other information and therefore cannot use this opportunity and adjust the price back to NAV. Robert Falzon (2008)[64] analyzed trends in USA and concluded that share price of REITs correlates with general capital market even if the underlining value (NAV) is not changing.

Clayton and Mackinnon (2003)[65] analyzed REITs and share price movements to NAV and concluded that REITs are hybrids between shares, bonds and real estate. REITs depend on financing from capital markets and banks and therefore reflect also the sentiment on capital market. On the other hand the value of REITs is highly correlated with the situation on the real estate market.

[59] Giacomo Morri, and Paolo Benedetto, 2009. "Leverage and NAV discount: Evidence from Italian real estate investment funds." Journal of European Real Estate Research.

[60] Martin Cherkes, Jacob Sagi and Richard Stanton (2007): A Liquidity – Based Theory of Closed – End Funds, Review of Financial Studies, Soc Financial Studies, 2007.

[61] Jarl G. Kallberg, Crocker L. Liu and Charles Trzcinka. 2000. The Value Added from Investment Managers: An Examination of Funds of REITs, Journal of Financial and Quantitative Analysis, s. 387–408

[62] Martin Cherkes, Jacob Sagi and Richard Stanton (2007): A Liquidity – Based Theory of Closed – End Funds, Review of Financial Studies, Soc Financial Studies, 2007.

[63] Barkham, R. and D. Geltner. 1995. Price discovery in American and British Property Market, *Real Estate Economics*, *23*. 21–44.

[64] Robert Falzon, 2008, Stock Market Rotations and REIT Valuation, Samuel Zell and Robert Lurie Real Estate Center, Working Paper, *http://realestate.wharton.upenn.edu/research/papers/full/441.pdf*

[65] Clayton,J. – Mackinnon, G. 2003. The relative Importance of Stock, Bond, and Real Estate Factors in explaining REIT Returns. *Journal of Real Estate Finance and Economics, 2003, 27,* pp 39–60.

3. HYPOTHESIS

My hypothesis is that that there is no single or several rational causes for the difference between the values.
If there would be single or several causes for the different value such as positive effect of liquidity or negative effect of management costs, then:

1) Stable either discount or premium to the NAV over the time would persist
2) The discount/premium would be observable in all different countries at the same time with similar level
3) There would be an average value and single companies may outperform only in exceptional cases
4) There would not be a possibility for profit as the discount is caused by rational stable factors

My hypothesis is that there is market sentiment and the individuals REITs in one market are moving together and there is therefore possibility for profit.

4. DATA AND RESULTS

The main source of data is from EPRA, the European Public Real Estate Association[66], Green Street Advisors[67] and HSBC[68]

The following tables summarize the development of discounts and premiums per countries in Europe and per single companies in Germany, Austria, UK, and France.

Table 2. NAV discounts/premiums in EUROPE 2013–2018

Country	Average	SD	1/2018	12/2016	12/2015	12/2014	12/2013
Europe	-0,51%	3,61%	-7,37%	2,90%	-0,30%	1,90%	0,30%
Austria	-13,90%	8,54%	0,60%	-10,20%	-17,30%	-18,20%	-24,40%
Belgium	24,68%	5,86%	23,70%	34,10%	27,40%	21,60%	16,60%
Finland	-20,68%	3,49%	-25,30%	-14,70%	-22,60%	-20,60%	-20,20%
France	1,92%	3,73%	-4,60%	6,30%	1,50%	4,70%	1,70%
Germany	9,66%	7,75%	0,80%	23,50%	10,50%	9,30%	4,20%
Norway	-12,14%	4,37%	-7,80%	-6,80%	-17,90%	-12,20%	-16,00%
Switzerland	1,28%	4,96%	8,40%	5,80%	-0,90%	-2,40%	-4,50%
United Kingdom	-11,84%	4,87%	-18,20%	-16,20%	-11,90%	-7,20%	-5,70%

Source: EPRA, the European Public Real Estate Association

[66] http://www.epra.com/
[67] https://www.greenstreetadvisors.com/
[68] http://www.hsbc.com/

Table 3. NAV discounts/premiums per companies GE, AT, UK, FR 2009–11

Stock	2009	2010	2011
Alstria	-36%	-32%	-36%
DIG	-46%	-43%	-47%
IVG	-37%	-31%	-33%
Euroshop	1%	14%	3%
VIB	-42%	-42%	-42%
Colonia	-62%	-63%	-65%
Galfah	-45%	-41%	-42%
Deutsche Wohne	-40%	-40%	-40%
Average German	**-38%**	**-34%**	**-37%**
CA Immo	-29%	-23%	-27%
Conwert	-34%	-32%	-34%
Average Austria	**-31%**	**-27%**	**-30%**
British Land	49%	39%	29%
Brixton	-28%	-36%	-46%
Derwert london	80%	74%	64%
Great Portland	50%	41%	31%
Hammerson	18%	20%	15%
Land Securities	70%	60%	49%
Liberty Internatio	54%	56%	48%
Segro	35%	34%	26%
Shaftesbury	34%	37%	31%
Workspace group	73%	53%	24%
Average UK	**44%**	**38%**	**27%**
Klepierre	-5%	-5%	-5%
Mercialys	3%	-4%	-10%
Unibai Rodanco	9%	21%	14%
Average France	**2%**	**5%**	**0%**

Source: HSBC

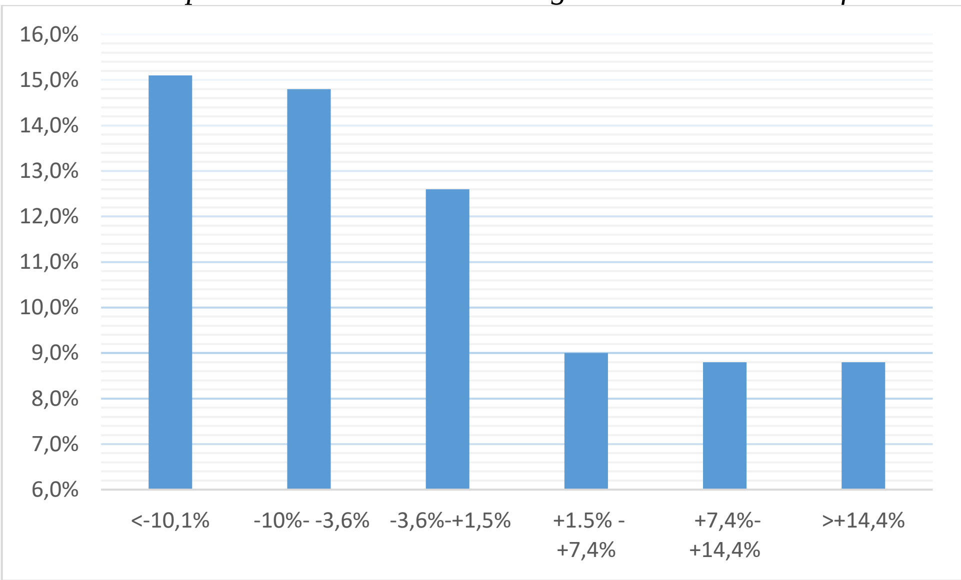
From both tables can be observed that at the same times there are countries with discount and countries with premium. Discounts and premiums are rather stable in the countries, meaning that although the total amount of discounts and premiums is changing the countries are in premiums and discounts for several years.

From the second table it can be observed that if the country is either in discount or in premium the majority of REITs are in discount or in premium as the country.

The analysis indicates that the discount and premiums are driven by market sentiment in the respective country, which may be changing over the years. Other than market sentiment, no simple rational explanation can be observed.

The following chart will summarize the effect of discounts and premiums on the total return of the shares for the next five years. Research was done by Green Street Advisors on extensive sample of REITs in the USA from 1990 till 2016.

Figure 2. Discounts/premiums to NAV and average annual total return for next 5 years



Source: Green Street Advisors, REITs in USA 1990–2016

The chart shows that there is relation between discounts/premiums and the return of the shares for next five years. The lower the discount the higher expected return. This would indicate that the discounts and premiums cannot be explained by rational approach as otherwise there would be no potential for profit. The research indicates that the Noise Approach is the correct approach to understand the REITs discounts/premiums.

5. RESULTS AND DISCUSSION

In the hypothesis 4 assumptions for the Rational Approach were assumed and all were rejected by the analysis.

1) Over the time neither stable discount nor premium to the NAV could be observed. In some countries were discounts and in some countries premiums and during time the situation was changing.
2) The discount/premium was not observed at the same time in all different countries.
3) There are very different discounts and premiums in the countries and the single REITs are moving together with the countries.
4) There is possibility for profit for REITs with higher discount.

The above mentioned factor indicates that the Noise Approach shall be used to understand, analyze and predict discounts and premiums of REITs.

6. CONCLUSION

The paper does not claim to fully explain the problem of discounts and premiums of REITs to NAV. The paper indicates optimal future research activity, which shall focus on the Noise Approach. Discounts and premiums are changing over the time, are different in different countries and rather represent the market sentiment than rational simple variable of the valuation. If the problem is deeply understood, it can be used for investment decision-making such as the purchase or shorting shares of REITs, the optimal timing of IPO (during periods of premiums) or for the decision to buy either shares in REITs (possibly during discount periods) or direct real estate (during premium period).

BIBLIOGRAPHY

Barkham, R. and D. Geltner. 1995. Price discovery in American and British Property Market, *Real Estate Economics*, 23. 21–44.

Bond, S.A. and Shilling, J.D. 2004, "An evaluation of property company discounts in Europe", *EPRA, University of Cambridge, Cambridge*.

Boudreaux, K.J. 1973. "Discounts and premiums on closed-end mutual funds: a study in valuation", *Journal of Finance*, Vol. 28 No. 2, pp. 515–22.

Brounen, D. and ter Laak, M. 2005, "Understanding the discount: evidence from European property shares", *Journal of Real Estate Portfolio Management*, Vol. 11 No. 3, pp. 241–52.

Clayton,J. – Mackinnon, G. 2003. The relative Importance of Stock, Bond, and Real Estate Factors in explaining REIT Returns. *Journal of Real Estate Finance and Economics*, 2003, 27, pp. 39–60.

Giacomo Morri, and Paolo Benedetto, 2009. "Leverage and NAV discount: Evidence from Italian real estate investment funds." *Journal of European Real Estate Research.*

Jarl G. Kallberg, Crocker L. Liu and Charles Trzcinka. 2000. The Value Added from Investment Managers: *An Examination of Funds of REITs, Journal of Financial and Quantitative Analysis*, pp. 387–408.

Malkiel, B.G. 1977, "The valuation of closed-end investment-company shares", *Journal of Finance*, Vol. 32 No. 3, pp. 847–59.

Martin Cherkes, Jacob Sagi and Richard Stanton. 2007. A Liquidity - Based Theory of Closed – End Funds, *Review of Financial Studies, Soc Financial Studie.*

Morri, G. 2006. "Leverage and NAV discount in Italian real estate investment funds", *paper presented at 22nd ARES Annual Meeting, Key West, FL*.

Pratt, E. J. 1966. "Myths associated with closed-end investment company discounts", *Financial Analyst Journal*, Vol. 22 No. 4, pp. 79–82.

Robert Falzon, 2008, Stock Market Rotations and REIT Valuation, Samuel Zell and Robert Lurie Real Estate Center, Working Paper, http://realestate.wharton.upenn.edu/research/papers/full/441.pdf

SOCIALLY RESPONSIBLE CONSUMER BEHAVIOR AND CUSTOMER SEGMENTATION IN THE RETAIL BANKING SECTOR

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Abstract
Corporate Social Responsibility (CSR) is a marketing approach focused on achieving commercial success in ways that create social value for society and its members, and adopting CSR as a company philosophy seems to be more challenging than could be expected. The article describes the current definition of Corporate Social Responsibility (CSR) and explores the Socially Responsible Consumer Behavior (SRCB). There is increasing pressure to be profitable and behave in socially responsible ways. Digitalization has significantly changed many retail banking processes, from opening accounts, paying for goods and services to signing up for mortgages. One of the biggest progress is in payment methods, which can now be processed online using digital tools. This paper aims to introduce the new payment methods and analyze new forms of client segmentation based on the credit evaluation model in the context of local conditions. Banks and other financial institutions must find ways to manage and implement their digital transformation and how to offer added value to their customers.

Keywords: *Alipay, Corporate Social Responsibility (CSR), Customer Segmentation, Sesame Credit, Socially Responsible Consumer Behavior (SRCB).*

1. INTRODUCTION

The acceptance of Corporate Social Responsibility (CSR) as a company philosophy seems to be more challenging than could be expected. In the last few decades, information and technology have evolved significantly, and the boundaries between the physical, digital and biological worlds have been blurred. The main challenge is to integrate the social innovations of the Fourth Industrial Revolution (big data, sharing economy, artificial intelligence (AI), robotics, 3D printing, the Internet of Things (IoT), quantum computing and others) into the sustainable business of the company. Digital technologies are transforming customer needs and the organization must include appropriate digital transformation as a basic pillar of their Corporate Social Responsibility.

Digital technologies have changed the process of designing production, distribution and product portfolio. The article describes the current definition of Corporate Social Responsibility (CSR) and explores the Socially Responsible Consumer Behaviour (SRCB) in the context of the banking industry. During the innovation development, the extended online marketing mix must be defined as a customer relationship management tool in the context of sustainable development. The growth of investment in financial technologies (FinTech) promises to reshape the banking industry by improving the quality and flexibility of financial services, cutting costs and time spent by product development.

The article describes the current definition of Corporate Social Responsibility (CSR) and explores the Socially Responsible Consumer Behavior (SRCB). There is increasing pressure to be profitable and behave in socially responsible ways. Digitalization has significantly changed many retail banking processes, from opening accounts, paying for goods and services to signing up for mortgages. One of the biggest progress is in payment methods, which can now be processed online using digital tools. This paper aims to introduce the new payment methods and analyze new forms of client segmentation based on the credit evaluation model in the context of local conditions. Banks and other financial institutions must find ways to manage and implement their digital transformation and how to offer added value to their customers.

2. OBJECTIVES AND METHODS

The purpose of this paper is to investigate the current definition of Corporate Social Responsibility (CSR) in the context of the latest trends in Socially Responsible Consumer Behavior (SRCB). Based on the literature review focused on CSR trends and changes in retail banking, there were defined customer-oriented principles and the main trend in this area. Changing the global environment, rapid speed of innovations, internationalization and the growth of investment in financial technologies, customers of today don´t evaluate different products and their parameters, they usually compare experiences. The methodology used in this paper was the analysis, synthesis, comparison in time and comparison of the innovation strategy based on the SBK data, which covers a period from 2014–2018. This paper aims to introduce the new payment methods and analyze new forms of client segmentation based on the credit evaluation model in the context of local conditions. The conclusion sums up the findings and discusses them.

3. LITERATURE REVIEW

The pioneering work of A. B. Carroll (1979) helped the formalization of both, Corporate Social Performance (CSP) and Corporate Social Responsibility (CSR) Later, in 1991, Carroll defined four-dimensional pyramid of CSRs. In summary, the total corporate social responsibility of business entails the simultaneous fulfillment of the firm’s economic, legal, ethical, and philanthropic responsibilities. (Carroll, 1991, p. 43) Kang, & Wood (1995) formalized an alternative version of Carroll´s pyramid, the model of “before-profit CSR”. This pyramid has charity at the top, economic responsibilities, social responsibilities in the middle and moral responsibilities at the bottom. They formulated a moral dimension of this concept. Meinhardt (2009, 2019) focused on the individual basic needs and this fact lies at the heart of the authors’ understanding of modern CSR. Public value is the basis of the new pyramid. The author distinguishes between value objectivists (conceptualized value as a characteristic of an object) and value subjectivists (value is not inherent in an object). Value is the relationship, defined Heyde (1927). The current issue is where to go with CSR in the context with global companies, the psychology of manager, and in the context of society digitalization. Managers should understand that there are serious deviations between short-run impacts of business activities and the long run alignment of business and social interests in wealth creation. (Windsor, 2001)

Socially Responsible Consumer Behavior is difficult to measure. We can expect that there is an impact on corporate responsibility initiatives on consumer purchasing choices. Creyer, & Ross (1997), Mohr, Webb, & Harris (2001) defined the positive relationship between socially responsible company initiatives and consumer attitudes towards their products or services. Boccia, Malgeri, & Covino (2018) analyzed a positive relationship between socially responsible initiatives of companies and attitudes of consumers towards them and their products. According to Plzáková, & Stupková (2019), identifying the environment as a key factor is an important first step in the strategic decision-making process. The customer way based on the AIDA model (Belch, & Belch, 2008) was composed of four main steps (Attention, Interest, Desire, Action) and Kotler and Armstrong (2003) to this model added the fifth part, Customer Satisfaction. In 2015 Kaushik developed STDC (See-Think-Do-Care) model for e-commerce customer relationship management. The e-commerce business model provides many benefits to both sellers and buyers.

Over the last several years, a significant increase in the automation of different work tasks, advances in technologies and adoption of new e-processes, has resulted in the digitalization and robotization of some popular consumer technologies. To keep up with these changes, companies are required to accept the ongoing integration of information technologies to support the digital transformation of these firms. Work is previously done by employees, such as obtaining data from multiple sources and transferring them to other systems, e.g. Customer Relationship Management Systems (CRMS) or Enterprise Resource Planning (ERP), which has been automatized and done by an application where a robot is usually used. According to Jayawardhena (2004), electronic commerce refers to the use of electronic means and technologies to conduct commerce in various settings, such as business-to-business (B2B) and business-to-consumer (B2C). Internet and social media can be a powerful tool for your business, if you are a service provider, especially in the case of banking, you need to be more aware of the effectiveness of your specific environment. In China, we can see the connection of banking segmentation to the payment system. Market segmentation is based on the assumption that there is a market with different customer needs. There are different groups of customers based on several variables (geographic, demographic, psychographic and behavioral), leading to different decision-making processes. Retail banks usually segment according to this mentioned criteria based on the traditional methods. According to Stafford (1996), segmentation is important according to gender. Harrison (1994) mentioned the importance of customer behavior. Machauer and Morgner (2001) noted that the main strength of benefit segmentation is that the benefits offered to the customers could have a causal relationship to their future behavior. These authors usually mentioned difficulties in choosing the correct benefits and keep a motivated customer. The last decade can be classified as a time of change and the Chinese system can be considered a modern way of credit scoring. There are several models of credit scoring. According to Crook (2002) Credit scoring is the set of decision models and their underlying techniques that aid lenders in the granting of consumer credit. Credit scoring techniques assess the risk of lending to a particular consumer.

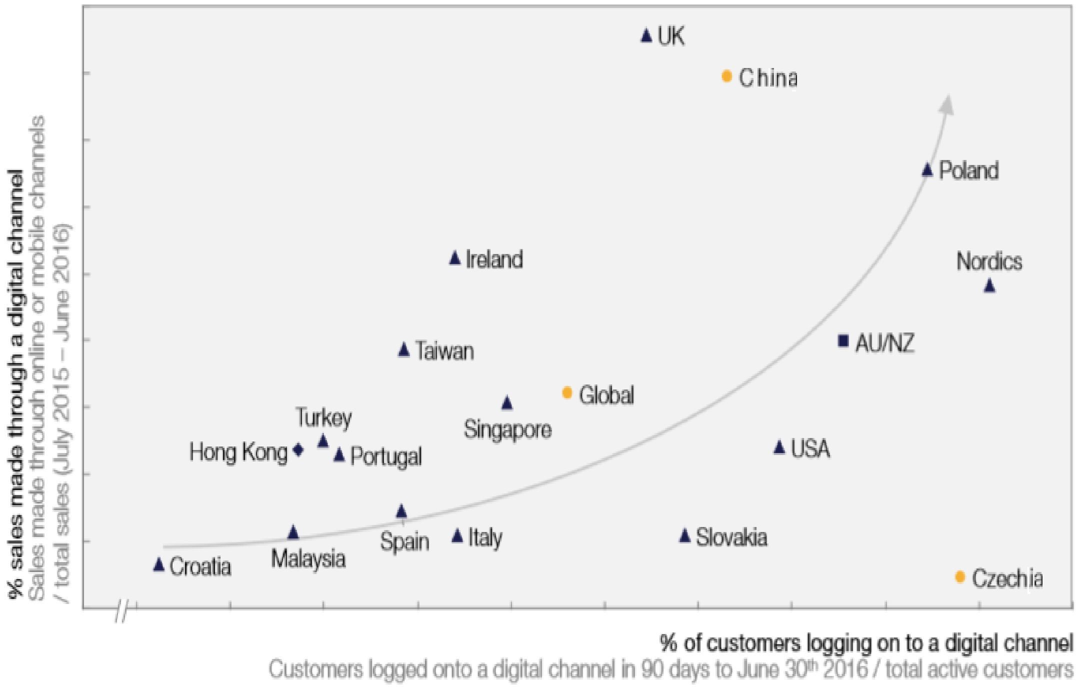
This paper discusses the application of individual models of credit scoring in the case of client segmentation and brings relevant conclusions and principles. The commercial credit rating of commercial banks has evolved from the Credit Scoring expert system to the probability of the default model. Given the relatively short operating history of some commercial banks and their lack of experience in data analysis, most commercial banks still widely use the more traditional Credit Scoring method (Credit Scoring, Expert System, Probability of Default Model). First, the most widely used score models include Linear Probability Model, Logit Model, Probit Model, Decision Tree Method, ANN (Artificial Neural Networks), as well as SVM(Support Vector Machine). Second, the expert system is the traditional method based on the credit analysis skills and experience of credit experts. This tool aims to analyze the key credit risk based on subjective judgments.

We could mention that the main indicators are 6A elements (Economic, Technical, Managerial, Organizational, Commercial, and Financial Aspects), CAMPARI elements (Character, Ability, Margin, Purpose, Amount, Repayment, and Insurance), CAMEL system (Capital, Adequacy, Asset, Quality, Management, Earnings, and Liquidity), and 5P elements (Personal, Purpose, Payment, Protection, and Perspective), and so on. Finally, compared with the traditional Expert System and Credit Scoring method, the Probability of Default Model could directly estimate the customer’s probability (Yang, Nie, & Zhang, 2009)

Currently, some Czech banks have managed to digitize individual parts of their business. However, Czech banks have stopped short from making fundamental changes to their operating model. Exhibit 1 shows that while Czech customers at the banks are among the most active in digital channels, sales through those channels are minor. A breakdown by-product reveals a wide gap between the digital sales of Czech incumbent banks and their European/ Asian peers. The gap is present across all products, no matter whether simple or complex. (McKinsley, 2017)

Customer profitability is a basic parameter that evaluates the financial value of a customer for a company. Customers also have a non-financial value that we evaluate from a marketing perspective. Customer Relationship Management also detects the efficiency and profitability of marketing and sales. There is a strong relationship between a business and its customers. To fully understand our clients, we need to look at the attitudes and behavior of customers. Client segmentation is the marketing concept, the process of how your organization divides its customers into smaller groups based on characteristics such as age, income, personality traits, and customer behavior. These segments can later be used to optimize the marketing mix and the specific business offer to different customers.

Figure 1. Sales made via digital channels



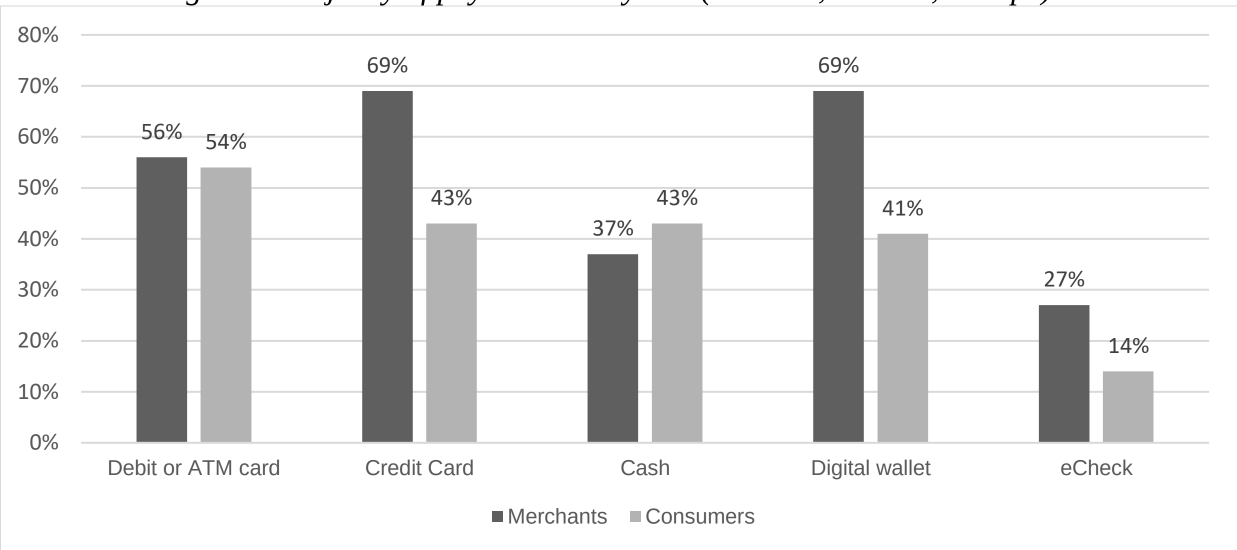
Source: McKinsley (2017)

The Internet has enabled a fundamental change in the global banking environment and innovation in technology, changing consumer behavior and their understanding of financial services. Digital marketing trends and strategies are evolving in the current internet development, which means that companies need to use them to succeed in their business. Vasiljeva, & Lukanova (2016) defined FinTech as industry-oriented financial services for private individuals and industries to provide customer-oriented solutions in the most efficient way and at the lowest cost possible, ensuring this via innovation and technology. The authors have found four main segments: payment-related services, wealth management, peer-to-peer lending (P2P lending), and crowdfunding. In the Czech Republic, the market for FinTech services has the potential to be worth between CZK 6 and 15 billion. Considering the market's present size, the figure currently stands at CZK 3 to 8 billion. However, the existing revenues are much lower. According to estimates, 2018 revenues in the sector were between CZK 400 and 800 million. (Deloitte, 2018)

4. RESULTS AND DISCUSSION

Digitalization has significantly changed many retail banking processes, from opening accounts, paying for goods and services to signing up for mortgages. Based on the JPMorgan consumer study, there is a positive relationship between the payment options a merchant offers and consumers' willingness to patronize that business. 83% e-customers say that payment options, in general, have at least some impact on their willingness to buy from a merchant, and nearly a quarter describe that impact as large. Digital wallet acceptance in particular also has a meaningful influence: 63% say being able to use a digital wallet has at least some effect on their willingness to buy from a business, and for nearly one-fifth of respondents, that impact is significant. Based on this research, there were estimated the majority of payments in 5 years, in 2021. (JPMorgan, 2016)

Figure 2. Majority of payments in 5 years (estimate, in 2021, Europe)



Source: own processing based on JPMorgan (2016)

The estimate of U.S. retail e-commerce sales for the second quarter of 2019, adjusted for seasonal variation, but not for price changes, was $146.2 billion, an increase of 4.2 percent (±0.9%) from the first quarter of 2019. Total retail sales for the second quarter of 2019 were estimated at $1,361.8 billion, an increase of 1.8 percent (±0.2%) from the first quarter of 2019. The second quarter 2019 e-commerce estimate increased 13.3 percent (±1.6%) from the second quarter of 2018 while total retail sales increased 3.2 percent (±0.5%) in the same period. E-commerce sales in the second quarter of 2019 accounted for 10.7 percent of total sales. (Census, 2019)

As the digital economy takes shape, more and more people and businesses around the world are going online. China is a country where the eCommerce ecosystem dominated by online and mobile. China's huge lead in the development of mobile payments and the third ordinary transactions take place via a mobile app WeChat and Alipay. In 2018, the number of internet users in China reached around 804.5 million and 610.1 million people had purchased goods online. This has driven the explosive growth of the Chinese e-commerce market, which is currently a global leader. Chinese e-commerce growth year-on-year (there is an increase of 65%), which was attributed to an increase in online payment methods and APM. (Statista, 2019) For the situation in the Czech Republic, see Figure 3.

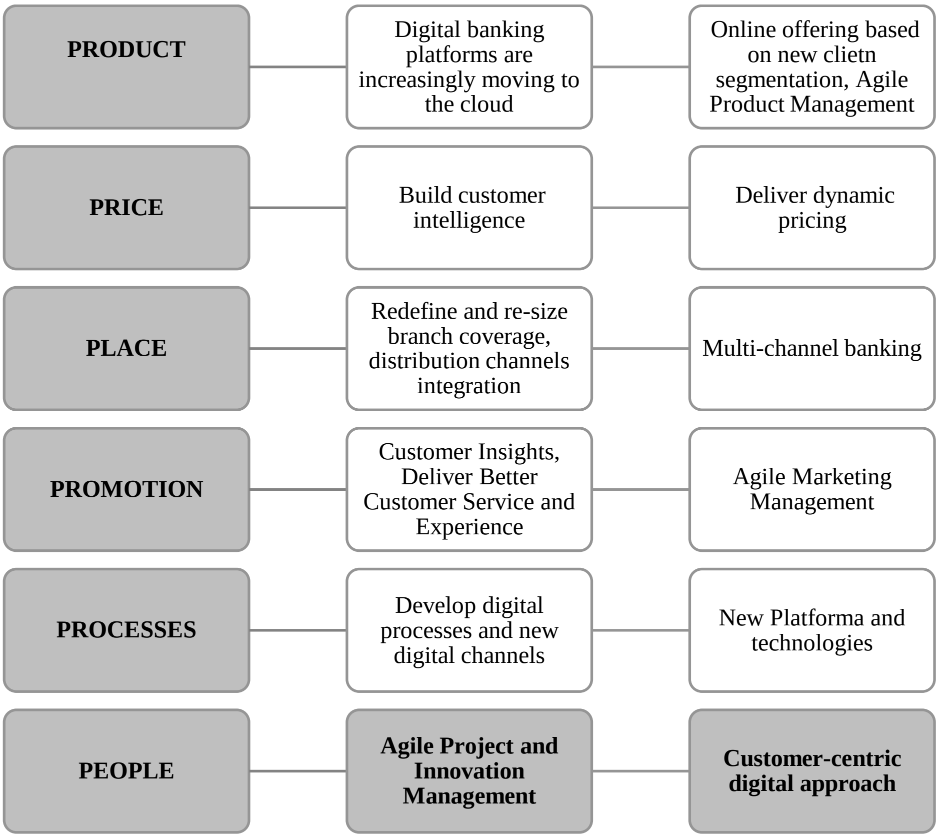
Figure 3. Czech e-commerce development (2014–2018, Czechia)

	2018	**2016**	**2014**
The number of trn.	1 089 087 165	667 308 202	467 678 538
• web trn.	101 619 704	25 328 811	14 339 961
• NFC trn.	852 846 243	517 626 213	167 075 036
Value of trn.	699 697 442 769	455 417 775	366 151 499
• web trn. Value	86 825 532 889	27 743 908	14 922 932
• NFC trn. Value	486 379 074 172	283 396 271	86 783 342

Source: own processing based on SBK (2019)

Together with a combination of new technologies for data collection and specialized software companies can track their products through production, delivery, and service. Banks create new products, automate processes, and improve regulatory compliance – all to transform the customer experience.

Figure 4. Marketing Mix - Digital Transformation



Source: own processing

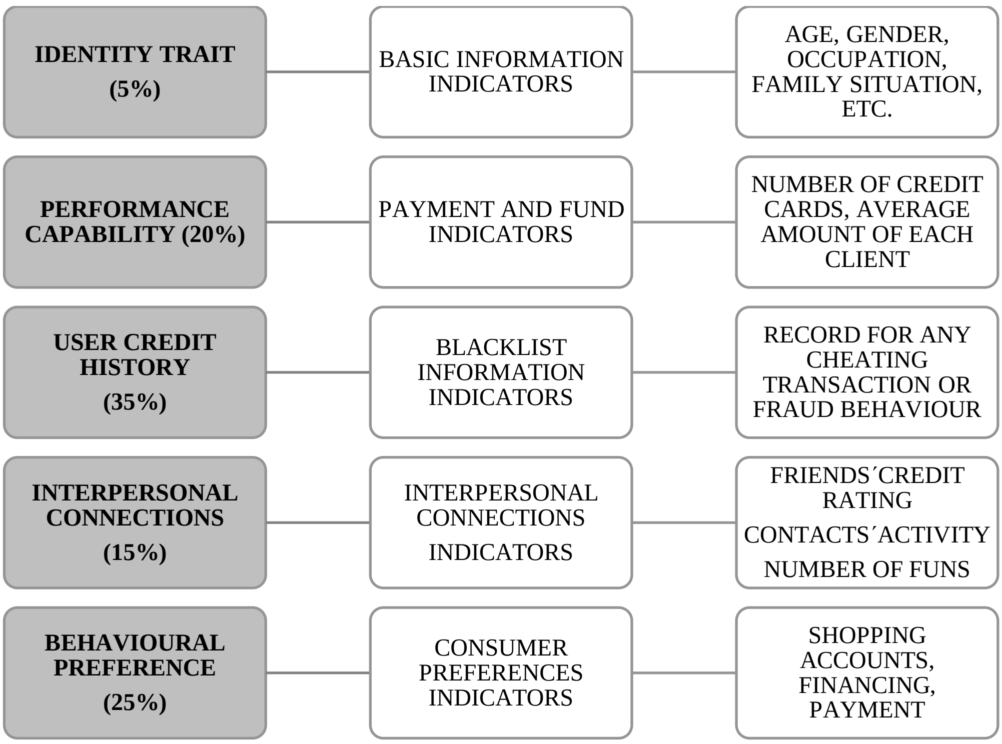
Mobile payment systems (MPS) are transforming global consumption, with smartphone users increasingly relying on these applications for their daily transactions. Some of the most popular applications include Google Wallet, Apple Pay, and Alipay. Perhaps the most striking example of swift, widespread adoption of mobile payments has occurred in China, wherein 2015 Alipay (a subsidiary of Ant Financial, which was spun off by Alibaba) had approximately 450 million users and 68% market share, while Tencent's Tenpay is growing quickly and has captured 20% of the domestic MPS market.

Consumers around the world are quickly adopting digital banking. According to Akinci, Aksoy, & Atilgan (2004), internet banking services are clustered in the following four groups: (1) Information services. (2) Money transfers (EFT and payments). (3) Investment services (stock, bond, and mutual funds). (4) Repo and currency exchange services. According to these authors present research shows that different categories of services are classified into homogeneous groups in terms of utilization levels. Kotler, Amstrong, Wong (2001) usual segments into B2B (business to business); B2C (business to consumer); C2B (consumer to business), and C2C (consumer to consumer – consumers participate in the transaction).

The Chinese government has recently introduced an initiative to classify each citizen and in 2020 distribute a specific "social credit number" to each Chinese citizen. This means that they will be scored according to their economic, behavioral and social status. The government has information about a particular customer/ citizen behavior to facilitate banking products or additional benefits. This type of new credit scoring and client segmentation is only a pilot.

“In 2015, the, the Chinese side allowed eight private companies to develop social credit pilots. The most common commercial SCSs (Social Credit Systems) are Sesame Credit, developed by Ant Financial Services Group, an affiliate of Alibaba, and Tencent Credit, developed by Tencent Holdings. ” (Kostka, 2019) Ant Financial Services Group invested 35% of global venture capital investment in fintech firms in 2008. The Chinese company started in 2004 as Alipay, a payment service for Alibaba. It blew past US-based PayPal in 2013 to become the largest provider of payments via mobile devices. Now, the platform offers a range of services including investing, credit, and insurance. (Quartz, 2018) Alipay's social credit system, Sesame Credit is a new form of the credit information system that collects data from government and financial systems. It analyzes the behavioral records of users on platforms. Sesame Credit is a unique and massive consumer database used to evaluate users' credit trustworthiness. The social credit system formulated by Alipay Aligns with China's long-standing tradition of guiding and monitoring the population's behavior. (Chong, 2018)

Figure 5. Sesame Credit Scoring Dimensions



Source: own processing based on Retail Banking Seminar (China, 2019)

The different Sesame Credit Score represents different credit Status. The range is usually from 350 to 950 (extremely poor: 350–550; medium: 550–600; good 600–650; excellent: 650–700; best: 700–950). Based on this range, users can obtain corresponding services (value). We can compare the dimension among credit rating China Central Bank, China Commercial Bank, and Credit Sesame. Finally, Czech Credit Scoring Dimensions is added, where we can say that the European system is very closed.

Sesame Credit scores are updated once a month and calculated and weighted based on five criteria: credit history, user behavior (e.g. purchasing behavior, donating to charity), ability to pay off debts and stable personal assets, personal information (e.g., provided reliable personal information), and social network (e.g. quality of social network). The algorithms used to create individual scores remain unknown (Ahmed, 2017), which makes it impossible for users to analyze and understand the creation of their scores. (Kostka, 2019)

Sesame Credit is based on Alibaba's e-commerce transaction data and Internet finance data of Ant Financial. The new is, that there are mixed traditional credit scoring and customers´ behavioral data. The result of this type of Credit Scoring is a Sesame Credit Score. It could be a new system and a form of Socially Responsible Consumer Behavior (SRCB).

Figure 6. Comparison of Credit Evaluation Dimensions (China and Czech Republic, 2019)

	CENTRAL BANK CHINA	COMMERCIAL BANK CHINA	SESAME CREDIT (Ant Financial Services Group) CHINA	COMMERCIAL BANK CZECHIA
BASIC INFORMATION INDICATORS	OK	OK	OK	OK
PERFORMANCE CAPABILITY	OK	OK	OK	OK
USER CREDIT HISTORY	OK	OK	OK	OK
INTERPERSONAL CONNECTIONS	X	X	**OK**	X
BEHAVIOURAL PREFERENCE	X	X	**OK**	X

Source: own processing

Sesame Credit is based on Alibaba's e-commerce transaction data and Internet finance data of Ant Financial. The new is, that there are mixed traditional credit scoring and customers´ behavioral data. The result of this type of Credit Scoring is a Sesame Credit Score. It could be a new system and a form of Socially Responsible Consumer Behavior (SRCB).

Consumers can infuse social responsibility throughout the consumption experience and Mohr, L. A., Webb, D. J., & Harris, K. E. (2001) investigate the impact of CSR on consumer buying behavior. There are four main groups of consumers—contemplators, contemplators, action groups, and maintainers. Purchase behavior among these groups ranged from unresponsive to highly responsive to CSR practices. (Ha-Brookshire & Hodges, 2009)

5. CONCLUSION

In particular, the final report focusses on the position of Corporate Social Responsibility (CSR) in the context of current theories. New access to the market segmentation based on a new attitude to credit scoring offers a new possibility of how to score bank clients and citizens. Sesame credit scoring is designed to manage the behavior of Chinese individuals, businesses, social organizations, and government agencies. In recent years, China has made rapid advances in the incorporation of big data technologies in bank segmentation on the one side, but on the other side, they have improved credit scoring methodology.

Based on the research, we can accept that attention will increasingly be paid to the Socially Responsible Consumer Behavior (SRCB) and the development of a new theoretical approach to customer segmentation based on business intelligence. New client segmentation based on the credit rating of platforms has the potential to collect highly sensitive personal information. Fintech in China, speed of implementation of Social Credit Scoring in China and the existence of several unanswered questions (protection of user data, method of use, integration of information more private entities and governments) may be an inspiration for other states, but also a threat for the people or nations themselves.

BIBLIOGRAPHY

Ahmed S, Fong A. (2017). *Cashless Society, Cached Data Are Mobile Payment Systems Protecting Chinese Citizens' Data?* Available at: https://citizenlab.ca/2017/01/cashless-society-cached-data-mobile-payment-systems-protecting-chinese-citizens-data/

Akinci, S., Aksoy, Ş., & Atilgan, E. (2004). *Adoption of internet banking among sophisticated consumer segments in an advanced developing country*. International journal of bank marketing, 22(3), 212–232.

Belch, M. A., & Belch, G. E. (2008). *Integrated Marketing Communications*. The International Encyclopedia of Communication. doi:10.1002/9781405186407.wbieci038

Boccia, F., Malgeri Manzo, R., & Covino, D. (2018). *Consumer behavior and corporate social responsibility: An evaluation by a choice experiment.* Corporate Social Responsibility and Environmental Management, 26(1), 97–105. doi:10.1002/csr.1661

Carroll, A. B. (1979). *A Three-Dimensional Conceptual Model of Corporate Performance*. The Academy of Management Review, 4(4), 497. doi:10.2307/257850

Carroll, A. B. (1991). *The pyramid of corporate social responsibility: Towards the moral management of organizational stakeholders*. Business Horizons, 34(4), 39–48.

Chong, G. P. L. (2019). *Cashless China: Securitization of everyday life through Alipay's social credit system—Sesame Credit*. Chinese Journal of Communication, 12(3), 290–307. doi:10.1080/17544750.2019.1583261

Census (2019). Quarterly E-Commerce Report. Available at: https://census.gov/retail/index.html#ecommerce

Creyer, E. H., & Ross, W. T. (1997). *Tradeoffs Between Price and Quality: How a Value Index Affects*. Journal of Consumer Affairs, 31(2), 280–302. doi:10.1111/j.1745-6606.1997.tb00392.x

Ha-Brookshire, J. E., & Hodges, N. N. (2008). *Socially Responsible Consumer Behavior?* Clothing and Textiles Research Journal, 27(3), 179–196. doi:10.1177/0887302x08327199

Harrison, T. S. (1994). *Mapping Customer Segments for Personal Financial Services*. International Journal of Bank Marketing, 12(8), 17–25. doi:10.1108/02652329410069010

Heyde, J. E. (1927). *Wert: eine philosophische Grundlegung*. American Journal of Sociology, 32(4), 675–675. doi:10.1086/214227

Jayawardhena, C. (2004). *Personal values' influence on e-shopping attitude and behaviour*. Internet Research, 14(2), 127–138. doi:10.1108/10662240410530844

JPMorgan (2016). *Payments and commerce in digital word.* Available at: https://www.jpmorgan.com/jpmpdf/1320725121878.pdf

Kang, Y.-C., & Wood, D. J. (1995). *Before-Profit Social Responsibility*. Proceedings of the International Association for Business and Society, 6, 809–829. doi:10.5840/iabsproc1995672

Kostka, G. (2018). *China's Social Credit Systems and Public Opinion: Explaining High Levels of Approval.* SSRN Electronic Journal. doi:10.2139/ssrn.3215138

Kotler, P., Armstrong, G., Saunders, J., & Wong, V. (2003). Principles of Marketing. Harlow, United Kingdom: Pearson Education Limited. ISBN 13 9781292220178.

Kotler, P., Armstrong, G., Saunders, J., & Wong, V. (2001). *Principles of Marketing*, 2nd edition. Corporate Communications: An International Journal, Vol. 6 No. 3, pp. 164–165. doi: 10.1108/ccij.2001.6.3.164.1.

Machauer, A., & Morgner, S. (2001). *Segmentation of bank customers by expected benefits and attitudes.* International Journal of Bank Marketing, 19(1), 6–18. doi:10.1108/02652320110366472

McKinsley (2017). *Digital Czech – How we grow*. Available at: https://www.mckinsey.com.

Meynhardt, T. (2009). *Public Value Inside: What is Public Value Creation?* International Journal of Public Administration, 32(3–4), 192–219. doi:10.1080/01900690902732632

Meynhardt, T. (2019). *Public value.* Public Value, 5–22. doi:10.4324/9781315163437-1

Mohr, L. A., Webb, D. J., & Harris, K. E. (2001). *Do Consumers Expect Companies to be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior*. Journal of Consumer Affairs, 35(1), 45–72. doi:10.1111/j.1745-6606.2001.tb00102.x

Plzáková, L., & Crespo Stupková, L. (2019). *Environment as a Key Factor of Health and Well-Being Tourism Destinations in Five European Countries*. IBIMA Business Review, 1–11. doi:10.5171/2019.611983

Quartz (2018). *China´s Ant Financial.* Available at: https://qz.com/1537638/ant-financial-raised-almost-as-much-money-in-2018-as-all-fintechs-in-us-and-europe/

Royne Stafford, M. (1996). *Demographic discriminators of service quality in the banking industry*. Journal of Services Marketing, 10(4), 6–22. doi:10.1108/08876049610124554

Statista (2019). *E-Commerce in China*. Available at: https://www.statista.com/topics/1007/e-commerce-in-china/

Thomas, L.C. , Edelman, D.E., & Jonathan N. (2002) *The History and Philosophy of Credit Scoring*. Credit Scoring and Its Applications, 1–7. doi:10.1137/1.9780898718317.ch1

Yang, Y., Nie, G., & Zhang, L. (2009). *Retail Exposures Credit Scoring Models for Chinese Commercial Banks*. Computational Science – ICCS 2009, 633–642. doi:10.1007/978-3-642-01973-9_71

Vasiljeva, T., & Lukanova, K. (2016). Commercial Banks And Fintech Companies In The Digital Transformation: Challenges For The Future. Journal of Business Management, (11).

Windsor, D. (2001). *The Future of Corporate Social Responsibility*. The International Journal of Organizational Analysis, 9(3), 225–256. doi:10.1108/eb028934

FINANCIAL BILINGUALISM AS A SUCCESS FACTOR FOR EFFECTIVE INVESTMENT DECISIONS: THE CASE OF CONTINGENT ASSETS AND LIABILITIES UNDER THE IFRS AND THE US GAAP

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Abstract
With IFRS covering 87% of the world´s biggest jurisdictions, it is a key success factor for any capital market participants to understand and evaluate accounting information presented in compliance with IFRS. On the other hand, remaining strong position of the USA and US companies on international markets creates a pressure on investors to be able to make decision also on the basis of accounting information presented under the US GAAP. Despite of the ongoing harmonization, the approach of the IFRS and the US GAAP to the recognition and measurement of contingent assets and liabilities differs in many aspects, which, when not taken into account, can imperil a success of any investment. Therefore, the aim of the submitted paper is to provide guidelines on reduction risks resulting from a lack of knowledge of these differences when making investment decisions. Using detailed textual analysis of relevant IFRS and US GAAP provisions, mainly the AIS 37 and the ASC 450, this contribution identifies differences in recognition, measurement and presentation of contingent assets and liabilities under the IFRS and the US GAAP. Theoretical knowledge presented as a result of our research is supported by practical examples and it is summarized in relation to the impact of presented differences on the true and fair view of financial situation of an entity.

Keywords: *contingent assets, contingent liabilities, financial bilingualism, IAS 37, IFRS, US GAAP*

JEL codes: *F36, F65, M40, M41*

1. INTRODUCTION

At the beginning of the second half of the 20th century, the process of globalization of the world economy meant a rapid increase in international economic transactions. G*rowing* integration and *interconnection* of capital markets prompted the idea of creating global accounting standards. Their purpose has been to harmonize accounting information presented in financial statements of transnational companies operating all around the world and by doing so, not only increase the transparency of accounting and financial reporting, but also to maintain stability on financial markets worldwide.

In 1973 accounting organisations of eleven world leading economies (incl. Australia, Canada, France, Germany, Japan, Mexico, Netherland, United Kingdom, Ireland and the USA) established the International Accounting Standards Committee (IASC), the predecessor of the International Accounting Standards Board (IASB), which nowadays operates as an independent team of experts that develops and approves International Financial Reporting Standards (IFRS). At the end of the 2018, IFRS was, at least in some extend, required in 144 jurisdictions worldwide (IFRS Foundation, 2019). While in the most of these jurisdictions an one-sided process of convergence of national accounting standards to the IFRS has been launched, the relationship between the US Generally Accepted Accounting Principles (US GAAP) and the IFRS differs. The US GAAP, as historically older and more extensive as to the content, were dominating the process of convergence first. (Zeff, 2005) In September

2002, when the Memorandum of Understanding, popularly known as the Norwalk Agreement, was signed between the IASB and the US Financial Accounting Standards Board (FASB), the main body responsible for issuing the US GAAP (Schoeler, 2017), there was an assumption that global accounting standards would be almost entirely derived from US GAAP. Overtime, the assumption was proven to be wrong. The global financial and economic crisis between 2007 and 2009 brought up many new economic trends including two of them related to development of global accounting standards:

- slowing down the process of globalization and cooperation in setting new global accounting standards (Zeff, 2007) – that was due to the US market failure to maintain its own stability. Therefore there has been growing distrust of standards' ability to ensure that financial statements provide true and fair view of the entities' financial position,
- expanding application of the IFRS on the world market – most of the countries that begun to require IFRS did so for domestic publicly accountable entities (listed companies and financial institutions) to ensure the unity of accounting, reporting and presentation of financial information of those companies with the highest impact on capital market´s stability. Even the Security and Exchange Commission (SEC), the body ensuring functions of US regulated markets, issued the decision that foreign companies registered on the US stock exchange can present their financial statements under the IFRS without the need to transform them under the US GAAP (SEC, 2007).

Under these circumstances, there has occurred a new requirement for investors on global markets. In our research we refer to it as the need to be financially bilingual. The financial bilingualism is requested from both, from the US investors and also from the non-US capital markets participants. The premise of this argument can be sought in two factors:

- the US has long been a country with the highest inflow and outflow of foreign direct investments (FDI) in the world. Considering such a strong position of the USA on the world capital market and a high volume of investments with US origin or placement, the US investors´ decisions are still crucial for the stability of international capital markets. Since the IFRS covers 87% of the world economies (IFRS Foundation, 2019b) and it is also accepted on the US stock exchange, for US investors it has become a key success factor to master the IFRS rules and principles when using accounting information to make investment decisions,
- on the other hand, the USA is also the country where most of the biggest transnational companies have their origin (UNCTAD, 2019) and for many of them the US GAAP is the main set of accounting standards. We agree with the opinion of MacGregor Pelikánová and Cvik (2017, p. 158) that *"currently, the US GAAP is perhaps overshadowed by the IFRS and only the future will ultimately answer whether the underlying economic philosophy and concepts of the IFRS will globally prevail and whether this will bring about the expected results, such as stability, transparency, fraud reduction, etc."* On the other hand, as mentioned above, the USA represents the most powerful and influencing capital market worldwide. Maintaining the stability of the world economy requires capital market participants outside the USA to have enough knowledge of the US GAAP provisions when entering international market.

2. LITERATURE OVERVIEW

There are many research papers, studies and publications devoted to explaining and interpreting individual standards, either under the IFRS or the US GAAP. These can form a wide knowledge basis on issues specific standards deal with, but are not very useful to create a an insight to the US GAAP – IFRS similarities and differencies. To contribute to the financial bilinguality of accounting information´s users it is much more necessary to analyze a particular issue from a multi-standard perspective (Quinn, 2014). Benchmarking across the full set of accounting standards, as applied in functional analysis of financial statements focused on the structure of the balance sheet and the operating cash flows of the income statement under the IFRS and the US GAAP by Levy, Bouheni and Ammi (2018) can be a good example. Also Lagrange, Viger and Anandarajan (2015) apply this perspective in their research on the effect of three alternative reporting styles on contingent liabilities.

All major audit and advisory firms are also comparing IFRS and US GAAP. The most extensive are comparisons prepaired by experts of "The Big Four" auditing companies (EY, KPMG, PwC and Deloitte). They are updated on regular basis and the publications are publicly available on their websites.

In this paper we also use the approach of multistandard perspective, but we prefer using the term financially bilingual, as already mentioned above. This terminology can be obtained also in the recently published book called *Institutions and Accounting Practices after the Financial Crisis* by Dr. Victoria Krivogorsky (2019) Professor in the Charles W. Lamden School of Accountancy at San Diego. However the term financially bilingual has been used a earlier by te PwC´s experts PwC who emphasized the importance of being financially bilingual in the US capital in 2013 already. Also Campbell (2016) discusses a need of fluency in both accounting standards.

3. METHODOLOGY

This paper examines financial reporting requirements for contingenies under the current IFRS and US GAAP, identifies their differences and discusses the impact of differing provisions on the true and fair view of company´s financial situation provided by financial statements.

The organization of the paper is as follows. The first part is meant to be an introduction to the discussed topic based on the historical perspective of the IFRS and the US GAAP relationship. Also origins of the term financial bilingualism are explained, which is followed by a brief overview of the literature that inspired us to do the research. The third part present the research methodology. Based on the idea that information presented in the financial statements under the IFRS are not sufficient for a making high-quality investment decision, in the third part we focus on identification of contingent assets and liabilities according to different sets of standards. This we consider essential for any further discussion on what and to which extend should be recognised in a financial statement. By synthesis of the acquired knowledge we create a summary table as a tool for a clear identification of contingencies and for proper usage of relevant terminology.

In the next part, we deal with the measurement of contingent assets and liabilities. Supported by practical examples of how value of certain item can impact the investment decision we emphasize the identified differences. At last, we analyse differences in recognition and reporting of those contingent assets and liabilities that arise from business combinations. We provide the reader with a guidance and explanations, why these differences are important and how to handle them when investors need to transform financial statements prepared under the IFRS to the reporting under the US GAAP or vice versa.

At the end of the paper, there is the final summary included. There we verify the research idea, we make statements about final conclusions and give directions for further research.

Identified differences that are related to the formal or structural aspects of accounting and financial reporting are excluded from the presentation of results in this paper. We only deal with those differences that might affect how investors perceive the value of a company based on accounting information presented via financial statement.

In the research three main methods were applied. First it was a method of desk research to formulate the historical background of the discussed topic and to explain differences in basic terminology. Critical analysis was applied to assess related IFRS standards´ provisions and the US GAAP statements. The methods of synthesis and comparison of the partial results were used to discuss the given topic. The method of induction is used for formulating the conclusions.

4. TERMINOLOGY AND DEFINITIONS

Accounting rules under the both, the IFRS and the US GAAP, demand companies´ management to deal also with items, where there is only an estimate of the amount of future loss or gains based on the past events and estimate of the probability that they will be accured. Under the IFRS these items are called, depending on their nature, either provisions, contingent liabilities or contingent assets. Their recognition, measurement, accounting and principles of disclosure are regulated by the International Accounting Standards 37 (IAS 37) – Provisions, Contingent Liabilities and Contingent Assets (IFRS Foundation, 2019).

The US GAAP uses general term contingenies and the issue is addressed primarily in the Accounting Standards Codification 450 (ASC 450) – Contingencies (Flood, 2018). Although the terminology designating these items under the IFRS and the US GAAP differs, basic rules remain the same: If the loss or gains are reasonably estimable in amount and time, it must me disclose to the financial statement to ensure the compliance with the principle of the true and fair view of financial situation and performance of the related company. But to evaluate investment decisions properly, investors, as financial statement users require also information about items that, even they cannot be exactly recognized, expresses the possibility of future economic benefits outflows and inflows as consequence of past events or present risks evaluation. Contingent assets and contingent liabilities could be briefly described as conditions or sets of circumstances, that result in certain uncertainty about a possible gain or loss of the company. Specific provisions on this topic are, as mentioned above, determined by IFRS standard IAS 37. This standard rules classification, accounting treatment as well as disclosure requirements for three main categories, as follows (IFRS Foundation, 2019):

Contingent liabilities are according to the IAS 37 defined as possible obligations that arise from past events and whose existence will be confirmed only on the occurrence or non-occurrence of one of the following:

- uncertain future events outside the entity's control,
- present obligations that arise from past events but are not recognized because:
  (a) it is not probable that the economic benefits will be required to settle the obligation; or (b) the amount of possibly required economic sources cannot be measured reliably.

If the present obligation arise from past events but its amount can be measured reliably or the time of settlement of the obligation is set, this item is recognized as a provision. Although provisions are not subject to the submitted paper, in the phase of recognition of contingent liabilities it is very important for further accounting treatment, measurement and disclosure to clearly distinct these two terms.

In general, all provisions are contingent because of some degree of uncertainty. Unlike contingent liabilities, provision are present liabilities and there is a clear certainty that they will result in an outflow of economic resources. Uncertainty lies only in the time or the amount of that outflow.

Contingent assets are, as defined in the IAS 37, possible assets that arise from past events and whose existence will be confirmed only on the occurrence or non-occurrence of uncertain future events outside the entity's control.

Under the US GAAP, the terminology of the contingencies differs. However, a strong relation in the content of the terms allows us to assign the IFRS terminology to equivalent terms eligible under the US GAAP. Results are summarized in Table no. 1s, where we not only assign the terms used under the US GAAP to those used under the IFRS, but we also outline the differences between them, if any.

The US GAAP further provides certain industry-specific contingency guidance, but such guidance is included in other sections of the Codification, such as the ASC 410 — Asset Retirement and Environmental Obligations, etc, but these are not subject of our research now (Flood, 2018).

Table 1. Comparison of terminology for contingencies under the US GAAP and the IFRS

US GAAP Term	US GAAP Standard	Differences	IFRS Equivalent
Contingency	ASC 450-10	Under the US GAAP the contingency is an existing condition or situation involving uncertainity about the range of possible loss to the entity, recognised when it is probable that the liability has been incurred and the amount is reasonably estimable. Unlike the IFRS, the US GAAP focuses on whether amounts of contingencies will be paid rather than whether there is a present obligation. The term contingency could be also used as a summary term for both provisions, contingent liabilities.	**Provision**
Loss Contingencies	ASC 450-20	The term "loss contingenfy" under the US GAAP refers to both recognised and unrecognised uncertain obligations while under the IFRS it refers only to those recognised by meeting certain criteria.	**Contingent liabilities**
Gain Contingencies	ASC 450-30	There is no difference in terms relevant to the content.	**Contingent assets**

Source: Own elaboration according to the IAS 37 and the ASC 450

5. MEASUREMENT

The nature of contingencies require financial statements´preparers to determine qualified estimates on the amount of resources that could outflow or inflow in case a contingent asset or liabitlity is accured. Under the both IFRS and the US GAAP there is the rule how the best estimate should be determined in case no amount in range is more likely than any other amount, but here the approach of the IAS 37 and the ASC differs significantly.

Under the IAS 37, when having more estimates with the same degree of probability, the mid-point of the range is used. On the contrary, the ASC 450 states that the low-point of the range of estimates should be used. Ultimately, this difference in the manner in which the best estimate is qualified estimate is qualifies can have a major impact on the image that is created about an entity's contingencies, whether they have a character of assets or liabilities. Moreover, according to the both approaches, the precautionary principle is not observed which is not complaint with the Conceptual Framework of neither IFRS or US GAAP.

Under the IAS 37, if the mid-point of the range is chosen, it means that when estimate for contingent assets or liability is made, this might give an impression that the inflow of economic benefits will be higher than it actually could be possible or the outflow of economic benefits will be lower. In both cases, the more positive impression could be given to the investors, what is contradictory to the precautionary principle.

Under the ASC 450, the low-point approach is, based on the precautionary principle, appropriate to apply on estimated made for contingent assets, as the best estimates would correspond with the amount that is likely in all cases. On the contrary, using the low-point approach when estimating the amount of contingent liability means that in all other cases the amount of possible outflow of economic benefits would be higher, so the investors are given the better image that it actually is.

Investors must therefore be critical in assessing the information presented in the financial statements in any case, regardless of the standards used. Neither of the standards respects the precautionary principle in the estimation. In the case of investors more willing to take the risk, this will be particularly appropriate in cases where the estimation improves the image of financial position of an entity, but for investors with a lower risk appetite, this may lead to inapplicability of the information available in financial statement. If they have enough information, they might and it may create a need to look for other investment opportunities.

6. DISCLOSURE

Investors need sufficient information to evaluate the amounts, timing and certainty of future cash flows, but there is still the question on how much information is useful for decision makers. To discuss this issue, first we need to specify the rules disclosure of information about contingent assets and liabilities for both sets of standards.

Contingent liabilities under the IAS 37 should not be recognized in financial statements as the degree of probability si less than 50%. But they should be disclosed in the Notes unless the possibility of an outflow of resources is remote.

The required disclosures for contingent liabilities are:

- a brief description of the nature of the contingent liability,
- an estimate of its financial effect,
- an indication of the uncertainties that exist,
- the possibility of any reimbursement,
- where any information required above is not disclosed because it is not practicable or practicable only for disproportionate costs, the fact should be also disclosed.

Contingent assets under the IAS 37 are not recognised in financial statements at all, since they may result in the recognition of income that may never be realized. For them to be recognised they must become virtually certain, but from this moment on they fall within the definition of an asset and should be recognized as such. If the degree of probability is less than 100% but above 50%, they are disclosed in the Notes. It the degree of probability is determined as less than 50%, contingent assets are neither recognized nor disclosed in the Notes. In the Notes following must be dislosed:

- a brief description of the nature,
- an estimate of the financial effect.

Perceiving the issue in terms of usefulness of accounting information, it could be considered to be inconsistent with *IAS 1 Presentation of Financial Statements*. This standard requires to present fairly the financial position, financial performance and cash flows of an entity. There is room for discussion, whether such an explicit requirement of fairly presentation (in most national jurisdiction, including Slovak or Czech republic, known as the 'true and fair view concept') can be obtained if contingent assets are never recognized and not disclosed when the probability they might accure is less than 50%. The criteria for recognition and disclosure of contingent assets and liabilities with different degree of probability under the IAS 37 are summarized in the Table no. 2.

Table 2. Recognition and disclosure criteria for contingent assets and liabilities under the IAS 37

Degree of Probability	Contingent Liability	Contingent Asset
Virtually Certain	Provide for	Recognize
Probable (above 50%)	Provide for	Disclose as a note
Possible (>1%<50%)	Disclose as a note	Do nothing
Remote (0%)	Do nothing	Do nothing

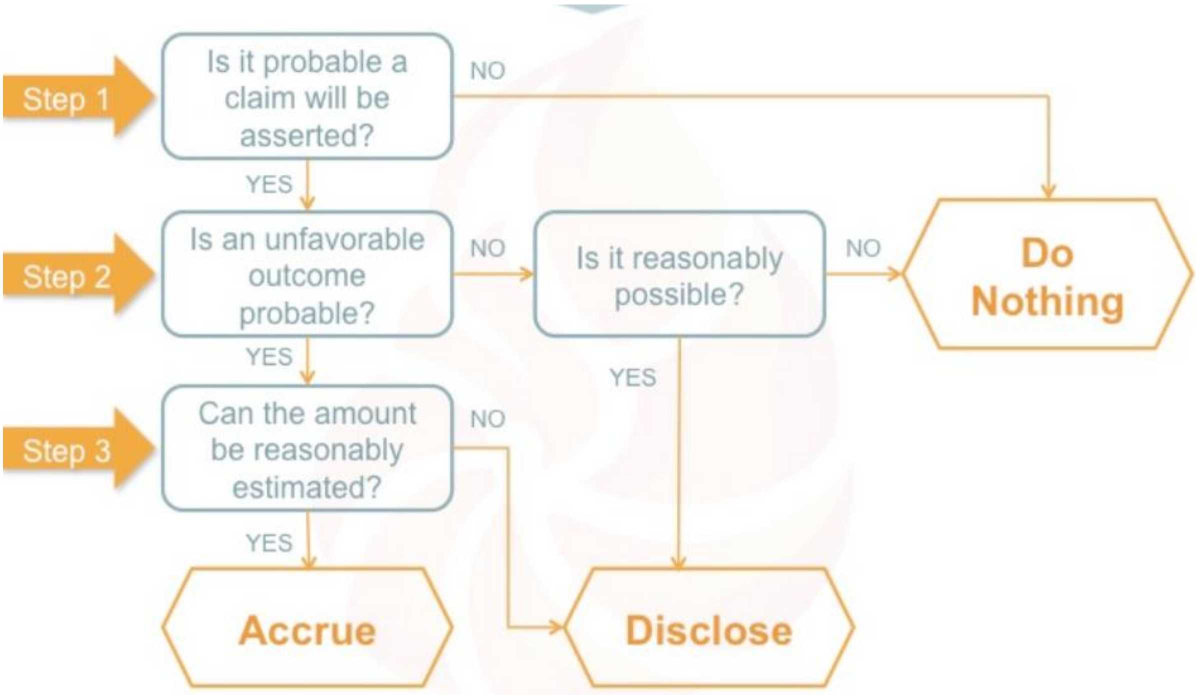
Source: Own elaboration according to the IAS 37

Disclosure about contingent assets and liabilities can in this context be as useful as harmful. Investors may hold back investment because of risks that never materialize but are disclosed as contingent liabilities or vice versa because of the lack of information on benefits that are probable to accur, but are not disclosed. On the other hand to make investment decision based on the inflow of economic benefits that will never be accrued would be as risky as to make an investment without having sufficient information on probable contingent liabilities that were not presented. Accounting standards´ role to set the rules that increase transparency in difficult contingent reporting environment is therefore such a challenging issue.

With an example of claim as the most common category that falls within the scope of the ASC 450, the Figure no. 1 presents the process of disclosure under the US GAAP. This tool can be a useful guide even when evaluating the proper accounting treatment and disclosure of contingent liabilities under the IAS 37, as the process of recognition is similar.

As described in the first step, it should be probable that a contingency will be asserted. However, interpretation of the term probable differs (Flood, 2018):
probable under the US GAAP means likely, what is intended to denote a likehood of 70% or more, probable under the IFRS is interpreted as "more likely than not", what refers to a likehood of more than 50%.

Figure 1. Recognition and disclosure criteria for contingent assets and liabilities under the ASC 405



Source: Walworth, M. (2018). Example: Accounting For Unasserted Claims (Asc 450). Retrieved from: https://www.gaapdynamics.com/insights/blog/2016/01/05/accounting-for-unasserted-claims-under-asc-450-(old-fas-5)/

Contingent gains have no specific ruling on their disclosure. The ASC 450 only states that adequate disclosure should be made of contingencies, that might result in gain and an entity should take appropriate care that these gains have not been realised yet. (EY, 2018)

7. CONTINGENCIES ARISING IN BUSINESS COMBINATIONS

The existing guidance for business combinations contains specific provisions on recognition, measurement and presentation of contingent assets and liabilities arised in a business combination. Under the US GAAP ASC 805 – *Business Combinations*, both contingent assets and liabilities are recognized at the date of acquisition. Initial measurement also applies similarly for both assets and liabilities. They should be measured at fair value, if the acquisition-date fair value can be determined during the measurement period. If the fair value is not possible to be determined properly, there are two criteria to be met for contingencies´ recognition and measurement (ASC 805-24-1):

One or more future events confirming the existence of the asset or liability must exist. The amount of asset or liability can be reasonably estimated. That estimate is subsequently used for setting the value of contingent asset or liability and it must be based on the guidance of the ASC 450 – Contingencies.

Subsequent measurement methods depend on the initial measurement. If contingencies has been recognized at fair value, an acquirer should develop a systematic and rational basis for subsequently measuring and accounting for these contingencies. If they were recognized under the guidance of ASC 450, subsequent measurement should have the same basis.

As stated in the IFRS 3 – Business Combinations "*the requirements of IAS 37 Provisions, Contingent Liabilities and Contingent Assets do not apply to the recognition of* *contingent liabilities arising in a business combination.”* (IFRS Foundation, 2019a) Contingent liabilities arising in the business combination are recognised at the acquisition date at fair value. The recognition criteria are similar as under the ASC 805. Contingent liabilities must represent a present obligation and they must be reliably measurable based on the evidence or a best estimate based on the reliable methodology. Subsequently, at the end of each period they are recognized at the higher of the best estimate to the date of subsequent recognition and of an acquisition-date fair value lowered by amortization.

Unlike the ASC 805, IFRS does not allow to recognize any contingent assets arising in a business combination. Investors must be very careful about this provision in their decision-making process as missing information on ontingent assets arising in a business combination

8. SUMMARY

Even many of the world’s capital markets require some version of IFRS for financial statements of listed entities and an extensive preparation and emphasis has been given to the worldwide adoption of IFRS, the US capital markets remains the biggest and the most influencing of all. It is demanding for capital market participants to be able to make decision also on the basis of accounting information presented in compliance with the US GAAP. Globalized international market requires investors to be financially bilingual.

In general, compliance with accounting standards is considered as direct evidence that financial statements provide true and fair view and vice versa, a deviation from accounting standards is evidence that financial statements do not provide true and fair view. However, in certain situations, compliance with accounting standards might distort the true and fair view and results in misleading information. In those situations it is necessary to deviate from the accounting standard and therefore, a conflict between the ‘true and fair requirement’ and the requirement for ‘compliance with accounting standards’ arises. In those situations true and fair view requirement should override the requirement to comply with accounting standards.

Based on our research, we conclude that presentation of contingencies in financial statement should be extended adjusted in both sets of standards, combining the US GAAP and the IFRS approach and go beyond the existing provisions. We see the movement toward greater transparency in contingent liabilities, but there are still discrepancies in following the precautionary principle and also the principle of the true and fair view of an entity´s financial position. Financial statement should include sufficient information not only to evaluate nature, timing or amount of contingent liabilities, but also information on estimates of the future cash flows or other economical benefits associated with contingent assets, which are according to our researched reported insufficiently.

Further we emphasize that measurement methods of the US GAAP are more respectful to the precautionary principle while measurement under the IFRS could be considered as more creative and it makes more space for creative accounting to adjust or modify the comprehensive view of an entity´s financial position. Using mid-point estimate approach could mean that investors would not have enough information on the lowest and the highest point of the estimate´s range and so their anticipations would be based on a very unstable concept, where amounts can differ both way, they could be much lower but also but higher than anticipated. We assume, that an optimal approach would be a combination of two approaches. The low-point approach should be used for contingent assets and the middle-point approach for contingent liabilities, as to maintain the followance of a precautionary principle and to lower financial risks arised from uncertainty related to the contingencies by its nature.

Despite the fact that accounting standards do not provide the optimal solution for accounting and reporting contingent liabilities, an entity remains free to choose the accounting policy that corresponds with the principle of fair presentation of its financial position. Even with different wording, but both the Conceptual Framework of the IFRS and also US GAAP standard ASC 100 – *General Principles* provides that the principle of 'true and fair view' overrides the principle of 'compliance with accounting standards'.

Investors should exercise caution when assessing financial statement information and resist the conviction that compliance with accounting standards automatically ensure a true and fair view of the financial position of the entity. Accounting standards on contingent assets and contingent liabilities should be translated into an appropriate accounting policy of the entity depending on specific conditions in which an entity operates. Also, the accounting policy should be perceived, either by investors or other external user of accounting information. We should take into account that the choice of accounting policy is, to a certain extent, a representation of an entity´s subjective view on financial position. (Juhászová & Domorcká & Ferov, 2015) To conclude these two contradictory positions, investors have to consider to which extend accounting standards provide sufficient provisions to follow when accounting and disclosing information about contingent assets and liabilities. If they do not provide sufficient ruling, investors should consider if chosen accounting policy do and based on which factors it has been chosen to represent objective financial position of an entity. The ultimate goal is to disclose information of sufficient scope and quality to enable users of financial statement information to fully understand the nature, timing, estimated amount and the probability of accruement of contingent assets of contingent liabilities relevant to entitty´s current or future financial situation.

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BIBLIOGRAPHY

Campbell, T. (2016). The bilingual CPA [Accessed: 2019-08-14] Retrieved from: https://www.journalofaccountancy.com/issues/2016/mar/financial-reporting-us-gaap-ifrs.html

Cvik, E. D. & MacGregor Pelikánová, R. (2017). The Ephemeral Value of Stock – What IFRS And GAAP Can(Not) Capture According to a Czech Case Study. [online] Anglo-American University in Prague. *The 5th International Scientific Conference IFRS: Global Rules and Local Use, October 20, 2017*, Prague. [Accessed: 2019-08-15]. Retrieved from: http://car.aauni.edu/wp-content/uploads/Proceedings-from-the-AAU-Conference-IFRS-Prague2017.pdf.

Flood, J. (2018). Wiley GAAP 2018: *Interpretation and Application of Generally Accepted Accounting Principles*. New Jersey: John Wiley & Sons Inc.

IFRS Foundation. (2019). IAS 37 Provisions, Contingent Liabilities and Contingent Assets [Accessed: 2019-08-14] Retrieved from: https://www.ifrs.org/issued-standards/list-of-standards/ias-37-provisions-contingent-liabilities-and-contingent-assets/

IFRS Foundation. (2019a). IFRS 3 Business Combinations [Accessed: 2019-08-14] Retrieved from: https://www.ifrs.org/issued-standards/list-of-standards/ifrs-3-business-combinations/

IFRS Foundation (2019b). Who uses IFRS Standards? [Accessed: 2019-08-14] Retrieved from: https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/#filing.

Juhászová, Z. & Domaracká, D. & Ferov, N. (2015). Shadow accounting and financial statements of the insurance companies. *IFRS: global rules & local use: proceedings of the 3rd international scientific conference: October 8–9, 2015*, Czech Republic. Prague: Anglo-American University, p. 83–86.

Quinn, E. J. (2014). The Challenges for Establishing the Convergence of Accounting Reporting Among Different Countries. *International Journal of Academic Research in Accounting, Finance and Management Sciences Vol. 4, No.2*, p. 144–151.

Krivogorsky, V. (2019). Institutions and Accounting Practices after the Financial Crisis: International Perspective. New York: Taylor & Francis Group.

Lagrange, B. & Chantal, V. & Anandarajan, A. (2015). Contingency liabilities: The effect of three alternative reporting styles. *Research in Accounting Regulation, Vol. 27, No. 2*, p. 131–177.

Levy, A. & Bouheni, F.B. & Ammi, C. (2018). Analysis of the Financial Structure: IFRS vs. US GAAP. *Financial Management: USGAAP and IFRS Standards, Vol. 6*, p. 131–177.

Schoeler, F. (2017). Accounting Information Comparability Accross the Countries Prescribing IFRS. [online] Anglo-American University in Prague. *The 5th International Scientific Conference IFRS: Global Rules and Local Use, October 20, 2017, Prague*. [Accessed: 2019-08-15]. Available: http://car.aauni.edu/wp-content/uploads/Proceedings-from-the-AAU-Conference-IFRS-Prague2017.pdf

SEC. (2007). *SEC Takes Action to Improve Consistency of Disclosure to U.S. Investors in Foreign Companies.* Retrieved from: https://www.sec.gov/news/press/2007/2007-235.htm.

UNCTAD (2019). World Investment Report 2018. Retrieved from: https://unctad.org/en/PublicationsLibrary/wir2018_overview_en.pdf

Walworth, M. (2018). *Example: Accounting For Unasserted Claims (Asc 450).* Retrieved from: https://www.gaapdynamics.com/insights/blog/2016/01/05/accounting-for-unasserted-claims-under-asc-450-(old-fas-5)/

Zeff, S. A. (2005). Evolution of US Generally Accepted Accounting Principles (GAAP). *The CPA Journal, Vol. 75, No. 1*. Retrieved from: http://archives.cpajournal.com/2005/105/infocus/p18.htm

Zeff, S. A. (2007). Some obstacles to global financial reporting comparability and convergence at a high level of quality. *The British Accounting Review 39*, p. 290–302.

DEPRECIATION RULES IN POLISH TAX AND BALANCE SHEET LAW

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Abstract
The article presents the basic principles of depreciation of fixed assets covered by the Polish tax and balance sheet law. It characterizes the main depreciation methods and the differences between them. This article is the first in a series of articles on depreciation, which presents the results of scientific research carried out by the author.

Keywords: *accounting, depreciation, tax law, balance sheet law*

1. INTRODUCTION

Depreciation is one of a non-cash expenses of an economic entity, which is a cost and whose consequence is a decrease in the value of fixed assets[69]. The issue of depreciation is often and widely discussed in the literature[70].

Depreciation is primarily defined as an economic category describing the properties of fixed assets, i.e. the turnover of the value of such assets from the production stage to the distribution stage and gradual transfer of fixed assets in the production process to new products manufactured with the use of these assets[71]. We distinguish many methods of depreciation. An entity, having some freedom in this area, establishes its own specific depreciation policy in this respect. Therefore, this issue is extremely important, and knowledge of the basic determinants and choices of depreciation rules by an economic entity is important.

The purpose of this article is a synthetic presentation of depreciation methods permitted by the Polish tax and balance sheet law. This study is the beginning of a series of articles which will comprehensively present the scientific research carried out by the author in this area. The main research tool used in the article is a review of the relevant literature and an analysis of legal acts.

2. TYPES OF TAX DEPRECIATION

The provisions of the Act on Income Tax specify three main methods of depreciation:

1. depreciation using the straight-line method,
2. depreciation using the degressive method,

[69] Sigidov Y. I., Rybyantseva M.S., Adamenko A. A., Yarushkina E. A. (2016), Methodological Aspects of Depreciation as an Economic Category, "International Journal of Economics and Financial Issues", No. 6., pp. 88–95.
[70] Cf. K. Janasz, W. Janasz, J. Wiśniewska, Zarządzanie kapitałem w przedsiębiorstwie, Difin, Warsaw 2007, J. Iwin, Z. Niedzielski, Rzeczowy majątek trwały. Amortyzacja i inwestycje rzeczowe w finansach przedsiębiorstw, PWN, Warsaw 2002, T. Martyniuk, Rachunek amortyzacji środków trwałych w przedsiębiorstwie, ODDK, Gdańsk 2008, E. Gaździk.
[71] Cf. J. Iwin Garzyńska, Kapitał amortyzacyjny w zarządzaniu finansami, PWE, Warsaw 2005; Leksykon finansów, J. Głuchowski (ed.), PWE, Warsaw 2001, P. Eichhorn, T. Thiemeyer, Finanzierung öffentlichen Unternehmen, Verlagsgesellschaft Nomos, Baden-Baden 1979.

3. depreciation according to individually-determined rates[72].

While in the case of intangible assets only one method of depreciation applies (most often it is depreciation according to individually-determined rates), in the case of fixed assets, taxpayers usually have a choice between two or three methods (and often they can also use one-off depreciation). It should be noted that once selected, the depreciation method cannot be changed later[73]. As the Supreme Administrative Court ruled in the judgement of 16 September 16, 2008,[74] *the method of depreciation selected once should be used to fully depreciate a fixed asset, which means that the depreciation method may not be changed (in the process of making depreciation write-offs).* This also applies if the taxpayer makes a mistake when choosing the depreciation[75] method.

The provisions of the Act on Corporate Income Tax regulating issues of tax depreciation, in Art. 16i-16k specify depreciation methods. These include: the straight-line and degressive methods. The straight-line method consists of calculating depreciation write-offs on a fixed basis, i.e. the initial value of a fixed asset, using depreciation rates resulting from the List of annual depreciation rates constituting an Annex to the Act (Art. 16i section 1 of the Act on Corporate Income Tax).

In principle, depreciation write-offs are made from the first month following the month in which the fixed asset is entered in the register of fixed assets and intangible assets.

Any taxpayer can use the straight-line method for each fixed asset. With this method, depreciation write-offs are calculated on a fixed basis and at the same rate, in equal instalments every month or in equal instalments every quarter, or once at the end of the tax year. The sum of depreciation write-offs for a fixed asset made in the first tax year in which the asset is entered in the records may not exceed the value of such write-offs for the period from the entry thereof in the register (list) until the end of that tax year. Depreciation write-offs are made from the first month following the month in which the fixed asset is entered in the records, until the end of the month in which the sum of depreciation write-offs equals the initial value of the asset or in which the asset is put into liquidation, sold or determined to be deficient (the sum of depreciation write-offs also includes write-offs which are not considered tax deductible).

The tax depreciation rates may be increased if the reasons referred to in Art. 16i section 2 of the Act on Corporate Income Tax arise. Pursuant to point 2 of this provision, taxpayers may increase the rates specified in the List of depreciation rates:

1) for buildings and structures used in the following conditions:
    a. deteriorated – using rates no higher than 1.2,
    b. bad – using rates no higher than 1.4;
2) for machines, equipment and means of transport, with the exception of sea rolling stock, used more intensively in comparison with average conditions or requiring special technical efficiency, using rates no higher than 1.4 during the period of such use;
3) for machines and equipment covered by groups 4–6 and 8 of the Classification of Fixed Assets, issued on the basis of separate provisions, hereinafter referred to as the "Classification", being subject of a rapid technical progress, using rates no higher than 2.0.

[72] Cf. Irena Frymark, Rachunkowość przedsiębiorcy, Wydawnictwa Szkolne i Pedagogiczne, Warsaw 2006, p. 131.
[73] Art. 22h section 2 of the Act on Income Tax from Natural Persons and Art. 16h section 2 of the Act on Corporate Income Tax, which stipulate that taxpayers choose one of the depreciation methods specified in the regulations and use the chosen method to fully depreciate a given asset).
[74] File ref. no. II FSK 856/07
[75] Individual interpretation of the Head of the National Revenue Information of 23 March 2018, 0115-KDIT3.4011.80.2018.1.WR).

If the conditions justifying an increase of rates arise or cease, these rates will be increased or decreased starting from the month following the month in which the circumstances justifying such changes occur.

Deteriorated conditions of use of buildings and structures are considered to consist of the use of such fixed assets in permanent presence of water, steam, significant vibrations, sudden temperature changes and other factors causing acceleration of the wear and tear of the asset.

Bad conditions of use of buildings and structures are considered to be the use of such fixed assets under the influence of destructive chemicals, especially when they are used for the production, manufacture or storage of corrosive chemicals. This also applies to cases of buildings or structures being strongly impacted by destructive chemicals dispersed in the atmosphere, water or vapours emitted by other sites nearby.

Machines, equipment and means of transport requiring special technical efficiency are understood as assets which are in operation in a three-shift system of work, despite the fact that they do not, by their nature, operate continuously, which are used outdoors, in forests, underground or in other situations entailing their more intense wear and tear.

Machines and equipment which are subject of a rapid technical progress are understood as machines, equipment and devices in which microprocessor systems or computer systems are used, fulfilling the assumed functions thanks to using the latest technological achievements, as well as other scientific and research equipment and experimental and production equipment.

The accelerated depreciation method is used in many countries, e.g. in the United States or Japan[76].

3. BALANCE SHEET DEPRECIATION METHODS

Balance sheet depreciation generally covers all fixed assets except for land not used for the excavation of minerals by the opencast method. In the light of the Act on Accountancy, depreciation or amortization write-offs of a fixed asset are made by systematic, planned distribution of its initial value over a fixed depreciation period. When determining the depreciation period and the annual depreciation rate, the period of economic life of the asset is taken into account.

As of the date of acceptance of a fixed asset for use, a period or rate and method of its depreciation should be determined. The correctness of the periods and rates of depreciation of fixed assets should be periodically verified by the entity, and an appropriate adjustment of depreciation write-offs should be made in the following financial years. However, the depreciation method selected once is not subject to change. The Act on Accountancy does not specify the depreciation methods which may be used by the entity. The legislator leaves the choice of the method at the discretion of the entity.

Pursuant to Art. 10 section 3 of the Act on Accountancy[77], in matters not regulated by the Act, by adopting accounting principles (policy), entities may apply the National Accounting Standards issued by the Accounting Standards Committee. On 29 May 2017, the National Accounting Standard No. 11 "Fixed Assets" (NAS No. 11) entered into force. This standard discusses, *inter alia*, issues related to depreciation and indicates methods of balance sheet depreciation. As indicated in NAS no. 7 "Change of accounting principles (policy) (...)" – and entity which discloses the use of NAS as its accounting principles (policy) in the financial statements undertakes to take into account all standards related to it, in matters not

[76] Cf. N. Ozaki, An Outline of Japanese Taxes. Tokyo: Tax Bureau Ministry of Finance, Japan 1998, pp. 80–95.
[77] Act on Accountancy of 29 September 1994.

regulated by the Act, including NAS No. 11. Meanwhile, entities which have not decided to use NAS but would like to use the solutions presented in NAS No. 11 should make appropriate changes in the accounting principles (policy). According to NAS No. 11, in practice, the straight-line method, the degressive method (also known as the accelerated or decreasing method of depreciation) and the natural method (also referred to as the production units method or differential write-off method) are most often used. The chosen depreciation method, by means of the way of spreading the value of the depreciable fixed asset over time, reflects the manner and procedure of deriving benefits from it. Different depreciation methods can be applied to individual groups, subgroups, types and inventory items.

The straight-line method consists of evenly spreading the value of the depreciated asset over its useful life. If the entity determines that the benefits deriving from a given asset will be realized systematically and evenly in individual periods, it is justified to use the straight-line method. When using the straight-line method, depreciation write-offs are made to the same amount in each subsequent period, using a fixed rate or depreciation rate. The depreciation rate can be determined per year or month, with the monthly depreciation rate being the quotient of the annual rate and twelve months. Write-offs determined using this method are recognized regardless of the actual productivity of the asset in a given month or quarter – this is a fixed cost, which means that write-offs are also made in months when a given asset is not used (e.g. during public holidays or vacations when the entity stops production using a given asset) or if the asset is used on a part-time basis.

The degressive method[78] means that the basis for making depreciation write-offs is reduced in each tax year by the sum of write-offs already made in the previous years. Depreciation using the degressive method allows the entity to increase the costs of the reporting period[79].

The degressive method of depreciation consists of spreading the value of an asset subject to depreciation over time in such a way that depreciation write-offs in the initial periods of use of an asset are higher than average (determined using the straight-line method) and gradually decrease. This method is most often used for such machines, equipment and means of transport which, in the initial periods of use, are subject to more rapid wear and tear than in later periods. The degressive method of depreciation allows the entity to, *inter alia*, offset the depreciation costs decreasing over time by potentially higher operating costs of the asset in later periods of its use, resulting from higher costs of repairs.

The distribution of write-offs in this method is entirely at the discretion of the entity, which means that the amount of the write-off can vary:

a) at the end of each calendar year,
b) systematically each year of the asset use (when the subsequent years of use do not coincide with calendar years), every few years, every quarter or every month.

This method, similarly to the straight-line method, allows the entity to recognize write-offs regardless of the actual productivity of the asset in a given month or quarter - this is a fixed cost, which means that write-offs are also made in the months when a given asset is not used or when the asset is used on a part-time basis.

When using the degressive method, depreciation write-offs can be made:

a) using the method of decreasing balance,
b) using the method of the sum of annual values (also known as the simplified degressive method or the SOYD method - *Sum OF Year's Digits*),

[78] Art.16k section 1 of the Act on Corporate Income Tax.
[79] R. Kubacki, Koszty uzyskania przychodów w podatkach dochodowych, Wydawnictwo Unimex. Wrocław 2012, pp. 248–250.

c) using the degressive-straight-line method (stipulated in tax regulations), using other methods

The degressive depreciation rate using the decreasing balance method is determined as the product of the straight-line depreciation rate and the accelerating indicator. The acceleration rate is set as the amount which provides for the most accurate reflection of more rapid consumption of economic benefits from a given fixed asset in the initial periods of its use. The acceleration rate can also be set as 1 – then the degressive depreciation rate of the decreasing balance will be equal to the straight-line depreciation rate.

The simplified degressive method (sum of year's digits) allows for full settlement of the depreciable value of a fixed asset over its useful life. The degressive depreciation rate determined by the sum of year's digits method changes (decreases) in each subsequent year of using the fixed asset. The depreciation rate resulting from it is determined as the product of the annual depreciation rate for a given year and the value of the fixed asset subject to depreciation.

When using the degressive-straight-line depreciation method, the depreciation rate is set in the same way as for the degressive decreasing balance method, but it is only used until the time when the depreciation rate resulting from this method equals or is lower than the amount of the determined write-off if the straight-line method were used. Starting from this period, the entity determines the depreciation rate using the straight-line method.

It should be remembered that using the decreasing balance method, a new depreciation rate (amount) is set at the beginning of each year due to the fact that the net book value of the fixed asset gradually decreases.

What is important, depreciation write-offs made using the degressive decreasing balance method do not allow a write-off of the full value of a fixed asset subject to depreciation. Therefore, after the end of the asset's useful life, its residual net book value is written-off once as the cost of depreciation.

The natural depreciation method consists of writing off the depreciable value of a fixed asset in proportion to the reduction of its use potential. The conditions for using the natural method are as follows:

a) determination of a total use potential of the fixed asset and the unit of its measurement,
b) reliable measurement of the use of the potential in a given period (e.g. a month) using the adopted unit of measurement.

The natural method provides the most accurate reflection of the use of the economic potential of a given fixed asset – mainly machines, equipment and means of transport. It also provides a direct reflection of the effects of temporary exclusion of a fixed asset from use, for instance due to its use only during the season.

The natural depreciation rate is set in three stages:

1) after the fixed asset is accepted for use and the natural depreciation method is adopted for it, the useful potential of the asset, measured by the number of production units or working time, is determined,
2) the unit depreciation rate per production unit/working time is set,
3) the amount of depreciation in a given period (a month, quarter, year) is determined as the product of the depreciation rate and the number of production units manufactured in a given period, using a given fixed asset or based on the working time required by a fixed asset in a given period.

4. REVIEW OF SELECTED SCIENTIFIC RESEARCH DOCUMENTS REGARDING DEPRECIATION USED BY POLISH ECONOMIC ENTITIES

According to the research conducted in 2002, for the majority of analysed enterprises, accelerated depreciation methods were not significant. As many as 79% of the analysed enterprises indicated that the degressive method is irrelevant for the shaping of the amount of depreciation as a source of investment financing. The reason for this may be the reluctance to increase operating costs, the simplicity of determining write-offs using the straight-line method, and the failure of financial and accounting services to recognize financial benefits deriving from depreciation. On the other hand, research conducted in 2010 shows that methods of tax depreciation are irrelevant for enterprises, because the majority of respondents did not answer the question, and the answers given were dominated by the indication of the immateriality of the depreciation method. This may prove two hypotheses. Firstly, Polish companies consider accelerated depreciation methods to be invalid. Secondly, in practice they use the solutions, but to a limited extent or without due awareness, as evidenced by the low rating of a one-off write-off[80].

The most common method of making depreciation write-offs is the straight-line method (56%). Research conducted by M. Kaczmarek in 2008 confirms the most common use of this method[81]. The main reason for its use is the easy method of determining the amount of depreciation. In particular, this method is used by managers of entities who are responsible for their own accounting books. A significant group of those choosing this method covers small service enterprises operated by farmers to obtain an additional source of income from non-agricultural activities. The entities whose tax settlements are carried out by persons having the necessary knowledge in the field of taxes, the straight-line method is also most often used. Depending on the needs and possibilities arising from tax regulations, such companies also use other depreciation methods, most often one-off method (14%) and individual method (10%). The analysed taxpayers do not use the degressive method, which is probably due to the complicated way of determining depreciation write-offs or the lack of a need for using this method. Only individual depreciation rates are used by entities which have only used fixed assets (4%). The one-off depreciation method is used by production companies (8%) which are small taxpayers, and due to the planned high revenues they use the option of including the entire depreciation write-off in their costs[82].

5. CONCLUSIONS

The legislation of the European Union indicates that a taxpayer should have a right to choose between straight-line and degressive accelerated depreciation methods. The concept of the Common Consolidated Corporate Tax Base (CCCTB) introduces a possibility of choosing between the straight-line and degressive method of depreciation, which offers an opportunity of choosing the method of depreciation which best reflects the use of the asset[83]. Scientific

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[80] Cf. Jolanta Iwin-Garzyńska, *amortyzacja w polskim systemie podatkowym oraz w koncepcji CCCT,* Zeszyty Naukowe Uniwersytetu Szczecińskiego No. 667, Finanse, rynki finansowe, ubezpieczenia No. 40, 2011, pp. 10–14.
[81] M. Kaczmarek, Przyczyny wyboru metod amortyzacji przez kierowników w małych i średnich firmach, "Zeszyty Naukowe Uniwersytetu Szczecińskiego" 2008, No. 493, "Finanse, Rynki Finansowe, Ubezpieczenia" No. 9, pp. 159–170.
[82] Cf. D. Zabielska, Metody amortyzacji środków trwałych w małych i średnich przedsiębiorstwach na obszarach wiejskich, Studia i Materiały, Miscellanea Oeconomicae, Year 19, No. 3/2019, Kielce 2015, p. 500.
[83] Cf. An Overview of the Main Issues That Emerged at the First Meeting of the Subgroup on Tax Depreciation of Assets. CCCTB/WP/007/doc.en, Brussels, H. Litwinczuk, Prawo wspólnotowe w zakresie podatków

research also confirms the fact that the right selection of methods and rates of depreciation effectively affect the amount of tax liabilities[84].

The selected variant of depreciation, the rates, periods and used methods affect the financial data presented in the financial statements, from the property (balance sheet) and financial (profit and loss account) points of view. Knowledge of the above dependencies is important because combinations of different variants may result in discrepancies in the final financial data presented.

BIBLIOGRAPHY

An Overview of the Main Issues That Emerged at the First Meeting of the Subgroup on Tax Depreciation of Assets. CCCTB/WP/007/doc.en, Brussels.

Cygańska M., Wpływ alternatywnych metod amortyzacji środków trwałych na wynik finansowy, nadwyżkę finansową i obciążenia podatkowe przedsiębiorstwa — analiza przypadku, “Zeszyty Naukowe Uniwersytetu Szczecińskiego” 2014, No. 832, “Finanse, Rynki Finansowe, Ubezpieczenia” No. 71.

Eichhorn P., T. Thiemeyer, Finanzierung öffentlichen Unternehmen, Verlagsgesellschaft Nomos, Baden-Baden 1979.

Frymark I., Rachunkowość przedsiębiorcy, Wydawnictwa Szkolne i Pedagogiczne, Warsaw 2006, p. 131.

Głuchowski J. (ed.), Leksykon finansów, PWE, Warsaw 2001.

Individual interpretation of the Head of the National Revenue Information of 23 March 2018, 0115-KDIT3.4011.80.2018.1.WR.

Iwin Garzyńska J., Kapitał amortyzacyjny w zarządzaniu finansami, PWE, Warsaw 2005.

Iwin-Garzyńska J., amortyzacja w polskim systemie podatkowym oraz w koncepcji CCCT, Zeszyty Naukowe Uniwersytetu Szczecińskiego No. 667, Finanse, rynki finansowe, ubezpieczenia No. 40, 2011.

Iwin J., Niedzielski Z., Rzeczowy majątek trwały. Amortyzacja i inwestycje rzeczowe w finansach przedsiębiorstw, PWN, Warsaw 2002.

Janasz K., Janasz W., Wiśniewska J., Zarządzanie kapitałem w przedsiębiorstwie, Difin, Warsaw 2007.

Kaczmarek M., Przyczyny wyboru metod amortyzacji przez kierowników w małych i średnich firmach, “Zeszyty Naukowe Uniwersytetu Szczecińskiego” 2008, No. 493, “Finanse, Rynki Finansowe, Ubezpieczenia” No. 9, pp. 159–170.

Kubacki R., Koszty uzyskania przychodów w podatkach dochodowych, Wydawnictwo Unimex. Wrocław 2012.

Litwinczuk H., Prawo wspólnotowe w zakresie podatków bezpośrednich. Perspektywy harmonizacji podatku dochodowego, in: Systemowa reforma podatków dochodowych, ed. Brzeziński B., Nikiel W., Wydawnictwo C.H. Beck, Warsaw 2009.

Martyniuk T., Rachunek amortyzacji środków trwałych w przedsiębiorstwie, ODDK, Gdańsk 2008.

Ozaki N., An Outline of Japanese Taxes. Tokyo: Tax Bureau Ministry of Finance, Japan 1998.

bezpośrednich. Perspektywy harmonizacji podatku dochodowego, in: Systemowa reforma podatków dochodowych, ed. B. Brzeziński, W. Nikiel, Wydawnictwo C.H. Beck, Warsaw 2009, pp. 36–40.

[84] Cf. M. Cyganska, Wpływ alternatywnych metod amortyzacji środków trwałych na wynik finansowy, nadwyżkę finansową i obciążenia podatkowe przedsiębiorstwa — analiza przypadku, “Zeszyty Naukowe Uniwersytetu Szczecińskiego” 2014, No. 832, “Finanse, Rynki Finansowe, Ubezpieczenia” No. 71.

Sigidov Y.I., Rybyantseva M.S., Adamenko A.A., Yarushkina E.A. (2016), Methodological Aspects of Depreciation as an Economic Category, "International Journal of Economics and Financial Issues", No. 6.

File ref. no. II FSK 856/07, judgement of the Supreme Administrative Court.

Act on Accountancy of 29 September 1994, uniform text: Journal of Laws of 2002, No. 76, item 694, as amended.

Act of 15 February 1992 on Corporate Income Tax, Journal of Laws of 2019, item 865.

Act of 26 July 1991 on Income Tax from Natural Persons, Journal of Laws of 2019, item 1387.

Zabielska D., Metody amortyzacji środków trwałych w małych i średnich przedsiębiorstwach na obszarach wiejskich, Studia i Materiały, Miscellanea Oeconomicae, Year 19, No. 3/2019, Kielce 2015, p. 500.

BLOCKCHAIN TECHNOLOGY AND VERIFICATION OF INFORMATION FROM FINANCIAL STATEMENTS

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Abstract
There are many models used to detect fraud, but also to detect manipulation of numbers especially in accounting. The objective of this paper is to describe and interpret the results applying blockchain technology on data from financial statements of companies. The paper examines the following hypothesis: The efficiencies that will be gained through forensic audit automation will be balanced by the requirements for new procedures to address the risks associated with the blockchain environment. Our study confirms that blockchain accounting is tamper proof and transparent and it can reduce manipulations and corrupt behavior, increase transparency of transactions and it can develop automated processes of accounting.

Keywords: *blockchain, financial statements, forensic accounting, audit*

1. INTRODUCTION

There are several cases known from the past where financial fraud has occurred in companies that wouldn't happen if there was a blockchain used. The blockchain will not cure all of the problems which were present in these companies, however, it would definitely solve at least some of them (e. g. antedating of records, destruction of evidence, and the audit trail of the procedures (not) carried out in the respective period).

The price to book ratio reflects the market value to book value of equity. Due to accounting convention on treatment of certain costs, the market value of equity is typically higher than the book value of a company. Also accounting standards applied by companies vary, so price to book ratios may not be comparable. As it is shown in the graph bellow, price to book value is roughly four times higher than book value of equity.

Figure 1. Historical price to Book Value Data

Source: https://ycharts.com/companies/NYT/price_to_book_value

Though the accounting is deemed to provide a reliable data of either confirmatory or predictive value, it is not always the case. Inspired by one of the common malpractices in business, Lomax (2008) has conducted research focused on the backdating of stock options (for the period 1992–2002). The results were appalling, the practice was present in 30% of cases. It could be served as the evidence of the problems with trust and confidence.

The problem has three serious consequences:
- creation of auditing profession,
- adoption of the concept of prudence,
- lack of reliability of accounting data.

Since then, there have been several initiatives to restore confidence in accounting. One of them is a blockchain application in accounting. Selection of correct decision in an environment with trust issue has been described in "The Byzantine Generals "Problem" (Lamport, Shostak, Pease, 1982). The Byzantine generals must agree upon a common battle plan only by communicating by messenger. However, one or more of them may be traitors who will try to confuse the others. The problem is to find an algorithm to ensure that the loyal generals will reach agreement. It is shown that, using only oral messages, this problem is solvable if and only if more than two-thirds of the generals are loyal; so, a single traitor can confound two loyal generals. With unforgeable written messages, the problem is solvable for any number of generals and possible traitors. These solutions were applied to reliable computer systems. One of them is blockchain technology.

Blockchain technology was conceived by Nakomoto (2008). He used a chain of blocks to create a secure digital currency system. It ensures published transactions and makes it almost impossible for a single or a small group of users to tamper blockchain records. (Nakomoto, 2008) Later were developed private blockchains (Pilkington, 2016) that involve a limited number of participants and information stored in the private chain is only accessible to predetermined participants. It can be used to share accounting records (within the company or with suppliers and customers). (Ondrušová, 2016)

Blockchain is a sequential database of information that is secured by methods of cryptographic proof, and it offers an alternative to classic financial ledgers. (De Meijer, 2016) After several years of successful use with bitcoin, blockchains have become recognized as an alternative to ownership ledgers based on classical double-entry bookkeeping. (Zhang, Wen, 2016)

2. METHODOLOGY

Because blockchain accounting is still not adopted by masses, a qualitative approach will be taken to make initial explorations on the topic. In order to fulfil the purpose of analyzing the use of blockchain technology in accounting, the paper will give insight into how this field is developing. Based on the use of methods of analysis and synthesis, the areas of accounting and auditing were identified where the blockchain technology could be used and further developed. In our paper, we will therefore look at the extent to which accounting issues can be solved by blockchain, and on the contrary, what problems are associated with its application.

3. RESULTS

Although the technological world has provided business with computers, internet, and advanced analytic methods in order to speed up and reduce the cost of data processing, the essence of the accounting – the main principles of double-entry accounting has been founded in Middle Ages and remains in force even today. Though the double entry system is self-balancing system on its own, it doesn´t provide enough assurance of:

- symmetry of the accounting entry (e. g. the transaction as a purchase by the buyer and the sale by the seller; in fact, it could be recognized as a sale by the seller but as a loan by the buyer),
- authenticity of accounting entries.

The current state of use of blockchain technology in accounting is still at an early stage compared to other industries.

Blockchain technology brings revolution in supply chains, payments, and income streams in a way that documents and harmonizes complex and diverse information from multiple sources. The potential of blockchain technology is in its ability to collect and record transactions from which all participants have an identical copy that can be retrieved and viewed in real time. Blockchain technology is a decentralized database technology that collects transactions and ensures their permanence through encryption. This means that each transaction is shared between trusted parties and verified, giving greater transparency, trust and increasing efficiency. Real-time technology continually delivers management reports and provides access to quality data that current systems cannot provide.

Real-time accounting on the blockchain would reduce manipulation of reported earnings. Irreversible, time-stamped transactions guarantee that contracts cannot be backdated to a prior reporting period and operating expenses which should be expensed immediately cannot be pushed into future periods. Real-time accounting on the blockchain could allow to spot suspicious asset transfers instantly and other transactions that imply conflicts of interest. Transparency in blockchain accounting would provide less possibilities to tunnel assets out of the firm and it would permit real-time surveillance against fraudulent actions by distressed companies.

Accounting on the blockchain include also smart contracts that can dramatically reduce costs of verification and enforcement. A number of blockchain platforms are designed to apply blockchain technology to execute smart contracts based upon simple events such as the passage of time or future financial outcomes. Smart contracts can have following applications – mechanical exercise of options, the payment of employee compensation when goals are achieved, instant collateral transfers and many others.

The double-entry system relies on the proof or verification of each transaction as long as the user and the issuer hold the same information. Blockchain accounting extend it by third-party validation. An extension of the current system by third-party by inclusion of independent third-parties would create a validation of the transaction that is harder to dispute making it much more secure than the two-party system. This extension requires trusted and neutral third-party – Blockchain – private blockchain that company would retain control over their information and could exclude irrelevant parties. To extend existing double-entry system by a third blockchain party would record transactions both within the organization and with external parties. The bookkeeping would be done by connecting each blockchain account to its corresponding double-entry account. The ledger prepared like this is invariable, meaning no one can change the information written in the ledgers. It is also transparent which allows everyone entitled to read it. In blockchain accounting the rules can be implemented, systems can be programmed to follow accounting standards and regulations automatically using smart contracts. System can include balance controls, payables and receivables confirmations, inter-organizational confirmations. All these can be automated by using smart contracts. This system can be integrated with the Internet of Things technology for further automation.

Client accounts – shared accounts – are created automatically when transactions occur. The accountant of the profession will not disappear; on the contrary, the profession's accountant will be less burdened on stereotypical work and the manual activity and activity of the accountant will be directed to more sophisticated tasks. The client will no longer need to provide information and documentation to the paper accountant. Accountants will monitor clients' financial results online, in real time. Businesses can also see the results of their business online without waiting for data to be processed by accountants. Companies will no longer have to pay for processing their data in the accounting software, but will pay to accountants whose role will analyze and interpret the data.

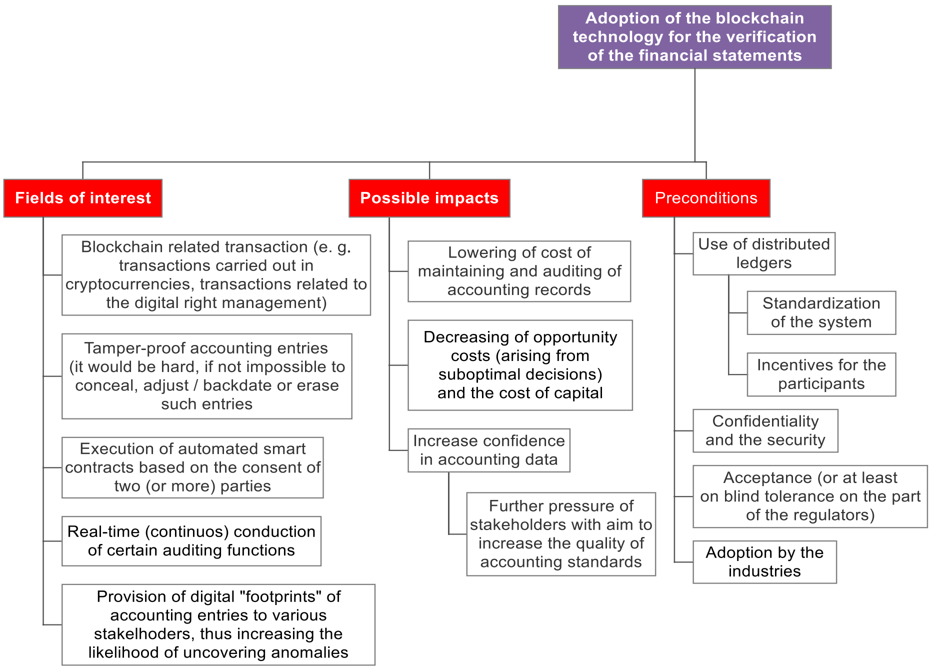
For reasons of simplicity of information transfer and automated processing of each transaction, blockchain technology can simplify and automate accounting elements, facilitate trading with new global customers, and automate auditing. Blockchain technology can investigate anomalies and unusual transactions in real time as they appear.

Auditors will also have to change the normal way in which audit processes work. The audit will be less time-consuming when using the blockchain system, and access to data processed by blockchain technology will also be cost-effective. Blockchain technology is a way to increase auditing automation.

Blockchain technology enables companies to confirm the authenticity and legitimacy of documents. When data is processed by a blockchain, a string is created to create a unique identifier for the file, and then it is labeled. This recorded transaction cannot be changed, so if this string is retrieved, everyone can be sure that the document remains unchanged and the time stamp is accurate. Transactions that are recorded in real time cannot be altered, they can be checked daily, thereby increasing confidence in accounting and increasing transparency. Blockchain technology will also facilitate state control functions. State authorities will have access to information on business-to-business transactions and will be able to check more efficiently on tax returns, whether for income tax purposes, but in particular tax returns for value added tax. Businesses will not be able to avoid paying taxes or claiming undue excess deductions related to value added tax. Businesses will need to work closely with regulators to develop new solutions that will be usable by both sides.

From the point of view of creditors and banks, communication with clients can also be more effective. At present, the bank's clients document their financial results, which banks must additionally verify. By accessing data, parts of data through blockchain technology, such administrative burden is eliminated.

Scheme 1. Adoption of the blockchain technology in accounting



Source: Own processing

Blockchain technology allows clients to analyze more effectively their clients and find out who they are "good" and who customers "are bad", respectively. which contracts are loss-making or not profitable, even if the revenues from them grow or vice versa which contracts are profitable. So, some features of cost or management accounting may be incorporated into blockchain technology. Of course, individual business transactions will only be available to businesses, state institutions, and individuals who have access to these data. However, all transactions can be processed within the system and provide results only aggregated for individual sectors or groups of enterprises. Other businesses can, on the basis of these analyses, compare with the industry's average results and predict future developments.

Removing manual interventions in accounting transactions has many benefits in terms of errors and frauds. Recorded time stamp transactions can also serve as evidence for litigation.

Technological blockade has undeniable benefits for different users, it remains to be seen who will work on the further development and implementation of this technology, whether private or public, how it will be created and how it will be managed.

Table 1. Data processing by different systems

	Decentralized data processing	**Blockchain**
Processing speed	Low	High
Processing costs	High	Expected to be lower
Transparency	Low	Very high
Security	Susceptibility to hacking attacks	Relatively high

Source: Own processing

The use of blockchain technology for accounting purposes is only at the beginning of development; in other areas of the economy in the most developed countries, this technology is already actively used. As already mentioned, trading with cryptocurrencies is done with the support of blockchain technology. In the field of agriculture, blockchain technology is used to monitor the movement of food (ex. grain) in the supply chain. Energy companies use blockchain technology enabling direct trade between manufacturers and consumers. Australian Post develops an electronic voting system based on digital identity verification. Airlines and booking systems use blockchain technology to change real-time reservation changes and make these data and changes accessible to all users in order to speed up and reduce the cost of data processing.

4. CONCLUSION

The current state of use of blockchain technology in accounting is still at an early stage compared to other industries. The introduction of blockchain technology requires considerable investment in systems and processes to meet their goal of creating a safer, more transparent and more efficient system, but at the moment removing the need for time-consuming financial controls. Under blockchain accounting all transactions are recorded in a virtual blocks and sequentially new blocks are created and linked to all the previous blocks in the chain. Blockchain uses hash strings and digital fingerprint is given to every financial information and allows automatical verification of these transactions. The primary benefits discussed above include increased automation, decreased risk of fraud, decreased costs and increased truthfulness of financial statements. Blockchain accounting allow examination of potential errors or frauds within accounting entries (validation of transaction and prevention of duplicated transactions – invoices, duplicate payments etc.), automation of transaction verification and faster and automated control of the recording process. This can expand providing assurance and change the role of auditors and could even automate tax filings. Blockchain accounting are fully reliable and cannot be corrupted because the transactions cannot be altered retroactively. Entire system of blockchain accounting is required to be designed in a manner that fraud is impossible or at least very difficult to commit.

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BIBLIOGRAPHY

De Meijer, C. R. 2016. The U.K. and Blockchain technology: A balanced approach. Journal of Payments Strategy and Systems 9 (4): 220–229.
Lamport, L.; Shostak, R.; Pease, M. (1982). "The Byzantine Generals Problem". ACM Transactions on Programming Languages and Systems. 382–401.
Lomax, S. (2008). 'Backdating stock options: the latest corporate storm', Business & Economic Review, January/March, pp. 15–18.
Nakomoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. Available at: https://bitcoin.org/bitcoin.pdf
New York Times. 2018. New York Times Historical Price to Book Value Data. Available at: https://ycharts.com/companies/NYT/price_to_book_value
Ondrušová, L. (2016) Company in crisis form the point of view of accounting. In Journal of East European Science and Research: scientific peer-reviewed journal. Bratislava: European Institute for Development and Education, vol. 8, no. 1, pp. 338–345.
Pilkington, M. (2016). Blockchain Technology: Principles and Applications. Research Handbook on Digital Transformations, Edward Elgar, 2016.
Zhang, Y., and Wen, J. (2016). The IoT electric business model: Using blockchain technology for the Internet of Things. Peer-to-Peer Networking and Applications 10 (4): 983–994.

DISCLOSURE OF INFORMATION ON THE APPLICATION OF STANDARDS IN THE FINANCIAL STATEMENTS OF COMMERCIAL INSURANCE COMPANIES

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Abstract
In this paper we focused on reporting information on the application of IFRS 4 Insurance Contracts, resp. IFRS 17 Insurance contracts in commercial insurance companies having their registered office in the territory of the Slovak Republic. In 2018, 15 commercial insurance companies operated in Slovakia using international financial reporting standards to prepare their financial statements. Insurance companies apply IFRS Insurance contracts in conjunction with IFRS 9, as insurance contracts are also a financial instrument for an insurance company. IFRS 17 represents an entirely new standard for which insurance companies are currently preparing. The source of the individual financial statements to be analysed is the register of financial statements and the websites of individual commercial insurance companies. The purpose of the contribution is to show how information on the application of standards and the reasons why some standards are not considered are prepared. At the same time, we also focus on verifying whether the presentation of information in the financial statements depends on the company that verifies the financial statements or is the result of a separate processing of a commercial insurance company.

Keywords: *financial statements, IFRS, notes, reporting,*

1. INTRODUCTION

In this paper, we focused on the notes of commercial insurance companies operating in Slovakia and prepared as of 31 December 2018. Commercial insurance companies prepare the financial statements according to the Act on Accounting. In the case of insurance companies, the Act refers to specific regulations, which are Regulation (EC) No. Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards (Special edition OJ Chapter 13 / Vol. 29; OJ L 243, 11.9.2002), as amended by Regulation of the European Parliament and Council Regulation (EC) No. Council Regulation (EC) No 297/2008 of 11 March 2008 (OJ L 97, 9.4.2008). and Commission Regulation (EC) No. Regulation (EC) No 1126/2008 of the European Parliament and of the Council of 3 November 2008 Regulation (EC) No 1606/2002 adopts certain international accounting standards (OJ L 320, 29.11.2008), as amended. For commercial insurance companies, this means that they are required to consider International Financial Reporting Standards, also referred to as International Financial Reporting Standards, IAS / IFRS for the preparation of the financial statements.

The financial statements of commercial insurance companies comprise the statement of financial position (balance sheet) at the last day of the accounting period, the profit and loss statement of other comprehensive income for the accounting period, statement of changes in equity for the accounting period, statement of cash flows for the accounting period and notes. Each of these statements contains information to provide a true and fair view of the entity (Kršeková, Pakšiová, 2015). In the paper we will focus mainly on the last part in the order of notes.

2. NOTES TO THE FINANCIAL STATEMENTS

The notes form an integral part of these financial statements (Šlosárová and Bednárová, 2015) unit (Peter, Wagner, and Paksiova, 2017). In this case, commercial insurance companies should include in their notes significant accounting policies and other explanatory information that illustrates the situation in a commercial insurance company. For the interested reader, they represent a source of information that is important for further decision-making (Meluchová and Mateášová, 2015). In terms of their extent, structure and breakdown, they are among the most extensive part of the financial statements.

In the notes, individual insurance companies also state how international financial reporting standards have been applied and which have not been applied in the preparation of the financial statements. In the detailed analysis of the financial statements, we focused on this part of the notes in the case of commercial insurance companies operating in Slovakia.

Commercial insurance companies are among the entities providing a characteristic product on the market – namely insurance. Insurance is provided based on insurance contracts, which are subsequently recognized in the financial statements. Correct recognition and valuation of fasting contracts is not only about providing a true and fair view of the insurance company, but also affects the solvency of the insurance company (Gambaro, Casalini, Fusai, and Ghilarducci, 2019). This requirement applies not only to Slovakia (Meluchová and Mateášová, 2015) but also to other countries in which insurance companies operate (Tsukahara, Nishiyama, and Nakamura, 2019).

As of 1 January 2019, 15 insurance companies based in the Slovak Republic were authorized to operate in the Slovak Republic, 21 were operating through a branch and 633 under the freedom to provide services. (www.slaspo.sk, 9/20/2019). Commercial insurance companies operating in Slovakia are listed in the following overview (www.nbs.sk, 9/20/2019):

NO.	INSURANCE COMPANY	IFRS 9 AND IFRS 4	IFRS 17
1.	AEGON Životná poisťovňa, a. s.	from 2021	A
2.	Allianz – Slovenská poisťovňa, a. s.	from 2021	A
3.	BNP Paribas Cardif Poisťovňa, a. s.	from 2021	A
4.	ČSOB Poisťovňa, a. s.	no	B
5.	ERGO Poisťovňa, a. s.	from 2022	B
6.	Generali Poisťovňa, a. s.	from 2022	C
7.	KOMUNÁLNA poisťovňa, a. s. Vienna Insurance Group	from 2022	B
8.	KOOPERATIVA poisťovňa, a. s. Vienna Insurance Group	from 2022	B
9.	NN Životná poisťovňa, a. s.	from 2022	B
10.	NOVIS Insurance Company, NOVIS Versicherungsgesellschaft, NOVIS Compagnia di Assicurazioni, NOVIS Poisťovňa a.s.	no	A
11.	Poštová poisťovňa, a. s .	from 2022	B
12.	Union poisťovňa, a. s.	from 2021	A
14.	UNIQA poisťovňa, a. s.	from 2021	A
15.	Wüstenrot poisťovňa, a. s.	from 2022	B

Reporting in commercial insurance companies in Slovak republic

In the above-mentioned commercial insurers, we have analysed in the notes that part concerning the application and recognition of international financial reporting standards. We focused mainly on the standard, which is designed for reporting insurance activity, namely the standard governing insurance contracts.

At present, insurers apply IFRS 4 Insurance Contracts, which was adopted in 2004 and have been applied since 1 January 2005, when preparing the financial statements. The standard has been amended several times. Given the development of the insurance market, the introduction of fair value (detailed adjustment, application and method of its determination required the introduction of a separate standard), the development of financial markets (definition, measurement and reporting of financial instruments required the introduction of a new standard dedicated to financial instruments) also in the area of insurance contracts by issuing a new standard IFRS 17 insurance contracts. Insurance company's application, respectively. they indicate the non-application of these standards in their remarks.

In a detailed analysis, we found that insurance companies report this fact in three ways:

AEGON Life Insurance Company, a. s.; Allianz – Slovenská poisťovňa, a.s..; BNP Paribas Cardif Insurance Company, a.s.; Union Insurance Company, a.s. and UNIQA Insurance Company, a.s. report the application of IFRS 9, Financial Instruments, with IFRS 4, Insurance Contracts – Amendment to IFRS 4 (issued on 12 September 2019 and effective in the EU, depending on access), for annual periods beginning on or after 1 January 2018 that choose to apply the temporary exemption option, or when an entity first applies IFRS 9, to entities that choose to apply the overlap approach).

The amendment addresses concerns raised by the implementation of IFRS 9, the new standard on financial instruments, before implementing the new standard that the IASB is currently working on to replace IFRS 4. These concerns include the temporary volatility of results. The amendment introduces two approaches – the overlap approach and the deferred approach. The revised Standard will provide all companies that issue insurance contracts with the possibility to report the volatility that could arise when IFRS 9 is applied to other comprehensive income rather than profit or loss before the new Standard on Insurance Contracts is issued. In addition, the revised Standard will provide companies whose activities are mainly associated with insurance with a voluntary temporary derogation from the application of IFRS 9 until 2021. Entities that postpone the application of IFRS 9 at a later date will continue to apply the current Standard on Financial Instruments. , t.j. IAS 39. The amendment to IFRS 4 supplements existing alternatives in the standard that can already be used to address temporary volatility. The Company fulfilled the conditions for deferred access as its insurance liabilities exceeded 90% of its total liabilities as at 31 December 2015 and the Company's activities were not subsequently changed. Therefore, the Company will apply IFRS 9 from 2021 onwards.

Insurance companies ERGO Poisťovňa, a.s.; Generali Poisťovňa a.s.; COMMUNAL INSURANCE COMPANY, a.s. Vienna Insurance Group; KOOPERATIVA poisťovňa, a.s. Vienna Insurance Group; NN Life Insurance Company, a.s.; Postal Insurance Company, a.s. and Wüstenrot insurance company, a.s. they report the application of IFRS 9 to IFRS 4 in the same way, only in their application that they will apply IFRS 9 only from 2022.

Insurance companies ČSOB Poisťovňa, a.s. and NOVIS Insurance Company, NOVIS Versicherungsgesellschaft, NOVIS Compagnia di Assicurazioni, NOVIS Insurance Company a.s. do not comment on the application of IFRS 9 in connection with IFRS 4.

Insurers comment on the new standard relating to insurance contracts as follows and again in three ways:

Method A
AEGON Life Insurance Company, a.s..; Allianz – Slovenská poisťovňa, a.s..; NOVIS Insurance Company, NOVIS Versicherungsgesellschaft, NOVIS Compagnia di Assicurazioni, NOVIS Insurance Company a.s, BNP Paribas Cardif Insurance Company, a.s.; Union Insurance Company, a.s. and UNIQA Insurance Company, a.s. the opinion on the adoption of IFRS 17 is as follows:

IFRS 17, Insurance Contracts (Standard issued on 18 May 2017 and effective for annual periods beginning on or after 1 January 2021). IFRS 17 replaces IFRS 4, which allowed companies to account for insurance contracts using existing accounting practice. As a result, it was difficult for investors to compare and assess differences in the financial management of otherwise similar insurance companies. IFRS 17 is a standalone, uniformly based standard for accounting for all types of insurance contracts, including reinsurance contracts, that the insurance company owns. It requires insurance contract groups to be recognized and valued:

I. at the present value of future cash flows (cash flows from transactions) adjusted for existing risks, considering all available information on cash flows from transactions in a manner consistent with observable market information; increased (if this represents a liability) or decreased (if this represents an asset)
II. by the amount representing unearned profit in the class of insurance contracts (contractual margin for the service rendered). Insurance companies will report profits from the group of insurance contracts over the entire period of provision of insurance coverage as the existing risk expires. If a group of insurance contracts is loss making or does so, the entity recognizes the loss immediately. The EU has not yet approved this standard. The Company is currently assessing the impact of this amendment on its financial statements.

Method B
Insurance companies ČSOB Poisťovňa, a.s., ERGO Poisťovňa, a.s.; COMMUNAL INSURANCE COMPANY, a.s. with Vienna Insurance Group; KOOPERATIVA poisťovňa, a.s. Vienna Insurance Group; NN Life Insurance Company, a.s. with.; Postal Insurance Company, a. s and Wüstenrot insurance company, and. with. justify in the comments that this standard has not yet been adopted by the European Union, as follows:

IFRS 17 Insurance Contracts is effective for annual periods beginning on or after 1 January 2022 (subject to approval by the IASB and the European Union), requiring comparable values. In May 2017, the IASB issued IFRS 17, a new comprehensive accounting standard for insurance contracts covering accounting and measurement, reporting and disclosure. Once effective, it will replace IFRS 4 (insurance contracts) issued in 2005. The Company expects to have a significant impact on the financial statements. IFRS 17 applies to all types of insurance contracts (life, non-life, direct insurance and reinsurance), regardless of type. The issuing company as well as certain guarantees and financial instruments with voluntary participation elements. The standard also regulates exceptions. The overall objective of IFRS 17 is to provide a more useful accounting model for insurance contracts that will be consistently used by insurers, as opposed to the requirements of IFRS 4, which are largely based on previous local accounting policies. IFRS 17 provides a comprehensive model for insurance contracts covering all relevant accounting aspects. The essence of IFRS 17 is a general model enriched with specific arrangements for contracts with direct participation features (variable fee approach) and a simplified approach (the premium allocation approach), particularly for short-term contracts. The Company is currently conducting an impact analysis which is an inherent part of the IFRS 17 project.

Method C
Generali Poisťovňa a.s. uses a more concise statement: The impact of the new standard on the financial statements is currently being assessed, while the impact of this standard on the financial statements is expected to be significant. The Company applies a temporary exemption and applies IFRS 9 together with IFRS 17 Insurance Contracts. IFRS 9 was endorsed by the European Union in November 2016.

3. AUDIT OF COMMERCIAL INSURANCE COMPANIES

Based on the published annual reports, audit firms were verified and verified by individual insurance companies. The following overview shows the audits of the 2018 financial statements.

Unfortunately, in the case of one insurance company, an audit report has not been published either in the register of accounts or on the insurance company's website, the information on the audit company is not disclosed.

NO.	INSURANCE COMPANY	AUDITING COMPANY
1.	AEGON Životná poisťovňa, a. s.	PWC
2.	Allianz – Slovenská poisťovňa, a. s.	PWC
3.	BNP Paribas Cardif Poisťovňa, a. s.	PWC
4.	ČSOB Poisťovňa, a. s.	PWC
5.	ERGO Poisťovňa, a. s.	KPMG
6.	Generali Poisťovňa, a. s.	EY
7.	KOMUNÁLNA poisťovňa, a. s. Vienna Insurance Group	KPMG
8.	KOOPERATIVA poisťovňa, a. s. Vienna Insurance Group	KPMG
9.	NN Životná poisťovňa, a. s.	KPMG
10.	NOVIS Insurance Company, NOVIS Versicherungsgesellschaft, NOVIS Compagnia di Assicurazioni, NOVIS Poisťovňa a.s.	
11.	Poštová poisťovňa, a. s .	KPMG
12.	Union poisťovňa, a. s.	PWC
14.	UNIQA poisťovňa, a. s.	PWC
15.	Wüstenrot poisťovňa, a. s.	KPMG

Audit of commercial insurance companies in Slovak republic

From a previous analysis of the notes, we have concluded that insurance companies are applying the standards related to insurance contracts in essentially three ways. In many cases the wording in the notes is almost word-to-word identical. In a more detailed analysis, we found that the reporting method is the same for those insurance companies that are audited by the same audit firm. However, this assumes that either commercial insurance companies have one template for making notes because the audit firm does not prepare financial statements. If it had done so, it would then have audited the financial statements itself, which would be directly contrary to the substance of the audit.

4. CONCLUSION

Through a detailed analysis of the notes, we have found that insurance companies seek to comply with the requirement that the financial statements provide a true and fair view of the entity. Although we have analysed only 15 notes from the financial statements of commercial insurance companies for the year 2018, it can basically be stated that they have used three methods of drawing up the accounts. At the same time, these groups almost correspond to the division according to which audit firm audited the 2018 accounts (Kareš and Kňažková, 2016). In any case, however, it can be stated that commercial insurance companies are responsibly preparing for the application of the new standards, which they declare in their financial statements.

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BIBLIOGRAPHY

Gambaro, A. M., Casalini, R., Fusai, G., Ghilarducci, A. (2019). *A market-consistent framework for the fair evaluation of insurance contracts under Solvency II.* Decisions in Economics and Finance, 1–31.

Kareš, L. – Kňažková, V.(2016) *Interpretation of the results of control of the organization providing assurance services.* p. 84–91, Vranov nad Dyjí, Czech Republic.

Kršeková, M. – Pakšiová, R. (2015) *Financial reporting on information about the financial position and financial performance in the financial statements of the public sector*. p. 136–145, Bratislava, Slovak Republic. Czech Republic.

Meluchová, J. – Mateášová, M. (2015) *The Ethical aspect of the business in insurance in the conditions of a globalized financial market.* p. 783–790 Ostrava, Czech Republic.

Petera, P. – Wagner, J. – Pakšiová, R. (2017) *Empirical study of approach to sustainability management and reporting in the Czech and Slovak Republic*, Prague, Czech Republic.

Šlosárová, A. Bednárová, B. (2015). *Analysis of measurement approaches in financial statements of selected industrial enterprises in the Slovak republic from perspective of users usefulness*. p. 1263–1273. Ostrava.

Tsukahara, M. – Nishiyama, K. – Nakamura, R. (2019). *Characteristics of Japanese Life Insurance Companies Disclosing Embedded Value.*

www.registeruz.sk
www.nbs.sk
zákon č. 431/2002 Z.z. o účtovníctve

CORPORATE ENVIRONMENTAL RESPONSIBILITY: ADVANTAGES, COSTS AND CONTRADICTIONS

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Abstract
This paper studies the environmental responsibility of companies, as part of Corporate Social Responsibility, and focuses on its costs and on some contradictions on the behaviour of some Companies highly engaged with environmental policies. In particular, we discuss the advantages of environmental compliance (better reputation and, indirectly, higher revenue) and the disadvantages (specific costs). The attention towards the need to protect and safeguard the environment has grown in the last decade. Nowadays, Companies are expected to consider this particular perspective and take appropriate measures in order to prevent the deterioration of the environment. Companies are not only expected to respect valid legal environmental rules, but in some cases the public expects that the Company takes additional responsibility. Many companies comply with these expectations, as said, also in order to increase the value of their reputation.
On the other side, compliance with environmental standards may create costs for companies. These costs would probably affect salaries paid to workers and prices paid by costumers and, finally, consumers. Hence, the protection of the environment may entail a trade-off with other important priorities. In addition, some companies are highly engaged with environmental policies, but still behave in ways which are not really ethical. We use two case studies to discuss this last point.

Keywords: *ethics, environment, corporate codes, effectiveness*

1. INTRODUCTION

This paper studies the raise of importance of the environmental responsibility, as part of Corporate Social Responsibility, of (Multi-National) Companies (Wisemann, 1982; Tilt, 2001; Ramus and Montiel, 2005; Ageron et al., 2012; Agan et.al. 2016). In particular, we focus also on the costs of environmental policies and on some ethically contradictory behaviours of some companies. The attention towards the Social Responsibility of Companies has been growing in the last decades (Russo and Fouts, 2017; Shou et;al., 2019). Companies are not any longer considered as being Organizations with a full legitimacy to concentrate on the maximization of profits and wealth and fully entitled to escape social/ethical responsibilities. Indeed, Companies are now considered as being entities which are socially-embedded and share a responsibility towards the Society they operate within (Dunning and Lundan, 2008; Bhattacharya et al, 2011; Diamond, 2011). This particular type of Responsibility encompasses also a certain responsibility towards the protection and the safeguard of the environment, intended as "the complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival" ("Definition of environment", n.d.). The awareness towards the need to protect and safeguard the environment dates back to some decades, at least to the UN Conference held in 1972. Nonetheless, the incorporation of the environmental responsibility among the set of expectations that the (Multi-National)

Company should comply with is more recent (Holtbrugge and Dogl, 2012). In the past, Companies were supposed to be entities legitimated to concentrate exclusively on an attempt to maximize their profit and wealth. They were not supposed to concentrate on social (environmental) issues. According to this view, it was eventually the State authority and the legislator which were expected to address social and environmental issues. However, the general orientation has evolved and nowadays Companies are also expected to directly address social and environmental issues, eventually going beyond the pure legal requirements. As a consequence, many companies have engaged in environmental-friendly activities, clean forms of production and have taken steps to reduce the degree of pollution generated by their activities. This attitude is appreciated by various segments of stakeholders and by the general public in general. Clearly, on this basis, companies have an interest in operating according to environmentally sustainable processes. Otherwise their reputation would suffer and the market demand of these companies' products would decrease.

On the other side, compliance following environmentally sustainable standards, eventually self-imposed going beyond the strict requirements of the law, is not costless (Rondinelli and Barry, 2000; The Costs of EU Environmental Policies to Business, 2005). Environmentally sustainable methods of operations may entail additional costs that the any Company would consider when preparing its own costs' budget (including salaries) and setting prices to charge to its customers. Hence, at the end, the costs of environmental-friendly business activities may be, at least in part, transferred to the rest of the society. This paper studies the issue and discusses two case-studies. These two case-studies suggest that environmental responsibility may be counter-balanced by other unethical behaviours, when the company attempts at reaching advantages through unfair means. This apparent ambivalent behaviour may be part of a strategy called "tokenism" (Kahane and Cavender, 2006). Consequently, environmental policies could be just a symbolic and very visible concession to that segment of the stakeholders demanding ethical responsibility from the company, while the costs of these particular policies could be (at least in part) offset through other less visible and far less ethical behaviours.

This paper studies the emergence of the importance of environmental responsibility, as part of the general area of Corporate Social Responsibility (first section), including the trade-off between environmentally friendly business operations and the necessity to keep costs and prices under control. The second session will discuss two case-studies. Discussion and references follow.

2. THE EMERGENCE OF THE IMPORTANCE OF CORPORATE ENVIRONMENTAL RESPONSIBILITY

The last decades have witnessed the emergence of a new vision of Companies and of their role within a Society. The Brandland Report on Environment (1987) on Sustainable Development has spurred a (for that time) innovative way to frame the relationship between the Company and the Environment. As said already, Companies are now seen as being more than just entities charged with the mere responsibility of satisfying their shareholders. Indeed, it has been a long time that the Power exercised by Companies on the definition of social policies has been recognized (Vernon, 1971). Large (Multi-National) Companies have a turnover close or even exceeding the budget of some national administration, are active worldwide and definitely concur to the determination of legislative rules, even eventually bordering illegality ("State Capture", Hellmann and Schankerman., 2000). Hence, the very ontological connotation of the concept of Company has been re-discussed and specific extra-business responsibilities have been given to Companies. Companies are, at least by some, not seen as pure economic agents any longer but rather as a functional part of a social organization. As a result, the very role of the Company within the Society has evolved. The Company has also been considered to be a "citizen" with responsibility towards the Society where it operates. According to this view, Companies should take responsibilities towards their workers, the society in general and, in particular, also towards the Environment. Therefore, Companies, especially large Multi-National Companies, become co-responsible for the safeguard, care and preservation of the environment.

Many companies have developed internal code to comply, or show compliance, with this relatively new type of social expectation. This, for example, is an excerpt from the internal codes of ElectroTerminal:

We will comply with environmental regulations and standards applicable to our operations to minimise environmental pollution and to contribute to environmental protection. Since 2006, we have been using an environmental management system according to ISO 14001. We also strive to continuously improve our energy efficiency by investing in sustainable technologies (e.g. our photovoltaic system) and eliminating wasteful use of energy (Electro Terminal, 2019).

Here below, indeed, is an excerpt from the internal code of the Erste Group:

"EG requires the Supplier to comply with all applicable legal environmental requirements and to demonstrate continual improvement of its environmental performance. Environmental Permits and reporting. The Supplier shall make sure that it obtains, keeps current, and follows the reporting guidelines of all the required environmental permits and registrations… Supplier shall document and implement a relevant environmental management system (based on international standards such as ISO 14001), designed to identify, control and mitigate significant environmental impacts…..The Supplier shall identify hazardous materials, chemicals and substances, and ensure their safe handling, movement, storage, recycling, reuse and disposal. All the applicable laws and regulations related to hazardous materials, chemicals and substances shall be strictly followed. The Supplier shall comply with material restrictions and product safety requirements set by applicable laws and regulations. The Supplier shall ensure that key employees are aware of and trained in product safety practices. Resource Consumption, Pollution Prevention and Waste minimisation. The Supplier shall optimise its consumption of natural resources, including energy and water. The Supplier shall implement and demonstrate sound measures to prevent pollution and shall minimise the generation of solid waste, wastewater and air emissions. Prior to discharge or disposal, the Supplier shall characterise and treat wastewater and solid waste appropriately and according to applicable laws and regulations" (Erste Group, 2019).

Visibly, there are Companies who develop detailed environmental policies. Some may do it because of a real and genuine commitment to environmental issues and sustainable development. Eventually, Companies developing environmental policies may be spontaneously and genuinely ready to take on not only environmental but also general social responsibility. On the other side, there may even be a pure business strategy behind this particular introduction of environmental standards. There are groups of people who declare that they would gladly be ready to spend additional sums of money if they were sure that the purchased goods are manufactured according to safe environmental standards. Companies may bet that compliance with environmental standards pays in terms of better reputation which can be transformed into higher economic results. On the other side, compliance with a safe environmental policy is not immune from costs. These costs may include, for example, as reported in "How much does basic environmental compliance cost?" (2014), *"1) the costs of audit, 2) the costs permit and approval fees, 3) site improvement and cost of business practices, 4) environmental monitoring, sampling and testing 5) personnel time and expenses, 6) additional professional fees*". These costs can amount to a significant level and can put constraints. Those Companies genuinely concerned with sustainable development may sacrifice part of their profits for the sake of the Idea. On the other side, those Companies complying (or declaring they do) with safe environmental policies because this can help them increasing their profits (through the effect of a better reputation) would need to consider advantages and disadvantages before taking a decision. We reasonably believe that Companies genuinely interested in environmental protection would behave ethically also in other cases than when only environmentally sustainable production is concerned (i.e. paying taxes, producing healthy products). The next section will discuss two case studies and try to shed some light into the ethical complexities that such decisions entail.

3. CASE STUDIES

The Case Study is a method used to shed light into specific phenomena happening in a circumscribed context (Denzin and Lincoln, 2000; De Vaus, 2002; Remenyi et al., 2015; Bryman, 2016). A case study should not be expected to generalize (as case studies are qualitative and not a quantitative method of research). Indeed, expecting generalization would reveal fundamental misunderstandings regarding the scope and aims of research based on a case-study. Actually, case studies are used as a basis for clarifying relationships emergent following a quantitatively – based study or, alternatively, can be used within a strategy of exploratory research perspectives; the emergent patterns can then be operationalised into statistical variables and used in further quantitative studies to help promote the generalization of results. Our paper makes use of case studies in view of highlighting the mechanisms of the decision-making processes, not to imply any form of generalization out of the very discussed cases. The information outlined in the case studies presented herein was obtained exclusively from open media reports. The sources used were not academic in nature. However, the information reported herein is considered to reflect the reasonable, extractive veracity of any reporting to the public as a whole.

We consider first the case of **IKEA**. IKEA is a well-known Swedish multi-national company producing non-assembled pieces of furniture. IKEA, after some accidents, has moved towards recognising the importance of environmentally sustainable production, eventually also influenced by the importance of environmental issues in Scandinavian societies.[85]

IKEA has adopted a rich set of environmental initiatives like, for example, replacing plastic bags with reusable bags, packaging only with recyclable material, minimizing the use of formaldehyde, using post-consumer waste and many others. In addition, IKEA responsibilizes suppliers as well. Indeed, IKEA expects that its suppliers respect environmental policies as well. IKEA operates a constant auditing activity of its supplier' compliance with environmental standards. These auditing activities, together with other environmentally-friendly operations, contribute to raise the costs of running the business. In addition to these initiatives, IKEA has, among other ones, also developed a wind farm so to increase the use of renewable energies. All these decisions have entailed an increase in operating costs due to investment in technologies, use of more expensive material, training of personnel and monitoring compliance internally and externally. Still, it seems that the controlling shareholder of the company are ready to sacrifice a part of their profit in the name of environmental safety. The image of the company benefits from it and it is even possible that this favourable reputation leads to a higher revenue because of a preferential attitude from

[85] Details about IKEA's environmental policies can be found at:
https://www.ikea.com/ms/en_JP/customer_service/faq/help/about_ikea/social_environment.html#1 and https://www.ikea.com/ms/en_JP/the_ikea_story/people_and_the_environment/index.html.

those buyers sensitive to the environmental *problematique*. The top executives of IKEA insists a lot on the importance of environmental responsibility for their company ("IKEA takes environmental friendly decision to…", 2018).

It may seem that the controlling shareholder of Ikea is ready to sacrifice part of the revenue in order to respect environmental standards. However, there are some remarks to formulate. As said, the authors of this paper believe that companies genuinely interested in ethical issues (like the environmental one) would hardly behave ethically under certain respects and unethically under other ones. IKEA is actually organised in a way that allows a considerable saving on taxes. The Company is finally reporting to an entity registered in the Netherlands, with a low tax burden in comparison with Swedish standards. It seems that IKEA exploits all the possible legal loopholes which allow Multi-National Companies to operate legally and avoiding paying reasonable taxes on their profits. These loopholes and mechanisms are well described in the literature (Shakson, 2011; Podda and Neal, 2019). Some large Multi-National Companies operate all around the world choosing organisational structures that allow to minimise the amount of taxes they pay to Governments. A lower income for the Government means, *ceteris paribus*, less resources for paying pensions, building hospitals, schools and eventually implementing safe environmental policies. The Multi-National Company may donate money to charities and engage in costly environmental policies. However, the costs of these policies are transferred to the general public through a mechanism of tax-avoidance.

One may even argue that IKEA is acting (presumably) legally within the framework on existing Tax Laws and Laws on the Right of Establishment of Companies. Hence, the blame should be put on those governmental authorities of various countries which should eventually have the responsibility of changing existing national and international laws in the area. The very Company benefiting from existing loopholes would not itself be guilty of anything, as it has acted legally. However, this argument would be missing some important points. The first is that the whole foundations underpinning Corporate Social Responsibility are based on the idea according to which Companies should do more than just limiting themselves to respect existing laws. Indeed, Companies should be responsible also regarding the ethicality of their own behaviour. One cannot state that those Companies behaving legally but not ethically are immune from blame without re-questioning the whole edifice of Corporate Social Responsibility. The problem of Companies (i.e. Google) minimizing their taxes through exploitation of existing legal loopholes is precisely one of the most important ethical issues in the world of International Business (Kato and Okoshi, 2019). Hence, there is a ground to question the behaviour of IKEA and, on the basis of the idea according to which Companies genuinely ethical do not cherry pick when being so, there is a ground for questioning the genuineness of the environmental commitment of IKEA as well. The second point is that there is already a significant discussion of the role of Multi-National Companies as agents exploiting their strength exactly in order not just to influence but exactly to determine the choices of those public officials responsible for issuing laws (Johnson, 2005; Shakson, 2011). Hence those Multi-National Companies benefiting from the possibility of exploiting the legality of certain tax optimisation strategies are actually part of the system which (co) determines the legality of these very strategies.

Johnson and Johnson the protection of the environment and the sustainability of business operations is also a central part of the Credo of Johnson and Johnson. The use of water, waste, energies are strictly regulated internally. The use of solar energies is encouraged and practised. As reported in the official website of the company:

"We are committed to operating responsibly and we seek to reduce adverse environmental impacts from our operations, products, and services. To manage our environmental risks, we pursue a path of continual improvement—investigating, assessing,

understanding, and improving environmental aspects and impacts using robust management systems. We educate our employees, our suppliers, our customers, and other interested parties about our efforts and expectations in this area" ("Environment, Health and Safety Policy", 2016).

The Company expects that also suppliers with respect of the environment ("Case study: How Johnson & Johnson …", 2018). Johnson and Johnson invests a considerable amount of resources in studying the environmental impact of its business operations, measuring it, managing and changing it (ibid). The company also monitors and audits the various activities in view of complying with its own environmental policy. It also organises and prepares conferences and reports for assessing the success of its own policy and developing them even further. The Company has developed ambitious targets, like, for example, reducing absolute carbon emissions 20% by 2020 and 80% by 2050 and producing/procuring 20% of electricity from clean/renewable sources by 2020 and aspire to power all of our facilities with renewable energy by 2050 (ibid.).

The previous paragraphs suggest that the Company is seriously engaged in the protection and safeguard of the environment and is ready to bear the costs that any really enforced environmental policy entails. On the other side, following the same logic proposed when discussing the case of IKEA, there are some shadows regarding the genuineness of the ethicality of the behaviour of Johnson and Johnson. Some few examples of a long list are provided here. The Company has been recalling specific products from the market on a regular basis since (at least) 1982. The reason for recalling the products is their unhealthy nature and the dangers that consumption would pose. Furthermore, in 2012, the Company has reached an extra-judicial settlement with shareholders because of many allegations of improper and illicit behaviour, including bribing foreign officials and hiding the dangers that certain products could create. The Company has also been fined for violation of the Foreign Corrupt Practice Act (still bribing foreign officials) and has more recently settled for frauds on Consumers.

Again, one may argue that occasional (major) legal problems may be unavoidable considering the volumes of sales of the Company and its worldwide exposure. The Owners of Johnson and Johnson may be not morally responsible for the behaviour of its managers, because of the Principal-Agent Problem, namely the limited capacity of the very Company' Owners to control the behaviour of its managers. On the other side, this paper questions the accidental nature of these episodes, in view of their frequency and of the amount of the monetary sums involved. Like in the case of Ikea, a sound and costly environmental policy is unfortunately accompanied by unethical behaviours which counterbalance the CSR-friendly spirit that the existence of a detailed environmental policy would suggest. It may be that the costs of environmentally sustainable operations are offset through other production/marketing strategies which are, indeed, unethical.

4. DISCUSSION AND CONCLUSION

The paper suggests that developing (and complying with) environmental policies can be a good strategy, even when the Company is not genuinely interested in Sustainable Development. This because the Company will gain in terms of reputation and, hopefully, increase its sales. However, environmentally sustainable operations are costly. In particular, the case studies show how some companies which are actively engaged in the protection and safeguard of the environment and have developed specific internal policies, in reality find some ethically questionable ways to save on costs. This may happen exploiting the legal international loopholes on taxes and locating the headquarter of the company in countries with a favourable tax regime (IKEA) or saving on production costs and inserting dangerous products into the market. These practices may suggest that certain Companies behave opportunistically. They invest resources in visible environmental projects and capture a certain benevolence from the public. Indeed, on the other side, the same Companies find other less visible and less ethical ways, with a lower immediate media impact, to save on costs. This could be part of a precise strategy, aiming at maximising the advantages of a sound reputation while indirectly recovering the costs of a safe environmental policy.

BIBILOGRAPHY

Again, Y , Fatih, M. and Acikgoz, A. (2016), "The relationships between corporate social responsibility, environmental supplier development, and firm performance", *Journal of Cleaner Production*, 112, 3, 1872–1881.

Ageron, B., Gunasekaran, A. and Spalanzani, A. (2012), "Sustainable supply management: An empirical study", *International Journal Production Economics*, 140, 1, 168-182.

Bhattacharya, CB, Sankar, S, and Korschun, D. (2011), *Leveraging Corporate Social Responsibility: The Stakeholder Route to Business and Social Value*. Cambridge University Press, Cambridge.

Bryman, A. (2016), *Social Research Methods*, Oxford University Press, Oxford.

Case study: How Johnson & Johnson promotes environmental and social responsibility throughout its supply chain – Sustain Case – CSR Magazine. (2018). Retrieved 20 October 2019, from https://sustaincase.com/case-study-how-johnson-johnson-promotes-environmental-and-social-responsibility-throughout-its-supply-chain/

De Vaus, D. (2002), *Social Surveys*, SAGE publications, London.

Definition of environment. Retrieved 20 October 2019, from https://www.merriam-webster.com/dictionary/environment

Denzin, N.K. and Lincoln, Y.S. (2000), "Introduction: the discipline and practice of qualitative research", in *Handbook of QualitativeResearch*, ed. Denzin, N. K. and Lincoln, Y.S., Sage, London, pp.1–28.

Diamond, J. (2011), *Big businesses and the environment: different conditions, different outcomes. Collapse: how societies choose to fail or survive:* Penguin.

Dunning, J.H. and Lundan, S.M. (2008), *Multinational Enterprises and the Global Economy*, Edward Elgar, Cheltenham, UK, Northampton, USA.

Electro Terminal. (2019). *Code of Conduct Corporate Social & Environmental Responsibility*. Retrieved from https://www.electroterminal.com/uploads/user_upload/Company/ET-Code_of_Conduct__Kunden__EN.pdf

Environment, Health and Safety Policy. (2016). Retrieved 20 October 2019, from https://www.jnj.com/about-jnj/company-statements/johnson-johnson-environment-health-and-safety-policy

Erste Group. (2019). *EG Ethical and Environmental Code of Conduct for Suppliers of Goods and Services*. Retrieved from https://www.erstegroup.com/content/dam/at/eh/www_erstegroup_com/de/%C3%9Cber%20uns/Erste%20Group%20Procurement/egp-code-of-conduct.pdf

FAQ – Social & Environmental Responsibility. (2012). Retrieved 20 October 2019, from https://www.ikea.com/ms/en_JP/customer_service/faq/help/about_ikea/social_environment.html#1

Hellman, J. and Schankerman, M. 2000, "Intervention, corruption and capture: the nexus between enterprises and the state", Economics of Transition, 8,3, 545–576.

Holtbruegge, D. and Dogl, C., (2012), "How international is corporate environmental responsibility? A literature review", Journal of International Management, 18, 2, 180–195.

How much does basic environmental compliance cost?. (2014). Retrieved 20 October 2019, from https://www.rmagreen.com/how-much-does-environmental-compliance-cost

IKEA takes environmental friendly decision to use only renewable and recycled materials by 2030. (2018). Retrieved 20 October 2019, from https://www.connectedtoindia.com/ikea-takes-environmental-friendly-decision-to-use-only-renewable-and-recycled-materials-by-2030-4162.html

Johnston, M. (2005), *Syndromes of Corruption*, Cambridge University Press, Cambridge.

Kahane, H. and Cavender, N. (2006), *The use of Reason in Everyday life*, Thomson and Wadsworth.

Kato, H and Okoshi, H. (2019), "Production location of multinational firms under transfer pricing: the impact of the arm's length principle", International Tax and Public Finance, 26,4, 835–871.

Kaufmann, D. and Vicente, P. (2005), "Legal Corruption", Economics and Politics.

People and the environment. (2010). Retrieved 20 October 2019, from https://www.ikea.com/ms/en_JP/the_ikea_story/people_and_the_environment/index.html

Podda, P.A. and Neal (2019), "Corporate Internal Codes to prevent bribing and similar unethical behaviour: does it really work?" Conference *IFRS – GLOBAL RULES AND LOCAL USE*, Anglo American University and Metropolitan University Prague, Prague, 2019.

Ramus, C.A. and Montiel, I. (2015), "When Are Corporate Environmental Policies a Form of Greenwashing*?", Business and Society, 44, 4,* 377–414.

Remenyi, D., Williams, B., Money, A., and Swartz, E. (2015), *Doing Research in Business Management*, SAGE Publications, ThousandsOaks.

Rondinelli, D.A. and Barry. M.A., (2000), "Corporate Environmental Management and Public Policy: bridging the gap", The American Behavioral Scientist 44, 2.

Russo, M.V. and Fouts, P.A., (1998), "A Resource-Based Perspective On Corporate Environmental Performance And Profitability", European Management Journal, 16, 3, 284–296.

Shaxson, N. (2011), *Treasure Islands: Tax Havens and the Men who Stole the World*, The Bodley Head.

Shou, Y. Shao, J.; Kee-hung, L. (2019), "The impact of sustainability and operations orientations on sustainable supply management and the triple bottom line", Journal of Cleaner Production, 240, forthcoming.

The Costs of EU Environmental Policies to Business. (2005). Retrieved 20 October 2019, from https://www.ecologic.eu/1421

Tilt, C.A., (2001), "The content and disclosure of Australian corporate environmental policies", Accounting, Organizations and Society, 7, 1, 53–63.

Vernon, R. (1971), *Sovereignty at Bay: The Multinational Spread of U.S. Enterprises*, Basic Books, New York.

Wisemann, J. (1982), "An evaluation of environmental disclosures made in corporate annual reports", Accounting Organizations and Society, 7, 1, 53–63.

World Commission on Environment and Development, (1987), Brandland Report on Environment, United Nations, New York.

SUMMARY AND FINAL COMMENTS

The seventh in the now regular annual series of international scientific conferences under the name of „IFRS: Global Rules for Local Use“ took place at the Metropolitan University of Prague on 10–11 October 2019.

The slight amendment to the title „BEYOND THE NUMBERS“ predicted this year's focus of the conference – reflecting on the transparency of financial statements between Europe and rest of the world, the impact of political pressures on accounting standards, and development of ICT in financial sector. Recognized key note speakers from UK, France and Greece enriched the series of plenary sessions. Special thanks go to professor David Alexander for his explanation of the difference between public and politicians‘ interest, to professor Eleftherios Thalassinos for stressing the importance of digitalization in banking, to professor Lubor Lacina for outlining the future of euro, to professor Luboš Smutka for predicting the impacts of sanctions between EU and Russia, to professor Anne Jeny for her persuasive speech about fair value measurement, professor Jan Frait for an interesting connection between IFRS9 and cyclical risks in banking sector, and also to Aleš Králík LL.M. for inside views on the financial reporting standards in Czech capital markets.

Big thanks also go to the participants of the parallel sessions for their working paper presentations. It has been a great contribution of this year's conference to emphasise on feedback and discussion, from and directed by the chairpersons of the various sections. Nine Czech, Slovak and Romanian PhD students were encouraged to give their presentations in order to encourage them continuing their future research activities. Students had the chance to experience the review process and present their ideas to academics and experts attending the conference.

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We are very glad that the co-operation of three universities – Metropolitan University Prague, Anglo-American University and University of Warsaw – was successful and that we can look forward to further developments in future years, so as to be ever more useful to the up-coming generations of academic scholars and practitioners.

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