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ACTA VŠFS

Economic Studies and Analyses
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SCIENTIFIC ARTICLES VĚDECKÉ STATĚ

• **Roger OWUSU-BOAFO, Ernest OBENG,
Jone Yeboah ADDO:**

The Relationship Between Credit Risk Management
and the Profitability of Banks in Ghana
Vztahy mezi řízením úvěrových rizik
a rentabilitou bank v Ghaně

• **Maria Natasha JOSTAN, Ria Sandra ALIMBUDIONO:**

Student Academic Studies,
Lifestyle and Prospect as Future Accountant
Akademické studium,
životní styl a vyhledávání budoucích účetních

• **Eva LAJTKEPOVÁ:**

Distribution of Wages
in the Regions of the Czech Republic
Distribuce mezd v krajích České republiky



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Editorial

Editorial

RADIM VALENČÍK

Dear readers,

The second issue of ACTA VŠFS this year contains articles by authors from Ghana, China, Indonesia and the Czech Republic. This time the articles are characterized by considerable diversity. When preparing the issue, we emphasized the link to previously published materials and past issues of the journal, in order to maintain continuity and provide readers with a more comprehensive treatment of topics falling within the profile of our journal. The published articles can thus contribute to a broader knowledge of private and public finances and open up space for follow-up research with their conclusions, which are mainly of an analytical, application-oriented nature.

We begin with the article *The Relationship between Credit Risk Management and the Profitability of Banks in Ghana* by Roger Owusu-Boafo (Ghana), Ernest Obeng (China), Jone Yeboah Addo (Ghana), which uses adequate analytical methods to analyze the relationship between credit risk and profitability of eight (from total 29) a bank in Ghana. The multi-criteria analysis showed a positive and significant relationship between credit risk and their profitability of banks and at the same time that the size and ratio of indebtedness are factors that affect profitability.

The following is an article *Student Academic Studies, Lifestyle and Prospect as Future Accountant* by Maria Natasha Jostan (Indonesia) and Ria Sandra Alimbudiono (Indonesia). It deals with the analysis of the lifestyle of accounting students in terms of how their preconditions for the future profession of accountant are manifested. Although the article seems to be devoted to a partial issue and is based on a relatively small number of analyzed persons, it contains a number of inventions and is based on hypotheses that very well describe the specifics of the accounting profession. The perceived and discovered relationships between lifestyle and way of thinking are particularly stimulating.

The third article *Distribution of Wages in the Regions of the Czech Republic* by Eva Lajtkepová (Czech Republic) deals with the varied dynamics of wage growth in the regions between 2011 and 2018. Based on cluster analysis, the regions were divided into four groups and the typical factors determining wage levels were analysed: the economic level (measured as GDP per capita), the unemployment rate and the level of education (the share of the population with basic and university education). The results of the correlation analysis showed a moderate direct relationship between the economic level and the wages of the 9th decile, as well as a moderate to strong indirect dependence between the low wages of the 1st decile and the unemployment rate; the results of the correlation analysis between the variables of the level of education and wages were not very conclusive.

The fourth article *New in the Czech Civil Code – Rules on Family Enterprise* by Karel Marek (Czech Republic) and Martin Janků (Czech Republic) deals with legal and economic aspects of family enterprises. In 2012, the New Czech Civil Code, Act. No 89/2012 Coll., introduced the institute of the family enterprise as completely new notion in the Czech Civil law. The present paper aims to analyse the key rules of this new legal regulation, focusing on significant aspects of the institute in the context of a business law and a family law, as well as to highlight the potential regulation itself.

The fifth article *Scenario Analysis Approach for Operational Risk in Insurance Companies* by Michal Vyskočil (Czech Republic) deals with the possibility of calculating capital in insurance companies allocated to operational risk. It proposes a model that can be used in insurance companies to calculate the required capital of operational risk. To identify the influence of three main parameters (typical impact, worst case impact and frequency) needed to build a model to calculate 99.5% VaR using Monte Carlo Simulation, for the calculation were used a real scenario and data from a small Central and Eastern European insurance company.

The sixth main contributions are concluded by the article *Predatory and Alternative Hedonism – Better Later than Now?* by Ondřej Roubal (Czech Republic) and Petr Wawrosz (Czech Republic). It deals with the economic aspects of the atmosphere of unrestricted consumption, deliberately supported by market mechanisms. Value patterns of the hedonistic lifestyle are defined by motivation of excitement, sensory pleasures, delight, self-satisfaction, intense need for emotional stimulation, current orientation or an accelerated pace of life. The life philosophies of independence, non-determination and “inner orientation” logically lead to the application of such life strategies that can support and develop this attitude to life. However, the consumer-oriented hedonistic lifestyle is met with frequent social, environmental and ethical criticism. There is room for discussion on an alternative model of hedonism based on a more responsible and prudent approach to consumption and voluntary modesty, which will ultimately increase the feeling of personal happiness and general life satisfaction. Alternative hedonism is further compared with the ideas of the economy of productive consumption and with the development of the financial market.

In the section “From scientific life”, we have included information on a significant step in the use of the concept based on the promotion of the productive services’ sector as a future dominant economic sector, as assumed by the economics of productive consumption. This is the publication of the article “*The Fourth Industrial Revolution, or a Change Comparable to the Industrial Revolution?*” written by the authors Pavel Sedláček and Radim Valenčík in the August issue of the Social Policy Forum dedicated to Industry 4.0, which is a professional peer-reviewed journal published by the VÚPSV (Research Institute for Labour and Social Affairs). This conceptual material based on six monographs gradually prepared by a research team working at VŠFS during years 2014–2020 falls into the hands of a very wide range of people who deal with the social policy and the concept of social policy in practice (including government officials, trade unions, legislatures, etc.).

Doc. Radim Valenčík, CSc.

Executive Editor

Vážení čtenáři,

druhé letošní číslo časopisu ACTA VŠFS obsahuje články autorů z Ghany, Číny, Indonésie a České republiky. Články se tentokrát vyznačují značnou různorodostí. Při přípravě čísla jsme kladli důraz na návaznost na dříve publikované materiály a minulá čísla časopisu, abychom zachovali kontinuitu a pro čtenáře poskytli komplexnější zpracování témat spadajících do profilu našeho časopisu. Publikované články tak mohou přispět k širšímu poznání soukromých i veřejných financí a otevírají svými závěry, které jsou převážně analytického, aplikačně zaměřeného charakteru, prostor pro navazující výzkum.

Začínáme článkem *Vztahy mezi řízením úvěrových rizik a rentabilitou bank v Ghaně* autorů Rogera Owusu-Boafo (Ghana), Ernesta Obenga (Čína) a Jone Yeboah Addo (Ghana), který s využitím adekvátních analytických metod analyzuje vztah mezi úvěrovým rizikem a ziskovostí osmi (z celkových 29) bank v Ghaně. Vícekriteriální analýza prokázala pozitivní a významný vztah mezi úvěrovým rizikem a ziskovostí bank a současně i to, že velikost a poměr zadlužení jsou faktory, které ziskovost ovlivňují.

Následuje článek *Akademické studium, životní styl a vyhledávání budoucích účetních* autorů Maria Natasha Jostan (Indonésie) a Ria Sandra Alimbudiono (Indonésie). Zabývá se analýzou životního stylu studentů účetnictví z hlediska toho, jak se projevují jejich předpoklady pro budoucí profesi účetního. I když je článek zdánlivě věnován dílčí problematice a vychází z poměrně malého počtu analyzovaných osob, obsahuje řadu invencí a opírá se i o hypotézy, které velmi dobře vystihují specifika profese účetního. Zvláště podnětné jsou předpokládané a zjištěné vztahy mezi stylem života a způsobem myšlení.

Třetím příspěvkem je článek *Distribuce mezd v krajích České republiky* autora Evy Lajtkepové (Česká republika). Zabývá se různou dynamikou růstu mezd v krajích v letech 2011–2018. Pomocí shlukové analýzy byly rozlišeny čtyři skupiny krajů. V nich byly analyzovány typické faktory utváření mzdové hladiny: ekonomická úroveň (měřená jako HDP/obyv.), míra nezaměstnanosti a vzdělanostní úroveň (podíl obyvatel se základním a s vysokoškolským vzděláním). Výsledky korelační analýzy ukázaly středně silnou přímou závislost mezi ekonomickou úrovní a mzdami 9. decilu, středně silnou až silnou nepřímou závislost mezi nízkými mzdami 1. decilu a mírou nezaměstnanosti; výsledky korelační analýzy mezi proměnnými vzdělanostní úrovně a mzdami příliš průkazné nebyly.

Čtvrtý článek *Novinka v českém občanském zákoníku – pravidla pro rodinné podnikání* autorů Karla Marka (Česká republika) a Martina Janků (Česká republika) se zabývá právními a ekonomickými aspekty rodinných podniků. V roce 2012 byl přijat nový občanský zákoník, zákon č. 89/2012 Sb. Zavedl institut rodinného podnikání jako zcela nový pojem v českém občanském právu. Příspěvek si klade za cíl analyzovat klíčová pravidla této nové právní úpravy se zaměřením na významné aspekty institutu v kontextu obchodního práva a rodinného práva, a návazně prezentovat její možné zdokonalení.

Pátý článek *Analýza scénářů operačního rizika v pojišťovnách* autora Michala Vyskočila (Česká republika) pojednává o možnosti výpočtu kapitálu v pojišťovnách alokovaného na operační riziko. Navrhuje model, který lze v pojišťovnách použít pro výpočet

požadovaného kapitálu operačního rizika. Pro výpočet byl použit reálný scénář a data od malé pojišťovny z oblasti střední a východní Evropy, aby byl identifikován vliv tří hlavních parametrů (typický dopad, dopad nejhoršího případu a frekvence) potřebných pro sestavení modelu pro výpočet 99,5% VaR pomocí Simulace Monte Carlo.

Hlavní příspěvky uzavírá článek *Predátorský a alternativní hédonismus – lepší později než teď?* autorů Ondřeje Roubala (Česká republika) a Petra Wawrosze (Česká republika). Zabývá se ekonomickými aspekty atmosféry neomezeného konzumu, záměrně podporovaného tržními mechanismy. Hodnotové vzorce hédonistického životního stylu jsou definovány motivací vzrušením, smyslovými potěšením, rozkoší, spokojeností se sebou, intenzivní potřebou emočních stimulací, současnou orientací nebo zrychleným životním tempem. Životní filozofie nezávislosti, nedeterminace a „vnitřní orientace“ logicky vede k aplikaci takových životních strategií, které mohou tento postoj k životu podporovat a rozvíjet. Hédonistický životní styl orientovaný na spotřebitelské hodnoty se však setkává s častou sociální, ekologickou a etickou kritikou. Existuje prostor pro diskusi týkající se alternativního modelu hédonismu založeného na odpovědnějším a uvážlivějším přístupu ke spotřebě a dobrovolné skromnosti, který nakonec zvýší pocit osobního štěstí a všeobecné spokojenosti se životem. Alternativní hédonismus je dále srovnáván s představami ekonomiky produktivní spotřeby a s rozvojem finančního trhu.

Do rubriky *Z vědeckého života* jsme zařadili informaci o významném kroku v oblasti využití koncepce vycházející z prosazování odvětví produktivních služeb jako budoucího dominantního ekonomického sektoru, jak to předpokládá ekonomie produktivní spotřeby. Jedná se o uveřejnění článku *Čtvrtá průmyslová revoluce, nebo změna srovnatelná s průmyslovou revolucí?* autorů Pavla Sedláčka a Radima Valenčíka v srpnovém čísle časopisu *Fórum sociální politiky* věnovaném Průmyslu 4.0, což je odborný recenzovaný časopis vydávaný VÚPSV (tj. při Ministerstvu práce a sociálních věcí). Tímto se dostává do rukou velmi širokému okruhu osob, které se v praxi zabývají sociální politikou i koncepcí sociální politiky (včetně odborných pracovníků státní správy, odborů, zákonodárných sborů apod.), koncepční materiál, který vychází z šesti monografií postupně zpracovaných výzkumným týmem působícím na VŠFS v letech 2014 až 2020.

doc. Radim Valenčík, CSc.

Výkonný redaktor

The Relationship Between Credit Risk Management and the Profitability of Banks in Ghana

Vztahy mezi řízením úvěrových rizik a rentabilitou bank v Ghaně

ROGER OWUSU-BOAFO

ERNEST OBENG

JONE YEBOAH ADDO

Abstract

Banks are faced with several types of risks. Prominent among these risks is credit risk. Profitability is key to the growth and survival of banks. This study therefore seeks to investigate the relationship that exists between credit risk and the profitability of banks in Ghana. To achieve this objective, eight banks were sampled out of a population of twenty-nine (29) banks over a ten (10) year period from 2005 to 2014. A panel regression was run using Return on assets (dependent variable) as a proxy for profitability while non-performing loan ratio and net charge off to total loans and advances (independent variables) were used as proxies for credit risk. Other variables such as size, growth and debt ratio which influence profitability were controlled for in the model. Secondary data comprising annual reports of the selected banks was used for the study. The study established a positive and significant relationship between credit risk and the profitability of banks in Ghana. This implies that banks in Ghana enjoy profit in the midst of all the credit risk. The study also confirmed the findings of previous studies that, size and debt ratio are factors that influence profitability as there was a positive and significant relationship with profitability.

Keywords

credit risk, profitability, return on asset, non-performing loans, debt ratio

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Abstrakt

Banky čelí několika druhům rizik. Mezi těmito riziky je významné úvěrové riziko. Rentabilita je klíčem k růstu a přežití bank. Tato studie se proto snaží prozkoumat vztah, který existuje mezi úvěrovým rizikem a rentabilitou bank v Ghaně. K dosažení tohoto cíle bylo vybráno osm bank z populace dvaceti devíti bank v období deseti let od roku 2005 do roku 2014. Byla provedena panelová regrese s využitím návratnosti aktiv (závislá proměnná) a jako zástupce proxy úvěrového rizika byla použita rentabilita, zatímco poměr špatných úvěrů a čistého odúčtování celkových půjček a záloh byla nezávislá proměnná. V modelu

byly kontrolovány další proměnné, jako je velikost, růst a poměr dluhu, které ovlivňují rentabilitu. Pro studii byla použita sekundární data z výročních zpráv vybraných bank. Studie prokázala pozitivní a významný vztah mezi úvěrovým rizikem a rentabilitou bank v Ghaně. To znamená, že banky v Ghaně používají zisk jako základ posouzení veškerého úvěrového rizika. Studie také potvrdila zjištění předchozích zkoumání, že velikost a poměr dluhu jsou faktory, které ovlivňují rentabilitu, protože mají k rentabilitě pozitivní a významný vztah.

Klíčová slova

úvěrové riziko, rentabilita, návratnost aktiv, nesplácené půjčky, poměr dluhu

1 Introduction

Individuals (Households), Businesses, and Governments access credit to enable them undertake purchases, investments and other spending. Credit creation is therefore important for the economic activities of players in the economy. Banks are among the financial institutions that facilitate access to credit through the process of accepting deposits from surplus units and transforming those deposits into credit (loans) for deficit units. This intermediary role played by Banks exposes them to several types of risks, prominent among them is credit risk.

A bank may be defined on three bases: 1. Economic function basis, 2. Services rendering basis 3. Legal basis. In accordance with their economic functions, banks accept deposits from savers and transform those deposits into credit for borrowers. Banks also provide services such as current accounts, savings account, demand deposits, underwriting, insurance, financial planning, leasing and many others. On a legal basis, a bank is a corporate body with the license to operate a banking business, that is, they accept deposits, make loans or operate any other business or activity that may be authorized by the Bank of Ghana (Banking Act 2004).

The types of banks operating in Ghana include but are not limited to the following: Commercial Banks, Investment Banks, Savings Banks, Community Banks, Universal Banks and the likes. Banks play an important role in the economy through the provision of the various services including facilitating financial intermediation by accepting deposits from surplus units and translating same into credit for deposit units and undertaking payments of goods and services on behalf of their customers. Banks also pay debts for their customers through the offering of lines of credit when such customers are not able to pay. They keep the valuables of customers as well. Banks also serve as a platform where government seeks to regulate the growth of the economy through its policy. Banks therefore play a critical role in the economy hence their successes and survival will be inured to the benefit of not only the shareholders or owners, but also to the economy as a whole, hence a study on banks is necessary.

Banks are faced with several risks in the course of business which they need to deal with or manage in order to remain in business. These include interest rate risks, liquidity risks,

credit risks, market risks, operational risks and the likes but prominent among these risks is the credit risk. The management of this risk is important because most banks earn a greater portion of their income from the loans they give out.

Credit risk is the risk of default of a debt obligation. That is, the risk that a loss will occur when a borrower does not repay the principal, interest or both, on a loan within the specified time and terms of repayment.

Based on the role banks play in the development of the economy, that is making credit available to deficit units and accepting deposits from surplus units, making payments, facilitating the circulation of money in the economy, among others, credit risk management has become a topic of interest for many researchers.

Also, the subject matter of credit risk caught the attention of many researchers following the economic downturn that the world experienced between the periods of 2007 to 2009, that is, the credit crunch. There is therefore the need for further research to establish the relationship between credit risk management and profitability, so that the necessary attention will be given to credit risk management. Many studies have been conducted across the world which has either established a positive or negative relationship between credit risk management and the profitability of banks. Bourke (1989) established a positive relationship between credit risk and the profitability of 12 European, North America, and Australian Banks. In their study, Abiola & Olausi (2014) found, that credit risk impacted positively on the profitability of banks in Nigeria. Kithinji (2010) found a positive relationship between credit risk management and profitability of banks in Kenya. Boahene, Dasah & Agyei (2012), in their study on credit risk and profitability of selected Banks in Ghana, established a positive and significant relationship between credit risk and profitability. Whereas the studies above have all established a positive relationship, others have also established a negative relationship between credit risk management and profitability. Bakaeva, Hosna, Ara & Sun (2009) in their study found that there exists a negative relationship between credit risk management and profitability of commercial banks in Sweden. Ruziqa (2013), in his study in Indonesia, found that credit risk is negatively related to profitability. Kolapo, Ayeni & Oke (2012) also established a negative relationship between credit risk management and profitability of Nigerian Banks.

From the above, it can be deduced that the debate on the relationship that exists between credit risk management and profitability is inconclusive, hence there is the need for further research to find out what relationship exists between credit risk management and profitability of banks in Ghana. Although some work has been done on this subject matter in Europe and some parts of Africa, not much has been done in Ghana; hence a further study is recommended.

The primary objective of this study is to ascertain the relationship between credit risk management and profitability of commercial banks in Ghana. Given the importance of Credit Risk Management to the survival and stability of Commercial Banks, this study will provide adequate information to stakeholders of Commercial Banks and also contribute to literature on this subject matter.

1.1 Review of Related Literature

Businesses and for that matter banks are faced with uncertainties regarding their decisions and actions in their day to day operations. For instance, banks may have to decide whether to invest deposits in securities or give them out as loans to their customers, whether to open a new branch or not and the likes, and the outcomes of these decisions may not be certain. These results in risk to the Banks as the projected outcome may either deviate from projections or be obtained as projected. Santomero (1995) documents that risk in the context of banking is the probability that an outcome of a decision or action may lead to the loss of earnings or capital, an imposition of constraints to achieve a set objectives or possible impacts on a bank's operations. Froot, Cresswell & Johnson (1993) also posit that risk in banking is the reduction in a firm's value due to changes in the business environment.

1.2 Risk in Banks

Generally, risk can be divided into six types: Credit risk, Market risk, Liquidity risk, Operational Risk, Legal risk and Reputational risk (Koch & MacDonald, 2009). Once the activity of a counter party is involved, factors such as the size, volume and type of the business activity may determine the level of such risks, which has the effect of influencing the market value, profitability and thus the value of the firm.

Nicholl (2007) documents that market risk is the possibility or probability of a decrease or reduction in the value of an asset as a result of changes in market variables such as prices, exchange rates and interest rates. Santomero (1997) also posit that market risk cannot be totally diversified; hence it is also called non-diversifiable or systematic risk. It however can be hedged to reduce its impact on a portfolio.

Liquidity risk is the risk of inadequate funds, or marketable assets to meet immediate and future cash obligations to counterparty and on time (Smith, 1985). Such a situation can be described as a funding crisis as a bank or financial institution faced with liquidity risk may not have sufficient funds to meet its loan requests, its interest on deposits, the salaries and wages of workers, and to undertake investments and the likes.

Operational risk is associated with the challenges of accurately processing, settling and making delivery on trade in exchange of cash (Santomero, 1997). Stewart (2007) is also of the view that operational risk may also arise from costs borne out of transactions such as refusal or failure to meet regulatory requirements, untimely collections and failure to honour settlements.

Legal risk relates to financial contracts and is separated from the legal implication of credit, counter-party and operational risk (Santomero, 1997). Transactions that were properly entered into and were well established run the risk of being abolished as a result of new regulations, court opinions and legislations, among others. Violations of the laws and regulations, perpetration of fraud by a bank's employees or management could also pose legal risk to a bank or financial institution.

Reputational risk involves the negative opinions from customers and other stakeholders about a bank or financial institution which has the tendency of affecting the profit or value of the institution (Protiviti, 2013). It demonstrates a decrease in value in an institution's brand, or a lack of ability to persuade potential customers to patronize the firm's products or services. Reputational risk leads to lost sales.

Credit Risk is by far one of the greatest risks financial institutions face in their operations (Boffey & Robson, 2007). It is the probability that counter-party will default in the principal or interest owed and hence fails to repay debts owed on a timely basis (Koch & Macdonald, 2000). Naomi (2011) opine that it is the likelihood of variation in the net income or profit of a bank or financial institution resulting from the non-payment or delay in payment of credit advanced to its customers. Choudhry (2011) also opined that apart from defaults in the loans issued to borrowers, credit risk may also result from different activities banks undertake, such as losses emanating from derivative activities, a downgrade in credit rating by rating agencies, as well as investment in debt-to-high quality customers whose risk profile has reduced. The real value of a loss or risk on credit is dependent on the value and condition of the collateral pledged in respect of the security advanced. Where the collateral is retrievable, the percentage of risk on default is less. As cited in Afriyie & Akotey (2012), a bank may have a high level of credit risk, inadequate institutional capacity, inefficient credit guidelines, an inefficient board of directors, low capital adequacy ratios and liquidity, compulsory quota-lending resulting from government policies and interference and inadequate and improper supervision by the central bank. As this study concentrates on the relationship between credit risk management and profitability, an effective system of credit risk management will help improve performance and reduce the adverse effect credit risk may pose to banks.

1.3 Credit Risk Management

Risk management in banks is a daunting task, but comes with many benefits. It is at the heart of all financial institutions and it is involved in all activities of its risk portfolio. The main aim of reducing or managing risk in a financial institution is to reduce its impact on earnings or to avoid incurring large losses. Among a host of other risk management procedures, Gestel & Baesens, (2008) enumerate the following: 1. Identification of the risk, 2. Measurement and quantifying the risk. 3. Developing strategies to manage the risk. They detail these procedures in the diagram below:

The identification process of risk involves the definition and analysis of potential sources of risks to be dealt with. This stage of the process is very important because the firm or bank must first of all know what kind or type of risk(s) it is dealing with. The next stage involves the measurement stage which deals with the quantification of the risk identified. A statistical analysis may be used to determine the level of probability of default or how a change in the drivers of risk can result in an actual level of default. Treatment of the risk is a four-step approach which includes risk avoidance, risk reduction, risk acceptance and risk transfer (Gestel & Baesens, 2008). Risk avoidance involves investment in low risk or minimum risk products. This approach is geared towards avoiding risk. Risk

acceptance measures adopt diversification by investing in numerous products that cut across industries to lower the impact of risk on the investment. Risk transfer is a process of transferring the impact of risk to other financial institutions such as banks, insurance companies, investment companies etc., by engaging in derivative services. All of these processes can be adopted in the treatment of risk. The final stage is the implementation of a strategy. This involves putting people, systems, technology and statistical models in place to assess, measure and monitor the current and future level of risk in the firm.

The Basel Committee on Banking Supervision (1999) established a four stage approach to managing credit risk in the banking system, these include: 1. Establishing an appropriate credit risk environment. 2. Operating under sound and acceptable credit granting process. 3. Maintaining an appropriate credit administration, measurement and monitoring process. 4. Adequate control over credit risk.

By establishing an appropriate credit risk environment, banks are required to implement their own systems, policies and strategies of assessing, approving, issuing, reviewing and retrieving credit in their firms. There must also be seen to be the existence of sound internal control systems and clear lines of communication and responsibilities in reporting potential risk within the firms. In that regard, management and the board must be seen as key players within the system of managing credit risk, hence the responsibilities of the key players must be spelt out. Under a sound credit granting process, banks are enjoined to establish credit granting criteria with limits of credits to be granted, the authority of loan officers and a conduct analysis of the credit worthiness of loan applicants. As regards the maintenance of an appropriate credit administration, a measurement and monitoring process, banks are enjoined to develop internal credit risk rating systems and techniques as well as establish a credit administration and monitoring systems internally. Finally, ensuring adequate control over credit risk requires banks to continuously review credit, proper management of the credit granting systems as well as to ensure a well-functioning loan workout situation.

Miller (1996) also argues that, a credit risk management process begins with the decision making prior to the allocation of credit thereby ensuring that managers assess the credit worthiness of customers before granting the loans, a follow up of all credit commitments to ensure customers adhere to the terms and conditions under which the loans are granted such as payments of interest on a regular basis, and monitoring and reporting at each stage of the loan process to ensure that, for example, the collaterals pledged in the event of default are existent and in good condition.

Several researchers have studied and identified the reasons behind bank failures and poor performances (Chirochiga, 1997; Santomero, 1997; Brownbridge & Harvey, 1998). Chief among these reasons is the weaknesses in credit risk management. Loans account for a greater proportion of credit of banks, which is usually 10–15 times their equity (Kitua, 1996). Banks are therefore faced with some difficulties when there is a deterioration in the quality of loans (Boahene, et al., 2012) which is brought about following the information processing mechanism (Liukisila, 1996), and further increased at the loan approval, monitoring and controlling stage. This problem is further exacerbated when credit risk management policies, strategies and procedures are either non-existent or are weak

in their implementation (Boahene, et al., 2012) which brings about a high level of poor quality loans resulting in poor performances of banks.

1.4 Credit Risk and Bank Performance

Banks strive to improve on their performance all the time. One of the measures they adopt to achieve this goal is to lower their credit risk as much as possible. Credit risk management is therefore vital in ensuring banks optimize their profitability. Banks with a high level of loan portfolio and minimal credit risk improve on their profitability (Boahene, et al., 2012). Angbazo (1997) points out those banks with larger loan portfolio usually demand higher net interest margin to compensate for the likelihood of higher risk of default. Ducas & McLaughlin (1990) are of the opinion that the variation in a bank's profitability is largely due to its credit risk. In other words, changes in a bank's performance are as a result of changes in their respective credit risk, because a higher exposure to credit risk leads to lower bank performance or profitability. Cooper, Jackson & Patterson (2003) also posit that variation in credit risk leads to variation in the health of a bank's loan portfolio, which eventually affects the performance or profitability. As suggested by Koehn & Santomero (1980), Kim & Santomero (1988) and Athanasoglou, Brissimis & Delis (2005), risks in banks affect both the safety and profitability of the banks. Bobakova (2003) posit that the profitability of a bank is dependent on its ability to foresee, avoid and monitor risk, and possibly to cover the losses that may arise from such risk.

Empirical Review

Following the fact that credit risk is one of the greatest and most important risks faced by banks and other financial institutions, and following the impact such risk has on their profitability or performance, many researchers have taken a keen interest in finding out the exact relationship that exists between credit risk and profitability of banks and have come out with varied findings regarding this relationship. While some findings established a negative relationship between credit risk management and profitability, others find a positive relationship.

Negative Relationship

Bakaeva, Hosna & Sun (2009) in their study on credit risk management and profitability of commercial banks in Sweden, sampled four banks for their study. The study revealed a negative relationship between credit risk management and profitability. A simple regression was run to estimate or establish the relationship, as non-performing loan ratio (NPLR) and capital adequacy ratio (CAR) represent credit risk management, while profitability was measured by return on equity (ROE) using secondary data from the financial reports of the sampled banks. In their study to determine the presence of credit risk on bank performance, Costa Rica, Epure & Lafuente (2012) observed, through a regression analysis, that credit risk which is measured by Non-Performing Loans Ratio was inversely related with performance as measured by Return on Assets. They observed that, credit risk accounted for the differences in banks' performance, therefore banks which are able to control or manage credit risk have the tendency to produce high performance or profitability. Corroborating the findings of Epure & Lafuente (2012) is a study on the effects

of credit risk management on the performance of Nepalese banks by Poudel (2012). By using a regression analysis, the study establishes an inverse relationship between credit risk factors and bank performance or profitability. The study therefore recommends, that banks should not only fashion out policies to control, reduce or manage the level of credit risk in their operations, but should also take steps to improve their profitability. Kolapo, Ayeni & Oke (2012) also sought, through an empirical investigation, to explore the relationship and the effects of credit risk on the performance or profitability of commercial banks in Nigeria. Seven commercial banks were selected for a cross sectional study for a period of eleven (11) years ranging from 2000 to 2010. The traditional Return on Assets (ROA) was used as a measure of profitability, while the ratio of Non-Performing Loans to Total Loans and Advances (NPL/LA), ratio of Total Loans and Advances to Total Deposits (LA/TD) and the ratio of loan loss provision to classified loans (LLP/CL) were used as proxies for credit risk. In applying a panel model analysis, the research showed a negative relationship between credit risk and profitability and the effect of credit risk on profitability of the selected banks was cross-sectionally invariant. Based on their findings, the study recommended that banks in Nigeria should improve their credit analysis capacity, loan and risk management, while the regulatory agencies ensure strict compliance to relevant provisions of the laws by banks. In assessing the efficacy of credit risk management on the performance of banks in Nigeria, Rufai (2013) assert in his study that, managing credit risk was critical to the growth and survival of banks and other financial institutions. A purposive sampling technique was used to select the banks for the study and secondary data was sourced in which a simple regression and Pearson correlation were carried out to establish the relationship. ROE and ROA were proxies for profitability or performance while non-performing loan ratio (NPLR) proxied credit risk. The study established an inverse (negative) relationship between credit risk and profitability. Banks with sound credit risk management systems tend to have lower rate of defaults and higher interest income (profitability). The study further revealed that banks with higher profit prospects tend to absorb credit losses as and when they occur, thereby resulting in a better performance. The findings of Felix & Claudine (2008) indicate that profitability as measured by ROA and ROE was negatively related to credit risk which was proxied by NPLR. In a study by Ahmed, Takeda and Shawn (1998) using a multi-variant regression model, it was established that a loan loss provision was important and had a positive impact on non-performing loans, hence an increase in loan loss provision implies a direct increase in credit risk which has the effect of reducing the value of loans and subsequently diminishing bank performance, hence credit risk has a negative relationship with performance (profitability). In the work of Al-Khouri (2011) on the effects of bank specific risk on their performance, 43 commercial banks were sampled in six of the Gulf Cooperation Council (GCC) countries over a ten-year period. A regression analysis tool was used and the findings were that credit risk, liquidity risk and capital risk have key influence on the profitability of a bank.

Positive Relationship

In their study, Ben-Naceur & Omran (2008) on the impact of bank regulations, concentration, financial and institutional developments on commercial banks' margin and profitability in the Middle East and North Africa, established that credit risk and capitalization have a positive influence on interest margins, cost efficiency and profitability of the banks. A panel regression model was applied for a time horizon of 1989 to 2005 for the study. Also, in his study to determine the impact of effective credit risk management

on the survival of banks, Njanike (2009) established that poor management of credit risk resulted in a high level of bank failures in Zimbabwe from 2003 to 2004. The study therefore advised banks to establish and implement credit scoring methods, loan review policies and good corporate governance practices. Kithinji (2010) sought to measure the effect of credit risk management on banks' profitability in a study conducted in Kenya, through a regression model. Through the use of records on total credit, the level of non-performing loans and profits for a five-year period, the study revealed that banks' profit are not influenced by the level of credit and non-performing loans, hence, a positive relationship exist between credit risk management and profitability of banks. It was the opinion of Kithinji (2010) that banks' profits are influenced by factors or variables other than credit and non-performing loans. Kargi (2011) in his study on the impact of credit risk on the profitability of Nigerian banks, data used was from a time period spanning from 2004 to 2008. To determine the relationship between credit risk management and profitability, a descriptive correlation and regression model was used. The study thus supports the claim that bank profitability is negatively controlled by the loans and advances, non-performing loans and levels of deposits. In their study on managing credit risk to optimize bank's performance, Alalade, Babatunde & Oguntodu (2014) in a survey of selected banks in Lagos State, Nigeria, established a positive and significant relationship between credit risk management and profitability. In order to establish this relationship, structured research questions were administered to respondents which were analysed through statistic measures. It was established that banks that had a high level of credit risk management systems produced high performance or profitability, hence a positive and significant relationship. This implies that, as credit risk management increases, profitability also increases and vice versa. In a study by Abiola & Olausi, (2014), on the impact of credit risk management on the performance and profitability of commercial banks in Nigeria, it was established that credit risk has a positive relationship with profitability. The study relied on secondary data from the financial reports of seven commercial banks for a period of seven years (2005–2011). In applying a panel regression to estimate the model, profitability or performance was proxied by return on assets (ROA) and return on equity (ROE) while non-performing loans ratio and capital adequacy ratio were variables used to measure credit risk. Although the study revealed a positive relationship between credit risk and profitability, it was observed that the banks lacked effective credit risk management practices and high interest rates were charged on loans to compensate for the defaults and that explained the seemingly high level of profitability in the face of a high credit risk.

Quite surprising, but consistent with the findings of Kithinji (2010) and other studies, is a recent study by Boahene, et al., (2012) in Ghana on credit risk and profitability of selected banks. Six commercial banks were sampled for the study covering the five-year period: 2005 to 2009. Credit risk was proxied by a non-performing loan rate, net charge-off (impairment) rate and pre-provision profit as a percentage of net total loans and advances while profitability was proxied by Return on Equity. A regression analysis was used to determine the relationship. The findings revealed that credit risk has a positive and significant relationship with the profitability of banks. That is to say that banks in Ghana enjoy high profitability even in the midst of high credit risk. This implies that factors other than credit risk affect the profitability of banks in Ghana and one such factor is the interest rate.

From the above reviews, it can be inferred, that the actual relationship that exists between credit risk management and profitability, remains inconclusive as some studies find a positive relationship between credit risk management and profitability while others find a negative relationship. A further research to ascertain the relationship that exists between credit risk management and profitability is encouraged, especially in Ghana where non-performing loans have been on the increase in recent times and the purpose of this paper to explore the relationship further.

2 Research Methodology

The acceptability, reliability and validity of a research are dependent on the methodology adopted for the study. The research methodology must be scientific and therefore follow the acceptable procedure in the field of study; the process must in addition be conventional, rigorous and unbiased to ensure general acceptability of the findings and this is what this paper adopted.

Varying research designs can be adopted to study business problems or undertake business research (Hair, et al, 2011). Research design could therefore be classified into three categories namely: exploratory, descriptive and explanatory studies (Saunders, Lewis & Thornhill, 2009).

This paper adopted an explanatory research approach since the main objective of the study is to establish the relationship between credit risk management and profitability of commercial banks in Ghana. In the exploratory research category, there is little or limited information available to the researcher (Hair, et al., 2011). This research design is suitable when the researcher seeks to clarify his or her understanding of a problem or an issue.

According to Mason & Bramble (1997), the population of a study involves a group of all possible individuals, objects or measurements of interest for consideration. Moore (2009) also define a population as the entire group of individuals about which a set of information is to be derived. For the purpose of this study, the population under consideration involves all banks operating under a universal license in Ghana. This however excludes the Bank of Ghana, the Rural and Community Banks and the ARB Apex Banks. As at December 2013, the number of banks issued or operating under a universal license in Ghana were 29. Hence the population of this study is made up of the 29 banks operating or issued with a banking license in Ghana. However, A sample size of, eight (8) banks were selected to represent the population in this study. This was due to the difficulty the researcher faced in getting the data of the other banks. Since all the selected banks operate in the same environment and are faced with the same market or systematic risks, their outcomes can be deemed to represent the population. Also, most of the selected banks are the big players in the banking industry and hence are better placed to represent the entire population. The samples selected for this study are made up of banks with a large customer base and include: GCB Bank Limited, Cal Bank Limited, Standard Chartered Bank Ghana Limited, UT Bank Ghana Limited, Unibank Ghana Limited, Ecobank Ghana Limited, SG-SSB Limited and HFC Bank Limited. The purposive sampling method was used for this research work.

The purposive sampling technique enables the researcher to conveniently select data or instruments that suit the research or will enable the researcher answer the research questions or achieve the research objectives.

This study covers a time period of ten (10) years spanning from 2005 to 2014. The main consideration for selecting this time period is mainly the availability of data. Prior to this date, most of the banks in Ghana were using the manual system of banking, hence access to data such as their annual financial statements was quite cumbersome (and herculean).

This study adopted the secondary sources of data. The data was extracted from the annual financial reports of the banks selected for the study. Specifically, data relating to non-performing loans, total loans and advances, net charge off (impairment), profit before tax and total assets were extracted from the financial statements of each bank to measure credit risk management and profitability respectively for the study duration.

To enable this study, achieve its aim of establishing the relationship between credit risk management and the profitability of commercial banks in Ghana, a panel regression model was used in its form as below:

$$P_{it} (ROA) = F (Y_{it}, Z_{it}) + \epsilon_{it},$$

Where P_{it} represents the profitability of Bank i at time t . Y_{it} is the vector of the variable of Bank

i at time t , Z_{it} represents the features of Bank i at time t and ϵ_{it} is the error term taking care of all other factor that may affect the dependent variable. In that sense, Profitability as defined by ROA and ROE is the dependent variable, while credit risk as defined by NPLR and CAR is the explanatory variable.

To further explain the model, it is expressed in the form as below:

$$P_{it} = \beta_0 + \beta_1 NPLR_{it} + \beta_2 NCOTL_{it} + \beta_3 SIZE_{it} + \beta_4 GRO_{it} + \beta_5 DR_{it} + \epsilon_{it}$$

Model specification

$$ROA = \beta_0 + \beta_1 NPLR_{it} + \beta_2 SIZE_{it} + \beta_3 GRO_{it} + \beta_4 DR_{it} + \epsilon_{it}$$

$$ROA = \beta_0 + \beta_1 NCOTL_{it} + \beta_2 SIZE_{it} + \beta_3 GRO_{it} + \beta_4 DR_{it} + \epsilon_{it}$$

Proxies/Variables for Measurement

In order to establish the relationship between credit risk management and the profitability of commercial banks in Ghana, non-performing loan ratio (NPLR) and net charge off (impairment) were used as variables in measuring credit risk, while profitability was measured as return on assets (ROA).

As indicated above, non-performing loan ratio is one of the variables used to measure credit risk management in this research. Non-performing loans are loans due for more

than 90 days but are unpaid or not redeemed (Louzis, Vouldis & Metaxas, 2012) and the amount used must be the gross value of the loan as recorded on the balance sheet (World Bank, 2013). In other words, non-performing loans are the total losses of a bank, within a specified time out of the total amount given out as loans and advances to customers. NPLR is a popular measure of credit risk as many researchers have used it in their work (Kolapo et al, 2012; Abiola & Olausi, 2014; Boahene, et al., 2012), hence the choice of it as a measure of credit risk management. This variable is a direct measure of credit risk because it shows the percentage or proportion of loans and advances that has not been paid back, hence a larger proportion of non-performing loans relative to total loans and advances, indicates a high level of credit risk within a bank. Non-performing loan ratio is expected to have a positive or negative relationship with profitability. As has been exhibited in literature NPLR can either be positive or negative.

Non-Performing Loan Ratio (NPLR) is calculated as:

$$NPLR = NPLs/TotalLoans$$

Net Charge Off to Total Loans and Advances (NCOTL) is a variable measuring credit risk. It is defined as the amount charged against profit as loan default or credit loss divided by Total Loans and Advances. This measure of credit risk was used in a similar work by Boahene, et al., (2012). Net Charge Off to Total Loans Advances (NCOTL) is expected to have a positive or negative relationship with profitability as previous studies have established.

NCOTL is calculated as:

$$NCOTL = Net\ Charge\ Off\ (Impairment)/Total\ Loans\ and\ Advances$$

The two proxies for credit risk management (NPLR and NCOTL) are independent variables in the model used to establish the relationship between credit risk management and profitability of commercial banks in Ghana.

3 Proxy for Profitability

Paramount in the objective of this study is to establish the relationship between credit risk management and profitability. It is therefore important to define the variables that represent profitability in this study. As dependent variable, Return on Assets (ROA) was used as a measure of profitability. Whereas there are other measures of profitability, ROA was selected as a measure of profitability in this study because of its wide usage in previous studies (Abiola & Olausi, 2014; Appa, 1996; Kolapo, et al., 2012; Boahene, et al., 2012; Ahmed, Takeda & Shawn, 1998).

ROA is a measure of how efficiently the management of a bank is able to use the assets of the bank or firm to generate profit. That is, it indicates how efficiently firms or banks use their assets to generate earnings. A higher ROA indicates a better performance; however, banks that require large initial outlays or investments could have lower ROA. Return on

assets could also indicate the capital strength of a bank. Since ROA is a dependent variable, there is no expected output sign for it. ROA is calculated using the formula as below:

$$ROA = \text{Net Income} / \text{Total Assets}$$

Net Income is defined as profit before tax.

4 Control Variables

Taking a cue from previous studies of this nature and from the researcher's own point of view, there are other variables that can affect the dependent variable (Profitability) in the model. Halsem (1968) posits that profitability depends on a number of factors, such as the size of the firm, the management of the firm, location and time. In the view of Guru, Staunton & Balashanmugam, (1999), the profitability of a bank is influenced by factors which are both internal and external. This research is focussed on the internal factor of credit risk management and therefore has controlled for other variables, such as size of the bank, growth of the bank as measured by the increase in interest income as was used in the model of Boahene, et al., (2012) as well as the debt ratio of the bank.

Bank Size is defined as the log of total assets of the bank. Bank size is expected to have a positive relationship with profitability as larger banks benefit from economies of scale. This implies that profitability increases with larger banks. Bank Size = Log of Total Assets

Growth of the bank is measured as the increase in interest income for the years under review. Growth is expected to have a positive relationship with profitability as banks aim to increase their interest income year on year. Growth is calculated as:

$$\text{Growth} = (\text{Interest Income in current year} - \text{Interest Income in previous year}) / \text{Interest income in previous year}$$

Debt Ratio is another control variable that affects profitability. Boahene, et al., (2012) used this variable in their study. It is measured as the ratio of Total Liability to Total Assets. Debt ratio is expected to have a positive relationship with profitability as a greater portion of the assets of banks is financed by liability through the deposits of customers. Debt ratio could also be negative for other firms. Debt ratio is calculated as:

$$\text{Debt Ratio} = \text{Total Liability} / \text{Total Assets}$$

Table 4.1: Summary of proxies for profitability, credit risk and control variables

VARIABLE	DEFINITION	EXPECTED SIGN
ROA	Return on Assets (ROA) is measured as the profit after tax divided by the total assets of a Bank. This is a measure of Profitability.	
NPLR	Non-Performing Loan Ratio (NPLR) is measured as Non-Performing Loans divided by Total Loan and Advances. This is a measure of credit risk.	Negative/Positive
NCOTL	NCOTL is defined as Net Charge Off (Impairment) divided by Total Loans and Advances.	Negative/Positive
SIZE	Bank Size is a control variable that may also affect the profitability of a bank in the measure of the relationship. It is measured as the log of Total Assets of Bank <i>i</i> in time <i>t</i> .	Positive
GRO	Growth is also a control variable and is measured as the increase in interest income year on year of Bank <i>i</i> .	Positive
DR	It measures the leverage of the bank. It is defined as Total Liability divided by Total Assets.	Positive/Negative
ERROR TERM (ε _{it})	These measures all other variables that might have explained the dependent variable but are not included in this model	

Source: Own processing by authors

The STATA software (13.0) was used to run the regression to establish the relationship among the variables.

5 Data Analysis and Discussion of Findings

This section presents data which was run in a regression model to establish the relationship between credit risk management and the profitability of banks in Ghana. A brief descriptive statistic provides an overall assessment of the observed data. A total observation of eighty (80) for each variable (dependent, independent and control variable) has been provided. A mean, standard deviation, minimum and maximum values of each variable has been provided in this section. The section also contains regression results establishing the relationship between credit risk and profitability of banks in Ghana. Detailed discussion explaining the findings of the study has also been provided.

Table 5.1: Descriptive Statistics

VARIABLE	OBS	MEAN	STD.DEV	MIN	MAX
ROA	80	0.042701	0.021284	0.0048	0.0918
NPLR	80	0.092504	0.06972	0.016	0.33
NCOTL	80	0.023875	0.028121	-0.011	0.1424
DR	80	0.861475	0.050874	0.61073	0.927644
GROWTH	80	0.374375	0.288802	-0.3377	1.1588
SIZE(LNTA)	80	20.27182	1.227787	16.9027	22.45839

Source: Own processing by authors

The table above presents a brief descriptive statistics of the dependent, independent and control variables of the regression model.

From the above, it is evident that banks in Ghana enjoy a high level of profitability, as banks were able to generate an average profit of 4.27% with their assets (ROA of 4.27%). Although the average (mean) profitability for the banks was impressive, some banks performed below average with a minimum Return on Assets (ROA) of 0.48%, while others performed above average with a maximum ROA of 9.18%. The variation from the mean profit, as measured by the standard deviation, showed a relatively low figure of 2.13% as shown above.

The sampled banks appear to be enjoying relatively low credit risk, as the statistics above report an average Non-Performing Loan Ratio (NPLR) of 9.35% and the Net Charge Off to Total Loans and Advances (NCOTL) averaging 2.38%. The NPLR and NCOTL has been declining over the period of the study, and this may partially be resulting from the increased regulations in the banking sector, such as the credit risk reserves, which require banks to keep a percentage of profit against credit risk, Capital Adequacy Ratio (CAR) which requires banks to have a minimum CAR of 10% (Bog, 2007) as well as the improvement in the processes of granting loans by the respective banks. The standard deviation for NPLR and NCOTL was 6.96% and 2.84% respectively. Some banks however were faced with a high level of credit risk as the maximum NPLR and NCOTL were 14.24% respectively, while others showed prudent management of credit risk by reporting a minimum NPLR and NCOTL of 1.6% and 1.1% respectively. The standard deviation for NPLR and NCOTL were 6.97% and 2.81% respectively.

The Debt Ratio for the banks averaged 86.15%, showing a high percentage of debt finance by the respective banks. This implies that on average, 86.15% of banks' assets is financed by debt or liabilities. This is expected because the majority of the assets of banks are generated from the loans and advances to customers which are financed by customer deposit. The Debt Ratio also showed a low standard deviation of 5.09% with a minimum and maximum value of 61.07% and 92.76% respectively.

Growth in interest income averaged 37.42% with a standard deviation of 28.88% and a maximum and minimum 115.88% and -33.77% respectively. This is encouraging, as the growth in interest income is most likely to result in increased profit. The size of the banks as measured by the log of total assets averaged 20.27182.

5.1 Correlation Results

To test for the existence of multicollinearity in the model, a correlation was run which gave the results as presented below. It was found that NPLR and NCOTL were highly correlated, as they had a correlation coefficient of 0.7980 (79.80%). This is expected as both NPLR and NCOTL are measures of credit risk. This implies that the regression results could be biased if these two variables were put together in the same regression model. To avoid the problem of multicollinearity, NPLR and NCOTL were run in separate regression models

Table 5.2: Correction output

	ROA	NPLR	NCOTL	DR	GROWTH	LNTA	
ROA	1.000						
NPLR	0.1726	1.000					
NCOTL	0.2008	0.7929	1.000				
DR	-0.2097	-0.1127	-0.0761	1.000			
GROWTH	-0.0523	-0.2372	-0.094	0.0234	1.000		
LNTA	0.3646	-0.2667	-0.4027	-0.0401	-0.0139	1.000	
							Hausman Test
							Hausman

Source: Own processing by authors

Chi2 (4) = 14.14
 Prob > Chi2 = 0.0014

A hausman specification test was conducted to select between the Fixed-Effect and the Random-Effect. As per the results of the test as shown above, the Fixed-Effect was selected for the study.

Fixed-Effects (within) Regression

R-Sq: Within = 0.1970	Number of obs. = 80
Between = 0.0082	Number of groups = 8
Overall = 0.1140	Group variable = id

Table 5.3: Regression results with NPLR

ROA	COEF	STD. ERR.	t	P>t	[95% Conf. Interval]
NPLR	0.088807	0.036206	2.45 0.014		0.017844 0.159769
DR	-0.08178	0.042377	-1.93 0.054		-0.16484 0.001276
GROWTH	0.009041	0.007238	1.25 0.212		-0.00515 0.023227
SIZE (LNTA)	0.003899	0.001887	2.07 0.039		0.000201 0.007596
_CONS	0.022526	0.057637	0.39 0.696		-0.09044 0.135491
SIGMA_U	0.009478				F(4, 68) = 4.17
SIGMA_E	0.015901				Prob > F = 0.0044
RHO	0.262139				

Source: Own processing by authors

Fixed-Effects (within) Regression

R-Sq: Within = 0.2340

Between = 0.3462

Overall = 0.2530

Number of obs. = 80

Number of groups = 8

Group variable = id

Table 5.4: Regression Results with NCOTL

ROA	COEF	STD. ERR.	t	P>t	[95% Conf. Interval]
NCOTL	.2915555	0.0844571	3.45 0.001		0.1260226 0.4570884
DR	-.078161	0.0405288	-1.93 0.054		-0.1575961 0.001274
GROWTH	.0061898	0.0068992	0.90 0.370		0.0073323 0.0197119
SIZE (LNTA)	.0052634	0.0019011	2.77 0.006		0.0015374 0.0089895
_CONS	-.0059425	0.0562345	-0.11 0.916		-0.1161602 0.1042751
SIGMA_U	.00884324				F(4, 68) = 5.61
SIGMA_E	.0153877				Prob > F = 0.0006
RHO	.24827578				

Source: Own processing by authors

6 Discussion of Findings

From the regression results above, the two measures of credit risk had a positive and significant relationship with profitability at 5% and 1% significance levels for NPLR and NCOTL respectively. This means that, as credit risk increases, the banks tend to make higher profit. That is, as default rate increases, banks make more profit. This result, although curious, makes sense, because banks in Ghana charge relatively high interest rates which compensate for the defaults. That is, because of the high interest rates charged by the banks, even though some customers default, the high interest rates charged are high enough to compensate for the defaults, hence the banks are able to make profit in the midst of defaults. Therefore, the banks direct the cost of loan defaults to other customers by charging high interest rates. Buchs & Mathisen (2005) posited that there is a high overhead cost (which includes impairments on loan defaults) and sizeable provisioning due to large non-performing loans. Banks in Ghana are among the highest earning banks in Sub Saharan Africa, as they have high ROA's and ROE's. It stands to reason that the existence of credit risk compels banks to charge high interest rates which leads to high interest income and eventually, high profitability. In a similar report by the Bank of Ghana (2004) on 'The Cost of Banking in Ghana', it was revealed that Banks in Ghana enjoy high profitability in spite of the existence of high overhead cost which includes non-performing loan charges. This is largely explained by the high interest or lending rates charged by the banks in Ghana. The Ghana Banking Survey Report (2010) also proves this assertion of high profitability in the midst of high credit risk among Ghanaian Banks. As non-performing loans increased by 343.33% from 2007 to 2009, total income also increased by 87.97% over the same period.

Although the usual expectation is a negative relationship between credit risk and profitability, the regression results proved otherwise and the above reasons explain why such results were possible. The regression result is consistent with the findings of some previous studies one of whom is Boahene, et al., (2012), who conducted a study on the impact of credit risk management and the profitability of selected banks in Ghana and found a positive and significant relationship between credit risk and profitability. Kithinji (2010) also found a positive relationship between credit risk and profitability of Banks in Kenya in a study conducted in Kenya. Abiola & Olausi, (2014) also found a positive relationship between credit risk and profitability in Nigeria.

Size of a bank as per the regression results showed a positive and significant relationship with profitability or performance. This implies that, bigger and larger banks are more likely to make profit than smaller banks. This is quite expected, because larger banks are able to attract more deposits, hence they have more credit available to issue to customers, which in effect leads to an increase in profitability. Larger banks are also able to benefit from economies of scale, as a result of their size, which leads to a reduction in cost and consequently an increase in profit. The results are consistent with previous studies such as Demirguc-Kunt & Huizinga (2012); Kupiec & Lee (2012) and Boahene, et al., (2012) who have all found a positive relationship between bank size, as measured by the log of total assets, and profitability.

Debt ratio had a negative and significant relationship with profitability. That is, banks that use high debt are less profitable than banks with equity finance. This is quite surprising

as previous research works have found a positive relationship between Debt Ratio and profitability of Banks (Agyei, 2010; Boahene, et al., 2012). This result however may partly be explained as being influenced by the choice of banks used for this study, as the majority of the banks used for the study are listed banks. Also, banks with a high debt ratio may contend with paying high interest to their lenders which limits their potential for profit.

7 Conclusion

From the above findings, it has been established that, there exist a positive relationship between credit risk management and profitability of banks in Ghana. Bank size and debt ratio has been established as variables that influence profitability as there exist a positive and significant relationship between them respectively. The outcome of this research is consistent with previous studies which established same (Boahene, et al., 2012; Kithinji, 2010).

The researchers recommend for further research on the relationship between Interest Rate Risk and Default Rate Risk.

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***Student Academic Studies,
Lifestyle and Prospect as Future Accountant***
***Akademické studium, životní styl a vyhledávání
budoucích účetních***

MARIA NATASHA JOSTAN
RIA SANDRA ALIMBUDIONO

Abstract

This study aims to determine and understand the role of Accounting Studies in student lifestyle and financial behavior of accounting students, which will have an impact on their future accounting profession. Data was collected through interviews with 10 accounting students, academics and practitioners which obtained several results. The results of this study indicated that Accounting Studies plays a role in the lifestyle and financial thinking of accounting students, and will later be able to have an impact on the performance and daily life of the accounting profession in the future. Based on this analysis, overall it can be concluded that besides accounting studies, there is another factor to support the accountant mindset that is work environment. Mindset, financial behavior and accounting student life style obtained by accounting studies and it able to support future accounting profession.

Keywords

accounting studies, lifestyle, financial behavior, accounting students, accountant profession

JEL Codes

A23, G02, M41

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Abstrakt

Cílem této studie je určit a pochopit roli studia účetnictví v životním stylu studentů a finančním chování studentů účetnictví, což má dopad na jejich budoucí účetní profesi. Data byla shromážděna prostřednictvím rozhovorů s 10 studenty účetnictví, akademiky a odborníky, kteří dosáhli pozitivní výsledky. Poznatky této studie naznačily, že studium účetnictví hraje roli v životním stylu a finančním myšlení studentů účetnictví, ovlivňují budoucí výkon a každodenní život vykonavatele účetní profese. Na základě této analýzy lze obecně dospět k závěru, že kromě studia účetnictví existuje další faktor podporující účetní myšlení. Tím je pracovní prostředí. Pojednává se vztah mezi myšlením, finančním chováním a účetnictvím, životním stylem studenta ovlivněným studiem účetnictví schopným podporovat budoucí účetní profesi.

Klíčová slova

účetní studia, životní styl, finanční chování, studenti účetnictví, účetní profese

1 Introduction

The development of technology and information made a change on people life style. This phenomenon once described inside the movie of "*Confession of Shopaholic*" in 1990 which quite reflecting the consumptive lifestyle of millennial(Iwan, 2018). That millennial phenomenon happen in Indonesia which reflected inside PDB 2018 that increased around 5% more than PDB 2017(Adharsyah, 2019). Asian Development Bank (ADB) stated that most of contributed 2020 economic development in Indonesia will be related to consumption(Situmorang, 2019). What it means by consumption is online shopping that often done by young generation. This strong consumption is believed to be able to continue economic growth for 2019 and 2020. Besides, the survey from Indonesian Bank on the last September 2019 indicated that the average of people consumption are increased from 68,6% to 68,8%, followed by the decreased of payments ratio / public debt (Agustiyanti, 2019).

A good education style needs to be implanted on every individual, especially for Accounting Studies. some of previous studies has been done in order to observe the role of Accounting Studies in daily life and its effect toward lifestyle, financial behavior such as: private financial plan and daily financial plan(Waluyo & Marlina, 2019), economic thought and accounting principle and behavior of daily life. Butler, Church & Spencer (2019) conducted an experimental education that made students gained more critical thinking and better ability to solve the problems within 4 stages, *Do, Reflect, Think & Apply* in Accounting Studies. Those experimental application has been done inside the topic of Accounting Information System (AIS) and it audit, accounting fee with material allocation fee, financial accounting within the recording material of *percentage of completion*, government and non-profit accounting (Public Sector Accounting), professional program that related to the value of competition AICPA and IMA, and the topic of tax system. Asonitou and Hassal (2019)stated that the lack of creativity such as time management, task delegation, uncertain matter, and knowledge interdisciplinary implementation and other necessary quality to manage daily problem which include as a complex problem.

The aim of this research is to understand the deeper meaning of how Accounting Studies has an important role on financial behavior and accounting student life style and their future profession. Therefore, this qualitative research includes as explanatory research category. This research was conducted to answer a main research question regarding the role of Accounting Studies on financial behavior and accounting student lifestyle and their future profession, And there are mini research question which include some question such as: (1) How is the behavior and lifestyle of accounting student nowadays? (2) How is the role of Accounting Studies on supporting student lifestyle? (3) How is the relation of accounting as future profession and student current lifestyle and financial behavior which supported by current accounting studies? This research is expected to bring and input for academic side in Indonesia related to the implementation of accounting studies, thus it can be useful for society lifestyle and every personal responsibility.

2 Research Method

This research was conducted qualitatively on 10 students in one of university in Surabaya. The informants picked randomly by website pick random from 41 students which obtain the GPA over than 3.5. The data collected by interview and observation related to lifestyle and economical thought during a month. The observation was done in semi-structured way to obtain information related to lifestyle, financial thought and behavior and deep accounting studies of student. The observation will be related to student (as informant) daily life, to analyze and observe student financial behavior, lifestyle and their implementation of accounting studies. Another data collected on academic informant by semi-structured to obtain the data which related to the role of accounting studies toward each of informant, for economical behavior, daily life and their profession need as accountant. In this aspect, the chosen informants are accounting lecturer which has been taught more than 10 years or accountant who has been worked for more than 5 years. There are practitioners as informant, in this aspect the chosen informant is accountant who has been experienced in accounting field. The analysis will be carried out through triangulation of the interviews result among informants with the basic theory related to the topic of this research.

3 Discussion

Accounting students has various kind of lifestyle, especially related to decision making and their daily financial rule. All the informants students admit that their biggest spending is secondary spending, which included as their hangout spending, skincare, and other shopping needs. There are several motives why students tend to spend their financial saving on secondary needs; however they tend to have a same motive which they spend on something to satisfy themselves within the low price. This consumptive behavior is similar to the result of Indonesia Millennial Report (IMR) 2019 which has the biggest financial spending to entertain them and that spending related to the spending for food.

The chosen informants stated that they did not have specific schedule for shopping, they only did it when they need it. Purchase decision by student has a close relation to the analysis of Thakur (2016) which indicated that customer often seek for information regarding the useful value of products. They tend to consider *utilitarian value* rather than *hedonic value*.

Moreover, when student being asked regarding the role of Accounting Studies inside the mindset, financial behavior and their life style, most of student answered that they could feel the change before they obtained an Accounting Studies and after they obtained Accounting Studies. There are two students as informant who stated that there did not experienced any change by accounting studies, because they tend to feel that they obtained accounting studies only oriented on a company matter, and could not fit their daily life matter. The rest eight students did obtain a big change and able to implement Accounting Studies on their daily life style. Accounting studies explained in detail within 5 main topics, Financial accounting topic, Management accounting, accounting

information system, Audit and tax matter. On financial accounting topic, only three out of ten informants who are able to applied this topic on their daily life. They applied a recorded concept of their daily life to make a record of their financial spending and the concept of depreciation of shopping, therefore they would not spend any expensive purchase and considering their depreciation matter. The other seven students find that financial accounting topic only oriented for company matter; therefore they hardly apply it for daily life. There are Management accounting topic, eight out of ten students stated that they are able to implement *budgeting* on their daily life, thus it can help to record their spending and income. Furthermore, they find that they can make better decisions after obtaining this topic. They also have an ability to think within the thought of *costs & benefits* for their daily lives, such as those matter related to daily needs. The rest of it, two informants feels that their topic can only use for their future job, and could not be implemented on their daily life. There is also the topic of System which is able to form the mindset of five students become more systematic for their daily life. They are able to understand the cycle of accounting that has been taught for certain topic, therefore their will have more opened knowledge for their daily life, furthermore, they are able to organize the spending documents such as receipt to be more organized and easy to find when they need it. The rest five students feel that that organized system will only be useful or their working life, because those kind of accounting cycle only able to be applied for company context.

Audit topic, this topic is able to moved six out of tent student as informant become more skeptical and careful on organized their daily life. Besides, they will be able to track back their daily spending through their saved receipt (documents). The last topic is taxed topic which consider as carrying less role on daily life of all informant, because they have not burdened by the tax obligation yet. Whereas, without them knowing, they actually have implemented this topic, taxed topic has taught student how to identify and differentiate various kinds of taxes for Indonesian citizen. Every student did not realize how taxed issues work in such a simple process such as restaurant taxes, value-added tax for every good they have purchased or vehicle taxes for them who carried their own transportation.

The implementation of budgeting system on student daily life has been proved that academic education can help student to apply their knowledge for their daily life(Waluyo & Marlina, 2019). Inside the research of Waluyo and Marlina, they found a material which most participated on student private financial is budgeting material. The interview result related to student lifestyle and the applied accounting studies indicated different result based on the analysis of Oktafikasari and Mahmud (Oktafikasari & Mahmud, 2017) which showed that economical literation which means accounting studies include it impact, has significant influence on student consumptive lifestyle. The informant students are able to differentiate between their needs and their desire, moreover they are able to limit their consumptive behavior through budgeting method.

Following the understanding of behavior and role of accounting studies for student, researcher tried to observe the needs of accountant in this era. There are some information forms several academic informants, according to first informant, he stated that not every academic education helps the entire accountant need. Therefore, people not only need to obtain their current need but also has to be creative on creating an innovation for their

future needs. This statement reflected from academic point of view as an accountant. Another opinion has different point from first informant, second informants found how accountant needs nowadays are related to technological used. Technology should not be served as supporter but also as enabler. Informant stated another necessary aspect for accountant is their ability to understand and analyze the data. This analytic ability related to their ability to understand the statistical and physical condition of market such as customer behavior. According to the second informant, people should be able to catch up with the development of technology, because it will affect their company life. This statement related to the analysis of McKinney Jr., Yoos II, & Snead (McKinney, Yoos, & Snead, 2017) who stated that in this Big Data era, analysis not only requires an ability to analyze but also understand the situation and limitation of it analyzed topic. That statement was agreed by Third informant, he stated that the current education has been fulfilled the need of accountant within it standardized system. However, those standards should be followed by adequate technology. Another opinion by third informant stated that as profession, accountant needs people that obtain the combination of strong commitment and capable competences. That combination is needed because commitment and competences will help accountant to build an independent character. It means, every accountant has to own a will to learn, even without any motivation from other people. A company obviously tried to look for a competence accountant with strong commitment, therefore accountant will be placed for long-term period without longer training session or else (Sawitri & Fauziyah, 2017). Therefore, if competences and commitment being taught from the early situation of student, universities will be able to obtain professional accountants. The fourth informant stated another opinion of how accountant should have a good ethic and morality. According to him, the current accounting students are having less ethic and morality pressure and it caused their less understanding of consequences on their future job. Ethic and morality is important for younger generation of accountant to widen their further thinking of every consequences and decision.

Another question has given to academic related accountant regarding accounting studies of education, mindset and daily lifestyle. First informant stated that accounting studies has significant role for himself to change his life to be more organized, accurate and build his personalities. He stated that accounting should be learned not only for its competencies but also as his personal identity. However, second informant tend to have different opinion, this second informant agreed that education have a role to form his mindset but only related to professional work as accountant. The biggest influence of his life is not come from academic education but his mentors in work. Those mentors catch his attention and push him to build a better professionalism of work. Another opinion come from third informant who found that the advantages of accounting studies are accumulated year by year which makes him hardly differentiate it one by one. Third informant concludes that the current system of education has different system from the old system which is not only educated based on tutorial but also help to maintain student better mindset. Fourth informant indicated that accounting studies has significant role to help student daily life. Based on various answer above, it can be concluded that besides academic studies, another aspect that influence accountant performance is mindset and lifestyle and work environment. Based on several opinions, environment affect accountant daily life, it is related to the analysis of Sutrisna, Kurniawandan Dewi (Sutrisna, Kurniawan, & Dewi, 2017) who found that education level has a close relation to accountant performance in daily life.

The role of accounting studies for student daily life is expected to complete accounting as profession on student future roles. Millennial has been gifted with a good ability of technology and it should be followed by a good academic ability (Ladhari, Gonthier, & Lajante, 2019). The requirements of accountant profession should be easily overcome because accounting student in this era should have fast response toward technology. Remember that daily activities of millennial generation who often utilized technology in their social interactions; However, they need to have a limitation on their behavior of using technology. Informant stated their opinion related to academic education as their asset to obtain their better career in the future. Based on the opinion of some informants, even though they are not working as accountant yet, they are sure that their accounting studies could change mindset and support them to obtain their performance as future accountant. For example, an informant declared regarding how their future work will include *cost and benefit*, based on accounting studies, he should think of how his effort will be balance compared to material – non material benefit. Besides, another informant also declared that they need to implement a careful attitude of audit on his future work environment.

The change toward structured mindset, financial behavior and better lifestyle expected to support accounting student for their future accountant profession. For example, a cautious attitude that is not only used when an individual carries out his job as an auditor, but an individual also need skeptical and cautious in competitive work environment. That skeptical attitude is needed in order to be able to recognize good and supportive colleagues in harsh reality of working world. Besides, integrity principles and independence principles in audit will help to guide accountant profession to be more consistent and gain ethical behave on their daily working life. There are thought of cost & benefit, which can also be useful for working life. Accountants should have the thought of costs & benefits of doing a project from client, whether the business and work-related costs of a client will be related the material or non-material benefits they will receive. Pietrzak&Wnuk-Pel (Pietrzak & Wnuk-Pel, 2015) found that an important ability which has to be managed by management accountant is their work measurements method. Performance measurement also needs to be done by accountant within self-evaluation, thus, it is able to provide better performance for work environment and work task. Besides, knowledge of cycle and documents will help accountant to gathered and achieved the data based on the work they have done before and make it as reference on their next work as an experience of their past and will help them for the future problem (managerial judgment). That managerial judgment will be useful for accountant when they want to classify the secondary spending, however it can give another future benefit such as client entertain cost. Student behavior of hangout too often in order to engage as many as possible relation for the future purposes is one of discretionary expense. The spending for hangout nowadays has dominated people life style, however this factor could be useful for the future problem when they begin to obtained the networking strength they have built from early condition. Tax knowledge which currently achieved by student will help student on their future work as accountant to recognize what kind of taxes they need to fulfill later. Decisions making of an accountant on controlling their desire are related to their character and private mindset (Prather-Kinsey, Boyar, & Hood, 2018) Systematic thinking and organized work are expected to help future accountant to work in a better way, more relaxed in non-conductive situation. There are also principles of accountability

including accuracy, giving a positive influence on individual performance. Accounting Studies indeed tends to be succeed in building an individual daily life mindset, become more logical and organized, however not everyone able to apply accounting studies in their daily life, whether it as decision making and financial management. By carrying logical and systematic thinking, a person is able to catch more structured and realistic thinking; therefore they can help someone in solving any problems, both for their personal daily life and their working life. This mindset can be obtained through accounting studies within various topics and materials.

4 Conclusion

Student lifestyle and financial behavior often based on utilitarian value rather than hedonist value. There are other discoveries of this research which indicated that the topic of accounting studies that has significant role on student way of thinking is the topic of audit. Besides, budgeting material on Management accounting also has significant role on accounting student. Accounting studies that implemented in daily life can help to change accounting student way of thinking become more organized. Besides accounting studies, there is another factor to support the accountant mindset that is work environment. Mindset, financial behavior and accounting student life style obtained by accounting studies and it able to support future accounting profession.

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Distribution of Wages in the Regions of the Czech Republic

Distribuce mezd v krajích České republiky

EVA LAJTKEPOVÁ

Abstract

Regions as higher territorial self-governing units were established in the Czech Republic on the basis of Constitutional Act No. 347/1997 Coll. Their territory was delimited by the territory of the listed districts. The regions show various differences in social, demographic, but naturally also economic development. The text focuses on differences in the development of wages, covering the period of 2011–2018. Wages in all regions were growing in these years, but this growth was not uniform: the lowest wages (the 1st decile wages) were growing most, the highest wages (the 9th decile wages) showed the lowest growth. Four groups (clusters) of regions were identified by the cluster analysis according to the typical development of the lowest and the highest wages. In these groups, we focused on typical factors of the wage level formation: the economic level (measured as GDP per capita), the unemployment rate and the educational level (the share of the population with basic and university education). The results of the correlation analysis showed a moderate direct relationship between the economic level and the 9th decile wages, a moderate to strong indirect dependence between the low wages of the 1st decile and the unemployment rate, but the results of the correlation analysis between the variables the educational level and wages were not very conclusive.

Keywords

regions, distribution of wages, median, cluster analysis, economic level, unemployment rate

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Abstrakt

Kraje jako vyšší územně samosprávné celky vznikly v České republice na základě ústavního zákona č. 347/1997 Sb., jejich území bylo vymezeno územím vyjmenovaných okresů. Kraje vykazují různé odlišnosti v sociálním, demografickém, ale samozřejmě i ekonomickém vývoji. Text se zaměřuje na odlišnosti ve vývoji mzdovém, zachycuje období let 2011–2018. Mzdy sice ve všech krajích v těchto letech rostly, ale tento růst nebyl rovnoměrný: nejvíce rostly nejnižší mzdy (mzdy 1. decilu), nejpomaleji mzdy nejvyšší (mzdy 9. decilu). Pomocí shlukové analýzy byly dále identifikovány čtyři skupiny krajů podle typického vývoje nejnižších a nejvyšších mezd. V těchto skupinách jsme se zaměřili na typické faktory utváření mzdové hladiny: ekonomickou úroveň (měřenou jako HDP/obyv.), míru nezaměstnanosti a vzdělanostní úroveň (podíl obyvatel se základním a s vysokoškolským

vzděláním). Výsledky korelační analýzy ukázaly středně silnou přímou závislost mezi ekonomickou úrovní a mzdami 9. decilu, středně silnou až silnou nepřímou závislost mezi nízkými mzdami 1. decilu a mírou nezaměstnanosti, nicméně výsledky korelační analýzy mezi proměnnými vzdělanostní úroveň a mzdami příliš průkazné nebyly.

Klíčová slova

kraje, mzdová distribuce, medián, shluková analýza, ekonomická úroveň, míra nezaměstnanosti

Introduction

Regional differences in all countries are the focus of not only empirical theoretical research but also of practical policy or at least public debate. Their (un)justification, sources and factors are sought; these differences are described and explained. All this should then serve as recommendations on how to reduce particularly unjustified differences, bring the regions closer together and equalize them. No country can allow differences between regions to be too great (or even deepen), as this could jeopardize the stability of the society.

Regions as higher territorial self-governing units in the Czech Republic were established on the basis of Constitutional Act No. 347/1997 Coll., but their real establishment is connected with the adoption of Act No. 129/2000 Coll., on Regions (Regional Establishment), and with the first elections to regional councils (year 2000). The regions were delimited from the beginning by the territory of the listed districts, but these boundaries did not always respect the natural or historical catchment area. Although some partial adjustments were made to the regional boundaries (the biggest change was the integration of 25 municipalities from the Vysočina Region into the South Moravian Region in 2005), the present regions of the Czech Republic can still be considered as artificially created units.

Significant differences in various socio-economic, demographic, sociological and other characteristics among regions in the Czech Republic are highlighted by various entities (e.g. the Czech Statistical Office) (<https://www.czso.cz>), this comparison is usually accompanied by warnings about risks of the differences deepening even further. The following text aims to point out the differences in the distribution of wages within the regions, trying to find further similarities of those regions that show similar characteristics in wage development.

1 Theoretical background

There are quite a lot of texts and articles dealing with the context of the distribution of wages; they are of different qualities and use different methodological bases. Some observe the effects of demographic characteristics of workers on the distribution of wages (Wahlberg, 2010), (Bílková, 2011), some examine the influence of company sizes (Cosic,

2018). However, if we focus only on texts describing differences in the distribution of wages between regions or even countries (Atkinson, 2007), (Fernández-Macías, Vacas-Soriano, 2015), the choice is somewhat modest, although especially in some countries (in Europe, e.g. Portugal, Spain), this problem is regularly addressed by the authors (García, Molina, 2002), (Pereira, Galego, 2011), (Pereira, Galego, 2014).

In these texts, the differences in the distribution of wages between urban and non-urban areas are often highlighted. Empirical research shows that wages in densely populated urban areas are higher than in non-urban areas (DiAddario, Petacchini, 2008), (Matano, Naticchioni, 2013). In the case of Portugal, Pereira and Galego (2011) even find differences of 20–30% in wages between Lisbon and other regions. These differences are explained, for example, by higher living costs in cities (and hence higher demands on earnings), by attracting highly skilled labour to city centres, or by increasing human capital in the case of incoming formerly less-skilled workers. Cahill and Gager (2014) explain regional differences in wages in Canada by human capital. Although comparing levels of wages in the Canadian provinces and the US, Hunt and Mueller (2002) conclude that the average earnings are very similar, they still point to a greater “return on” qualification and education in the US. The link between higher unemployment rates in areas outside large centres (and, on the contrary, lower unemployment rates in these regional centres) and levels of wages is shown by Zierahn (2013).

The link to the demand as a factor increasing wages in regions around large centres is emphasized by Krugman (1991). Vamvakidis (2009) notes the relationship between regional differences in wages and the wage bargaining system in the European Union countries: there are smaller regional differences in wages where regional wage bargaining is more coordinated.

The impact of the minimum wage on the distribution of earnings also attracts attention. Campolieti (2015) compared the impact of the minimum wage on the distribution of wages in Canada and the US with the conclusion that its effects in Canada are less significant than in the US. The effect of the increase in the minimum wage on the distribution of wages (especially on the increase in wages not only of low-paid workers but also of others) is described by Lopresti and Mumford (2016) or Ferraro *et al.* (2018), in the Czech conditions, e.g. by Duspivová and Matějka (2013).

2 Data and methods

The aim of the article is to evaluate the development of wages in the regions of the Czech Republic (except Prague) in the sector of wages in 2011–2018. Particular attention is paid to wages of the 1st and the 9th deciles, marginally also to median wages. The capital city of Prague was not included in the studied sample: it is both a region and a city, while its characteristics are so different from other regions of the Czech Republic that the results would necessarily be distorted.

The period of 2011–2018 was chosen due to the following reasons: the studied source data on wages are collected using a uniform methodology (until 2010, the so-called

business and non-business sectors, not the wage and salary spheres, had been monitored in a slightly different way). During these eight years, the Czech economy experienced a period of recession and economic growth. At the same time, unlike in previous years, the effective minimum wage was significantly increased several times.

Due to the nature of the data examined, only secondary data could be used, in the case of wages, the data from the Regional Labour Cost Statistics, i.e. the system of regular monitoring of the current wages level and working hours of employees in the individual regions of the Czech Republic in the form of a statistical survey. This survey is included in the program of statistical surveys announced by the Czech Statistical Office in the Collection of Laws for the relevant calendar year. The survey is carried out by the state statistical service of the Ministry of Labour and Social Affairs, the course and development of the survey is managed by a committee composed of representatives of various institutions (e.g. the Ministry of Labour and Social Affairs, the Czech Statistical Office, the Ministry of Finance, Czech National Bank, etc.). The processor of the Regional Labour Cost Statistics is Trexima, s. r. o. (<https://portal.mpsv.cz/sz/stat/vydelky>).

Data on the regions of the Czech Republic (the economic level measured by the GDP per capita indicator, the unemployment rate measured as the share of unemployed persons in the population aged 15–64, the educational level as the share of the population with the relevant level of education in the population over 15 years of age) are taken from the Czech Statistical Office (especially statistical yearbooks of the individual regions).

The obtained secondary data are processed by standard statistical methods of descriptive statistics, by means of the cluster and correlation analysis.

3 Results and discussion

3.1 Development of individual categories of wages, results of the descriptive statistics

From the results of the survey of wages in the framework of the Regional Labour Cost Statistics, we can state that wages in the wage sector of all regions of the Czech Republic were growing during the whole monitored period (2011–2018). However, this growth was not even in all regions, nor was it equally fast. While the highest wages (9th decile) showed the slowest growth in all regions, the lowest wages (1st decile) grew relatively fast. However, the statutory minimum wage grew fastest: it increased by an incredible 52.5% over the eight-year period. While we may admit that part of this high growth makes up for the previous years when the minimum wage was not adjusted (2007–2013), the big difference compared to the growth of other wages is still unusual.

This significant rise in the legal minimum undoubtedly had an impact on the growth of the lowest wages (1st decile). They grew in all regions, the growth ranging from 34.3% (Karlovy Vary Region) to 50.3% (Pilsen Region), with the most frequent growth being 37–39%. While at the beginning of the monitored period (2011), the lowest 1st decile wages

were in the Ústí (CZK 10,434) and Moravian-Silesian (CZK 10,659) Regions, in 2018, this unflattering first place position was occupied by the Hradec Králové Region (CZK 14,455) and again the Moravian-Silesian Region (CZK 14,797). Interestingly, however, we can find the permanently lowest amounts of the 1st decile earnings not only in regions where the level of wages has been below the Czech Republic's average for a long time (Karlovy Vary Region), but also in the South Moravian Region, where the level of wages is otherwise significantly higher. The highest 1st decile wages have been found in the Vysočina Region and the Pilsen Region for the whole period (see Table 1).

Table 1: Wages of the 1st decile in 2011–2018 (CZK)

Region	2011	2012	2013	2014	2015	2016	2017	2018
Central Bohemian	11,479	11,491	11,597	11,906	12,078	13,229	14,292	15,791
Pilsen	11,177	12,049	12,062	12,261	12,647	13,460	15,186	16,798
South Bohemian	11,357	12,001	12,086	12,284	12,726	13,463	14,334	15,570
Karlovy Vary	11,140	11,434	11,414	11,713	12,027	12,648	13,785	14,960
Ústí	10,434	10,730	11,042	11,434	12,253	13,027	14,046	15,401
Liberec	11,179	11,448	11,964	12,627	12,776	13,779	14,626	15,852
Hradec Králové	11,473	11,908	12,120	12,452	12,655	13,254	14,108	14,455
Pardubice	11,477	11,764	11,885	12,394	12,568	13,167	14,507	15,954
Vysočina	11,904	11,821	11,927	12,346	12,444	13,448	14,994	16,298
South Moravian	10,783	11,119	11,191	11,688	11,884	12,656	13,791	14,992
Zlín	11,188	11,274	11,426	11,911	11,940	13,031	14,225	15,482
Olomouc	10,802	11,050	11,650	11,927	11,741	12,571	13,597	14,933
Moravian-Silesian	10,659	11,109	11,161	11,322	11,633	12,448	13,503	14,797

Source: Ministry of Labour and Social Affairs

The fact that the growth of the statutory minimum wage pushed the growth of the lowest wages, and the level of the statutory minimum wage and the 1st decile wages were getting closer can also be supported by the development of the ratio of the minimum wage to the 1st decile wages (see Table 2). While in 2011, this ratio was around 70% in all regions (the highest was in the Ústí Region – 76.6% and in the Moravian-Silesian Region – 75.5%), in 2018, it was significantly higher in all regions and ranged from 72.6% in the Pilsen Region to 82.4% in the Moravian-Silesian Region (cf. Duspivová, Matějka, 2013). The question is whether this convergence of the 1st decile wages and the statutory minimum wage is motivational and desirable: if the trend continued, the share of workers remunerated only by the minimum wage without further possible increase in wages as motivation for quality work would increase (or part of wages could be paid only as money down, within the informal economy).

Table 2: The rate of the statutory minimum wage and the 1st decile wage (%)

Region	2011	2013	2015	2016	2017	2018
Central Bohemian	69.7	73.3	76.2	74.8	77.0	77.3
Pilsen	71.6	70.5	72.7	73.6	72.0	72.6
South Bohemian	70.4	70.3	72.3	73.5	76.7	78.4
Karlovy Vary	71.8	74.5	76.5	78.3	79.8	81.6
Ústí	76.6	76.9	75.1	76.0	78.0	79.2
Liberec	71.6	71.0	72.0	71.8	75.2	76.9
Hradec Králové	69.7	70.1	72.7	74.7	77.9	78.9
Pardubice	69.7	71.5	73.2	75.2	75.8	76.5
Vysočina	67.7	71.3	73.9	73.6	73.4	74.9
South Moravian	71.9	76.0	77.4	78.2	79.8	81.4
Zlín	71.5	74.4	77.0	76.0	77.3	78.8
Olomouc	74.1	73.0	78.3	78.7	80.9	81.7
Moravian-Silesian	75.5	76.2	79.1	79.5	81.5	82.4

Source: Own calculation

The slowest growth of median wages was found in the Moravian-Silesian Region (by 26.7%), the fastest in the Hradec Králové Region (by 40.6%), with the most frequent growth being in the range of 35 to 39%. The lowest median wages in the whole monitored period were in the Karlovy Vary Region (CZK 18,263 in 2011, CZK 25,274 in 2018), the highest in the Central Bohemian Region (CZK 22,300 in 2011, CZK 29,654 in 2018) and the Pilsen Region (CZK 20,993 in 2011, CZK 29,245 in 2018).

The highest wages (9th decile) showed the slowest growth of all categories of wages: the most frequent growth was by 32–35% (but only by 19.9% in the Moravian-Silesian Region). In some regions (Olomouc, Moravian-Silesian, Ústí, Karlovy Vary), even the highest wages dropped several times in absolute terms year-on-year. While the 9th decile wages in the Central Bohemian Region exceeded CZK 40 thousand in 2011, in the Karlovy Vary, Olomouc, Pardubice, Moravian-Silesian and Zlín Regions, this limit was not exceeded before 2017. The highest 9th decile wages have been reached by the Central Bohemian and South Moravian Regions on a long-time basis: in both regions, it is certainly due to the effect of the urban centres (Prague and Brno), in the Central Bohemia Region also the influence of important employers (especially Škoda Auto). This is also consistent with the conclusions of foreign studies (DiAddario, Petacchini, 2008), (Matano, Naticchioni, 2013), (Zierahn, 2013) that wages in large cities (or agglomerations) are higher than in areas further away from these centres.

The development of the decile ratio (D9/D1) is also quite interesting (see Table 3). Its slight decrease in most regions suggests that even the highest and lowest wages are converging, i.e. a certain levelling occurs. The highest decile ratio was in 2018 in the Central Bohemian (3.5) and South Moravian (3.4) Regions, in many regions, the decile ratio was below 3.0 (e.g. in the Pardubice and Vysočina Regions) at the end of the monitored

period. It is interesting that this trend of levelling the level of wages within the regions in the Czech Republic does not correspond to the increasing inequality of wages within the EU countries, that has become evident especially since the beginning of the financial crisis (Fernández-Macías, Vacas-Soriano, 2015). In other words: while, within a transnational scale, the scissors of inequality are opening between the countries, on the contrary, they are closing within the Czech Republic.

Table 3: Decile ratio development (D9/D1)

Region	2011	2012	2013	2014	2015	2016	2017	2018
Central Bohemian	3.5	3.6	3.7	3.6	3.7	3.5	3.5	3.5
Pilsen	3.3	3.1	3.2	3.3	3.3	3.2	3.1	2.9
South Bohemian	3.2	3.0	3.1	3.0	3.1	3.0	2.9	2.9
Karlovy Vary	2.9	2.9	2.9	2.9	3.0	2.9	2.9	2.9
Ústí	3.5	3.4	3.3	3.3	3.2	3.1	3.1	3.0
Liberec	3.2	3.1	3.1	3.0	3.1	3.0	3.0	3.0
Hradec Králové	3.0	3.0	3.0	2.9	3.1	3.0	3.1	3.2
Pardubice	3.0	3.0	3.0	2.9	3.0	3.0	2.9	2.8
Vysočina	2.8	3.0	3.0	2.9	3.2	3.0	2.9	2.8
South Moravian	3.7	3.6	3.7	3.6	3.7	3.6	3.5	3.4
Zlín	3.1	3.1	3.1	3.0	3.2	3.0	2.9	2.9
Olomouc	3.1	3.0	2.9	3.0	3.2	3.0	3.0	2.9
Moravian-Silesian	3.5	3.4	3.4	3.3	3.4	3.2	3.1	3.0

Source: Own calculation

3.2 Results of the cluster analysis

The cluster analysis (Ward's method was used, the Euclidean distance square was chosen as the measure of distance) was applied to create the typology of regions according to the lowest (1st decile) and highest (9th decile) wages. According to the development of these two variables, four unequally numerous groups (clusters) of regions can be identified:

- G1: South Moravian Region, Hradec Králové Region,
- G2: Moravian-Silesian Region, Olomouc Region, Karlovy Vary Region,
- G3: Vysočina Region, Pardubice Region, Liberec Region, Ústí Region, Zlín Region, South Bohemian Region; as a subgroup we can identify the Vysočina Region and the Pardubice Region (see below),
- G4: Pilsen Region, Central Bohemian Region.

The first group (G1) consists of two regions characterized by the 1st decile wages that are permanently below-average, but on the other hand, by high wages of the 9th decile (i.e. also by the high decile ratio).

The second group (G2) consists of regions with the lowest level of wages on a long-term basis both for the lowest wages (1st decile) and the highest wages (9th decile).

The third (the most numerous) group (G3) can be called the “average”: the lowest and the highest wages are around mean values within all the regions. However, there are two regions with relatively similar wages (Vysočina Region and Pardubice Region): they have above-average lowest wages compared to other regions in the group (the Vysočina Region even has the highest 1st decile wages of all regions within the Czech Republic).

The last group (G4) is characterized by a long-term high level of wages – both for the 1st decile wages and for the highest wages (thus, in fact, it represents a certain counterbalance to the G2 group).

But what else do regions belonging to the individual groups have in common? The following text tries to find common characteristics of those regions where the level of the distribution of wages is similar. Here, we focus mainly on indicators of economic level (measured as GDP per capita), unemployment rate (measured as the share of unemployed persons in the population aged 15–64) and educational characteristics (share of persons with basic and uncompleted education, and university education in the population over 15 years of age). As a rule, these characteristics are accepted as those that affect levels of wages (Perugini, Pompei, 2017), (Hällsten, 2013), (Zierahn, 2013).

The regions of the first group (South Moravian and Hradec Králové) have a similar above-average economic level, but the unemployment rate differs considerably (in the South Moravian Region, the unemployment rate has been higher in the long term). Interestingly, while the share of the population with basic education or even without education was very similar, the share of the population with university education was significantly higher in the South Moravian Region than in the Hradec Králové Region (the South Moravian Region had the highest share of the population with university education, not counting Prague).

The regions of the second group (Moravian-Silesian, Olomouc, Karlovy Vary) are also characterized by a similar economic level – in this case, considerably below the average of the whole Czech Republic. They have a very similar unemployment rate as well. At the same time, these regions have shown considerable internal differences in the education of the population in the long term: they all have an above-average share of inhabitants with basic or uncompleted basic education, but their centres, i.e. the environs of regional cities, have relatively higher share of the population with university education.

The Pardubice and Vysočina regions are very similar and close (not only geographically). They have the same economic level (slightly below the Czech Republic average), almost the same unemployment rate, and a very similar structure of the population education. Other regions of the G3 group (Ústí, South Bohemian, Liberec, Zlín) are less similar in other characteristics – the similarity is perhaps only the “average” characteristics.

The Central Bohemian and Pilsen Regions are similar in terms of the high economic level, low unemployment rate and higher educational level of the population (below-average share of inhabitants with basic education or even without education and, on the other hand, the above-average share of people with university education).

3.3 Results of the correlation analysis

Above we have briefly described how the individual groups of regions differ according to the 1st and the 9th decile wages and also according to three selected characteristics: economic level, unemployment rate and educational level. Let us now focus on at least the correlation coefficients between the pairs of variables: the 1st and the 9th decile wages and other characteristics (GDP per capita, unemployment rate, the share of persons with relevant education). The assumptions are as follows:

- a) the higher the economic level of the region, the higher the wages, i.e. we will expect a strong direct dependence between the GDP per capita and the 9th decile wages variables,
- b) we will also expect that higher unemployment is influenced by low wages (i.e. the higher the unemployment rate, the lower the 1st decile wages), i.e. we will expect a strong indirect dependence between the 1st decile wages and the unemployment rate,
- c) for the educational level, suppose that high wages are directly influenced by higher education and low wages by low education of the population, i.e. we find at least moderate direct dependence between high wages and the share of the population with university education and at least moderate indirect dependence between low wages of the 1st decile and the share of the population with basic education.

The results of the correlation analysis are summarized in Table 4, Table 5 and Table 6.

Table 4: Spearman's correlation coefficient – part 1 (variables: wages and economic level)

Variables	2011	2012	2013	2014	2015	2016	2017
GDP/capita// 1st decile	0.104396	0.313187	0.247253	-0.054945	-0.021978	0.142857	0.115385
GDP/capita// 9th decile	0.675824	0.758242	0.697802	0.609890	0.681319	0.560440	0.620879

Note: The indicated values are statistically significant at $p < 0.05$

Source: Own calculation

Based on the calculated values of the Spearman's coefficient between the pair of GDP per capita and the 9th decile wages, our first assumption was basically confirmed: we can find a statistically significant medium-strong dependency (order correspondence) between GDP per capita and the 9th decile wages (results are statistically significant

at a 5% significance level). Especially in 2012 and 2013, this dependence was relatively strong. Nevertheless, there was an assumption of a stronger dependence, but this was not confirmed (especially in 2014 and 2016, we can only speak of *moderate* dependence). However, it can be assumed that the economic level of the region has an impact on high wages. Spearman's coefficient values for the pair of variables GDP per capita and the 1st decile wages are merely a confirmation that the economic level of the region does not affect the lowest wage: the values are close to zero, and we can say that these two variables are rather independent.

Table 5: Spearman's correlation coefficient – part 2 (variables: wages and unemployment rate)

Variables	2011	2012	2013	2014	2015	2016	2017
Unempl./1st decile	-0.774725	-0.917582	-0.747253	-0.629987	-0.624485	-0.674003	-0.604396
Unempl./9th decile	-0.203297	-0.285714	-0.307692	-0.085282	-0.176066	-0.140303	-0.219780

Note 1: Unemployment monitored as the share of unemployed persons in the population aged 15–64

Note 2: The indicated values are statistically significant at $p < 0.05$

Source: Own calculation

Here, based on the calculated values of the Spearman's coefficient, our assumptions were confirmed again: we observe a statistically significant moderate to strong indirect dependence (order correspondence) between the unemployment rate and the 1st decile wages (results are statistically significant at 5% significance level). This means that the higher the unemployment rate in the region, the lower the lowest wages (1st decile). This indirect dependence is strongest in 2012 and 2013 again (in 2012, we can even talk about a very strong indirect dependence). On the contrary, it is apparent that unemployment does not affect the high wages of the 9th decile (Spearman's coefficient values close to zero, statistically insignificant).

However, from the above results (see Table 4 and Table 5), one observation is interesting: in 2012 and 2013, there was a decline in GDP in the Czech Republic (in 2012, this decline was even stronger), i.e., we can talk about the economic recession. In these years, the most demonstrable results of the above correlation analysis also became apparent. In other words, if the economy is not doing well, low wages in regions are significantly affected by the unemployment rate (i.e. they are lower with increasing unemployment rate), but high wages increase with the economic level of the region (the higher the economic level of the region, the higher the 9th decile wages can be expected). In years when the economy is doing better, these sharper features are blunting.

Table 6: Spearman's correlation coefficient – part 3 (variables: wages and educational level)

Variables	2011	2013	2015	2017
University education // 1st decile	0.019257	0.109890	-0.440146	-0.134987
University education // 9th decile	0.484182	0.719780	0.396149	0.454547
Basic education // 1st decile	-0.555709	-0.565934	-0.124139	-0.340659
Basic education // 9th decile	-0.360385	-0.401099	-0.422073	-0.620879

Note: The indicated values are statistically significant at $p < 0.05$

Source: Own calculation

As to the results in Table 6, it is necessary to explain that the correlation coefficients were calculated for every two years because the level of education does not change so significantly year-on-year. And in this case, the results of our calculations are rather surprising. The share of the population with university education had a demonstrable effect (statistically significant stronger dependence) on high wages only in 2013 (it has to be noted again that in this year, the Czech economy did not do well). On the contrary, this dependency was not proved in the following years under investigation. The fact that a higher level of education did not have much influence on low wages was expected, but the negative signs of the Spearman's correlation coefficient values in 2015 and 2017 are interesting: they suggest that the higher level of education (higher share of the population with university education) lead rather to lower wages of the 1st decile.

Even in the case of the relation of the share of the population with basic education or without education and low wages, the results are not very demonstrable. Although the values of the correlation coefficient were statistically significant in 2011 and 2013, we can speak of at least moderate indirect dependence, but this is not the case in the following years. Surprisingly, the outcome for 2017 and the pair of variables population with basic education and the 9th decile wages is definitely a surprise: we can say that in this case, the moderate indirect dependence is statistically significant; i.e. the higher the proportion of persons with basic education or without education in the region, the lower the 9th decile wages.

Conclusions

The regions in the Czech Republic are considered to be higher territorial self-governing units, which were delimited by the territory of the exhaustively listed districts at the time of their establishment. This territory of the regions did not always respect the natural catchment and historical boundaries, but at present, we can already say that this system is basically "established".

Regions differ in many aspects – demographic, social, etc., but naturally, also economic. The subject of the text was the wage development in the wage sector in 2011–2018

(a period when the Czech Republic experienced not only an economic recession but also economic growth). The results of the survey of Regional Labour Cost Statistics in the wage sphere were used for the survey; all the regions of the Czech Republic were included in the studied sample with the exception of Prague (which is a region and a city at the same time).

Statistical surveys show that wages in this sector (wages of the 1st and the 9th deciles, median wages) grew in all regions in the given period, but unevenly, and also unevenly between regions. The lowest wages showed the fastest growth (the fastest growth of all regions was recorded in the Pilsen Region, the slowest in the Karlovy Vary Region), while the highest wages grew slower (the 9th decile wages showed the fastest growth in the Hradec Králové Region, the slowest in the Moravian-Silesian Region). As the statutory minimum wage grew most in this period, it gradually began to approach the wages of the 1st decile (in four regions, the ratio of the minimum wage to the wage of the 1st decile in 2018 exceeded 80%). This unequal development of wages in most regions leads to a decreasing decile ratio: the highest and lowest wages are thus converging, i.e. a certain levelling of wages occurs.

Based on the cluster analysis, we have identified four groups of regions, each characterized by a different development of the lowest and highest wages, but also by other characteristics (economic level, unemployment rate and level of education of the population). These characteristics were further analysed in relation to wages of the 1st and the 9th deciles. The results have confirmed our assumptions that there is moderate direct dependence, moderate to strong indirect dependence between the unemployment rate and the wages of the first decile, but surprisingly, the relationship between the educational level and wages has not been unambiguously confirmed (in some of the monitored years, statistically significant moderate dependence was reported, but not in other years).

However, the correlation analysis showed an interesting conclusion: in the years when the Czech Republic experienced an economic recession (2012 and 2013), low wages (1st decile) in the regions were significantly affected by the unemployment rate and the share of low-educated people, while high wages (9th decile) were more influenced by the higher economic level of the region and the share of the population with university education. Conversely, in years when the economy is doing better, these sharper attributes are blunting. It would certainly be interesting to explore the relationship between the level and development of wages in the regions and the economic cycle: foreign studies suggest that wage development may not be cyclical (Abraham, Haltiwanger, 1995), (Marczak, Beissinger, 2013); at least, they probably differ in a short and long term.

These conclusions are therefore an interesting promise for further examination: in addition to the relationship between the business cycle and wages in the regions, factors affecting wages and changing with the business cycle could also deserve attention.

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*New in the Czech Civil Code
– Rules on Family Enterprise
Novinka v českém občanském zákoníku
– pravidla pro rodinné podnikání*

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Abstract

For more than two decades the family business enterprises of the first generation (generation of founders) are more and more dominating in the category of today's Small and Medium-sized Enterprises in the Czech Republic. The necessary legal background defining the legal relationships and rights of all participating persons was, however, limited to general provisions in the Commercial Code that hasn't solved many of the problems associated thereto. Only in 2012 the new Czech Civil Code, Act. No 89/2012 Coll., introduced the institute of family enterprise as completely new term in the Czech Civil law. The present paper aims to analyse the key rules of this new legal regulation, focusing on significant aspects of the institute in the context of commercial law and family law, as well as to highlight the potential weaknesses in the regulation itself.

Keywords

family enterprise, family member, involvement in the operation of family enterprise, profit share and property gains

JEL Classification

D21, K22, K36

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Abstrakt

Již více než dvě desetiletí dominují v kategorii malých a středních podniků v ČR rodinné podniky první generace (generace zakladatelů). Nezbytná právní regulace vymezující právní vztahy všech zúčastněných osob se však dříve omezila na obecná ustanovení obchodního zákoníku, která neřešila specifické problémy. V roce 2012 vstoupil v platnost nový občanský zákoník, tj. zákon č. 89/2012 Sb. Ten upravil institut rodinného podniku jako zcela nový institut v českém právu. Tento příspěvek si klade za cíl analyzovat klíčová pravidla této nové právní úpravy, se zaměřením na významné instituty v kontextu obchodních vztahů a rodinného práva a také chce upozornit na potenciální slabiny této nové právní úpravy.

Klíčová slova

rodinný podnik, rodinný příslušník, zapojení do činnosti rodinného podniku, podíl na zisku a majetkové vztahy

1 Introduction

After the democratisation of the society and privatisation of the national economy in Czechoslovakia after 1989 (since 1993 Czech Republic and Slovak Republic) only gradually small enterprises that appeared and started to operate were stabilised in the economic and legal form of family business enterprises. The necessary legal background defining the legal relationships and rights of all participating persons – relatives and other family members – however, lagged behind, and was limited to general provisions in the Commercial Code that hasn't solved many of the problems associated thereto. Only in 2012 introduced the new Czech Civil Code, published as the Act. No 89/2012 Coll., the institute of family enterprise as completely new term in the Czech Civil law.

2 Goal of the paper

The regulation of the family enterprise has no tradition in the Czech law. Thus, it's a completely new institute the roots of which we may find in the Italian *Codice Civile* (Art. 230bis).¹ According to Explanatory Memorandum to the Civil Code the rules are aimed at filling the gap in regulation where the family members are in fact working for a family enterprise without their rights and obligations would be governed by a special contract closed to that purpose. It is true that also in the Czech business environment we could often encounter such regulation because the family business is a frequently employed arrangement of commercial relationships, where family members work under the guidance of one family member. Agricultural farms, family hotels or restaurants may serve as an example. Before the 2012 Civil Code there were no contractual rules for these arrangements. Such relationships were often solved by the use of rules on unjustified enrichment. However, this caused unequal relationships not only as regards the shares of family members on the profit obtained but also situations where some of the family members had either decision-making powers and responsibilities, nor could they claim settlement shares at the time of termination of their participation in the family business. Working for a family business without having a labour contract was even held for illegal work and there were considerations about tax evasion and avoidance of health and social insurance.

The rules of sections 700 to 707 Civil Code prevent the presence of such irregularities in the future. However in the process of application of the new rules we face some interpretation problems and gaps that the present paper will analyse. We encounter the interpretation problems already in connection with the definition of the term family enterprise. In interpreting the statutory rules we should also take in consideration the circumstance that before the legal rules commercial practices and customs established in the family enterprise take precedence provided that they are not contrary to the legislation in force, i.e. provisions of Sections 700 to 706 Civil Code. These commercial practices and customs

¹ Italian regulation is effective for almost 40 years, since the rules on the family enterprise were established along with the reform of the Italian family law in 1975, when, *inter alia*, the institute of *L'Impresa Familiare* was introduced (see TARDIVO, G. and M. CUGNO, 2011).

may serve also as interpretation tools for the determination of rights and obligation of the participating family members.

As follows from the above stated, the aims of the regulation of family enterprise to rule the position of those family members who – without any legal grounds – take part in the business of an enterprise owned by some of the family members and thus to provide legal basis to the claims for their personal contributions. Ruling this aspects, however, brought a significant limitation of ownership rights of the family business owner and, given the rather vague definition of cases to that these limitations apply, we may expect disputes on the interpretation of these cases and scope of the limitations.

The adoption of the new legislation brought a significant limitation of rights of the family business owner and due to the somewhat vague identification of cases to that such restrictions apply, we may expect disputes concerning the interpretation of these cases and the extent of the restrictions and await the resulting case law. The fact is that the owners of existing family enterprises were not prepared for the limitation of their ownership rights that occurred when the Civil Code entered into force. When interpreting these rules we must, further on, realize that the family community, to which the new legislation applies, may have in fact exist for many years before and to the effective date of the Civil Code haven't to meet any formal requirements to fall under the application thereof. Therefore they did not have to sign any contracts, or make arrangements in order to be subjected to the new legislation. If, in the context of family communities, their relationships satisfy the conditions of the family enterprise, the legislation in question applies automatically to them.

The paper aims at analysing of selected issues of the new legal regulation, focusing on significant aspects of the institute in the context of commercial law and family law, as well as to highlight the potential weaknesses in the regulation itself. The text was prepared on the basis of general theoretical scientific methods. The use of analytic method is accompanied by the historical method when comparing the rules contained in the former Commercial Code. Comparative method is employed also in the highlighting of the origin of the new institute and its relatively recent formation.

Paper opens with characteristic features of the notion of family enterprise itself. After that is defines the family members who are legally entitled to be involved in the operation of a family enterprise. Leading role belongs logically to the owner of the family enterprise and thus the subsequent part characterises its specific position among the family members including the ownership of the enterprise. After a brief characteristic of the formation of a family enterprise the following part focuses on claims that belong to family members involved in the operation of the enterprise. Explanations on the transfer of participation in family enterprise are followed by the regulation of possibilities for termination of participation by family member and – finally – of the dissolution of the family enterprise as a whole.

3 Results and discussion

3.1 The notion of family enterprise

The family enterprise is most often defined as a kind of commercial enterprise (Section 502 Civil Code) in which spouses and persons within a defined family relationship with at least one of the spouses work together.

It is doubtful whether the definition of family enterprise as a type of the commercial enterprise (Section 502 Civil Code) without further specification as this means its definition merely as a sort of “collective asset” (*universitas rerum*). This specification doesn't respect that the basis of the legal regulation of family enterprises is the ruling for rights and obligations of participating family members when operating the commercial enterprise. For the definition of the latter it is therefore necessary to stress the personal component as the particular issue of the regulation. Undisputedly, there is no family enterprise without the specification and operation of a commercial enterprise under Section 502 Civil Code and it can be said that the focal point for the setting up of a family enterprise is establishing and operating of the commercial enterprise. A commercial enterprise, however, is defined as an organised set of business assets, whereas the basis of a family enterprise is the ruling of contract-free relationships between family members in the course of operation of a set of business assets. Therefore we hold that a more precise definition of the family enterprise is a specification emphasising the personal component and defining a family enterprise as family community that is established for the purpose of running a commercial enterprise. For the definition of the family enterprise is not a crucial issue the proprietary essence of the commercial enterprise that forms the basis of the family enterprise, but it is namely the personal participation of defining family members therein.²

It is irrelevant what is the subject of business of the commercial enterprise, which are its property components or what is the value of the set of assets forming the enterprise. However, it is of relevance which persons are involved, on a permanent basis, in the operation of the enterprise, and if these are persons as defined by the legal provisions, then it is a family enterprise – provided there is no contract between these persons or any other reason that would make applicable a different legal institute for the regulation of their relationships. We thus conclude that the relationships between family members involved in the operation of the family enterprise are not personal component of this enterprise of that kind we may specify the latter in the case of any commercial enterprise. In the case of disposal with the family enterprise, its demise and/or the loss of the enterprise nature as a family enterprise will occur, without personal relations being transferred to the purchaser of the enterprise. Therefore we consider the family community in the sense as defined above should be regarded in that way that is not part of the commercial enterprise as its component and these relationships are placed outside the organized set of all components that make up the enterprise.

As characteristics of the family enterprise we may indicate:

- a) Existence of the commercial enterprise

² For economic aspects of the family enterprise, see i.a. PETLINA, L. and V. KORÁB, 2015.

- b) Operation of the business
- c) Personal involvement of the family members in the operation of enterprise or keeping of a household, whereas the persons shall be relative in a degree defined by the law
- d) permanent nature of the involvement
- e) personal involvement in the operation is not covered by a contract

A question may be raised whether the joint labour of the spouses or at least one of them together with relatives in the statutory defined degree (see sub c) above) should not be a separate characteristic of the enterprise.

If the above characteristics are met, we can talk about the family enterprise

3.2 Family members involved in the operation of family enterprise

Family members who may be involved in the operation of the family enterprise, are defined by the legislation as spouses, or at least one of the spouses and their relatives up to the third degree, or persons relative in the brother-in-law degree with the spouses to the second degree. According to this wording of the Civil Code we may conclude that the basis for the family enterprise is a married couple, or at least one of the couple. A question arises whether for the establishment of the family enterprise the existence of a married couple is a precondition – at least at the moment of its very establishment – and whether the degree of relativity or brother-in-law relationship devolves from the couple or at least one of them. We can hold that there is no justification for such a conclusion and we can't interpret the family enterprise in such a narrow way. According to our opinion the family enterprise can thus be established even in cases where none of the family members is in the marital relationship, provided the members meet the condition of being related up to the third degree or in a brother-in-law relationship up to the second degree (KUČERA, J., 2015). The narrow interpretation would not meet the purpose of the new legislation as specified in the Explanatory Memorandum to the Civil Code.

In order to specify of the personal component of the family enterprise, it is necessary to determine also the notion of relatives and brothers-in-law of the spouses, as we have to deal exclusively with persons that may be involved as family members in the operation of a family enterprise and enjoy rights and obligations defined by the Civil Code. In specifying the sequence of relatives up to the third degree we shall apply the provision of Section 773 Civil Code that says that the degree of relationship between two people is determined by the number of birth, which comes in direct line from one another and in the next two lines from their nearest common ancestor. Therefore, we have to distinguish between relative in first degree, namely parents and their children, in the second degree grandparents and their grandchildren, and in the third degree the great-grandparents and their great-grandchildren. Further on, we may involve the side line, i.e. whether the related persons have a common ancestor and do not come from one another. In this case,

the first degree is out of question of and the second degree relatives are siblings and the third degree relatives are uncle and nephew and aunt and niece.

As regards the persons related on the brother-in law line, the Section 774 Civil Code applies. The affinity arises through marriage between one husband and relatives of the other spouse, in which line and to what degree is related to someone with one husband, in a line in which the degree is in brother-in-law relation with the second husband. Therefore, essential for the definition of family enterprise is the fact that after the termination of the marriage due to the death of one of the spouses or his/her declaration for dead the brother-in-law relationship shall not cease]. The brother-in-law relationship is of relevance for the definition of the family enterprise up to the second degree. This means that a spouse shall be due to the marriage in brother-in-law relation of first degree with parents of the other spouse, his/her children, great-parents and grandsons or siblings of the spouse.

The legal rules require that the relatives or brothers-in-law are involved in the operation of the family enterprise in person or that they work for the family on a permanent basis [9], whereas no difference is made between these two categories except for the performed type of the work; all persons are held for family members involved in the operation of the family enterprise.³

It is also necessary to answer the question who represents the person in relation to that we shall determine the relativity or brother-in-law relation. The only logical person is the owner of the business enterprise, at least at the time of the establishment of the family enterprise. The Civil Code indicates the spouses or at least one of them who work in person in the enterprise. We may also encounter a broad definition of the institute of family enterprise where – in the case of existing family enterprise – every family member connection to any member of the family who is involved in the operation of the enterprise is admitted. In other words, the delegation of the involvement is possible to a person, which is the way laid down by the Section 700(1) Civil Code linked to any member of the family (ŠVESTKA, J., DVOŘÁK, J., FIALA, J., ZUKLÍNOVÁ, M. e. a., 2014, sv. II). For this interpretation the link of a family member to the owner of the enterprise is not considered and the owner may influence the non-delegation of the involvement only by his/her disapproval.

It is convenient to deal also with the question how many family members at least must be involved in the operation of the family enterprise to that the characteristics of the family enterprise shall be met. However, in the doctrine and/or the existing case law we will find no reference to answer that question. So we may conclude that two family member are enough to form a family enterprise and none of them have to be in marital relationship.⁴

3 See the Explanatory Memorandum to the Act No. 89/2012 Coll./Civil Code/: "Also the the family member who is permanently working for the family, in particular, takes care of the family household is put on the same level with the family members who perform labour for the family enterprise. It is the consistent fulfillment of the statutory principle that the personal care of the family and its members is of the same importance as the provision of proprietary performance."

4 With respect to the priority of the matrimonial property law we may conclude that the family enterpsise can't be establish only between the spouses, not even in the case of their separated property.

3.3 Owner of family enterprise

The answer to the question who can be the owner of a family enterprise, gives us Section 700(1) Civil Code in the first sentence. According to this provision we can conclude that business enterprise that is considered for a family enterprise, must be owned by one or more individuals (ŠVESTKA, J., DVORÁK, J., FIALA J., ZKUKLÍNOVÁ, M. e. a., 2014, sv. II). Due to the linguistic interpretation of this provision we may deduce that no legal (moral) person is admitted as the owner. But in practice we find cases where the enterprise of a legal person is operated in the way meeting all criteria for its specification as family enterprise and the application of the rules for family enterprises would be suitable as they would meet the purpose and aim of the latter. As a typical example we may quote single-person limited liability companies where relatives or brothers-in-law of the shareholder of the company are together involved in its operation. We believe that in such cases there is no serious reason for non-application of the rules for family enterprises. This conclusion can be supported also by the second paragraph of Section 700 Civil Code that excludes the establishment of a family enterprise in cases where the rights and obligations of family members involved in the operation of the enterprise are ruled by articles of association including the founding legal act establishing a commercial company or cooperative agreement. There are thus explicitly excluded forms when community of family members exists within a commercial company but not cases when one of the family members stands as partner (shareholder) in legal person that operates a commercial enterprise and other family members are involved in a form that is not covered by a contract.

Given that the owner of a commercial enterprise can be – under the current legislation – a private non-entrepreneurial person, even a minor, we hold that identical conclusion can be made as regards the ownership of family enterprise. With respect to the fact whether the owner must be personally involved in the operation of the enterprise we can conclude that for the latter it is not the case. Also the management of the undertaking can be procured by other person than by the owner.

With respect to the circumstance that the new legislation admits that one and the same person may be the owner of more enterprises, we can't preclude the alternative that the nature of the family enterprise shall have only one of them, namely the one in the operation thereof are the family members really involved in person.

3.4 Ownership form of family enterprise

There can be no doubt that a commercial enterprise in the operation of which are involved family members may be in single ownership or co-ownership by shares. It is, nevertheless, questionable whether commercial enterprise can be in the joint ownership of spouses. We would answer the question positively. Excluded is, however, application of family enterprise statute to situations when all family members involved in the operation of the enterprise will be at the same time co-owners of shares in the enterprise. The legislation of the ownership right must take precedence.

3.5 Formation of family enterprise

The legislation doesn't rule in details the conditions for the formation of family enterprise. Since the existence of a commercial enterprise brought to operation is necessary for the existence of the family enterprise, we may conclude that a family enterprise can be formed not sooner than at the moment of the formation of the commercial enterprise and/or start of its operation. No formal prerequisites are necessary for the formation of a family enterprise and the fact that we have to do with this type of commercial enterprise doesn't need to be recorded in the public register. We may hold that no third person must be aware of the fact that a commercial enterprise is run in the form on the family enterprise. We can thus characterise the formation of the family enterprise as being established by *de facto* involvement in person of relatives or brothers-in-law of the owner of the enterprise. It is obvious that the family enterprise is base on a fiction (ŠVESTKA, J., DVOŘÁK, J., FIALA J., ZUKLÍNOVÁ, M. e. a., 2014, sv. II).

The family enterprise may be also formed at any time in the course of operation of a commercial enterprise.

The family enterprise shall not be formed by leasing of an enterprise, as a precondition for the formation of family enterprise is its ownership by a family member.

The family enterprise is based on the fact that the claims of the family members are not covered by a contract. It remains a question whether it is according to the law to rule on some questions by mutual agreement of all involved family members.

If some family communities that suit the conditions of the family enterprise under the 2012 Civil Code have been active before January 1, 2014 and continued after the record day we may held that the family enterprise has been formed to that day and since this time the relevant rules on family enterprise of the new Civil Code shall apply. In such a case the claims of family members incurred before December 31, 2013 would be dealt according to the previous legislation and claims dated after the record day according to the new Civil Code.

3.6 Non-application of the legal rules for family enterprise

The legal regulation of family enterprise shall not apply where the rights and obligations of the family members involved in the operation of the family enterprise are covered by a contract, whether it may be articles of association, memorandum of association, silent partnership, co-operative statutes, labour or other similar type of contract. The contractual regulation shall always take precedence over the rules on family enterprise, i.e. will apply where family members involved in operation of a family enterprise don't have any other legal guarantee of their rights and obligation.

The rules on family enterprise shall also not apply in the event when in the operation of family enterprise are involved the spouses alone. Here the Civil Code explicitly prefers the

rules on matrimonial property law. Thus, the rules on Family enterprise can be held for subsidiary regulation as its application shall occur only when there is no prevalence of the above defined statutory or contractual rules.

With respect to the prevalence of the matrimonial property law the question must be asked whether a family enterprise can be founded only under the participation of the spouses. We hold that this is not the case even in situations should the commercial enterprise be in the ownership of one of the spouses and the other is personally involved in the operation of the latter or works for the family on permanent basis. In situation like this the rules on joint ownership of the spouses shall apply on the property rights for the operation of such commercial enterprise as the profit from the operation of what belongs only to one of them forms part of the joint ownership of the spouses. The question, however, is whether, for the other spouse who is involved in the operation of the family enterprise but is not the owner thereof, it would not be more useful to be in a position of the family member involved in the operation. Such a member namely is not only entitled to the profit share but has also the right to participate in the decision-making on principal questions concerning the operation of the enterprise outside the usual business and in questions on the disposal with the enterprise. Merely on the basis of being a spouse and participation on the joint ownership of the spouses under statutory rules (SOLIL, J., 2014). These rights do not belong to the other of the spouses under the rules of matrimonial property law.⁵

3.7 Claims of family members involved in the operation of the family enterprise

Civil Code specifies as the basic right of family members involved in the operation of the family enterprise the right to participate in profits from this operation. The legislation does not specify more detailed conditions for determination of the amount of profit share of each member with the exception of the rule that each family member should participate in the extent corresponding to the amount and type of his work. It follows from the wording of the legal provision that the decision-making of family members is subject to the use of the entire profit of the family enterprise and, therefore, not only the part that is intended for distribution among members of the family. Should this conclusion be accurate, it means that members of the family by their decision affect what portion of the profit will invest back for the development of family enterprise, its maintenance and operation and what portion will be divided among family members. Family members are therefore capable to influence the primary business decision-making on the use of the profit in its entirety. The decision on the use profits from the family enterprise belongs to all family members involved in the operation of the family enterprise, and this decision is taken by a majority of votes. At this point it should be noted that the Civil Code does not rule on the share of family members involved in the operation of the family enterprise to cover the loss of the family enterprise. We may hold that the entire business risk is borne by the owner of the family enterprise. The legislation also doesn't rule for the obligation

⁵ *The reason for the usefulness of the rules family enterprise may be, inter alia, the fact that, pursuant to Section 118 Labour Code, there can be no employment relationship between the spouses.*

of the involved family members to provide any cash or non-cash deposits to the family enterprise. We hold, however, that the members of the family can mutually agree on the provision of deposits for the owner of family enterprise.

In spite of the fact that the Civil Code regulates the entitlement of the family members as the claim for share on the profit, it seems as a proper interpretation that the family members are not entitled to a regular income for their personal work for the family enterprise, with regard to the terms used there is no reason to consider the profit for something different than the result of the current accounting period. If that were the case, then the subject of decision of the family members shall be only the so called net profit, i.e. the profit, after deduction of the tax duty chargeable to the owner of the family enterprise, after deduction, when applicable, of social security contributions and contributions to the State employment policy and health insurance premiums.

We can accept the interpretation that a family member will be entitled for his work for the family enterprise to receive incomes, this regardless of whether the family enterprise earns profits or not. This conclusion is also supported by the tax legislation that rules for the taxation of income of family members involved in the operation of the family enterprise and not for taxation of earned profits.

The law does not rule for payment of profit shares exclusively in cash. We can therefore hold that a consideration can be also accepted. However, this will be in the competence of the family member community.

Family members involved in the operation of the family enterprise can waive their claim to profit shares, this in the form of a notarial deed. This rule is undoubtedly a mandatory one. However, it is questionable whether the members involved in the operation of the family enterprise may define by mutual agreement rules for more accurate profit distributions and concrete extent to which they will participate in the earned profit. We are of the opinion that this may be the case, if such agreement is not a waiver of the right to profit shares by some of the members. We also hold that family members involved in the operation of the family enterprise can agree on what part of the profit shall be distributed among them, and will not be used for further operation of the family enterprise.

If during the operation of the family enterprise some gains should be incurred, all family members are entitled to them, this to the same extent as to profit shares. They are entitled, to the same extent, to properties acquired from the profit earned. Therefore, the question is, what represents the gains to the family enterprise, and what claims arise to family members therefrom. Also in this case there are significant interpretation problems. We may not exclude the interpretation that the gains to the family enterprise are not identical with the commercial enterprise and become a separate property falling to the co-ownership of family members. The share of each family member should be determined by the extent of the amount and type of his/her work. Should this interpretation be correct, then the concept of "collective asset" (*universitas rerum*) the concept of mass as ruled by the provisions of Section 501 Civil Code shall be lost. Among the characteristics of collective assets belongs the definition that it is a set of two or more separate assets, all of which belong to the ownership of a single person and are used for identical purpose.

And this would not be the case if the gains to the family enterprise and property acquired from the profit would fall to the co-ownership of family members. Therefore we incline to the conclusion that the claim to the share of family member on the gains to the family enterprise or on property acquired from the profits of the family enterprise should be settled in cash, this in the case of termination of its involvement in the family enterprise. The family members can waive the claims to gains and shares in property by a statement in the form of notarial deed. In the case that we admit the emergence of co-ownership shares to gains and property acquired from profit, this will bring great legal uncertainty for the owner of the family enterprise. Further on, the situation may arise that the family enterprise ceases to have the character of an organized set of assets eligible for running the business.

Further rights of family members involved in the operation of the family enterprise we consider for substantial, since they significantly restrict the ownership right of the enterprise owner. Family members in a family enterprise shall have the right to participate in decision-making with respect to operation of the enterprise and the disposal with the enterprise outside the regular operation. The Civil Code explicitly provides that the principles concerning the operation of the business or its closing down are reserved for the decision of the family members. To interpret properly the questions, what kind of changes specifically have to be decided will be the task of the application practice and the case law. However, we may presume that these issues involve changes of the subject of business, changes of the established place of business of the enterprise, changes in organizational structure and management and/ or questions of further development of investments in the operation of the family enterprise (ŠVESTKA, J., DVOŘÁK, J., FIALA J., ZUKLÍNOVÁ, M. e. a., 2014, sv. II). And, lastly, the decision on termination and dissolving of the family enterprise.⁶

Family members have, unless stipulated otherwise, the pre-emption right to the family enterprise, which is to be disposed. Thus, the pre-emption right belongs to family members also in the case of assignment of the enterprise by donation. The legislation rules explicitly that even in the case of disposal of the property that, by its and designation, should permanently serve for the operation of the enterprise, the family members possess the pre-emption right. In practice, we may expect that family members will benefit from this pre-emption right even as regards the immovable properties belonging to the family enterprise. Due to the fact that the nature of the commercial enterprise as a family establishment is not recorded in any public register and cannot be ascertained from public sources, the person acquiring the property will not be able to find out prior to the conclusion of the purchase agreement that the transferor is restricted by the pre-emption right of the family members.

⁶ We consider the resolving of this question for essential. In the case the owner of a commercial enterprise should not be allowed to cease, according to his/her own will, the operation of the commercial enterprise run as family enterprise, it can be expected that it will be more suitable for owners to give preference to contractual arrangement with working family members.

3.8 Transfer of the participation in family enterprise

The legislation is based on the non-transferability of participation of family members. Any claims of family members have personal character and are non-transferable. An exception is allowed if and only if the transferee is one of the family members exhaustively defined by the provisions. Section 700(1) Civil Code and all family members who are involved in operation of the family enterprise agree with such transfer of participation. It is therefore obvious that the transfer can occur only if the person who transfers or assigns ceases to be involved in operation of the family enterprise personally and this will be taken over by the person of transferee, who meets the preconditions therefor, being a relative or brother-in-law of the owner. The legislation does not rule on the contract to transfer the participation in a written form and does not provide for the prior consent of family members as a condition for the implementation of the transfer. It is therefore possible that the transfer will occur also on the basis of an oral agreement, which shall be approved subsequently by all family members involved in the operation of the family enterprise. In the event that such consent was not given and the transfer or assignment would have taken place without the consent of all family members, we may hold such act for invalid due to the fact that the rule of Section 703 Civil Code ruling for the transfer of participation has mandatory character. It is therefore a legal rule that does not allow for any derogation and legal act arranging for transfer or assignment of the participation would, without the consent of family members, conflict by its content with the law (LAVICKÝ, P. e. a., 2014). If we agree with this argumentation we shall conclude that this is the case of absolute nullity. With regard to the fact that we may expect a broad spectre of opinions concerning the degree of the invalidity and character as the statutory rule – mandatory or relatively mandatory, we may admit that the invalidity is a rule provided to protect the family members involved in the operation of the family enterprise, that may be invoked only these members that are protected by granting the right to provide consent to the transfer/assignment of the participation. Another issue of interest is the assessment of the legal conduct, on the basis of which the transfer of participation to other person than to a family member referred to in Section 700 (1) Civil Code would occur. In such a case, we can conclude that this would be a legally non-existent conduct.

We can presume that the transfer in accordance with the legislation can occur even for consideration. We hold at the same time that only the case law will resolve the question whether by the transfer of participation the claims and rights associated therewith shall be transferred as well, for example, entitlement to payment of profit for the period preceding the transfer of participation. Making this conclusion we should deal with the fact that the transfer of participation has the same consequences for the family member whose participation terminates, as the cease of the involvement in the operation, according to Section 705 Civil Code (LAVICKÝ, P. e. a., 2014). We believe that this is not so and that the transfer of the participation is mentioned by the legislator deliberately in a separate provision than the one that terminates the participation. We tend to believe that with the transfer of the participation rights associated with the involvement in the operation of the enterprise are transferred as well and therefore the unpaid and outstanding claims shall follow. Thus we may interpret the assignment in that way that the legal status, which enjoys the family member in question, shall be assigned to another member in unchanged

extent. We must realise that in the transfer of participation the family member cannot apply the pre-emption right.

It remains a question whether the transfer of participation to other family member can occur in the case of a death of family members. This conclusion we may refuse because by the death of a family member involved in the operation of the family enterprise its participation ceases and outstanding claims from this participation should be subject of the succession.

3.9 Termination of participation of a family member

Family member's involvement in the operation of family enterprise shall cease in the case he/she stops to perform work for the family. The Civil Code does not specify any formal requirements to this termination and it can be therefore expected that the demise shall occur by a *de facto* cease of work for the family enterprise. Another reason for the termination of the participation of a family member may be that he/she concludes an employment contract or similar contract or enters in another relationship with the owner of the commercial enterprise that precludes his/her participation in the family enterprise. It can be expected that with regard to the eligibility requirements for family members entitled to be involved in the operation, the termination may occur by cease through divorce of the marriage that is basis for the brother-in-law relationship. And, finally, the termination of the participation of a family member occurs also by his/her death.

For practical reasons, we consider for necessary that the termination of involvement in the operation of family enterprise shall occur also due to a unilateral act of the owner of the enterprise or on the basis of the decision of the family members involved in the operation of the family enterprise. We may admit that in the application of this unilateral termination of involvement the practices and conventions set during previous operation of the enterprise. On the other side, completely unclear is the specification of claims arising to a member family member upon termination of its involvement in the operation of the enterprise and their settlement. According to the wording of Section 706 Civil Code we may expect that the entitlement of the member is of pecuniary nature as the rules admit that it may be broken down into instalments should an agreement to such end be concluded or instalments shall be approved by decision of the Court. However, there isn't any closer definition of nature of this claim and its amount. We may suppose that the legislator refers to settlement of all claims of member whose participation terminated and, therefore, including the share on the gains and property acquired from the profits of the family enterprise, which we consider for a meaningful interpretation. This means that obviously the member's share in the property shall be settled. If it stands up to the conclusion of a mutual ownership to these increments and things taken from the profit, it would be a cancellation and settlement of the mutual ownership, when a family member whose participation to lapse, would always be entitled to a settlement amount in the money. If the conclusion on the co-ownership by shares in there gains and property acquired from the profits will stand, it would be a cancellation and settlement of the

co-ownership, where a family member whose participation shall terminate, is always entitled to a settlement share in money. Due to the fact that the person that shall be obliged to pay the share, would be probably the owner of the family enterprise – even if the legislation completely avoids this issue – the claims of the former member would accrue to the ownership of the owner of enterprise. Associated issues to the latter are whether the profit of the family enterprise can be used for repayment to a former member and whether there is any obligation to repay the Member with participation terminated, shall not arise to all family members whose involvement in the enterprise continues. Specification as to whom the claim on the settlement upon the termination shall be raises will therefore remain to be settled by the case law. Whereas the question of locus standi in this dispute seems to be clear, different conclusions can be reached with regard to the legal capacity to be sued. The authors of this paper are of the opinion that the latter belongs only to the owner of the family enterprise.

3.10 Dissolution of the family enterprise

As we have defined one of the characteristics of family enterprise is its keeping in the operation, we may conclude that the family enterprise ceases to exist due to the suspension of its operation that is not of a temporary character. To the dissolution of family enterprise comes by its disposal and we expect that also due to the succession to the family enterprise. The question is whether the dissolution of the family enterprise occurs when the one or more of the family members make use of their pre-emption right to the family enterprise (ŠVESTKA, J., DVOŘÁK, J., FIALA J., ZUKLÍNOVÁ, M. e. a., 2014, sv. II). And, naturally, the dissolution of the family enterprise can also occur by agreement of the persons involved in its operation.

We hold that the existence of the family enterprise shall be influenced by declaration of bankruptcy on the property of its owner. To continue in the operation of the enterprise as family enterprise after such declaration would be contrary to the principles of the bankruptcy proceeding and the operation of the enterprise would also interfere with the disposal rights of the liquidator of the bankruptcy. We may also find the interpretation that the operation of the family enterprise may be terminated due to the circumstance that the liquidator of the bankruptcy will not declare towards the family members involved in the operation of the enterprise within 30 days after declaration of the bankruptcy that he shall meet their requirements. This interpretation rests on the provision of the Bankruptcy Proceedings Act that affects the contracts on fulfilment of mutual obligations, so far as they remain unfulfilled on the opening day of the bankruptcy by the other party to the contract as well. With regard to the fact that the existence of a non-fulfilled contract is the condition for application of this statutory provision – and we characterise the family enterprise as arrangement of contract-free relationships between family members, we may hold this provision of the Bankruptcy act for non-applicable to the family enterprise.

4 Conclusion

In conclusion of our analysis and considerations, we should remind you that, unless otherwise provided by law, family members can rule for their rights and obligation in a way of derogation from the law. Prohibited are only legal acts that *contra bonos mores*, violating the public order or rights relating to the personal status of persons, including rights for protection of the personality of individuals.

In the their next years, after the settlement of the re-codifying rules of the Czech civil law, we may expect further interpretation of the rules on family enterprise by the case law of general courts to be established on this issues, but also the one of the administrative courts, e.g. in the context of defining the legal and illegal labour in the decisions of the labour inspectorates relating to bailout the family without labour relations.⁷ In the event that the labour will be defined as personal performance of a family member, we shall exclude the conclusion that it could be held for illegal labour.

At present, some professional workplaces in the Czech Republic are considering wheter to include the modification of the family plant The Business Corporations Act and exclude it from the Civil Code. Any amandment or non-complecion of the Business Corporations Act must be carefully assessed by our court and the evaluation (analysis) of the existing adjustment must be carried out first.

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⁷ *These questions are dealt by the case law already several years before the introduction of the institute of the family enterprise. Most consequently were the features of dependent labour defined by the Supreme Administrative Court in its decision of December 13.02.2014, sp. zn. 6 Ads 46/2013. Available at http://www.nssoud.cz/files/SOUDNI_VYKON/2013/0046_6Ads_13_20140220123634_.pdf*

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Scenario Analysis Approach for Operational Risk in Insurance Companies

Analýza scénářů operačního rizika v pojišťovnách

MICHAL VYSKOČIL

Abstract

The article deals with the possibility of calculating the required capital in insurance companies allocated to operational risk under Solvency II regulation and the aim of this article is to come up with model that can be use in insurance companies for calculating operational risk required capital. In the article were discussed and compared the frequency and severity distributions where was chosen Poisson for frequency and Lognormal for severity. For the calculation, was used only the real scenario and data from small CEE insurance company to see the effect of the three main parameters (typical impact, Worst case impact and frequency) needed for building the model for calculation 99,5% VaR by using Monte Carlo simulation. Article comes up with parameter sensitivity and/or ratio sensitivity on calculating capital. From the database arose two conclusions related to sensitivity where the first is that the impact of frequency is much higher in the interval (0;1) than above the interval to calculated capital and second conclusion is Worst case and Typical Case ratio, where we saw that if the ratio is around 150 or higher the calculated capital is increasing faster that the ration increase demonstrated on the scenario calculation.

Keywords

operational risk, insurance, scenario analysis, distribution, sensitivity

JEL Classification

C150, G320, C100

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Abstrakt

Článek se zabývá možností výpočtu požadovaného regulatorního kapitálu v pojišťovnách pro operační riziko podle nařízení Solventnost II. Cílem tohoto článku je přijít s modelem, který lze v pojišťovnách použít pro výpočet kapitálu alokovaného pro operační riziko. V článku byla diskutována a porovnána rozdělení četnosti a dopadu, kde bylo zvoleno Poissonovo rozdělení pro frekvenci a Lognormální rozdělení pro dopad. Výpočet se zakládá na reálném scénáři a datech z malé pojišťovny ze střední a východní Evropy, aby bylo možné pozorovat vliv tří hlavních parametrů (typického dopadu, nejhoršího možného dopadu a frekvence), které jsou potřebné pro sestavení modelu pro výpočet na hladině 99,5 % VaR pomocí simulace Monte Carlo. Článek přichází s analýzou citlivosti parametrů a / nebo poměrovou citlivostí při výpočtu kapitálu. Z databáze vznikly dva závěry týkající

se citlivosti. Dle prvního závěru je dopad frekvence v intervalu (0; 1) mnohem vyšší než nad intervalem pro vypočtený kapitál. Jako druhý závěr lze vyzorovat, že pokud je poměr mezi nejhorším možným případem a typickým případem okolo 150 nebo vyšší, vypočtený kapitál roste rychleji než poměrový ukazatel při výpočtu scénáře.

Klíčová slova

operační riziko, pojištění, analýza scénářů, rozdělení, citlivost

Introduction

Scenario analysis is the recurring process of obtaining expert opinion with own operational event recorded in company/group to identify and evaluate major potential Operational risk events and assess their potential impacts, ensuring a forward-looking risk point of view (Rippel and Teplý, 2008). From a measurement perspective Scenario Analysis provides a forward-looking cross-functional assessment of the potential size and likelihood of acceptable operational losses or events and delivers the proper inputs for Operational Risk capital requirement calculation by using the Internal Model. On the other hand from a management perspective Scenario Analysis, may start or drive the process of identification Operational risks which are existing currently or may potentially appear with impact to company and control weaknesses, with the purpose of defining and addressing the risk prevention and their mitigation techniques or strategies. Scenario analysis in banking industry as a calculating method was mentioned or used in Arai (2006), Mulvey and Erkan (2003), Rosengren (2006) or Dutta (2014) where scenarios had two important elements: Evaluation of future possibilities and Present knowledge and Dutta (2014) did not put such emphasis on historical data. Aim of this paper is come up with model based on three parameters which can be derive from historical data or collected from experts from insurance companies (expert judgement) during meetings and come with issues that can arise during parameters collection.

1 Data and Methodology

As opposed to banks, insurance companies do not have such a large database of operational risk events because they started to deal with the risks later on. For this reason, there is a problem with the data used for both scenario creation and scenario parameters to calculate the capital required. For this reason, it is clear that only data from our own experience can not be used and it is necessary to resort more to market data and expert judgments.

Figure 1: Data Sources

		Type of Sources	
		External	Internal
Time View	Forward-Looking	<ul style="list-style-type: none"> – use consultancy 	<ul style="list-style-type: none"> – use previous operational risk assessments (if they are forward-looking) – use strategic planning from senior management or parent company
	Historical	<ul style="list-style-type: none"> – use operational risk database from the world – buy database from another company or broker 	<ul style="list-style-type: none"> – use international loss data database – work with key risk indicators – use audit findings – use parent company database

Source: Author

The problem may arise, in particular, in the use of external resources, because the business and overall set-up or risk appetite of one insurer is not always the same as others, therefore it may threaten other risks, even in the group may be different risk perception between mother and subsidiary company. This raises another problem with using external databases. Different states face different risks with different impacts, which need to be further considered and treated with caution. Last but not least, it is necessary to correctly adjust the weights between the above four quadrants for appropriate setting.

2 Parameter selection

It is needed to define two parameters for severity calibration. First is typical impact and second is Worst case. To obtain Typical case as a severity distribution parameter the parameter has to be matched with a central tendency measure. Common statistics tendencies are mode (most frequent loss), median (loss amount which separates losses to two halves and expected value (mean, the probability-weighted average of all losses). The main problem with using mode as parameter is in the skewed distribution because the mode is matched with small negligible losses and the difference between mode and expected value can be really significant and this difference becomes larger when the frequency is increasing. Median has to deal with significant issue when the distribution is not symmetric and when number of losses is quite low the explanatory value is poor. On the other hand expected value is commonly use in statistics and can deal with problem right skewed distribution. All three parameters have problem with Worst Case represents the worst possible economic impact arises from an operational risk occurrence. The event should be considered as an extreme but still realistic scenario on the basis of internal controls system, environmental factors (because of lack of big operational risk losses).

Frequency is defined as annual expected number of loss and is the only one parameter for calculation.

3 Severity distribution

The sub-exponential distributions have tails that are descending slower than the exponential distribution (meaning a fatter tail). A fat tailed distribution guarantees a relevant (higher) level of conservatism and captures the tail behavior of the operational losses (low frequency but high impact).

3.1 Lognormal distribution

Lognormal is a continuous distribution, defined on \mathbb{R}^+ , and identified by two parameters, a scale parameter μ and a shape parameter σ .

3.2 Weibull distribution

Weibull is a continuous distribution, defined on \mathbb{R}^+ , and identified by two parameters, a shape parameter k and a scale parameter λ , that are non-negative. This distribution is sub-exponential only if the shape parameter is lower than 1.

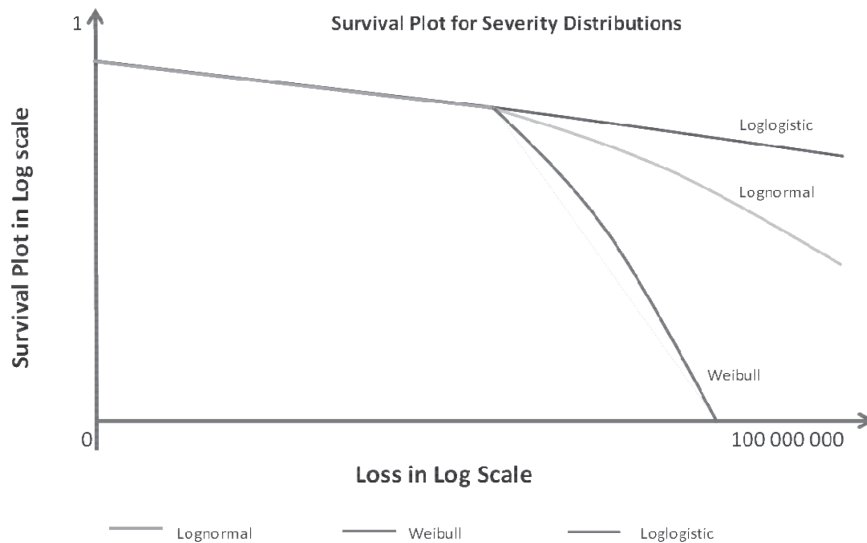
3.3 Log logistic distribution

Log-logistic is a continuous distribution, defined on \mathbb{R}^+ , identified by two parameters, α is the scale parameter and β is the shape parameter. Distribution is always sub-exponential.

3.4 Severity distribution quantitative analysis

The main difference between the distributions described above is the (long) tail behavior. Pretty useful graphical tool for analyzing the (long) tail behavior is the survival plot ($1-F(x)$). The survival plot you can see below shows the tail behavior of the three mentioned distributions calibrated with the same set of inputs. Weibull distribution presents the fastest tail decay, while the Log-logistic presents the slowest tail decay: given the same Worst Case the extreme values drawn by the Loglogistic are higher than the extreme value drawn from Lognormal, and the extreme values drawn from Lognormal are higher than the extreme value drawn from Weibull.

Figure 2: Survival Plot for Severity Distributions



Source: Author

Because of lack of data in database especially in the long tail the selected distribution we can not use a goodness of fit test approach. According to the lack of data will be impossible to select certain distribution that will provide us a conservative figure for each scenario.

3.5 Distribution comparison

Related to lack of enough big dataset we do not truncate the distribution because it is impossible to detect the certain breaking point. So we decided to apply the one only distribution same as authors in the banking industry Shevchenko & Peter (2013), Gatzert & Kobl (2014), Frachot, Georges and Roncalli (2001) or Chernobai (2007) because there is a lack of literature related to insurance industry.

The lognormal distribution seems to be the most appropriate distribution to model the severity from the following points:

- The Lognormal distribution allows to apply a prudential approach in line with industry standards
- It has only two parameters (μ and σ) as compare to other distributions where there are three variables
- Several studies show that the lognormal is a good choice to model the operational risk losses. The literature shows how the Log-Normal is a common distribution used to analyze the Operational risk. In their analysis, Dutta and Perry (2006) came up with conclusion that Log-Normal distribution produces reasonable capital estimates for many business lines. In additional the Log-Normal performance

is less complicated with similar results compared with distributions that have 3 or 4 parameters as mentioned above. Even Basel Committee used the Log-Normal Distribution to fit the results from 2008 Loss Data Collection Exercise for Operational Risk purposes. Basel Committee also confirms that the Log-Normal distribution is used by banks frequently for various purposes, and that it tends to fit actual loss data well. Cruz (2015), stated that the Log-Normal often give a good fit for Operational risk losses. Log-Normal distribution is the common distribution used to model the severity in Chernobai et al. (2007).

- Survival plot shows that it is not possible to select a priori distribution that is conservative for each scenario due to their diversity. However, since the Log-normal tail behavior is intermediate (between high and low tail heaviness). Log-Normal distribution is more optimal compared with other sub-exponential distribution because the probability of high VaR deviation from probably real distribution is minimized.

4 Frequency Distribution Selection

Frequency represents the average number of operational risk losses events whose occurrence is expected within a on-year time horizon and taking into account experience of internal resources, skills, business complexity and exposure to environmental factors.

Frequency distribution provides information about number of operational losses occurrence in certain time period. The distribution is modelled by using a discrete distribution therefore the number of occurrence has to be integer. The frequency of random events can be likened to a discrete random variable where the number of possible observations finite or countable. The most common statistical distributions used in operational risk models are Binomial, Poisson and Negative Binomial distribution.

4.1 Binomial distribution

Binominal distribution is represented by $Bi(n,p)$ and id a discrete distribution which can be applied to the frequency's model part for operational losses in a given interval with n events that has only two outcomes: failure and success with probabilities $1-p$ and p , respectively (Dyer, G., 2003).

The binomial distribution can better fit for modeling count data where the variance is less than the mean (Cruz, M, 2002). One major reversal in using the binomial distribution to model frequency of operational losses is the assumption of the number of trials (n) in the calculation (Ross, 2002). This may be the reason why this distribution is not widely used (Klugman, 2004) because the n is unknown. More so, when n is large and p is small, the binomial distribution can be approximated by a Poisson distribution.

4.2 Poisson distribution

Poisson distribution can be used to model for number of such arrivals that occur in a defined fixed period of time. In operational risk, Poisson process can help in modeling the frequency of operational losses that is a pre-requisite in estimating the regulatory operational VaR. The Poisson distribution is one of the most popular and common used frequency estimation because of its simplicity of use (Cruz, 2002). Poisson distribution was used also for operational risk modelling for LDA (Gatzert, 2014).

The most simplistic and attractive property of the Poisson distribution is that only the only one parameter lambda is needed to identify both the scale and shape of the distribution. To fit a Poisson distribution the only one step needed is to estimate the mean number of events in a defined time interval. This distribution is particularly used when the mean number of operational losses is sort of constant over time.

Another property is that the sum of n Poisson distribution with parameters $\lambda_1, \lambda_2, \dots, \lambda_n$ follows a Poisson distribution with parameters $\lambda_1 + \lambda_2 + \dots + \lambda_n$.

4.3 Negative binomial distribution

The negative binomial distribution is a discrete probability distribution of the number of successes in a sequence of independent and identically distributed Bernoulli trials before a specified (non-random) number of failures (denoted r) occur. In operational risk terminology, the number of failures (n) until a fixed number of successes (r) can comprise the number of days (n) that elapsed before a fixed number of operational losses (r) was observed.

The negative binomial distribution is probably the most popular distribution in operational risk after the Poisson (Cruz, G, 2002) because of it's two parameters and the additional parameter offers greater flexibility in the shape of its distribution. This two-parameter property releases the assumption of a constant rate of loss occurrence in over time assumed by the Poisson. Variance is greater than the mean is another assumption of the negative binomial distribution.

From information above can be seen that the negative binomial distribution is a special generalized case of the Poisson distribution where the intensity rate λ is no longer constant but can follow a Gamma distribution with a transformed $\lambda = m, k$ (where $m =$ mean, while k is a measure of dispersion of such distribution). This implies that λ has now been split into two parameters to consider the inherent dispersion in the data set which is a place to refine.

4.4 Frequency conclusion

Parameter sigma (shape) has impact calculating VaR in comparison to parameter mu. When the sigma is increasing the difference between Negative Binominal and Poisson has decrease behaviour because if sigma increases the severity distribution tail becomes more flat. The Negative Binominal distribution is more conservative in comparison to Poisson distribution but only when the frequency is very low and the severity tail is light, than the difference is only material. Low sigma and low frequency are connected to scenarios with the smallest VaR value and their impact is relatively negligible, so the choice of the distribution has a minimum impact on the overall results.

The other main advantages for choosing Poisson distribution compared to other distributions are:

- Easy to calibrate: Poisson is identified by only one parameter (λ)
- Easy to interpret: the λ parameter is interpretable as the average annual frequency
- Endorsed by literature: use of Poisson for modeling the frequency is often reported in literature (Bening & Korolev, 2002; Grandell, 1997; Ross, 2002 and Dutta & Babbel, 2014)

5 Aggregated Loss Distribution

We have decided to use frequency calculated for one year and the probability distribution function of the single event severity impact for each risk scenario as under the Loss Distribution Approach (LDA). LDA is commonly use in banks compared to insurance companies not just because of not enough large databases. Usage of LDA deals with issue that random observation from the severity distribution can be calculated by either Fourier or Laplace transforms as suggested in Klugman et al. (2004) and used in Dutta & Babbel (2014) by Monte Carlo simulation as they used for banks. We assume implicitly that the random variables and number of events are both independently distributed same as in Dutta & Babbel (2014) as they used for banks. We can find LDA approach in Frachot, Antoine and Georges and Roncalli (2001), Schevchenko & Peters (2013) or Wang et al. (2017). Operationally a single random value of the aggregated loss distribution can be obtained using extract a random observation (n) from the Poisson distribution defined by λ for frequency and extract (n) random and independent observations from Lognormal distribution defined by the μ and δ parameters for severity purposes and we assume that Worst case happens one time every 100 events. Then we obtain the random observation (i) from aggregated loss distribution as a sum of the (n) random values extracted in frequency and severity step. For computing the aggregated loss distribution we decided to use Monte Carlo calculated on a 99.5% quantile according to Solvency II purposes. Lognormal distribution and Poisson are chosen because of possible usage in insurance sector where as mentioned above is a lack of historical data and scenario analysis has to be build up more on expert judgements. That could be serious issue to obtain more detailed parameters than typical case represented by expected value and Worst case so it is necessary to use simpler approach.

6 Scenario analysis – Internal fraud

In the tables below you can find stress tests of frequency, typical case (represented by expected value) and worst case. Scenario analysis represented Internal fraud where the Typical case is 27 000 EUR, WC was estimated by expert judgement to value 359 000 and the annual frequency is 16.

Table 1: Sensitivity Results (Frequency)

Frequency	Typical Impact (Severity)	Worst Case (Severity)	VaR 99.5%
0.01	27,000	359,000	15,515
0.05	27,000	359,000	87,763
0.10	27,000	359,000	144,890
0.25	27,000	359,000	259,963
0.50	27,000	359,000	372,527
0.75	27,000	359,000	464,011
1	27,000	359,000	565,189
5	27,000	359,000	1,253,474
10	27,000	359,000	1,264,194
16	27,000	359,000	1,442,142
25	27,000	359,000	1,773,186
50	27,000	359,000	2,659,061
75	27,000	359,000	3,555,068
100	27,000	359,000	4,410,375
200	27,000	359,000	7,741,911

Source: Insurance company database + authorial computation

Table 2: Sensitivity Results (Typical Impact)

Frequency	Typical Impact (Severity)	Worst Case (Severity)	VaR 99.5%
16	1,000	359,000	2,816,705
16	1,500	359,000	2,247,802
16	1,750	359,000	2,116,856
16	2,000	359,000	2,024,425
16	2,500	359,000	1,872,702
16	3,000	359,000	1,799,234
16	5,000	359,000	1,539,391
16	7,500	359,000	1,394,534
16	10,000	359,000	1,364,785

16	20,000	359,000	1,356,525
16	27,000	359,000	1,444,485
16	50,000	359,000	1,879,699
16	100,000	359,000	3,060,741

Source: Insurance company database + authorial computation

Table 3: Sensitivity Results (Worst Case)

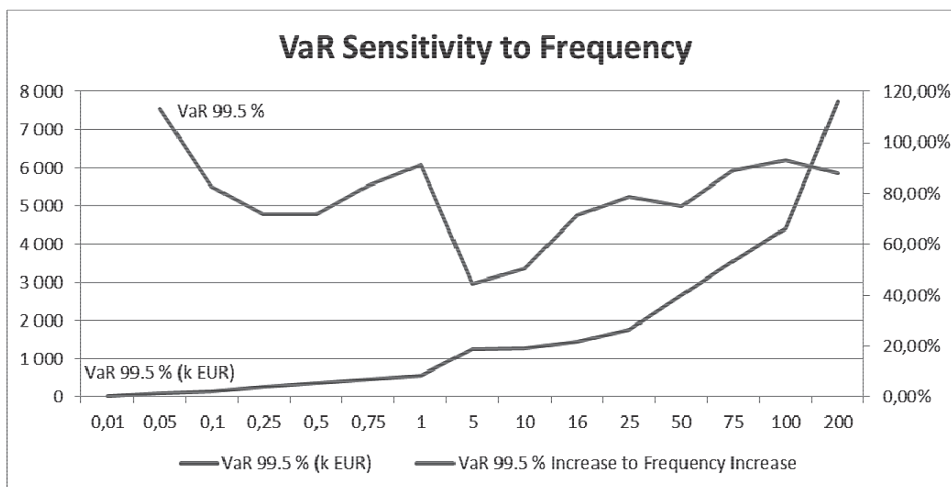
Frequency	Typical Impact (Severity)	Worst Case (Severity)	VaR 99.5%
16	27,000	50,000	754,116
16	27,000	75,000	789,536
16	27,000	100,000	828,504
16	27,000	150,000	926,774
16	27,000	250,000	1,148,618
16	27,000	359,000	1,450,015
16	27,000	500,000	1,896,440
16	27,000	1,000,000	3,787,161
16	27,000	1,500,000	6,058,194
16	27,000	2,000,000	8,504,698
16	27,000	3,500,000	18,479,688
16	27,000	5,000,000	28,464,726
16	27,000	6,500,000	41,588,647

Source: Insurance company database + authorial computation

7 Conclusion

In this paper we develop model for calculating operational risk on VaR 99.5% as required from Solvency II directive. This model is based on the selection of Poisson distribution for frequency with the only one parameter lambda, which is representing the annual loss occurrence and the selection of Lognormal distribution for severity purposes where we use two parameters (typical case and Worst case). The biggest advantage of this developed model is that every scenario can be calculated by using just three parameters and the parameters cannot be based just on historical losses from database but can reflect the forward-looking scenario nature. On the other hand could be challenge or issue to keep the expert judgment in proper way and avoid possible biases.

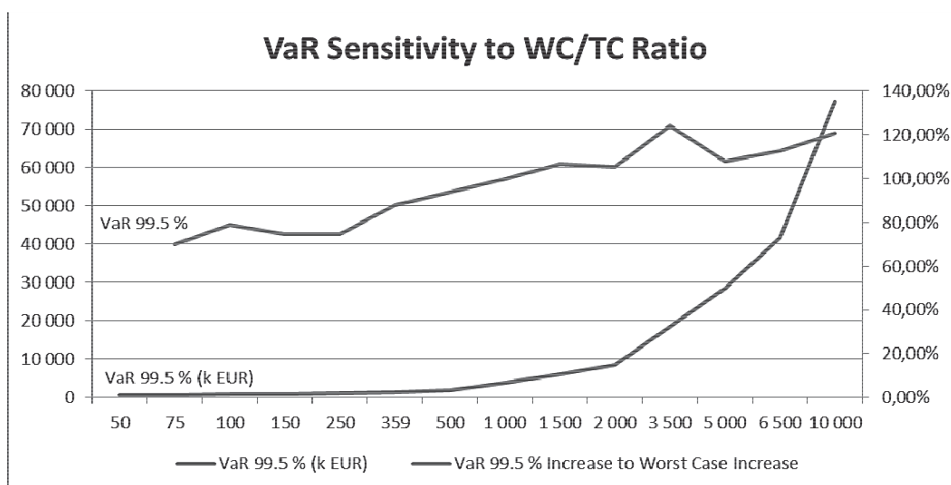
Figure 3: VaR Sensitivity to Frequency



Source: Author

The Figure 1 shows that the frequency parameter λ has a higher sensitivity and/or impact on the calculated capital at VaR 99.5% in interval (0;1) and then above 25 loss events per year. We have proved that this method fits to operational risk because of the typical losses, which the company worried about, are happening less than one per year and choosing Poisson distribution for this scenario example is correlating to Bening & Korolev (2002), Grandell (1997), Ross (2002) and Dutta & Babbel (2014).

Figure 4: VaR Sensitivity to Worst Case and Typical Case Ratio



Source: Author

As a further interest in the calculations, the ratio between the Worst case scenario and the typical case scenario arose with focus on VaR sensitivity. From the chart above is obvious

that if the typical case is stable (27 k EUR) and Worst case is increasing, the VaR sensitivity is ascending related to Worst case to Typical ratio. Except few point the curve VaR sensitivity is slightly increasing the whole time.

Although the typical case is, for example, lower than another typical case, the final amount of capital required may be higher due to the large ratio between the Worst case and the typical case. As we can see from the calculated results above, the typical case is the capital driver when the difference between typical case and Worst case is not that high and the values are close to each other.

After computing all operational risk scenarios we will come across a series of correlations between them. Most of the correlation between the categories of operational risk or operational risk scenarios, which may not always accurately replicate the structure, will be based on expert estimates due to a lack of data. The correlation between categories or scenarios cannot be measured every day, as is the case with market risk, and it is therefore very important to set up correct correlations, which will probably have a major impact on the final amount of capital required to meet the operational risk requirements.

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*Predatory and Alternative Hedonism
– Better Later than Now?
Predátorský a alternativní hédonismus
– lepší později než teď?*

ONDŘEJ ROUBAL
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Abstract

Hedonistic ethos is to intensify in the environment of consumer culture and in the atmosphere of unlimited consumerism, intentionally supported by market mechanisms. The value patterns of hedonistic life style are defined by experience motivations, excitement, sensual pleasures, delight, self-satisfaction, intensive need for emotional stimulations, present-time orientation or accelerated pace of life. It is considered identical with radical inclination towards individualization life practices, rapidly growing egoism and narcissistic tendencies confirming the meaning of one's own existence. Life philosophy of independence, non-determination and "inner orientation" logically leads to the application of such life strategies that can support and develop this attitude to life. Predatory hedonism focusing on the values of pleasurable experience requires mobility, flexibility and variability; it refuses to accept stability and obligations, i.e. anything that could tie and restrict life movement focusing on the fleeting and shifting world of experiences. It is a life "without ties", unpredictable, unsettled, wild and impulsive. Hedonistic life style oriented towards consumer values, however, meets with frequent social, ecological and ethical criticism. There is room for discussion related to the alternative model of hedonism based on more responsible and well-considered approach towards consumption and voluntary modesty, which shall eventually enhance the sense of personal happiness and general satisfaction with life. Ethical consumption, as part of fulfilling the idea of alternative hedonism, may become an attractive objective of this lifestyle, based on a non-ascetic, but socially and environmentally friendly, way of life. The alternative hedonism is further compared with ideas of economics of productive consumption and with development of financial market.

Keywords

alternative hedonism, consumer culture, deferred pleasure, predatory hedonism, life satisfaction

JEL Classification

B21, D 11

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Abstrakt

Hédonistický étos má intenzivně zesilovat v prostředí spotřební kultury a atmosféry neomezeného konzumentství, programově podporovaného tržními mechanismy. Hodnotové vzorce hédonistického životního stylu jsou typicky definovány zážitkovými motivacemi, vzrušením, smyslovými požitky, rozkoší, sebeuspokojováním, intenzivní

potřebou emočních stimulací, orientací na přítomnost či zrychleným životním tempem. Je ztotožňován s radikálním příklonem k individualizačním životním praktikám, hypertrofujícím egoismem a narcistními sklony potvrzujícími smysl vlastní existence. Životní filozofie nezávislosti a vnitřní orientace logicky vede k aplikaci takových životních strategií, které takové postoje k životu podporují a rozvíjejí. Predátorský hédonismus zaměřený na hodnoty smyslových potěšení a rozkoší vyžaduje mobilitu, flexibilitu a variabilitu; odmítá přijmout stabilitu a závazky, tj. cokoli, co by mohlo spoutat a omezit životní pohyb se zaměřením na prchavý a proměnlivý svět zkušeností. Je to život „bez pout“, nepředvídatelný, neklidný, divoký a impulzivní. Hédonistický životní styl orientovaný na konzumní hodnoty ovšem naráží na četnou sociální, ekologickou a etickou kritiku. Otevírá se zde prostor k diskusím alternativního modelu hédonismu, založeném na zodpovědnějších a rozváznějších přístupech ke spotřebě a dobrovolné skromnosti, což má v důsledcích zvyšovat i pocit osobního štěstí a životní spokojenosti lidí. Etická spotřeba se v rámci naplňování idejí alternativního hédonismu může stát atraktivní součástí životního stylu, založeného na neasketickém, ale sociálně a ekologicky šetrném životním způsobu.

Klíčová slova

alternativní hédonismus, spotřebitelská kultura, odložená spotřeba, predátorský hédonismus, životní uspokojení

1 Introduction

Different strategies contributing to the growth in demand and to creation of new markets gradually developed as part of the consumer culture. The ability to participate in consumer culture also becomes a significant indicator of personal success, prestige and appreciation (Zahrádka 2014, p. 10–11). Personal efforts and aspiration thus lead to competitive acquisition of consumption goods used as the values of social comparison as well as the confirmation of one's own social status and life situation. This naturally affects the strategies of life style, which are more present-time oriented, the unwillingness to economize and to postpone the consumption for the future. On the other hand, the consumers are socialized to be willing to accept and to adopt fashion trends, to search for new consumer targets and to wander from one experience to another. The formation of new markets and the initiation of customer demand stress more the need for saturation of different individual desires, usually anchored in an emotional world of subjectively formulated objectives and authentic wishes. In this context, Schulze depicts the consumer culture as an ideal environment cultivating and strengthening the attitude of people to non-material values of experiences (Schulze 2000). According to Schulze, the focus of people on the experience becomes a significant determinant of search, formulation and implementation of a life project, as part of which the satisfaction of emotional needs, initiation of exciting feelings and induction of states of bliss play a key role. In order to meet these needs, it is more popular to apply hedonistic life approaches systematically supported and confirmed by interventions of globally functioning marketing activities. The emotional marketing of experiences is being developed, through media representing experiences as values that bear no delay and whose attractiveness, intensity and uniqueness can be preserved only through action, fast decision and determination not to postpone anything (Lipovetsky

2007). Consumers turn into “experience collectors”, persistent adventurers wandering the marketing-marked paths of sensuality and aesthetic experience, aiming to hedonistically intensify present moments by shifting fleeting attention and only temporary interest in one experience to another. Prioritization of the experience as the central value leads to “everydayness improvement” and to radical withdrawal of meaningful rational conduct in favour of experience rationality. The nature of everydayness improvement lies in the ideal of “beautiful life” which is based on constant search for new experiences. “*The motto of the day is: Make the most out of your life*”. (Keller 2012, p. 88.)

In the related context, our first and main objective is to specify the important features and manifestations of hedonistic lifestyle which is described as *predatory*. This description is used to identify a specific model of hedonism developed in conditions of consumer culture, the coordinates of which present hedonistic life attitudes similar to the models of brisk and predatory rapaciousness and predatory style of thinking. At the same time, we will try to show how predatory characteristics of hedonism manifest themselves and to indicate its ambivalent displays. We further try to point out possible factors of self-destructive potential of predatory hedonism through liberal criticism and to offer an alternative model of hedonistic lifestyle, from which the consumers should discover more authentic and stable feelings of life joy and happiness. The alternative model of hedonism is to represent a generally more considerate and economical life style which takes into account ecological, social and ethical values, simultaneously respecting the needs of consumers as well. Alternative hedonism is not thus perceived as an attempt to promote ascetic life style but as an attractive, less economically and time-consuming life style where non-material as well as material values play the key role, however these values are achieved through a more considerate type of consumption. One of possible factors of alternative hedonism respecting the more considerate and rational approach towards the consumption may even be the ability and willingness to postpone joys and pleasures for the future. Such induced situation may bring more life pleasure and joy than approaches preferring immediate gratification. Where it is possible, we show connection between the concept of predatory and alternative hedonism on the one hand and the concept productive consumption and development of financial market on the other hand. The connection is only intimated in accordance with the first aim, but it can be seen as a perspective field of scientific research.

2 Life as “experience project” and hedonistic cult of the moment

In a society, where marketing industry as a significant media body substantially supports and promotes pleasurable experience instead of the most valuable attributes of life, hedonism gains ground as an essential attribute of commercialized life style. Schulze’s concept of life as the “experience project” is thus fulfilled in a hedonistic view of life accompanied by extraordinary desire to live life to the fullest, to constantly search for new emotional stimuli and pleasures, to maximize private welfare and to reveal the secrets of all new pleasurable experiences. It is based on fleeting appetite of different experiences that need to be changed as fast as possible, without hesitation, unnecessary delays and

postponement. The choice for entertainment is less stable and more impulsive; it bears no delay since the objects of experiences themselves quickly change in the explosion of practically unlimited offer of new opportunities. Moreover, experiences are difficult to be “consumed” in parts, whereas a certain part cannot be saved for “a rainy day”. Consumers are “trained” by marketing to worship the “cult of immediate satisfaction” with one rule “now or never” (Roubal 2014, p. 88). “The training” is supported by financial markets offering loans and other possibility for people without enough money. Under certain circumstances, consumers turn into *predators* that respond immediately and quickly chase after the prey promising unique emotional excitement and authentic experiences.

Orientation to experiences becomes the central motive of life, dominant value and aim in life that is no object of choice but necessity. The society intensively focusing on values identified with the emotionality of pleasurable experiences, initiation of delights and spiritual bliss will more likely support life cycle strategies corresponding to hedonistic mentality preferring instant gains and conduct models that are connected with term instant gratification in economic theory (Loewenstein 1992). Experiences become mainly the object of momentaneous consumption, present moment, object of acute action and are only with difficulties and reluctance postponed until a later time. Predators act immediately since any hesitation or postponement may jeopardise not only the goal achievement but also shorten the time given for fast and fleeting change of other experiences generated by wide choice of opportunities of emotional marketing. The orientation of life style to the *instant gratification* is distinctly and quite intensively supported by the interventions of marketing actions that stress the trend of immediate and easy availability. Marketing themes usually initiate active and fast action, they refer to life “without limits”, suggest life in a world of unlimited possibilities and endless adventures. It is quite difficult to imagine a commercial marketing message advising the consumer to be contained, careful, to postpone decisions and to be modest and restrained. Present consumption and immediate satisfaction are understood as main aim of human behaviour. Interestingly, mainstream economic theory often offers similar view as it sees a man as “a utility maximizer” without further feature (for details see e.g. Kirchgässner, 2010). However, such view is criticized (e.g. Valenčík and Wawrosz 2019) as it neglects important aspects of human being and it does not take in account that our consumption is always affected by past experience and a man always decides between present and future consumption when present decision can have long run effects.

Bauman pays attention to the specific significance of phenomenon instant gratification which is no longer the aim of social actors only but it also concerns completely impersonal and trans-personal institutionalized structures (Bauman 2010, p. 15–17). The promotion and enforcement of the cult of immediate consumption are quite evident in the whole complex of marketing industry, the main task of which is to monitor the increase in economic profits of firms that offer various goods and services. The sellers try to achieve that the consumers spend the least time on activities of consumption and purchase; the time spent on consumption should be reduced to the minimum. Mottoes such as “With no effort”; “Easy and fast”; “Quick pleasure”; “Immediate result”; “One-touch application” are to explicitly inform the costumers that they will save time, however, it is implicitly monitored if this saved time is turned into market profits in return since this time shall be used for other purchases (Roubal 2014, p. 187). The objective of manufactures and sellers

of goods and services is to make the customers spend less time with the products they have just purchased and to make them quickly return for other purchases and search for other alternatives of consumption. According to Bauman, this strategy is effective because the customers themselves call for fast effects; they desire quick results and usually prefer only temporary activation of their mental and physical skills during the consumption in order to have enough energy and time to accomplish other shopping goals. Marketing enforcement of hedonistic cult of the moment is thus used to spare the customers' time, ironically only to put it back on the altar of quick time in the chase for other shopping escapades.

This whole process, however, is likely to show ambivalent nature. On the one hand, consumers chasing after various adventurous experiences are rewarded with certain delights and excitement; they may come across new impulses and sources of pleasure and the unwelcome fossilization of everydayness is actually prevented by their own consumer greed for experiences. They will not allow the initial attractiveness of pleasurable feelings to simply turn into commonplace and boring comfort. They search for new challenges, discover new things, refuse routine and like players they start to play new games with a view to having a good time with the game and its outcome. They enjoy the game as well as the results they achieve during the game.

On the other hand, however, the methods of hedonists – predators constantly searching for new and more exciting preys represented by experiences, obviously did not induce more stable and permanent feelings of pleasure and satisfaction. The problem is that every particular decision and every choice from the wide offer of opportunities must evoke doubt as to whether other choices and decisions might not induce more irresistible experiences after all. The bigger the choice of different experiences is, the more intensive feelings of insecurity are induced by the next decision (Schwartz et al. 2002). In order to eliminate the unpleasant feelings of insecurity and fear that each specific decision made within the choice of possible experiences may have deprived the consumers of other more attractive and tempting aims offering irresistible feelings of pleasure, the collectors of experiences try to switch as fast as possible a large amount of different pleasurable experiences. They run back and forth between experiences, trying to absorb as much as possible within the shortest possible time to have enough time to “taste” other temptations. This naturally leads to the inflation of experiences where the effort to accumulate most of the experiences within the shortest periods of time also results in superficiality. Besides the feelings of insecurity, feelings of disappointment set in as well. The obsession with constant change and variation of experience objects, fast sequence of changing experiences cannot erase fancies and visions of other more attractive and still untested temptations that keep escaping and need to be pursued till complete exhaustion; moreover, the principle of constant innovations and the stream of exciting novelties turn into commonplace routine – becoming the cycle of everydayness. From the economic point of view, predatory hedonism can be seen as a source of economic and financial instability as for instance financial crisis after year 2007: if a man borrows money to satisfy the needs induce by marketing action, it often does not assess its ability to pay its debt. Financial organizations support its impatience, offer him/her loans without proper investigation its financial situation. Employees of the organization are or were often evaluated by amount of loans and immediate profit. However, if the conditions

change and many people become not to be able to their debts, many problems occur – both for debtors and their creditor and whole economy (for details see e.g. Stroukal 2019).

The value-based type of predatory hedonism and its motivational goals are characterized by a strong relationship to material values, seeking quick and successful professional career, guaranteeing – if possible – high income, prestige and power. They are therefore willing to sacrifice their free time, as well as reduce the efforts and time of family and partner relationships that are restrictive to the realization of their own life scenarios where there is not too much space for empathy and reciprocity. Conversely, dominating is loneliness and the efforts to satisfy one's egoistically-narcissistic needs and selfish interests that are clearly contrary to tolerance and understanding, caring about the environment, as well as self-discipline and respect for social rules.

Predatory hedonism is in line with patterns of behaviour, typically focusing on present, accelerated pace of life, and fleetingly shifting attention and interest from experience to experience, based on the rule *"now or never"*. Experiences are mostly a matter of momentary consumption, the current moment, the subject of an acute action, and they are postponed for later only with difficulty and reluctance. Not only do they accept but actively seek fast pace of life, consumer opportunities and conspicuous consumption. *"Narcissist personalities of today's people remain immature, bound to 'hyper-narcissism' and 'hyper-consumerism'; moreover, 'hyper-consumerism' now involves all aspects of social life, exploiting the principles of human spirituality and emotional pleasures"* (Radošinská 2017, p. 13). 'Their typically high level of commitment, desire for success, career and guaranteed earnings, completely leaves out the ascetic dimension to the treatment of profit, which transformed in the atmosphere of emotional consumerism experiential economy in a series of hedonistic adventures, debauchery and eventually indebtedness. It is worth noting that the basic features of predatory hedonism are known in economic theory long time ago. E.g. J. Galbraith in his *Affluent Society* (1958) actually warns against this approach.

In this context, we can mention the concept of self-illusory hedonism, which is based on an uncontrollable desire for all things new and on intense and imaginative dreaming and fantasizing about changes, which forms the core content of life in this perspective (Campbell 1987). A hedonist is constantly unhappy, he does not accept the way he lives, but dreams of how he could live, worrying about all that he is lacking in life and the life pleasures that elude him. There is no doubt that the contemporary consumer societies with increasing welfare and rising living standards further reinforce these fantasies in the real and imaginary world of consumption and open up new mental spaces for vivid images of a more attractive life surrounded by infinite possibilities of living a life of pleasure.

Campbell compares modern hedonism to the Romantic era, when dreams and fantasies were a significant personal quality, reflecting a man's desire for a non-alienated and authentic life. The difference, however, is that hedonistic dreaming is filled with the desires of consumer goods, it being more important to want the goods rather than own them. Hedonistic dreaming is permanent and unstoppable, desires and fantasies are endless, since reconciliation and satisfaction with what a hedonist has would mean adapting to the world and abandoning the project of "non-alienated life". In this concept, it is more

important to want than to have. Once a dreamy hedonist obtains what he desired, the subject of his desire becomes useless for him. He quickly reorients his desires and attention to other goods representing something new. Thus, the ownership of objects does not bring more peace and satisfaction to consumers' minds, but instead creates a state of constant dissatisfaction, leading to an obsessive pursuit of and search for new and seemingly indispensable products and services.

Predatory hedonism transforms a man into pleasure seeker, spinning the wheel of entertainment increasingly fast, furiously skipping from experience to experience, only to find out that an ever-increasing consumption of experience makes the appetite for excitation grow even more. The hunger for the experiences remains, only the appetite is more promiscuous. The question then remains how to limit many disappointments and frustrations where experience should bring more joy and pleasure, how to reduce anxiety and insecurity where an almost unlimited choice of experiences should, on the contrary, bring about feelings of authenticity and unlimited individual freedom.

One of the possible ways out of this situation is ethically focused consumption, which includes a certain restraint, self-discipline, willingness to postpone consumption, to reduce or significantly minimize it (e.g. skipping / garbage picking / dumpster diving). However, an ethically oriented consumer does not agree with the principles of predatory/self-illusory hedonism, but tends towards its alternative, more creative, voluntarily modest and rationalized form.

3 From predatory hedonism to its alternative model

The hedonistic model described as *predatory* is the object of frequent social criticism (Sassatelli 2009). British philosopher Soper presents a rather untraditional criticism revealing self-destructing potential hidden in practising the unbound hedonism containing many often unrecognised self-destructing elements that need to be reflected and eliminated for our own good (Soper 2012). Soper's criticism questions consumerism-based hedonism not only in terms of problematic ethical, environmental and social effects, but mainly in terms of the negative impact on the actors themselves. In the end, the predatory model of hedonism is to soften sensual pleasures and to divert attention from more spiritual forms of good life. Hedonistically-oriented life style is to restrict human abilities to experience spontaneous moments of joy and to lead to total sensual numbness (Veenhoven 2003). On the other hand, fast-food life style eliminates what becomes the object of growing interest, such as more free time, more personal contacts and a slower-paced life. According to Soper, modern forms of consumerism represented by predatory hedonism principally follow the ideas of growth economy as a system operating effectively provided that people are willing to spend their money. However, the problem is that if consumers should increase the number of their purchases, they would have to intensify their work-load, i.e. to spend more time at work thus limiting their free time for themselves and the family.

This forces people to purchase larger amount of goods and services, which compensates the lack of free time they are deprived of while trying to earn financial means necessary

to support and to implement the consumer life style (Soper – Fafejta 2014). This consumption dynamic is to restrict more available and financially far less demanding forms of satisfaction which are ruthlessly replaced with more expensive compensations in the form of consumer goods and services. For instance, travel and vacation industry generates products promising to get back at least some of the time spend on work duties. The similar concept can be seen in the popular web of city fitness centres resembling artificial impersonal industrial halls where people intensively focus on their bodies in concentrated training sessions. This may also involve a compensation for the lack of free time that could be invested in slower less stressful and quieter movement in nature.

The progressing model of consumption culture prosperity is more and more based on collective willingness and readiness to spend money and reluctance to save, to live in the mode of voluntary modesty and to postpone pleasures and joys for the future. At the same time it assumes that people will work harder and more intensively and sacrifice more time for financial income subsequently invested in products compensating and replacing those properties and values which people give up in favour of time-consuming work.

4 Alternative hedonism

In terms of contemporary consumption culture, the criterion for the evaluation of goods and services is not only their economic parameters and possibilities of practical use, but also their moral dimension (Grauel 2014). The purchase of products does not have to be a process necessarily based solely on economic considerations of utility or quality, but also on non-material motivation with a symbolic meaning. However, similar motivation based on value-based behaviour may be viewed as irrational in terms of the principles of economic behaviour and the laws of supply and demand (Nový 2015). In this context, the literature contains concepts such as “smart shopping”, “socially responsible consumption”, “voluntary modesty” or, last but not least, “shared economy”, which are terms summarizing the concept of the “political consumer” characterized by a certain degree of civic engagement (Micheletti – Follesdal – Stolle 2006). In various sociological, economic, anthropological or psychological areas of research, there is a growing interest in addressing questions of symbolic importance of consumption in the process of shaping social roles and identity (Newholm – Shaw 2007), non-material shopping motives as a source of self-reflection, trends and focus of active ethical consumption, or, conversely, increasing signs of anti-consumerism and a wave of boycotts of and protests against various types of products (Cherrier 2009).

In this context, Soper presented the model of alternative hedonism as a variation of sustainable life style that is environmentally friendly as well as considerate of physical and mental health, taking into account the needs of privacy and family life (Soper – Fafejta 2014). This alternative hedonism model is based on the assumption that the predatory consumption hedonism fails to evoke feelings of happiness and satisfaction, but rather personal disappointment, inner tension, emotional emptiness and permanent insecurity. It points out necessary restrictions of the consumer life style that does not bring more but fewer sensual pleasures and joys. The concept of alternative hedonism is not puritan

and does not follow the ideas of renunciation and asceticism. To the contrary – it offers more attractive strategies to achieve peace, welfare and sensual pleasures. The source of these pleasures and joys should not be searched for in the objective knowledge of “real” or “true” needs, i.e. in the visions of what values the consumers should try to achieve or what properties they should desire. It is necessary to focus on our own skills of self-reflection, experience and self-critical discovery of negative impacts of consumerism on our own life as well as on the surrounding world for which an alternative hedonist should be able to assume responsibility. We abandon here the idea of “unrecognised” and commercially generated “artificial” needs manipulating the desires of consumers. The stress is put on authenticity, self-control and the potential of free will of consumers who are able to continuously reflect and independently evaluate their own life situation determined by the consumer culture and consumerism. Self-reflective skills of consumers should identify negative aspects of consumption-based hedonist methods offering satisfaction instead of ecstasy and preferring resignation to transcendence. This should also show the consumers a way to “more spiritual” interests and overall more profound and intensive experiences (Honoré 2004). With the reference to Adorno, we live in a society where “everybody lives on a plane”, but they obey the commandment “thou shall not fly” (Adorno 1967). It shows that the main sources of personal happiness include values that exist beyond “shopping zones” and cannot be simply bought as a product or service. They mainly represent family values, friendly social relations, a meaningful job and free time (Durning 1992). Alternative hedonism focuses on acquiring abstract qualities, such as time, attention, space, peace, nature and safety that are to represent new forms of luxury and comfortable life. The possibility to enjoy our free time and to be allowed to decide about our time is one of the most desirable values. Enough free time is to represent one of the most luxurious factors and a significant determinant of a happy life. It relates to the concept that alternative hedonism rejects constitutive parameters and qualities of predatory hedonism, e.g. the before-mentioned “cult of immediate satisfaction”, which has to obey the rhythm of quick time. Alternative hedonism as specific life strategy of high-quality, fulfilled and happy life disapproves stressful haste, urgency, rapid and quick changes of different life moments, desire for quick results and temporary emotional excitement and rather focuses on a slower-paced life that offers free moments allowing to enjoy peaceful joys of ordinary life situations. While the feature of predatory hedonism is the afore-mentioned “cult of immediate satisfaction”, the constitutive feature of alternative hedonism might be the “cult of deferred pleasure”.

Alternative hedonism raises specific demand in different areas of consumption of products and services, thus shaping the overall character of the moralization of markets. Movements, such as Slow Movement, associating and implementing projects such as Slow Food, Slow Travel, Slow Cities, Slow Schools, Slow Books, Slow Living, etc. are civic initiatives motivated by the adoption of some principles of alternative hedonism and shared values of ethical consumption, a creative approach to life, trying to slow down the pace of life in different spheres of life, avoiding hurried existence, instant forms of being and seeking a more meaningful and better life in a peaceful environment allowing to develop social relationships and stronger interpersonal relationships (Humphreys 2013). Others point to the need to change lifestyle in terms of slowing down or reducing consumption, and often suggest original alternatives. For example, a model of so-called connected consumption is emerging as a new form of life practice, limiting waste and excessive consumption. This

model is based on the willingness to share different material goods with people around (car, clothing, garden equipment, etc.), thereby limiting the purchases of new goods and overall contributing to a more frugal and modest lifestyle (Schor 2013). There is also a rise in quasi-social movement promoting activities such as Slow Food or Slow Travel (Lindholm – Lie 2013). Elsewhere, we see how good it is for the quality of life to move away from hectic car transport to slower, smoother and healthier cycling, which is especially true for large cities (Ryle – Soper 2013). It is not just that the “speed culture” seems to be an unsustainable system in terms of ecological demands and economic possibilities, but it also makes sense in terms of everyday experiences of individual actors actively seeking more attractive and meaningful forms of life.

From our point of view the concept of alternative hedonism could be connected and/or compared with concept productive consumption (see e.g. Valenčík and Wawrosz 2019) emphasizing that consumption does not satisfy only immediate needs but can also have longitudinal effects including increasing future income. Typical examples of productive consumption are spa services that help a man to protect its health and so to keep and to develop ability to earn money. We would like to emphasize that alternative hedonism need not be connected only with restriction of consumption. A much more meaningful way is to find functional consumption – it means consumption that develops human ability and skills, that sees a man as a complex being not satisfying only present needs but looking for balance between present and future based on previous experiences. Part of functional consumption is also patient and looking forward to future consumption. Looking forward to itself brings satisfaction and pleasant feelings. Productive consumption can be supported by financial markets in the form of “transferred price” (e.g. Heissler, Valenčík and Wawrosz 2010) when a debtor borrows many for development and keeping its skills and it pays to a creditor some part of its future income obtaining due to using the skills.

5 Better later than now?

In the context of developed ethos of predatory hedonism and the related “cult of immediate satisfaction”, we often and in vain search for more distinct and frequent displays of what many economists describe as “anticipated gain”, sociologists or anthropologists as “deferred pleasure”. Generally speaking, the anticipated gain results from a situation where you look forward to possible future pleasurable experience (De La Fabián Rodrigo – Stecher 2018). It refers to a situation where immediate consumption of a product gives way to deferred consumption. Some products may evoke such powerful feelings of “looking-forward-to” that the preference of deferred consumption to immediate consumption appears to be subjectively more beneficial from psychological perspective (Loewenstein – Prelec 1993). Subjective feelings of joy, pleasure and bliss need not result from hasty and immediate consumption but also from deferred pleasure. Deferred pleasure belongs to the category of human activities that can be practised only in slow time. To postpone something means to wait, not to rush and to wait for the right moment that shall bring the expected gain. Lottery ticket agents may not profit from the fact that betters would spend a lot of money on tickets because they would naively believe to win the main prize, where the statistical chance of such a win equals almost zero. These companies might economically profit only

because the better buy a chance to win, though this chance is extremely small. And the visions of such lottery winnings may evoke most intensive feelings of pleasure and the looking-forward-to process related to the possible winnings becomes the only reward in most cases. Certain disappointments experienced in these lotteries need not result from the fact that the ticket was not the winning ticket but from the fact that the better can no longer enjoy the time and situation filling him with pleasurable feelings of possible win.

A number of travel agencies offers the so-called "last minute travels". It is a situation depicting life motives in quick time conditions, involving quick decision, fast and short preparation and hasty urgent implementation. Customers, who often use this bargain, do not usually have enough time for proper preparations, but they also lack time that could be used as the looking-forward-to-holiday phase. It is the enjoyment prior to the holiday and pleasurable dreaming about what the holiday might bring that might be the best thing about the whole holiday. This might be the reason why many travel agencies have offered the so-called "first minute travel", the contrary to the "last minute travel" in recent years. The customer thus purchases the holiday as well as enough time to look forward to the holiday.

The fact that many luxurious trademarks introduce waiting lists pursues at least two goals. First, it enhances the prestige guaranteed for the buyers by the identity symbols that have to be waited for. The customer experiences a situation that is intentionally and calculatedly forced out by the complex of marketing communication in the culture of instant gratification in the interest of economic subjects. Ironically, the customer is deprived of the possibility to acquire something immediately – which is otherwise a standard usually provided to the general public of less wealthy consumers. It is the situation of waiting and postponing the access to the goods that demonstrates certain characteristics that this situation requires a certain sacrifice from the customer. These sacrifices in the modern consumption-based society might be the most tormenting. However, if the customer makes "this sacrifice" in order to obtain something, the product on the waiting list gains in value for him and most likely for the others as well. Second, the introduction of the waiting list also makes sense because the customers may look forward to the product they are going to purchase. It does not take into account the gain from the value he intends to get. The same pleasure and joy might be brought by looking forward to a luxurious watch that cannot be purchased unless you are on a long waiting list with other buyers... as if they were waiting for a cheaper holiday. From the economic point of view, we add that creating a waiting list can increase a status of an item and a person buying it. Consumption of such goods can be seen as conspicuous and it indicates that the consumer achieved better position comparison to no-consumers. Creating artificial waiting list has nothing common with reasonable postponing of present consumption or with the phenomenon "looking forward to" future consumption.

6 Conclusion

Against the backdrop of post-modern hedonistic values of unrestrained and unscrupulous consumerism, we can see the emergence of an alternative form of voluntarily modest

hedonism with highly ethical thinking and conduct. Alternative hedonism prefers ways of creative rationalization of shopping and consumption, self-discipline, and restraint, while preserving the non-ascetic model of life. An alternative hedonist expects that self-restraint and application of certain principles of life minimalism in consumption will bring positive feelings of meaningfulness of such behaviour and the enjoyment of life. Alternative hedonism and the attractiveness of Epicureanism has a great potential for further development of ethical consumption and the global development of moralized markets. One of the main attributes of alternative hedonism is deferred gains.

Preference of deferred gains means return, though only temporary, to the conditions of slow time, i.e. a situation we might be less familiar with and are not well aware of in this time of modern communication technologies and information influx. The strategy of deferred pleasure does not support the arrival of quick time; this strategy of acquiring psychological gain is driven away by commercial marketing communication, systematically maintaining and enhancing the consumer appetite and greed for knowing new sources of entertainment and pleasure. Enforcing the principles of deferred pleasure is not in the interest of impersonal institutionalized structures forming consumers' spirit and commercializing everydayness, but it might be in the interest of social actors themselves in order to slow down the axes of entertainment hustle and bustle and the pace of hasty running back and forth from one experience to another with the expectation that more experiences and more frequent emotional adventures might also bring more pleasure and joy.

As a perspective field of scientific research can be further seen comparison the principle of alternative hedonism with theory of productive consumption showing that at least some parts of consumption also affect future income and utility. Alternative hedonism should not orientate only on consumption restriction but on looking such consumption developing human personality, skills and ability and creating space for development of each person. Present technological stage allows to achieve such progress. Financial markets also can offer tools how to support long run effects of consumption oriented on human development. The logical question is thus why we meet so often with predatory hedonism. Short answer indicates connection with conspicuous consumption (e.g. Veblen 1999), position investments (e.g. Heissler, Valenčík and Wawrosz 2010) and other forms undesirable behaviour. Many of them were many times analysed but their connection with predatory hedonism including the issue what to do to reduce such undesirable behaviour must be still solved.

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*A Major Step Towards the Practical
Implementation of Comprehensive Reforms
Důležitý krok k praktické realizaci
komplexních reforem*

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The peer-reviewed article by Radim Valenčík and Pavel Sedláček entitled “The Fourth Industrial Revolution, or a Change Comparable to the Industrial Revolution?” was published in the August issue of the Social Policy Forum dedicated to Industry 4.0. We consider the article, and especially the print media where it was published, to be significant for the following reasons:

1. The Social Policy Forum is a professional peer-reviewed journal published by the VÚPSV (Research Institute for Labour and Social Affairs) and is included in the list of peer-reviewed periodicals published in the Czech Republic by the Council for Research, Development and Innovation. The article is also indexed in the ERIH PLUS database, which is accessed by a wide range of state administrators, trade union officials, legislature experts etc. who manage social policy and communicate the concept of social policy in practice.
2. The subject of the August issue is highly topical and is directly related to the understanding of what is currently at stake. We have highlighted this in the article and, as evident from the title, we emphasise the importance of breaking away from the inertia surrounding current developments. We are currently entering a period of economic, financial, social and political turbulence, and we need to know the cause of this and how to resolve the impasse. Therefore, the article contains the theoretical background to create a comprehensive vision and concept, which answers the question “What to do?”
3. As the younger co-author, I had the opportunity to bring my own insight to the topic, especially regarding the startup sphere. In the context of the mentioned reforms, we perceive this to be a valuable resource and initiator, and an activator for the formation of innovation (often intergenerational) teams.
4. Of no less importance is that the article is the theoretical base of a more practically oriented article entitled “What kind of a pension reform for the Czech Republic and why?”, which Radim Valenčík and Jaroslav Šulc published in the second issue of 2020. With a slight exaggeration, it can be said that the article on pension reform answers the question “What to start with?”

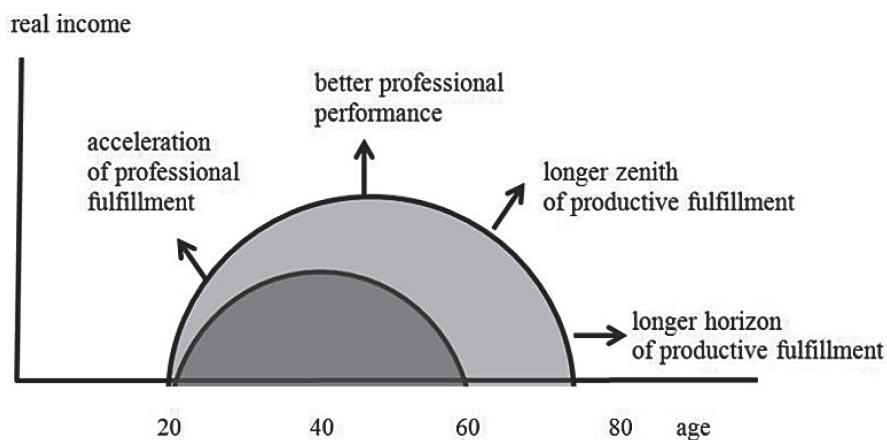
5. The reviewers have enabled the definitions of the most important terms and in particular the central concept of the “productive services sector”, to be refined to support the understanding of the essential contexts of the issue.

Continuity with previous research

The article also summarises the findings presented in previous professional monographs and provides a broader theoretical background of the output oriented to the general public. Here is a selection of the key findings:

Monography PERSPECTIVES AND FINANCING OF PRODUCTIVE SERVICES (Valenčík et al., VŠFS, 2014) deals with the issue of complex reforms related to the growth of human capital role, their context and implementation dimension in the intentions of the following theses:

1. The most general cause of the current problems lies in the fact that there was no re-orientation of the existing permanent development towards the society of productive services, i.e. a society where the core of the economy is represented by productive services immediately connected with acquiring, maintaining and utilizing human capital.
2. Economic growth can be both exponentially dynamic and sustainable, or more precisely it must be exponentially dynamic to be sustainable. The ground of this growth type are productive services with their effects depicted in the following figure:



More efficient utilization of investment opportunities connected with the development, maintaining and utilization of human skills may even enhance the exponential dynamics of growth (in the sense of proportional increase from the increasing base) as against the one resulting from the industrial revolution.

3. A crucial condition for the transition to economy based on productive services is the interest of subjects operating in the sector of productive services through establishing feedback (non-intermediated institutional decision) among the effects of productive services and financing of these subjects. Development of this feedback through human capital contracts can substantially contribute to higher

dynamics of economic growth, positive changes of its character and enhanced quality of life. It is a change comparable with industrial revolution (possibly even more distinct).

4. In order to enforce new economy, i.e. the economy of productive services, it is necessary to have a complex of interlinked reforms in the sectors of social investment and social insurance (especially education, health care and pension scheme). It involves reforms calling for full utilization of investment opportunities in the area of acquiring, maintaining and utilizing of human capital. Their implementation is thus connected with society's focus on substantially higher level of equality while utilizing these investment opportunities (in the sense of independence on starting property-and-income-related conditions of the holder of investment opportunities).
5. The inability to create a realist idea of the possibility of exponentially dynamic sustainable growth is a gnoseological cause of creating and spreading the visions of catastrophic or forced tackling of problems related to the existence of insuperable barriers of growth (through the regulation of consumption, restriction of the population number etc.). These concepts subsequently increase the intensity of status investment, which results in economic segregation of the society and weakening the institutional system by the activity of structures that are based on covering-up the violation of generally accepted principles. As a result, the reforms in the areas of social investment and social insurance systems are deformed and their unbiased indispensability for activities damaging the society is misused.
6. Threats and opportunities currently emerging in individual countries, along with the utilization of the theory, allow to show the way of enforcing conceptual complex reforms in the areas of social investment and social insurance. The reforms that focus on full utilization of investment opportunities related to free growth of a man and envisioning an improved market in that particular area on the basis of transfer price and intermediated application of the transfer price.
7. In order to perform the analysis of barriers arising between the theoretical solution and their practical implementation, it is possible or even necessary to use the theory of games, in particular during the analysis of status investment, during the analysis of activities of structures based on covering-up the violation of generally accepted principles and during the investigation of the possibilities of positive development on financial markets.⁸ Considering the fact that the efforts to cover the influence of structures based on covering-up the violation of generally accepted principles grew into systematic escalation of conflicts and increase in their intensity, it is necessary to pay attention to the analysis of the current development and its predictions with the objective to specify and to define conditions (including an estimate of when they may occur) that will allow to start a process of professional and mainly public discussions on necessary reforms and their local as well as global context, in response to the broader awareness that we are in a historical excess.

Monography PERSPECTIVES AND FINANCING OF PRODUCTIVE SERVICES (Valenčík et al., VŠFS, 2015) is based on the knowledge gathered during the series of conferences Human capital and investment in education (18th year took place in 2015). As the most general cause of current socioeconomic problems we consider the fact that uptill now the focus

of current development has not been switched to the society of productive services yet, e.g. the economic baseline where the productive services are directly connected with acquiring, maintaining and utilizing of human capital.

The socioeconomic analysis which we present in this monography-yearbook contains the following topics:

1. The characteristics of the current stage of global society development which we consider being a form of some historical excess, e.g. times when problems rapidly arise and strengthen to the extent that they spill over to conflicts threatening the very existence of our civilization.
2. Identification of causes of the current problems:
 - Original causes that are connected with the difficulties of moving to the economy based on productive services based on acquiring, maintaining and utilizing of human capital.
 - Subsequent causes that are connected with significant importance of the structures based on covering up of infringement of the generally accepted rules and structures based on position investment.
3. The criticism of the concept of 4th industrial revolution, which hides the origins of current problems and which is a quasi-theoretical support to exclude large social groups from active participation on the development of society, which finally can lead to the misuse of those groups as a destructive force.
4. A concept of game (complex of games) called "Titanic-type" games which makes current conflicts visible, shows where the game has come, and makes it possible to read from the reality what is going on, who is who and what to do.
5. A suggestion of the next steps (in comparison to the last monography) of complex reforms, the realization of which can overcome the current issues (in the Czech Republic with respect to the international context); and that is including the steps which can be done very quickly.
6. An analysis of the financial market development from the point of identifying the general background of causes of the "snag" phenomenon, which emerges during the use of investment opportunities on financial markets.
7. Showing the starting prerequisites of realization of complex reforms focused on the support of the creation of the branch of productive services (more exactly, the starting windows for communication and finalizing the preparation of reforms in the conditions we are currently in). As the most significant improvement compared to the last year we consider:
 - Elaboration of the Titanic-type game as a tool for reading or making the reality visible.
 - Identifying the "snag" phenomenon on financial markets when utilizing the investment opportunities. Both the above-mentioned improvements utilize the game theory. The analysis of Titanic-type game and its concept utilize tools of non-cooperative games; identification of "snag" phenomenon when using investment opportunities and solving related problems utilizes a cooperative games approach.
 - Elaborating the HCC (human capital contract) concept from the social models perspective.

Monography THE ECONOMIC BASE OF THE SERVICE SECTOR AND LAUNCH COMPREHENSIVE REFORMS (Valenčík et al., VŠFS, 2017) follows two previous complex analyses of contemporary society's issues in global context through identifying the causes of problems and possibilities of their resolving. Similar to them, it outcomes from defining the character of current times as a transition period to new economy, which is based on the branches of productive services, that contribute to production, preservation and utilization of human capital. It utilizes complex approach both in the sense of framework of the reforms that are necessary to create economic background and rise of productive services' branches, and also in the sense of theoretical mapping all the significant paths between theory and practice. It thus answers not only to the question "how it should be", but also to the question "how to realize what is seen theoretically desirable into practice". To the contrary of the concept of 4th industrial revolution or Industry 4.0 respectively it emphasizes, that not only technological change is going on, but a transfer of primary focus from economy based on machines production and consumption of their products to the economy based on human development, on production, preservation and full usage of human abilities. We can see it as a transfer to economy, that in the area of increasing human abilities can absorb nearly unlimited number of people and give them full possibilities during development of country's innovation potential. In this sense we also follow Radovan Richta's "Civilizace na rozcestí" (1966), which was published just fifty years ago before this book. Our approach shows up, that complex reforms can be started with gradual, fluent and voluntary transition to fully merit-based and fully closed system of social pension insurance, when we introduce and expand the postgraduate extension of current pay-as-you-go pension insurance. A model, that is presented in monograph shows that the resources that a man gets when extending his productive employment enable him to gradually decrease his economic activity (when combining partial pension benefit payment and income from economic activity) and at the same time utilize the resources for individual health and spa care and other services prolonging his active life. This way, economic base is created for starting the rise of productive services' branches (those branches that contribute to production, preservation and utilization of human abilities) with utilization of market (not ineffective rationing) financing. Prolonging the zenith and horizon of productive employment of those people that help to increase the innovation potential of society does not limit the employment of younger generations, actually the opposite is true – it significantly contributes to the creation of qualified jobs. Socioeconomic schemes, that are included in this monograph, have significant advantage in their orientation to accumulation and following effective allocation of available resources of economically active people. This is given the parameters of Czech economy (lower wages, low human capital investment, existing space for slight increase of health expenditure) suitable approach which can overcome a lot of systemic limitations. The majority of current models of financing productive services' branches has outcome either from a principle of central financing of public service, or simple realization of market demand of an individual. Both of these approaches are not enough for this development phase and it is necessary to supplement them with emphasis on individual or community (group) investment strategies into human abilities' development including appropriate construction of financial schemes.

Monography SECTOR OF PRODUCTIVE SERVICES. THEORY AND PRACTICE (Valenčík et al., VŠFS, 2018) deals with the issue of the relationship between theory and practice in terms

of the birth of the economy based on productive services. Productive in terms of their role in acquiring, preserving and, in a sense, the utilization of human abilities. Theory, whose subject is the society, does not and should not finish with the statement "how should it be", but its dimension can and shall be the analysis of all the important interconnects that link the theory with its application in practice. The more the theoretical approach develops within the theoretical approach, the more theory ceases to be merely an appeal to "how it should be", and thus it can more effectively influence reality. The first chapter, entitled *Problems in Science and Links of Science with Practical Use*, deals with the problems in contemporary science and its connection with practice. Problems with connecting theory to practice, use and applicability of theory in practice begin in science itself. In the chapter there are documented findings of the practice of scientific research, attention is drawn to some shortcomings, including the formulation of recommendations on how to eliminate them. The chapter *Transition from Third to Fourth Industrial Revolution in terms of theory and practice (reality and vision)* deals with the analysis of various approaches to defining the issues of the so-called Fourth Industrial Revolution and the practical contexts of this issue. It points to the considerable differences in the approaches and the resulting practical conclusions. In the chapter *Using the Dual Model of Titanic and Clash of Clans Games to analyse the relationship between theory and practice in supporting the constitution of the productive services' industry*, one defines a theoretical framework in which it decides what role theory plays in practice. Also, this chapter documents the use of a highly abstract theory in practice, if it is based on a mathematical apparatus that was developed precisely to identify what is happening. In other words, one of the aims of this chapter is to show that focusing the theory's attention on the problem of its application in practice does not contradict the requirement that theory be able to rely on an apparatus using original mathematical models. In general, we dare say, "there is never enough of good theory". The more effective theoretical methods we develop, the more opportunities to apply the theory in practice are offered. The chapter on *The Importance of Behavioural Economics for the Theory and Practice Relationship* follows on from this chapter, which responds to the need to respect the peculiarities of the human psyche, namely that the theory of social reality cannot be based on the premise of fully rational decision making. However, even in this case, we cannot do without good theory. If we know typical examples of rationality failure, we can count on them in the field of practical application of the theory. Also, another chapter called *The relationship of Economics and Ethics as an Expression of a Theory and Practice Interconnection* deals with what goes beyond the framework of a purely rational approach to the issue of increasing the role of the productive services' sector and the application of theory in the practice of securing the rise of the productive services' sector. At the same time, it suggests in which direction it is possible to develop closer links between the ethical and economic aspects of this issue. The monograph ends in the *Analysis of the Theory and Practice Relationship* that proposes a coherent concept identifying all the essential moments and dimensions of the theoretical research relationship in the field of socioeconomic reality and practice. This is concretized in this chapter in some ways where it is possible to expect a more effective application of theory in relation to actual social development.

If we want to get oriented in the current breakthrough times, we need support in the new economic theory. Here we call it *The Economics of Productive Consumption*, which is a logical continuation of the mainstream of economic theory development, the overlap

of the basic paradigm developed in neo-classical economics, the theoretical support of the prediction and analysis of the constitution of the productive services sector oriented on the development and preservation of human capital as the dominant economic sector. Similarly to the earlier stages of economic theory development, economics of productive consumption arises by combining stimuli from the field of theory development (in this sense, we are talking about the logical continuation of the development of existing knowledge) and at the same time stimuli from the field of practice (in this sense, we are talking about the historical conditionality of the present knowledge). The main difference between economics of productive consumption and neo-classical economics is as follows: According to neoclassical economics, the consumer focuses on maximizing his utility in the sense of subjective experience, and consumption has effects only in the form of subjectively perceived experience, while according to the economics of productive consumption the consumption is productive in the sense that the consumer (the economic entity) maximizes the present value of its future income in the long run in accordance with its lifetime strategy. If we look at the different directions that economic theory undergoes today on its neoclassical basis, the interpretation of preferences on the basis of productive aspects of consumption is a possible continuation that enriches the directions and in which the different directions can interconnect when expressing important questions. The Economics of Productive Consumption has its own theoretical apparatus which, in the logic of the development of economic theories, builds on the apparatus of neo-classical economics and other theoretical sources, allowing a very complex expression of economic efficiency. An important tool is the methodology of macroeconomic data analysis, which we have developed and which proved to be effective on the example of the Czech Republic. It has shown that certain shifts in the direction of those forms of consumption that have productive effects occur mainly in the middle-income groups of the population, indicating a combination of productive consumption and vertical mobility. At the same time, shifts towards greater representation of productive components of consumption have been hampered by the various forms of investment in the social position and the undeveloped financial market mechanisms that would open up resources for investment into development human capabilities. Through the theory of cooperative and also following non-cooperative games, concepts of game complexes can be expressed, playing in the field of decision-making on whether a player chooses a strategy of investing in a social position or developing skills. Based on these concepts, it is possible to formulate the parameters of specific non-cooperative games, to show the importance of reforms related to the improvement of financial markets, which create conditions for contracts related to human capital. The theoretical basis of economics of productive consumption extends the possibilities of mutual enrichment of various social sciences, illustrated by the combination of the sociological and economic view of the various concepts of consumption, respectively, the different types of consumption that different consumers have adopted as their own.

The last monograph from the series is WEALTH AND POVERTY (Valenčík et al., VŠFS, 2020 in press). The question posed by the name of the monograph, when and why becomes a problem and how to solve it, is reworded to the question: Why investment opportunities associated with the acquisition, preservation and use of human capital are not used according to their rate of return. This is the same question (or the same complex of problems and questions related to what is causing the problems and how to solve them)

but formulated so that the necessary tools can be used to describe, analyse, and solve the problem. In particular, it is about linking the microeconomic search for optimum to the use of investment opportunities linked to the acquisition, preservation and use of human capital, and Nash's solution to the negotiating problem in the field of cooperative games, enhanced with alternative options (alternatives in relation to improvements compared to the point of non-agreement).

On this basis, the phenomenon of investing in a social position or point of positional investment is identified, which plays a decisive role in the emergence of problems that depend on the division of society amongst the richer and the poorer citizens, in the deepening of this division and the related distortions of the social system. At the same time, understanding its role is also an answer to the question of why investment opportunities associated with the acquisition, preservation and use of human capital are not used according to their rate of return.

Positional investment works against market competition within its own field – on the market. It also works against its pressure to exploit investment opportunities according to their rate of returns (including those associated with the acquisition, preservation and use of human capital) and thus against increasing the efficiency of the economic system by means of resource-saving innovations and increasing human potential while fulfilling the human life welfare.

The engine of competition also operates in the field of positional investment, but here it empowers the social forces associated with obtaining positional advantage based on property in the form of violations of generally accepted principles: primarily in the form of robberies that grow into organized crime, corruption linked to the redistribution of public resources etc., secondarily by generating structures based on the mutual cover of violations of generally accepted principles that penetrate the institutional system and also find global coverage in the form of power, which is not under national control and national public choice.

To highlight the above conclusions, the introduction presents a fundamental difference between a redistribution and positional approach to addressing wealth and poverty, characterising the diverse types of redistribution solution, and referring to the potential risks associated with overestimating their role. To unblock some stereotypes, a parallel is drawn between seeking an answer to the question of why some rich and some poor are, why this may create a problem, with the question of why there is no light at night in the "epicurean" universe, followed by the idea of "epicurean" economics. The development of the theory of surplus into its usability in the pursuit of the emergence of additional value (as a form of "surplus over cost" retroactive to the economic process) shows that, even following the monitoring of this branch of economic theory, we must use the identification of the phenomenon of positional investment. Without this, we cannot answer the question of the dual role of the owner of the capital, etc. As a follow-up, knowledge on consumer behaviour is presented in terms of investing in the acquisition, preservation, and development of skills in relation to investing in a social position, including the context of experience wealth and the role of marketing.

Identifying chains of investment in the acquisition, preservation and usage of human abilities plays a particularly significant role in the practical application of conclusions, including those related to the use of highly abstract theoretical tools developed by authors and presented in this monograph. Positional investment acts on the most sensitive and vulnerable elements of these chains, in such a way as to disrupt as much as possible the vertical mobility associated with the equality of the opportunity for a social rise independent of the original income or property conditions. A complex of reforms, which, step by step, would create the conditions for exploiting the investment opportunities associated with the acquisition of preservation and the use of human capital according to their level of return, must therefore be designed in such a way that these decisive elements are “treated” precisely in terms of their resilience to positional investment. To do this, it is necessary to work with a comprehensive vision of a lifelong process of acquiring, preserving, and developing human abilities, including the outcome of this process in the field of prolonging the zenith and the horizon of productive human employment. In this context, it turns out that disputes over the reform of the pension system have their origins not only in the fact that it is a redistribution of permanently generated large financial resources, but also in a fundamental game of people's motivation, or the possibility or vice versa impossibility (blockage) in terms of over-procuring these incentives from the natural procuring of resources to their lives in an activity based on a continuously conscious lifelong perspective into an activity aimed at solving current problems.

What next?

The article can be expected to stimulate a qualified discussion. We feel that we need a reflection of the times, an answer to the question of what is happening and why. We also need a positive vision for a normal life. The article provides an impulse for this and the discussion can provide the answers. And not just discussion. We believe that the article has an important and practical call for action in terms of supporting startups that grow into developing stable and creative intergenerational teams.



