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BUSINESS TRENDS

Obsah – Content

Zveřejněné příspěvky byly recenzovány. Příspěvky neprocházejí jazykovou redakcí.

Contributions in the journal have been reviewed but not edited.

Klíčová slova – Keywords:
Podniková ekonomika – Business Economics
Management – Management
Marketing – Marketing
Finance a účetnictví – Finance and Accounting

Editorial

Dear readers,

this volume of the scientific journal Business Trends is devoted largely to contributions resulting from the project "V4 Scientific Centers for the Enhancement of Financial Literacy and Entrepreneurship Education", Standard Grant of the International Visegrad Fund No. 21410134. Entrepreneurship education and financial literacy are two of the key challenges for the Visegrad Group countries. The aim of the project was to conduct research focused on the analysis and comparison of the current state of, and development possibilities for, entrepreneurship education and financial literacy in Visegrad Group countries. The University of West Bohemia was the project coordinator. Partners in the project consisted of two Slovak universities (the Slovak University of Agriculture in Nitra and the University of Economics in Bratislava), one Polish university (the University of Zielona Góra), and one Hungarian university (the University of Pécs). The papers presented are focused on best practices and the results of research done in the area of entrepreneurship education and financial literacy in Visegrad countries within the project during its implementation period (9/2014 – 8/2015).

The importance of entrepreneurship has boomed in several last decades. Entrepreneurship education represents a strong mainstream which has the ability to raise nascent entrepreneurs, foster innovation and arrange a continuous flow of information and knowledge. The paper of Tausl Prochazkova presents best practice examples of entrepreneurship teaching methods. The paper of authors Bedo, Csapi and Posza deals with incubation program at the University of Pécs, Hungary. Authors Majduchova, Gajdova and Stetka focused on dissolving current gaps in entrepreneurship education and its impact on business development in Slovakia.

The terms "entrepreneurship" and "financial literacy" are closely connected and actually cannot be separated when dealing with attributes necessary for future business success. The paper of Krechovska aims to highlight the important role of financial literacy as one of the factors that ensures sustainable development in society. The paper of Toth, Lancaric and Savov examines the level of financial literacy of students in Slovakia and the influence of determinants education level and education focus. Results obtained in the qualitative research in the area of banking with a specific focus on the history, present and development tendencies of banking in the Czech lands are presented in the paper of Hruska and Dvorakova.

In addition to papers prepared within the project, you can find papers from other interesting areas. Information and communication technologies are definitely a phenomenon that has changed our world. The presented research of Petrtyl and Eger is focused on the comparison of e-business in selected countries. The paper of Reich, Czeglédi and Fonger discusses diversity management and expectations of employees on the effects of the workplace health management. Finally, the review of the conference proceedings "Opportunities and Threats to Current Business Management in Cross-border Comparison 2015" (University of West Bohemia, Pilsen) is included.

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Michaela Krechovská

FINANCIAL LITERACY AS A PATH TO SUSTAINABILITY

Michaela Krechovská

INTRODUCTION

Changes have been taking place in society including transformations of people's thinking and behaviour. New trends and concepts are being developed. One of the important concepts dealing with social development in recent years is the idea of sustainable development. The main idea of sustainable development is the need to set development goals that meet *"the needs of the present without compromising the ability of future generations to meet their own needs"* (World Commission on Environment and Development, 1987). Ensuring sustainable development in society requires individuals to behave in a sustainable manner. This, of course, also applies to the area of financial management and the handling of funds. New opinions are arising that call for a change in attitudes and appropriate social accountability and responsibility.

With regard to the sustainable behaviour of individuals, financial literacy has become increasingly significant in light of the deregulation of financial markets and easier access to credit. In the context of competition, financial institutions still offer favourable conditions, credit and other various financial products and services. We are confronted by easier access to personal loans, credit cards and other payment options. These facts have led to an increase in spending and consumption and a rapid rise in personal and household debt levels (Marcolin and Abraham, 2006; Beal and Delpachitra, 2003).

As Bryant (2013) states, economic growth and sustainability is rooted in financial literacy of individuals. *"Financial literacy is absolutely essential to living a successful and independent life, promoting economic growth, and sustaining it"*. Rahmandoust et al. (2011) highlight the importance of financial literacy in entrepreneurs' success and then in sustainable development of society.

Various institutions have begun to deal with this issue and have attempted to tailor educational programs so that individuals receive the appropriate economic and financial knowledge and skills. At the same time, it is believed that an economically educated public may result in better market outcomes. Many studies deal with this relationship and examine whether economical or financial education actually improves economic or financial literacy or personal outcomes, see e.g. Chytilová (2013), Carpena et al. (2011) or Hastings et al. (2013). It is therefore not unusual that measuring financial literacy in recent years has become more and more frequent. However, there still certainly are problematic areas in the standardization of the measurement of financial literacy. Huston (2010) analysed 71 financial literacy studies and identified three main barriers:

1. There is a lack of a definition of what financial literacy means,
2. Measures of financial literacy are not comprehensive, and
3. Most studies do not include a guide for interpreting this measurement.

This paper seeks to respond to some of these barriers. The aim of this paper is to highlight the significance of financial literacy for sustainable development of society. It deals with the definition of financial literacy and the measurement of financial literacy.

1. THEORETICAL BACKGROUND

1.1 Concept of financial literacy

Financial literacy has become a significant research topic in connection with the need to increase financial knowledge and the skills of individuals, and development in this area can be expected in the future.

The first use of the term "financial literacy" is often associated with the Jump$tart Survey of Financial Literacy Among High School Students provided by Jump$tart Coalition for Personal Financial Literacy in 1997, when the Coalition first began measuring financial literacy. In this study, financial literacy was defined as "*the ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security*" (Mandell, 1997). A few years earlier, Noctor et al. (1992) introduced financial literacy as *"the ability to make informed judgments and to take effective decisions regarding the use and management of money"*. Similarly, the European Commission defines financial literacy as *"capability of consumers and small business owners to understand retail financial products with a view to making informed financial decisions"* (European Commission, 2007). In the Czech Republic, financial literacy is defined by the Ministry of Finance of the Czech Republic (2010) as "*a set of knowledge, skills, and attitudes of a citizen necessary for ensuring his/her own financial well-being and the financial well-being of his/her family within the present society, and for his/her active involvement in the market of financial products and services. A financially literate citizen is familiar with the issues of money and prices, and is able to manage his/her personal and/or family budget responsibly, including the management of financial assets and liabilities in consideration of changing life situations*." An integral part of financial literacy is also taxation and other macroeconomic aspects (such as orientation in basic relationships between different sectors of the economy, understanding basic macroeconomic indicators such as GDP, inflation, interest rates, etc.). This is mainly due to the fact that it significantly contributes to the financial resources of individuals, households and businesses and thus has a significant impact on cash flows in private as well as corporate finance.

From the above definitions, it is possible to deduce the nature of financial literacy, which is a kind of understanding of the financial world, which leads households and firms to correct judgment, effective decision-making, and relevant behaviour in the area of finance.

Economic literacy is a broader term that, in addition to financial literacy, includes e.g. the ability to secure income, considering the consequences of personal decisions on current and future income, orientation on the job market, the ability to make decisions on expenditures, etc. (Ministry of Finance of the Czech Republic, 2010).

Financial literacy requires a summary of the necessary competencies. Figure 1 reflects the range of different knowledge; skills and information that everyone needs to live in a modern economy.

Fig. 1: Financial Literacy Triangle

Source: Investment Solutions Northland (2015)

1.2 Components of financial literacy

It is important to focus on the components of financial literacy and determine which are the least and most critical to financial success and sustainability (Marcolin and Abraham, 2006). Financial literacy in the context of managing personal or business finances involves three basic components (Ministry of Finance of the Czech Republic, 2010):

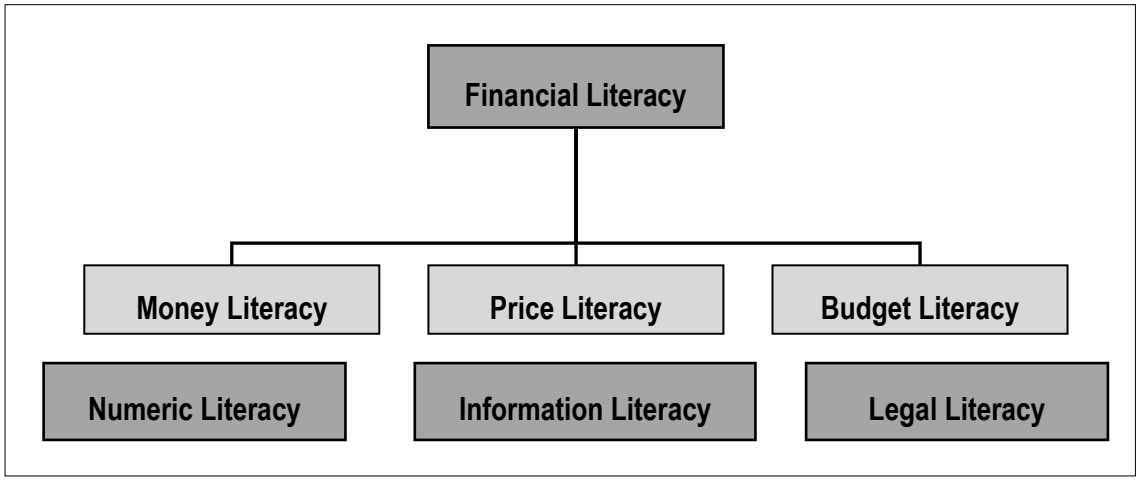
- **Money literacy** – the competence necessary to manage cash and non-cash money and accompanying transactions; the competence to handle management tools designed around these transactions (e.g. current account, payment instruments, etc.).
- **Price literacy** – the competence necessary for understanding prices and the methods by which they are determined; the competence in understanding inflation and the factors that influence them. This includes understanding the time value of money; the difference between nominal and real interest rates; and understanding the prices of financial instruments and services in the form of fees and interest rates.
- **Budget literacy** – the competences required to manage one's own budget as the ability to set financial goals and decide on the allocation of financial resources; the ability to manage a budget, work with revenues and expenditures; the ability to handle different accidental situations from a financial point of view, etc. In addition to the general competencies listed above, budget literacy also includes two specialized components that require orientation on the market of financial products and services: the ability to compare individual financial products and services, and to choose the most appropriate product or service according to a particular situation. This includes: management of financial assets (e.g. deposit, investment and insurance) and management of financial liabilities (e.g. loans or leasing).

The following competences go "hand in hand" with financial literacy:

- **Information literacy** – the ability to find, use and evaluate only required and relevant information,
- **Numeric literacy** – the ability to use mathematical tools to solve numerical tasks in financial decision making,
- **Legal literacy** – orientation in the legal system, conclusion of various contracts, overview of rights and duties, possibilities of assisting.

The individual components of financial literacy are shown in the following figure:

Fig. 2: Components of Financial Literacy



Source: own processing according to (Ministry of Finance of the Czech Republic, 2010)

Škvára (2011) introduced seven competencies that can be regarded as an extension and completion of the financial literacy scheme. In addition to the three mentioned above (numeric literacy, information literacy and legal literacy), he adds the following areas: competence in the field of consumer protection, competence in the basic rules of investing, and competence in issues of the European Union and management of various life situations.

2. IMPORTANCE OF FINANCIAL LITERACY FOR SUSTAINABLE DEVELOPMENT OF SOCIETY

Financial literacy plays an important role in helping ensure the financial health and stability of individuals, families, enterprises and national economies. Particular emphasis is placed on the financial literacy of individuals. As Dodaro (2011) confirms, economic changes in recent years have highlighted the need to empower consumers to make informed financial decisions and to benefit from a better understanding of financial matters. *"The recent financial crisis revealed that many borrowers likely did not fully understand the risks associated with alternative mortgage products, resulting in substantial increases in defaults and foreclosures that continue to expose borrowers to financial risk and be a drag on the economy today"* (Dodaro, 2011). Due to a lack of financial literacy, individuals are unable to optimize their own welfare (Hastings et al., 2013).

The development and level of people's financial literacy is closely reflected in the development of the economic indicators that can be monitored in different countries. Indicators such as the level of household debt, payment discipline, the possibility of household bankruptcies, the percentage of insolvencies or the percentage of ordered property repossessions can all be indicators of levels of financial literacy and financial education.

Household debt is a frequently monitored indicator, as there has been an increasing trend in this area in recent years. In addition, there has been a growing number of households that are unable to repay their liabilities. Therefore, particular types of debts are measured within general household debt. Consumer credit recorded a strong increase in recent years due to greater flexibility and lower overall sums of individual credit, especially among low-income population groups. According to Chmelar (2013), between 1995 and 2008, the amount of consumer credit expanded by approximately 150% in Europe, while the US consumer credit market grew by only 60% during the same period, although from a much higher initial level than in Europe.

In Table 1, the development of household debt in the Czech Republic is shown in comparison to the development of household debt in other Visegrad Group countries. We analysed household debt development based on the data published by OECD (2015). Since 2005, total debt of households has increased in all countries surveyed. However, each country has a different dynamic in terms of debt development. While in the Czech and Slovak Republic the ratio of household debt to net disposable income has been constantly growing, households in Hungary reached the highest peak of debt in 2010, and since then the proportion of debt has been decreasing. The situation is similar among Polish households where debt was highest in 2011; since then, however, there has been a slight decrease. Concrete values of household debt are shown in the table below.

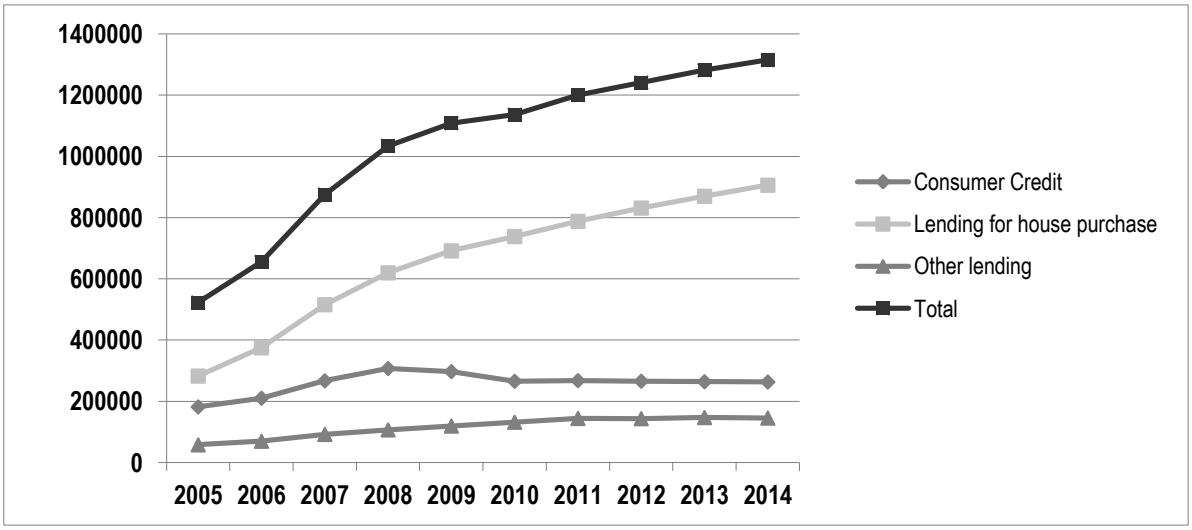
Tab. 1: Household Debt, Total, % of Net Disposable Income

Country/Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Czech Republic	39.41	43.64	52.94	58.80	60.35	61.89	64.36	65.79	67.56
Hungary	46.50	52.97	61.01	74.69	75.23	79.09	72.52	61.62	56.23
Poland	23.83	29.72	37.82	50.14	51.71	56.03	59.71	57.45	58.24
Slovak Republic	29.99	32.90	38.86	41.53	41.24	44.19	49.22	54.89	57.58

Source: OECD, 2015

When we look at household debt in the Czech Republic in more detail, we can identify individual types of debt and their participation in the growth of household debt (see Figure 3). Based on data carefully collected by the Czech National Bank (2015), the total household debt in the Czech Republic amounted to 1,314,973 million CZK in 2014. Lending for house purchases represents the largest share of total household debt (906,111.6 mil CZK). Consumer credit occupies second place in household debts, while the largest increase in consumer credit took place during the financial crisis in 2008 and 2009.

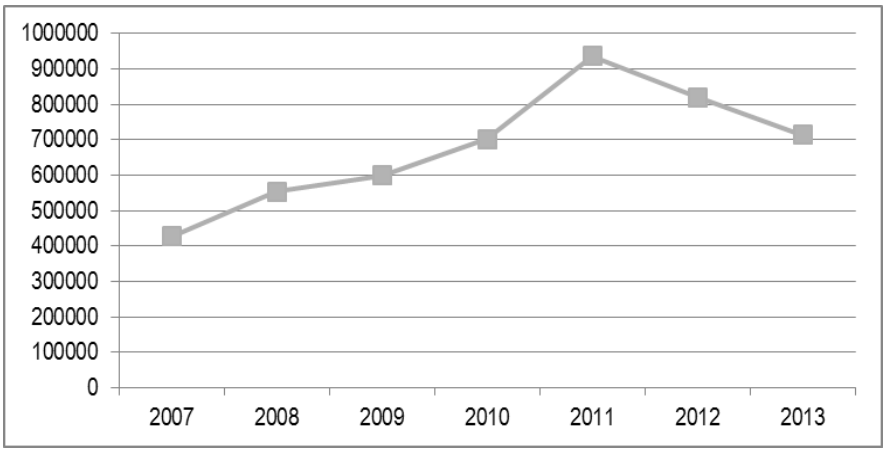
Fig. 3: Household Debt in the Czech Republic in years 2005 - 2014 (CZK mil)



Source: Czech National Bank, 2015

It is a positive factor that, despite the increase in household debt, the number of ordered property repossessions in the Czech Republic has reduced in recent years, as shown in Figure 4. Until 2011, the number of property repossessions had been growing exponentially (936,000 property repossessions were ordered in 2011). In 2012, we can observe a decrease in the number of property repossessions (820,000 repossessions were ordered in 2012 and 714,000 repossessions in 2013). According to analysts, financial literacy education can help prevent these phenomena (Czech Chamber for Repossession of Property, 2014).

Fig. 4: Number of Ordered Property Repossessions in the Czech Republic in years 2007 – 2013



Source: Czech Chamber for Repossession of Property, 2014

Although we have focused only on two monitored indicators, the importance of financial literacy as one of key factors for behaviour of individuals in a sustainable manner is evident in the figure above. We could analyse additional

implications using the statistics of bankruptcies and insolvencies both among consumers and businesses, etc. It is clear that financial literacy is not a "fool proof" cure for all these phenomena, and other factors may lead to these conditions as well. However, it is important not to neglect financial literacy, as it is one of the most important characteristics and skills that can determine the behaviour of individuals in the world of finance, their approaches to payment discipline, debt and thinking for the future.

In this regard, it is important to put emphasis on financial education as a tool for heightening and developing financial literacy, and also a tool to prevent the negative effects stemming from low levels of financial literacy (or illiteracy). Financial education refers to the process whereby individuals improve their knowledge and understanding of financial concepts, services, and products (Dodaro, 2011). Financial education should thus promote the active role of consumers and lead to understanding and acceptance of personal responsibility for financial management.

3. FINANCIAL LITERACY MEASUREMENT

Because of the significance of financial literacy and its impact on the overall sustainable development of society and global economic stability, financial literacy has become a priority of international as well as national institutions (most often the OECD and the European Commission at the international level; national banks and the ministries at the national level). These institutions also perform regular measurements of financial literacy in order to determine the current state of financial literacy among various population groups. A questionnaire is the most common method of measuring financial literacy.

In 2008, the OECD established the organization called the International Network on Financial Education – INFE, which is directly focused on support of financial education in OECD member countries. The basic structure of the financial literacy questionnaire was published in 2011 (OECD INFE, 2011) and supplementary good practice questions in 2012 (OECD INFE, 2012). These documents could serve as the basis for creating individual national financial literacy questionnaires for countries around the world. However, financial literacy and its measurement still lack a global approach. Surveys on this issue have been done by various institutions in different countries; the disadvantage, however, is the diversity in the samples of respondents or a different structure of individual issues. Results of such surveys are thus difficult to compare.

Our goal has been to contribute to the collection of national research in the field of financial literacy. Our research was focused on a target group of university students, as these young people should possess all necessary competences for employment; they will soon be establishing their own homes and companies, becoming part of the work force that will take part in the future economic development of individual countries. Therefore, it is necessary to provide proper entrepreneurship education in order for this group to reach its highest levels. As Goetz et al. (2011) points out, it is important to focus on financial education through methods that are appropriate for university students. Similar research among university students in the Czech Republic has been carried out by e.g. Kantnerová et al. (2013), or Krizek and Hradil (2012).

The standardized OECD questionnaire formed the basis of our research. Based on this OECD document, we created a questionnaire containing ten questions aimed at verifying financial literacy in the Czech Republic, Slovak Republic, Poland and Hungary. This was done in order to compare the levels of knowledge of university students in countries of the Visegrad Group. Questions were directed at the following areas: compound interest; inflation; evaluation of data from a graph; terminology and products of the financial market; investment risks; and household reserve fund. Questionnaires were distributed in all four countries and respondent questioning took place simultaneously in all countries from October 2014 to May 2015. In the Czech Republic, a sample of 600 respondents was created. Questionnaire respondents were students of universities of both an economic and non-economic focus.

Tab. 2: Structure of Respondents

Age		Gender		Education Focus	
23 or less	87.2	Male	29.3	Economic	50.0
Over 23	12.8	Female	70.7	Non-economic	50.0
Total	100.0	Total	100.0	Total	100.0

Source: own, 2015

Table 2 shows the demographic structure of questionnaire respondents in the Czech Republic.

Gathered data was analysed according to the score of correct answers of respondents in the first phase of processing. Initial results of the study proved the following:

- Students of economic fields had better results than students of non-economic fields (students with non-economic specializations showed 10% more incorrect answers than students with economic specializations).
- Students of master study programs reached better results than students of bachelor study programs (however the ratio of correct answers of bachelor study students was only 7% lower).
- Men showed better results than women (women had 8% more incorrect answers than men).
- The respondent profile with the highest financial literacy (i.e. the highest number of correct answers) is male, over the age of 23, with an economic education.

Additional results of research into the financial literacy of university students across V4 countries are now being processed statistically. Each member of the project team will publish their work individually including their own conclusions of results.

CONCLUSION

Quick changes in the economic and market environment; the emergence of new products; and increasing competition across countries are demanding the constantly increasing development of skills among individuals. This concerns the economic and financial literacy of individuals that have become indispensable components of contemporary living and doing business in the modern world. Therefore, the aim of this paper is to highlight the significance of financial literacy and activities leading to support of financial literacy for global economic development and ensuring stability. Indicators such as increasing household debts etc. demonstrate the importance of financial literacy of individuals for sustainable development of society. In this regard, it is important to put emphasis on effective financial education in order to increase financial literacy. It is necessary to increase financial literacy especially among young people who will form economy in the future. In today's turbulent world, however, financial education is becoming a lifelong process.

Our goal has been also to contribute to the national studies of financial literacy. In our study, we have focused on the financial literacy of university students in the Czech Republic, as it is necessary to develop their skills and knowledge in the area of finance and financial management. At the same time, we are aware of the limitations of the study, which is based only on research of one selected target group of respondents and cannot provide conclusions on the financial literacy of all the citizens of a given country.

Although the initial results of the study can be perceived positively, it is necessary to continue to devote attention to including financial education in university teaching while using teaching methods that are appropriate for heightening practical financial literacy among individuals. Thanks to this practical financial literacy, individuals should be able to realize the consequences of the socio-economic development of society, particularly with regard to the prevention of indebtedness and ensuring

financial security for the future. Ultimately, the financial literacy of individuals should lead to the sustainable development of society as a whole.

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FINANCIAL LITERACY AS A PATH TO SUSTAINABILITY

Michaela Krechovská

Abstract:

The paper aims to highlight the important role of financial literacy as one of the factors that ensures sustainable development in society. First, the paper deals with the definition of financial literacy and the importance of financial literacy for society. It analyses various symptoms associated with the level of financial literacy in the form of household debt and the number of ordered property repossessions. Furthermore, the paper focuses on the measurement of financial literacy and, in this context, presents selected results of the survey of financial literacy from a selected group of respondents (university students) in the Czech Republic that were acquired as part of the *"V4 Scientific Centers for the Enhancement of Financial Literacy and Entrepreneurship Education"* project focused on research in the field of entrepreneurship education and financial literacy in Visegrad Group countries. Financial literacy is seen as one of the most important characteristics that can determine the behaviour of individuals in the world of finance, their approaches to payment discipline, debt and thinking for the future. In this regard, it is important to put emphasis on financial education as a tool for heightening and developing practical financial literacy.

Keywords: financial literacy; financial literacy measurement; sustainability; financial education

JEL Classification: A20, D14

DEVELOPMENT MILESTONES AND TENDENCIES OF BANKING IN THE CZECH LANDS IN THE CONTEXT OF FINANCIAL LITERACY DEVELOPMENT

Zdeněk Hruška, Lilia Dvořáková

INTRODUCTION

In the context of the financial literacy development the bank literacy represents its specific part which focuses on the banking sector and related topics like e.g. insurance, stock market, investment etc. Banks represent one of the basic pillars of market economy functioning because they operate mainly in the role of financial agents and enable a fast cash flow. In market economies these are corporates which differ in some features from common business entities, the most significant difference can be the disposition of high sums of entrusted financial funds (Revenda, 2000). In the historical context the banking sector has gone through dynamic development worldwide. The development tendencies of banking in the territory of today's Czech Republic closely correspond with the historical development and important events which often influenced also the government system and the state territory. At first banking developed in response to the world development. North Italy had a significant influence on the form of banking systems of individual European states because **the genesis of banking is dated there in the 12th – 13th century** (Polouček, 2006). The Czech lands were part of the Austro-Hungary until 1918 therefore an independent Czech or Czechoslovak banking system cannot be identified until that year. A significant milestone was the year **1918** when the **independent state Czechoslovakia** is established. Related to the establishment of a new state it was necessary to form a banking system which should have consisted of two stages. At the same time it was necessary to create currency for the new state. In the Czech lands the banking has gone through significant changes from 1918 until 2015. The crucial change can be considered the transfer from one-stage banking system to two-stage system in 1990.

THE RESEARCH TARGETS AND METHODOLOGY

In the paper the results of the qualitative research in the banking area with a specific focus on the history, present and development tendencies of banking in the Czech lands in years 1918 – 2015 are presented. The main target of the paper is to identify, analyze and evaluate the milestones and development tendencies in the banking area in the Czech lands since the establishment of an independent Czechoslovak state, i.e. since 1918. In the paper the historical connections in the banking development are related to the political and economical development in the world because they are closely related factors. In the paper the historical development in banking is divided into **7 stages** which are bordered by significant milestones and changes which happened in the current Czech Republic territory. These changes were of a political or economic character. The authors of the paper based the qualitative research by the desk research method on critical literary search of mainly domestic literary sources, especially of monographic publications and scientific studies. Secondary information was further obtained from papers in professional magazines and professional internet servers.

1. DEVELOPMENT STAGE 1918 – 1939 (PERIOD BETWEEN THE WORLD WARS)

A significant milestone which preceded the development stage in 1918 – 1934 was the year 1751 when the first private banking house was founded in the Czech territory. This

banking house was founded in Brno at the time of Marie Terezie reign and it was focused especially on textile manufactures (Ježdík, 2002; Šenkýřová, 2005). As Polouček (2006) states after the formation of the independent Czechoslovakia there were 301 commercial banks, however, their number was reduced by the economic crisis influence. Živnobanka gradually became a significant bank which gained considerable strength especially before the Second World War (Polouček, 2006). The year **1919** can be considered the key year in the history of especially central banking in today's Czech Republic because the **Banking Office** was formed and it operated at the Ministry of Finance (Czech National Bank, 2015; Revenda, 2001). The head of this office was the minister of finance, while the first Czechoslovak minister of finance was Alois Rašín. The Banking Office had the role of the central bank (e.g. it issued state notes, determined the primary interest rates, provided the foreign exchange activity of the state or managed the state debt), however, because of the subordination to the Ministry of Finance it was not completely independent, as the current Czech National Bank is. Until the formation of the Banking Office the Land Bank temporarily held the functions of the institute of issue (Šenkýřová, 2005). Cashless payments were provided by the Postal and Check Office at that period. Already since 1920 there was a direction towards formation of a separate and independent institution in the form of the central bank. Everything resulted in **1925** by establishing the **National Czechoslovak Bank** which started its activity on the 1st April 1926 and by that moment the activity of the Banking Office was finished (Czech National Bank, 2015; Polouček, 2006; Revenda 2001). This bank had a form of a joint-stock company and the chief statutory body of this institution was the bank board of nine members (Vencovský, 1999). The first governor of the National Czechoslovak Bank was Vilém Pospíšil who was followed in 1934 by Karel Engliš (Šenkýřová, 2005). This central bank had the exclusive right to emit banknotes, to manage the circulation of currency and to look after its right function in Czechoslovakia at that time. As Revenda states (2001) the bank could provide loans also to business entities. By formation of the **Protectorate of Bohemia and Moravia** its functions were reduced, branches were closed and also the name of this bank was changed to the **National Bank for Bohemia and Moravia** (Czech National Bank, 2015). Regarding commercial banking, as soon as in the first development stage the banking system went through a big crisis which lasted in years 1923 – 1926. After overcoming the crisis there were in total 114 banks operating in Czechoslovakia in 1929 which means a decrease compared to the number at the time of Czechoslovakia formation. The most important banks were Živnobanka, Česká banka Union, Česká eskontní banka or Česká průmyslová banka (Šenkýřová, 2005). The banking market showed a dominance of **universal banks** because it was very difficult for specialized banks to find their use at that time and their development started at the end of the 20th century. Over the time banks extended their offer of services by new products which were for example transactions with state bonds (Pátek, 1992). Also institutes of public banking whose target client groups were especially farmers, tradesmen and public had a significant role.

2. DEVELOPMENT STAGE 1939 – 1945 (THE SECOND WORLD WAR PERIOD)

In the period between the 15th March 1939 – 8th May 1945 a part of the Czechoslovak territory was occupied by the nazi Germany which was reflected in the banking system too. The central bank was completely subordinated to the **banking of the German Reich** and its new name was the **National Bank for Bohemia and Moravia** and a German representative was appointed in its management. In Slovakia the Slovak National Bank was established. In the Czech territory the legal currency was the Czech crown and the Reich mark. When the exile government in London was formed there was started also a new bank of issue called the **Czechoslovak Currency Office**. It was opened in 1944 in London too (Czech National Bank, 2015). In October 1945 the activities of this office were

started to be executed by the National Czechoslovak Bank which started to work entirely as the central bank of Czechoslovakia (Czech National Bank, 2015). The period of Protectorate also effected the second stage of the banking system when there was a **reduction of commercial banks number** (Polouček, 2006). Most of the banks were expropriated and were directly under the Reich influence. Some banks were even deliberately destroyed (Šenkýřová, 2005). During the Second World War banking was **centralized** which was assisted by the Central Banking Union for Bohemia and Moravia established in 1941. This central union was divided in three economic groups which were further divided in professional groups. Each group was linked to a certain office in Germany. This way the protectorate banking was directly connected to the reich organization. The banking reorganization resulted in reduction of a lot of banking houses, in 1944 there were only six (Vencovský, 1999).

3. DEVELOPMENT STAGE 1945 – 1989 (COMMUNISM PERIOD)

Even after the end of the occupation of the Czech territory the number of banks decreased because of the presidential decrees and then all the banks were nationalized (Polouček, 2006). At that time the Czech banking system consisted of the National Czechoslovak Bank, joint-stock banks, private banking houses, land banks, reexcont and lombard institute, cooperative banking institutes, cooperative savings banks and post and municipal savings banks (Vencovský, 1999). After October 1945 the National Czechoslovak Bank became an exclusive institute which had the right to emit banknotes and coins and it made currency reform (Šenkýřová, 2005). The National Czechoslovak bank was involved in the **national economy centralization** in **1948**. In 1948 two operating banks were formed, they were Tatrabanka for Slovakia and Živnostenská banka for Bohemia. In that year there were only five banks operating on the banking market. (Revenda, 2001). Long-term loans were financed by Investiční banka. Another key milestone in the central banking area was the year **1950** when the **banking system reform** was made and the **State Bank of Czechoslovakia** was established. This bank worked as the central bank and took over the functions from the National Czechoslovak Bank. The main tasks of this institution were to emit banknotes and coins, to provide operating loans to economic and business institutions and since 1958 also to provide investment loans – since that year the State Bank of Czechoslovakia was the only universal bank, also labeled a monobank (Czech National Bank, 2015). Another function was to perform settlement and payment operations. The State Bank of Czechoslovakia was subject to the government powers, therefore it lacked the basic feature of a central bank which is independence. More changes came in **1953** when all public banking institutes were transformed into **state regional savings banks** and those fell within the influence of the Ministry of Finance (Šenkýřová, 2005). In 1967 they were united in the Czechoslovak State Savings Bank which was supposed to provide banking services to the Czechoslovak citizens. The Czechoslovak State Savings Bank was divided in two institutions in 1969. They were the Czech State Savings Bank and the Slovak State Savings Bank. There was also the Czechoslovak Commercial Bank operating in Czechoslovakia which was founded in 1964 and started its operation in 1965 (Revenda 2001). This bank focused on monetary relations with foreign subjects. In the researched period in Czechoslovakia except the mentioned banks there operated also the mentioned Živnobanka which focused especially on the monetary contacts with abroad (Šenkýřová, 2005). The key savings product for citizens in this stage were passbooks which were opened on a name or a bearer. Further on the citizens were offered budget accounts or accounts for young citizens and from the passive banking products especially housing loans.

4. DEVELOPMENT STAGE 1989 – 1993 (DEMOCRATIC CZECHOSLOVAKIA PERIOD)

The Velvet revolution and the transition from centrally planned economy to **market economy**

meant a number of changes also in the banking area. Since the 1st January 1990 two laws came to force and they significantly influenced the banking system and then the banking reform which meant the decline of the one-stage banking system was started. It was the Law no.130/1989 Col. about banks and savings banks. At that time the **two-stage banking system** was started in Czechoslovakia when the first stage is represented by the central bank and the second stage by commercial banks. In the same year the central bank stopped providing loans to the corporate sector (Revenda, 2001). In 1990 a few banks appeared which was supposed to contribute to the development of market economy. The **State Bank of Czechoslovakia was divided** into central bank, Commercial Bank (Komerční banka) and General Loan Bank (Všeobecná úvěrová banka). Furthermore the Czech State Savings Bank was transformed into Czech Savings Bank Inc. (Česká spořitelna a.s.) (Šenkýřová, 2005). Because of the establishment of market economy and rapid development in the business area it was reflected in the banking sector too. However, at that time the legislation had a number of weaknesses which showed later. Regarding the banking supervision, which is now done by the Czech National Bank, at that time it was performed by the **Ministry of Finance**. As Platscheková (2013) states in 1991 so-called small privatization was carried out and it used 80% of financing from bank loans. Platscheková (2013) further states that in that year 16 new banking licences were granted. The year 1992 meant the beginning of so-called big privatization and the number of banks grew further. Also during the big privatization banks played an important role by their loans. Another significant event of this stage of banking development in Czechoslovakia was the start of the **CERTIS** system (Czech Express Real Time Interbank Gross Settlement System) on the 8th March 1992. It became the only system for interbanking payments (Czech National Bank, 2015). In this stage the Consolidation Bank Prague (Konsolidační banka Praha) was also established (Businesscenter.cz, 2015). In 1992 The Bohemian-Moravian Guarantee and Development Bank (Českomoravská záruční a rozvojová banka) was founded to support small and medium businesses (Českomoravská záruční a rozvojová banka, 2004).

5. DEVELOPMENT STAGE 1993 – 2004 (PERIOD BEFORE JOINING THE EUROPEAN UNION)

High demand for loans was typical for the period of the 90s and the banks took inappropriate risks in a lot of cases (Mejstřík, Pečená, & Teplý, 2008). The year **1993** can be considered the most significant milestone in the history of the Czech Repulic in terms of central banking because together with the formation of the separate Czech Republic also the **Czech National Bank** was formed as an independent institution. The main target of the Czech National Bank is to look after price stability (Mejstřík, Pečená, & Teplý, 2008). As Platscheková (2013) states there were measures approved which included strict rules for granting banking licences for new banks. Adopting the Law no. 96/1993 Col. about building savings and the state support of building savings was an important event. Adopting this law led to forming new banking institutions which are called **building societies** (stavební spořitelny). These societies belong to specialized banks (Association of Czech building societies, 2014). In the following year 1994 the requested basic capital for banks was risen to minimal **500 million CZK**. The year 1995 meant the beginning of operation of the **Czech Export Bank** which became an important tool of the pro-export politics. (Šenkýřová, 2005). Platscheková (2013) labels the year 1996 as the black year because the Czech banking was characterized by a lot of frauds which were followed by filing criminal charges. In 1997 small and medium banks were revitalized which resulted from making the Stabilization program where the main role was played by a specialized institution Czech Financial Ltd. (Česká finanční s.r.o.). Then in 1998 the first big bank was privatized, it was the Investment and Post Bank (Investiční a poštovní banka) and further steps were made towards privatization of other big banks. Since 1998 the Czech National Bank switched to

inflation targeting (Czech National Bank, 2015). In 1999 new products and services especially for clients from the business area started to emerge on the Czech banking market. At the same time the majority share of ČSOB (Czech and Slovak Commercial Bank) was sold. Some banks lost their banking licences and negotiations about selling the Czech Savings Bank (Česká Spořitelna) were started. The critical situation of cooperative savings banks further influenced the Czech banking market. Since 2000 the Czech National Bank started to use the **Central register of loans** which was focused on information about loan commitments of natural persons and legal entities in business (Czech National Bank, 2015; Platscheková, 2013). In the same year the privatization of the Czech Savings Bank (Česká spořitelna) was finished, it was sold to Austrian Erste Bank. The group Société Générale became the majority owner of the Commercial Bank (Komerční banka) in the following year. The year 2002 meant the stabilization of the Czech banking system. Since 2003 the Law no. 124/2002 Col. has been in force, it is about financial funds transfers, electronic payment means and payment systems. In the same year the Union Bank Inc. (Union banka, a.s.) and the Pilsen Bank Inc. (Plzeňská banka, a.s.) lost their banking licences. Regarding the most significant product for public clients in terms of conservativeness and profitability it was still **building savings**. However, the state support for this product was reduced from 25% to 15%.

6. DEVELOPMENT STAGE 2004 – 2008 (PERIOD BEFORE THE WORLD ECONOMIC CRISIS)

The year 2004 is considered to be the year of Czech banking stabilization and the number of loans for clients from public grows (Platscheková, 2013). On the 1st May 2004 the Czech Republic joined the **European Union** which effected also the Czech banking because the Amendment to the Law about banks no. 126/2002 Col. and other laws influencing the banking business came into force. During the year 2005 the legislation adjustments continued especially the European Union directives were implicated into the Czech legislation. In the bankong sector a new system was created which enabled to measure and monitor loan risks. Together with the economic growth in 2006 there was also positive development in the banking sector. The banks operating on the Czech banking market then started to closely focus on public and the number of mortgage and consumption loans grew. Furthermore banks started to extend their portfolios of offered products by e.g. insurance or investments. In 2007 banks introduced automated systems of individual clients checking.

7. DEVELOPMENT STAGE 2008 – 2015 (PERIOD OF OVERCOMING THE WORLD ECONOMIC CRISIS)

In 2008 the **world economic crisis** hit the Czech Republic which had an impact also on the financial sector. The Czech banking system did not notice significant interferences in spite of the growth of clasified loans, because it was characterized by its stability. Also for this reason the Czech banking system is considered to be a stable sector with further growth potential. As Platscheková (2013) states the **loan market was stopped** especially in relation to the enterprise sector. The year 2009 was characterized by the growth of risk margins for business entities loans and by toughening the conditions for their providing. In 2010 Fio Bank, Inc. started to operate on the Czech banking market, it can be considered to be a pathfinder in the area of reduction of common banking services fees. In the same year the Czech National Bank presented its inflation target of 2% which was valid until entering the eurozone (Czech National Bank, 2015). As Platscheková (2013) says, since 2011 there has been growth of business entities loans. Other small banks entered the Czech banking market that year and they presented themselves by low fees. They were Equa Bank, Inc. and Air Bank, Inc. In 2012 the banking system of the Czech Republic was characterized by a strong link to other financial institutions such as insurance companies and pension funds. Among other small banks operating on Czech banking market in that period belongs ZUNO BANK.

Also Sberbank entered the Czech market and conversely Citibank limited its operations. In 2014 in the Czech republic an innovative Ferratum Bank started its business too, it focused on providing minimal loans with maturity up to three months. Except this bank Expobank started to work in the Czech Republic (Janda, 2014). In 2015 there are 46 banks and foreign banks' branches in the Czech Republic according to the statistics of the Czech National Bank. On the Czech banking market there are mainly **universal banks**. According to the balance sheet total the **three biggest banks** are ČSOB (Czech and Slovak Commercial Bank), Česká spořitelna (Czech Savings Bank) and Komerční banka (Commercial Bank). Among the significant specialized banks belong building societies. The banks with the state participation also belong among specialized banks. These are the Bohemian-Moravian Guarantee and Development Bank (Českomoravská záruční a rozvojová banka) and the Czech Export Bank (Česká exportní banka). For the current banking market is typical high competition and continuous reduction or cancelling of selected fees. Smaller banks try to get new clients especially by the no-fees policy and lower interest rates e.g. for loan products refinancing. New trends can be identified also in **cashless payments** which is still going through a dynamic development. A great boom was noticed especially by contactless payment cards or chips. Payments by mobile phones are so far at the beginning. A significane development is also seen at electronic banking which can be done not only on computers but also on mobile phones. Even in future we can expect further development in the area of payments and bank products and especially in the area of electronization and reduction of cash payments. In the last development stage there was noticed an attempt of banks to reduce the number of branches, however, according to performed researches the Czech clients are not ready for this step and therefore in the last years banks have taken the opposite direction and open new branches and contact places (e.g. in shopping centres). The year 2015 also meant achieving a new **minimum of average interest rate for mortgage loans** which is 2,05% (Hypoindex.cz, 2015). A negative news for the public clients in this stage was mainly the reduction of state support for building savings from 15% to current 10%. The continuous reduction of interest rates for savings accounts and term deposits still goes on. Concerning the future outlook in terms of the state measures, according to the statetement of the deputy of the minister of finance we can expect transformation of the Bohemian-Moravian Guarantee and Development Bank (Českomoravská záruční a rozvojová banka) into Czech Investment Bank. It will still be in the property of the state (Houdek, 2015). In terms of central banking the year 2014 was significant especially by the **interventions** performed by the Czech National Bank for the reason to keep price stability and to revive the economy (Janda, 2014). The average interest rate for mortgage loans stays on its minimum as well as the key interest rates declared by the Czech National Bank. The Czech banking sector is currently resistant, stable and profitable according to Pavel Štěpánek (2015). The above-average profitability is identified especially in comparison in Europe. Another feature of the current banking sector in the Czech Republic is the sufficient capital resources. The resistance of the Czech banks to risks was proved also by stress tests performed by the Czech National Bank. The news in 2015 was considering the introduction of so-called reverse mortgage on the Czech financial market. However this kind of loan has not been offered by any banking house in the Czech Republic yet, but the insurance company NOVIS considered its introduction (Střecha, 2015).

CONCLUSION

The Czech banking has gone through a dynamic development since the formation of the independent Czechoslovakian state till the present while the biggest influence on its form was the political situation and economic development not only in the domestic but in the worldwide context. The banking system form was changing during the time and great

differences can be found. During the monitored period there was the one-stage and also the two-stage banking system in the territory of today's Czech Republic. Since 1989 there has been the two-stage banking system in the Czech Republic which consists of the central bank and other banks. The banking market is charakterized by high competition and by targeting on certain client groups. Nowadays banks try to adjust to the clients' needs and they bring innovations in the area of banking products as well as supplementary services to the market. Even in the future we can expect a dynamic development in this segment of national economy. According to the present knowledge and development cash payments will be continuously reduced and they will be substituted by non-cash payments. Further innovations will probably come in product portfolios because banks bring new products in a reaction to clients' demands (as examples can be presented re-loans, re-financing of mortgages, reverse mortgage etc.). A significant development will continue especially in the cashless payment area on the national and international level. Another important milestone for the Czech banking market will indisputably be the acceptance of the unified European currency Euro and therefore the limitation of competences and functions of the Czech National Bank.

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DEVELOPMENT MILESTONES AND TENDENCIES OF BANKING IN THE CZECH LANDS

Zdeněk Hruška, Lilia Dvořáková

Abstract

In the paper there are presented the results obtained in the qualitative research in the area of banking with a specific focus on the history, present and development tendencies of banking in the Czech lands. The main target of the paper is to identify, analyze and evaluate the milestones and development tendencies in the banking system area (central banks and commercial banks) in the Czech territory since the formation of the independent Czechoslovak state in 1918 until the present, i.e. 2015. The historical development is divided into seven stages when each stage is bordered by important events of a political and economical character which had a significant influence on the form of the banking system. The stages are dated in the years 1918 – 1939, 1939 – 1945, 1945 – 1989, 1989 – 1993, 1993 – 2004, 2004 – 2008 and 2008 – 2015. In the paper important milestones regarding the banking development are described and prediction of the expected banking system development future periods is performed. For each historical stage of banking development the key events which influenced the character of the banking system and the portfolio of offered services on banking market are identified in the paper. Also the main changes in the first stage of the banking system, namely in the central bank, are documented and analyzed.

Keywords: banking; banking system; central bank; commercial banks

JEL Classification: G21, N24

IMPACT OF EDUCATION ON THE FINANCIAL LITERACY: A CASE OF SLOVAKIA

Marián Tóth, Drahoslav Lančarič, Radovan Savov

INTRODUCTION

Knowledge about finance is very important not only for companies, but also for individuals. Beňová et al. (2012) define the finance, as the relations between economic subjects in the economic transactions where the money supply is created, distributed and spent. In the resent years, exact the household´s finance and personal money management became the point of interest from the view of financial literacy (Lusardi and Mitchell, 2011). The connection between finance and literacy was firstly used by the Jump$tart Coalition for Personal Financial Literacy in 1997. Some initiatives to improve the quality of personal finance through financial education goes back to the 1950s and 1960s (Bernheim et al., 2001).

Financial literacy can we define as "the ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security" (Hastings et al., 2012). More complex explanation, given by OECD (2011) is, "Financial literacy is knowledge and understanding of financial concepts and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society and to enable participation in economic life". It also includes the knowledge of basic financial concepts, such as the working of interest compounding, the difference between nominal and real values, and the basics of risk diversification (Lusardi, 2008). Similar definitions of financial literacy are also given by another authors (see Hilgert et al, 2003; Moore, 2003; Lusardi and Tufano, 2009 and others).

Many authors point out relevance of financial education, proved that it is one of the most appropriate tools for avoiding the bad decision´s consequences (see Christelis et al., 2010; Gerardi et al., 2010; Banks and Oldfield, 2007; Lusardi et al., 2010).

Higher level of financial literacy can increase level of living standard. Poor knowledge about finance leads to negative credit behaviour resulting into the higher indebtedness and debt accumulation problems (Stango and Zinman, 2009), high-cost borrowings and loans (Lusardi and Tufano, 2009), and wrong choices of mortgages and other financial products (Moore, 2003). The financially illiterate people have mainly the opposite financial behaviour and according to Jappelli and Padula (2011) are the less financially informed individuals found in countries with more generous Social Security benefits. Generally can be claimed that financially literate consumers make better financial decisions, do more invest and participate on the stock markets, use diversification for risk elimination (Graham et al., 2009), are able to choose mortgages and loans with lower fees (Choi et al., 2011), avoid indebtedness (Hastings and Tejeda-Ashton, 2008), manage their wealth more effectively (Stango and Zinman, 2007), plan for retirement and accumulate more retirement savings.

The Slovak republic´s political situation before 1989, characterised by the centralised economy, when only one commercial bank and insurance company had existed, made the financial decision making and need for the financial literacy absolutely meaningless. After 1989, the transformation into the market economy brought the competitiveness and diversity of financial instruments, for which the households of Slovak republic had not been prepared enough. The low financial literacy and level of education reflected into many mistakes and wrong investing decisions made by the households, as well as politicians on the national level in the process of privatisation (Morvay et al., 2005). From the perspective of

Slovak republic is the definition stated by the Ministry of Education of the Slovak republic (2008) in the document the National standard of financial literacy as the ability to use the knowledge, skills and experiences for the effective management of own resources with the objective to ensure lifelong financial security of individual and his household. It is not a final state rather the continual development influenced by variables such as age, family, culture or birth of living. The Ministry of Education of the Slovak republic emphasised the importance of financial literacy development by formulating the National Standard of Financial Literacy in 2008. (Ministry of Education of Slovak republic and Ministry of Finance of Slovak republic, 2008).

The Slovak Bank Association (SBA) created the index for measuring the level of financial literacy, and provided the study in the 2012, the average financial literacy resulted into 68 %, however, the evaluation can be considered as misleading, taking into account that the monitoring was done as the voluntary online questionnaire (Slovak Banking Association, 2012). It put on the 9th place from 11 selected European countries (ING, 2012).

In substance the National Standard is divided into seven areas (Slovak Banking Association, 2012):

1. A person in the sphere of money

2. The financial responsibility and decision-making

3. Ensuring money to cover financial needs-income and job

4. Planning and money management

5. Loans and Debt

6. Savings and investments

7. Risk Management and Insurance

The aim of the paper is to measure the overall level of financial literacy on a sample of students in Slovakia and also the influence of education level and education focus.

1. DATA AND METHODOLOGY

We performed a questionnaire consisting from 10 questions on a sample of 608 students from two faculties of Slovak University of Agriculture in Nitra. One faculty was the Faculty of economics and management with economic focus and the other faculty was Technical faculty with non-economic focus. We selected this two faculties with the goal to compare the financial literacy based on the focus of the Study programme.

The sample of students allowed to evaluate the impact of selected determinants. The sample structure is in table 1 and 2.

Table 1: Structure of the respondents: Highest education achieved

	Frequency	Percent	Valid Percent	Cum.Percent
High School	235	38.7	38.7	38.7
Bachelor	373	61.3	61.3	100.0
Total	608	100.0	100.0	

Source: own

Table 2: Structure of the respondents: Education focus

	Frequency	Percent	Valid Percent	Cum. Percent
Economic	375	61.7	61.7	61.7
Non-economic	233	38.3	38.3	100.0
Total	608	100.0	100.0	

Source: own

The main source for processing the data is the Index of financial literacy (IFIG). It is an average score of correct answers of respondents. The highest possible IFIG value can be 1, the lowest 0. If IFIG is 1 it means all questions were answered correct.

$$\text{IFIG} = \frac{\textit{Number of correct answers of all respondents}}{\textit{Number of respondents}}$$

To measure whether the results are influenced by the selected determinants (education level and education focus) non-parametric statistical methods were used. To verify the existence of statistically significant differences between the individual groups of respondents (depending on a particular determinant) the Mann-Whitney U test was used. A null statistical hypothesis with parity of all the medians is tested. If the p-value is lower than the chosen level of significance (0.05), the null hypothesis is rejected. This means that the difference between at least one pair of the medians calculated from the sample is too big to be a result of only random selection, i.e. it is statistically significant – there is a relationship between the variables. If the p-value is equal or higher than the chosen level of significance, the null hypothesis cannot be rejected. This means that the difference between each pair of the medians calculated from the sample can only be a result of random selection, i.e. it is not statistically significant – there is no statistically significant difference between the variables.

2. RESULTS

The overall index of financial literacy of students from both faculties was 0.627 in year 2015. What is more important, we can confirm differences in results based on the determinants. The results show the higher the achieved education, the higher the financial literacy. Also the economic oriented education helps to improve the financial literacy as well. IFIG results based on determinants are in table 3.

Table 3: Average IFIGs according to structure of respondents

EDUCATION	IFIG	FOCCUS	IFIG
high school	0.577	economic	0.674
bachelor	0.658	non-economic	0.553

Source: own calculations

The results of the test show that both determinants have influence but not in all individual questions (I_1 to I_10). The education focus caused statistically significant differences in case of 7 questions, education level only in case of four questions (see tables 4 and 5).

Table 4: Results of Mann-Whitney Test for individual questionnaire items: Highest education achieved

	I_1	I_2	I_3	I_4	I_5	I_6	I_7	I_8	I_9	I_10
p level	**0.000**	**0.012**	0.614	**0.007**	0.227	0.052	**0.000**	0.387	0.095	0.181

Source: own calculations

Note: Statistically significant differences are "bolded"

Table 5: Results of Mann-Whitney Test for individual questionnaire items: Education focus

	I_1	I_2	I_3	I_4	I_5	I_6	I_7	I_8	I_9	I_10
p level	**0.000**	**0.000**	**0.000**	0.275	**0.000**	**0.002**	**0.022**	0.873	**0.003**	0.167

Source: own calculations

Note: Statistically significant differences are "bolded"

The questions of the questionnaire were further divided in four areas of financial literacy. The first area was focusing in interest (IFIGi), second area was dealing with financial market (IFIGfm), third area was questioning risk management (IFIGr) and the last area was personal finance (IFIGpf).

The impact of highest education achieved and focus of education on four areas of financial literacy was evaluated using linear regression. The results show that the overall index of finance literacy ($IFIG_o$) is influenced by education level and education focus of the respondents (table 6). Also questions focused on interest and financial market were significantly influenced by education achieved and focus of education. No impact of determinants can be confirmed in the area of personal finance.

Table 6: Results of linear regression: EDUCATION, FOCUS

	IFIGi	IFIGfm	IFIGr	IFIGpf	IFIGo
EDU	yes	yes	no	no	**yes**
FOC	yes	yes	yes	no	**yes**

Sorce: own

The concrete values of IFIG for groups of students based on education achieved and education focus are in table 7. The overall IFIG is higher in case of students of bachelor degree compared with high school graduates. Within the groups of education the focus is also important. High school graduates with economic focus responded with better results in all areas of financial literacy. The same is in case of bachelor graduates.

Table 7: IFIG Results for determinants and areas of financial literacy

		IFIGi	IFIGfm	IFIGr	IFIGpf	IFIGo
high school	economic	0,615	0,485	0,658	0,793	0,633
	non-economic	0,458	0,412	0,539	0,657	0,505
bachelor	economic	0,725	0,616	0,707	0,707	0,696
	non-economic	0,565	0,454	0,607	0,760	0,590

Source: own calculations

3. DISCUSSION

The level of financial literacy is affected by various determinants. Based on the results of previous research mainly age, gender, education and income have significant impact on financial literacy. Hung et al. (2009) in their study claim that the level of financial literacy increases with the level of education and income. The factors, as gender and age do not have significant impact on the level of financial literacy. Murphy (2013) agrees with the assumption that the level of education has the highest correlation with financial literacy, but also the other factors such as age, race, gender and earnings are of influence. Lusardi and Mitchell (2011) emphasise the importance of age, as the determining factor, and state that middle age people have the highest level of financial literacy, whereas Bhushan et al. (2013) showed that financially literacy is not affected by age.

As stated by Murphy (2013), the level of education is also a relevant determinant of financial literacy. Based on the results of our research we can confirm that education and the focus of education affects the level of financial literacy. Bachelor school graduates with IFIG

average 0.658 answered almost one out of ten question more correct when compared to high school graduates. The next examined determinant – education focus has also impact on financial literacy according to our sample. The difference is even higher in that case. IFIG of students with economic focus was 0.674 and in case of students with non-economic focus 0.553.

CONCLUSION

The aim of this paper was to measure the level of financial literacy on a group of Students in Slovakia and the importance of education level and education focus on the financial literacy. Our results show that the higher the education the better the financial literacy. And also the economic focus of education has significant and positive effect on the level of financial literacy.

The need for education and increase of competencies of households is generally beneficial for the economy and the country. This fact is perceived also by financial intermediaries who prefer educated clients. The importance of financial literacy was significantly tested by the financial crisis. In Slovakia just like in any other country financial crisis caused a decrease in value of mutual funds (almost by 60%). The reaction of households or individual investors in Slovakia was to sell the investment which showed full illiteracy in the field of financial investments and the need to increase financial literacy. The government implemented in 2013 the National Standards of Financial Literacy to increase to increase financial literacy in Slovakia. They define the knowledge, skills and experience in financial education and personal finance management, which should secondary graduate have. Results of our research show that education has positive effect on financial literacy and therefore we consider the implementation of financial literacy education into the curriculum in Slovakia positive.

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IMPACT OF EDUCATION ON THE FINANCIAL LITERACY: A CASE OF SLOVAKIA

Marián Tóth, Drahoslav Lančarič, Radovan Savov

Abstract

The Financial crisis in 2008 increased the focus of financial intermediaries and also national authorities for financial education and financial literacy of households. Bank association in Slovakia started to measure and increase the financial literacy of population and government implemented the National standard of financial literacy into the curriculum of grammar schools and high schools. This paper examines the level of financial literacy of students in Slovakia and the influence of determinants education level and education focus. We performed a questionnaire with 10 questions on a sample of 608 students from two Faculties of Slovak University of Agriculture. The questions were linked to 4 areas: interest, risk management, financial market and personal finance. To measure the level of financial literacy we use Index of financial literacy IFIG). Using Index of financial literacy and Mann-Whitney U test techniques we find that education level and education focus are relevant determinants of financial literacy level. Students with bachelor degree have better results when compared to high school students. The success rate measured by the IFIG of bachelor students was 0,658 and the success rate of high school students was 0,577. We also found differences based on the education focus. We compared two groups: students with economic focus of education with students with non-economic focus of education. Based on our results we can conclude that economic focus of education increases the level of financial literacy. The success rate of students with economic focus of education was significantly higher (0,674) compared to the students with non-economic focus of education (0,553).

Keywords: financial literacy; index of financial literacy; determinants; education

JEL Classification: D14, D31

VARIOUS PERSPECTIVES ON ENTREPRENEURSHIP EDUCATION: EMERGING TRENDS IN ENTREPRENEURSHIP SUPPORT

Petra Tausl Prochazkova

INTRODUCTION

The attention paid to entrepreneurship has increased during last decades. National representatives and institutions, non-governmental organizations, representatives from private sector, even the general public recognized the potential and possibilities of entrepreneurship activities and their positive influence not only on economy, but also on social and environmental factors. Entrepreneurship is linked with a triggering event and it is understood as a process of recognizing opportunities and their shaping and reshaping. Of course such a process assumes also determining and acquiring resources which are together with the entrepreneur and the opportunity recognition the crucial components for a potential successful new venture. Entrepreneurship is however not predictable and in today´s open economies full of innovations and information technology it implies a need for emerging of cooperation and support by higher education institutions, especially universities. Understanding the fact that teaching entrepreneurship is important can play a significant role for development of a supportive structure for nascent entrepreneurs and ventures. When a school or a university understands its importance in this process a lot of innovation and implementation to improve the education and generally the curriculum can be done. Implementing entrepreneurship as a part of curricula and lectures has become main stream among several universities across many countries. Sharing knowledge and methods of entrepreneurship teaching and learning approaches enables students to become more entrepreneurial and it is considered as one of the very effective ways in finding of students' entrepreneurial mindset.

1. BRIEFLY ABOUT ENTREPRENEURSHIP

As mentioned above the entrepreneurship and its development are extremely significant for every society. The concept of entrepreneurship became a phenomenon. There is no doubt that entrepreneurship in general has gained its status as a legitimate scholarly research subject (Vesper, 1988). There is no single definition of this phenomenon because it cannot be properly defined (Anderson and Starnawska, 2008), (Long, 1983), (Audretsch et al., 2007). Tons of definitions and descriptions could be found in the literature when in a result some definitions and entrepreneurship concepts are just fragmentary. However, several definitions should be mentioned to illustrate a conceptual picture of entrepreneurship. As it is widely known the first usage of the concept of entrepreneurship or more precisely an entrepreneur is related to Richard Cantillon (1755). Besides other things defined Cantillon mentions an entrepreneur as a self-employed person. The Cantillon´s definition has been developed and adjusted for example by Joseph Schumpeter, Gartner or Frank Knight. In early beginning of the 20th century economist Schumpeter (1934) described entrepreneurship as an essential ingredient for a creative destruction. Gartner (1990) for example asked, if entrepreneurship is not just a buzzword, or if it does have any particular characteristics that can be identified and studied. Knight (1967) spoke about courage to bear the uncertainty of entrepreneurship and about entrepreneurs´ managerial functions. Furthermore, many other researchers have defined entrepreneurship in terms of which the entrepreneur is and what does he (she) do (Shane, Venkataraman, 2000). Kiesner (2010) says that entrepreneurship and entrepreneurs is a path out of the world's economic troubles and chaos. Entrepreneurship is also often perceived as a "heart" of sustainable, organic growth for the

most developed as well as for the transitioning and developing economies (Carayannis and Maximilian von Zedtwitz, 2005).

From the perspective of some international bodies, the European Commission defines entrepreneurship in terms of using creativity and innovation and mentions that entrepreneurship competencies are important for everyone, as they lead people to a better understanding of the things they do (European Commission, 2009). The Global Entrepreneurship Monitor, represented by Amorós and Bosma (2014) perceive entrepreneurship as a highly-developed system influenced by business environment conditions and the activities of various entities such as entrepreneurs themselves, policy makers, public and non-public institution representatives, and society. OECD (2014), among other relative studies, defines entrepreneurship as a source of innovation and growth thanks to several indicators of performance.

2. ENTREPRENEURSHIP EDUCATION

There is an old entrepreneurship myth asking "whether the entrepreneurs are born or they can develop" In other words, many scholars have been asked if entrepreneurship is a natural gift. This is a controversial academic question on this matter. One side believes that entrepreneurs are born into this world with a special drive and emphasis for success that most of other people lack. Other believe that entrepreneurs can be "made" through education, experience and training. For example Schumpeter considers entrepreneurship not a profession but a function. In other words, entrepreneurs have a butterfly-like existence (Uzunidis et al., 2014). At the current time perhaps the majority of scholars and universities believe that entrepreneurship can and should be taught. There are several reasons for it, not only related to its impact on the economy competitiveness, but also due to the fact that it is proved that highly educated entrepreneurs experience higher growth levels and survival rates (Ellis et al., 2004).

Parker (2009) argues that education plays an essential role between the determinants influencing access to entrepreneurship. The entrepreneurship education is understood as an instrument which should help the development of creative and innovative behavior in individuals. Importance and interest in teaching entrepreneurship has risen significantly at the same time as appreciation of the relevance of entrepreneurship in society is growing (Brand et al., 2007), (Kuratko, 2005), (Henry et a., 2005). The GEM Report A Global Perspective on Entrepreneurship Education and Training (2010, p.8) defines entrepreneurship education as "*building of knowledge and skills either about or for the purpose of entrepreneurship generally, as a part of recognized education programmess at primary, secondary or tertiary level of educational institutions".*

Universities are now in the position of becoming one of the most important drivers of economic growth thanks to their ability to foster innovation, attract new businesses and provide a continuous flow of information and moreover, to form young and capable individuals (Tausl Prochazkova at el., 2013). They are considered as platforms for development of entrepreneurial behavior and activities (Kolvereid, 1996; Zainuddin and Ismail, 2011). Today's students are responding to the reality of economic and social life and universities can serve largely to educate and train people for their entrepreneurial career (Tausl Prochazkova, 2014). Nazaré (2012) mentions that universities are no longer ivory towers and that they have undergone changes and should help society to provide a constant process of change.

Kuratko (2005) mentioned that entrepreneurship education activities at universities should pay attention to three main areas: entrepreneurship education, entrepreneurship research and cooperation with entrepreneurs. In order to provide the correct understanding what the entrepreneurship is about and how to prepare students for it in a close interaction with entrepreneurs and relative entrepreneurship research together with entrepreneurship education should be combined. As this paper deals only with

entrepreneurship education the topic following text focuses only on this part of entrepreneurship "popularization" in the two of its following sections:

- The entrepreneurship education analysis,
- The entrepreneurship education methods.

2.1 Entrepreneurship education analysis

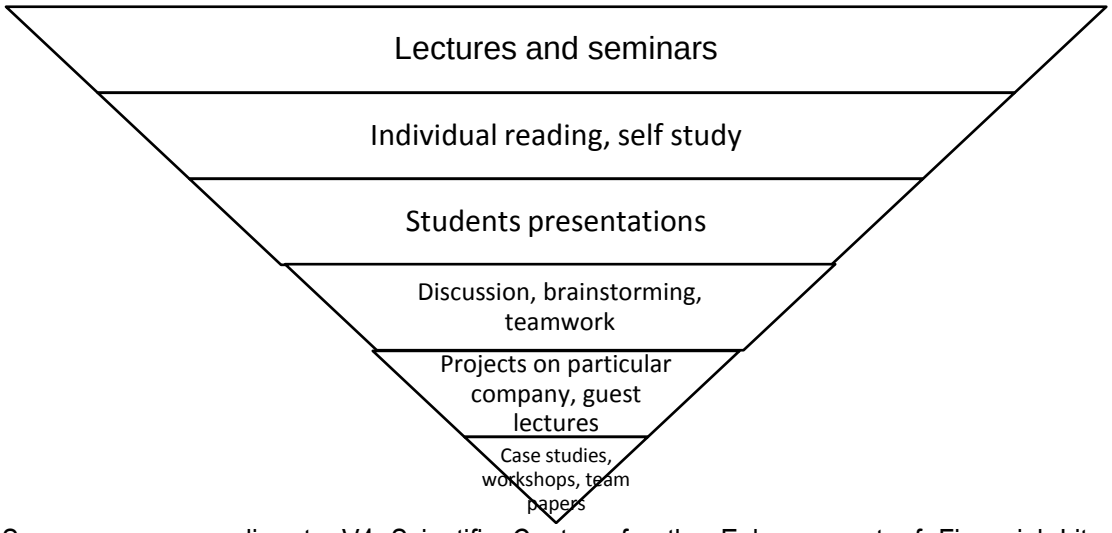
There are many studies conducted at universities in determining the stage of development of entrepreneurship education which can be taken as an example, see Lüthje and Franke (2003) or Turker and Selcuk (2009). Also, several national or international policies are dealing with the topic of entrepreneurship education (European Commission, 2013), (GEM, 2014), (Potter – OECD, 2008), (Ministry of Education, 2015). However, several times it was proved that this kind of education is not provided on a conceptual basis. For example, The Final Report of European Commission Expert Group did not bring any positive results about the entrepreneurship education in the Czech Republic. In this report it is featured: "There is no generally accepted system of entrepreneurship teaching in the Czech Republic. Education of entrepreneurship is running at some universities, more or less on the basis of various individual approaches." (European Commission 2008).

As an answer to this statement an analysis of entrepreneurship education at selected universities was performed in the framework of the project *V4 Scientific Centers for the Enhancement of Financial Literacy and Entrepreneurship Education*. Together, in four countries (the Czech Republic, Slovakia, Hungary, and Poland) a syllabus analysis was performed which tried to answer the questions *if entrepreneurship education is a part of the faculty programmes with a focus on economics.* Only a limited number of faculties with a focus on economics were selected. For example, in the Czech Republic, 10 faculties were selected and examined. An analysis of syllabus was carried out among selected institutions in all study programmes including all study specializations when only English study programmes were not included. We may present in this paper some interesting outcomes of the comprehensive analysis. The full analysis is available as the outcome of above mentioned V4 project and further outcomes of the project´s partners will be published. From the 10 chosen faculties, there are 22 study specializations out of 114 (with 12 specializations at a bachelor's level of study programmes and 10 at a master's level of study programmes) that use the term of entrepreneurship or business economics in their titles. The resulting profile of students studying each specialization is very useful information. The Information about this character is provided by the individual faculties in the description of their specialization. The results confirm low orientation on entrepreneurship career and they are as it follows:

- A specialist in economic positions (lower or middle management) - employee - 50.0%.
- Other - 46.21%.
- An economic analyst - 2.27%.
- An entrepreneur - 1.52%.

When studying deeper the 22 study specializations we realized that the share of all ECTS credits given by the taught subjects (together 19,980 ECTS) on entrepreneurship subject is only 0.8%. This is really a very low number. We took also a closer look on subjects which are dealing mainly with entrepreneurship issues. There are together 23 various subjects focusing mainly on entrepreneurship topics from the 10 selected faculties. By entrepreneurship subjects is not only important the topic, but also the way it is taught. The research found out a primary theoretical level of entrepreneurship education with dominance of classic lectures and seminars. Figure 1 shows the dominance of used teaching methods.

Fig. 1: Dominance of used teaching methods



Source: own according to V4 Scientific Centers for the Enhancement of Financial Literacy and Entrepreneurship Education project outcome, 2015

The data from the Figure 1 can be compared to some previous researches made by the project´s partners (Tausl Prochazkova et al., 2013). The research results show how students evaluate the effectiveness of such teaching methods. Not surprisingly, the most efficient ones were considered the methods of case studies, workshops and guest lectures. Such an example pointed out a significant discrepancy between the fact how the entrepreneurship is mainly taught and how it should be taught from the students´ point of view. This problem mentioned also Moroz and Hindle (2012) or Jack and Anderson (1999) who discuss the growing disconnection between the scientific theory and theorizing and the study of the real entrepreneurship.

2.2 Entrepreneurship education approaches – the best practices

Traditional educational methods focused mainly on theory and the didactic approach is not considered very important in the entrepreneurship education (Davies and Gibb, 1991). According to Gibb (2007) lectures, case studies and projects, sometimes entrepreneurs´ presentations dominate most of the entrepreneurship education. On the other hand, results of different researches show that there are types of entrepreneurship education that increase motivation for starting a new business and these are mostly various practical programmes that seem to be particularly useful because they offer real-life experience (Peterman and Kennedy, 2003; Petridou and Saree, 2011). Sidhu et. al (2014) discuss two mainstream methods of teaching and learning entrepreneurship:

- Inductive learning – Using this method the teacher shows to the students various examples how a concept is used. Students should reflect on it and recognize the way how the concept works and they demonstrate their understanding. This method is mostly recommended to use in subjects of management, leadership, team-building considered as essential qualities of an entrepreneur and it is consider as the most suitable method for teaching entrepreneurship.
- Deductive learning – Using this method the teacher introduces the concept to the students and then the students should complete their tasks to practice this concept. This method is mostly recommended to use in subjects and cases where facts and basic knowledge are of the highest importance.

The previous chapter showed the results of the V4 project research. The results confirm that the currently used approaches and teaching methods of entrepreneurship are not the most

suitable ones. Therefore, the following text mentions some information about two international partners of the Faculty of Economics, the University of West Bohemia (UWB) who are in close and fruitful interaction with the Faculty. Both partners are more experienced in the field of entrepreneurship education and could be used as an inspiration of the best practice approaches.

Tab. 1: Entrepreneurship education examples of the best practices

Description	Marquette University, USA	HAMK University of Applied Science, Finland
Own major/study programme	At the Marquette University the entrepreneurial major was introduced in 2004.	Partially bachelor and full master degree programme
Teaching methods - basic	Lectures, individual or group projects, best practices, discussion	Lectures, individual or group projects, best practices, discussion
Teaching methods - innovative	Case studies, interactive lecture – using video sources, guest lectures, workshop, design-based thinking, games and simulations, team work	Case studies, interactive lecture – using video sources, guest lectures, workshop, design-based thinking, games and simulations, team work
Special events	In cooperation with the Kohler Center for Entrepreneurship: Special workshops – for example with social entrepreneurs After lessons follow the speaker series – important business speakers (available also online) ImpactNext - Marquette´s Business Plan Competition	Pitching competition Intensive learning experience (experiment) – Amazing Business Train Intensive weekly entrepreneurial programme focused on international cooperation - Freezing Week
Existence of entrepreneurship centre/business incubator	Kohler Centre for Entrepreneurship	Business Services – contact point Innopark HAMK

Source: own source, 2015

In comparison to the partner, the Faculty of Economics, the UWB, several aspects of these two universities should be mentioned:

- At present, there is no entrepreneurship major at the Faculty of Economics, the UWB.
- Since a really limited number of subjects are focused on teaching entrepreneurship, the entrepreneurship education is really patchy at the Faculty. If the entrepreneurship education is provided, the mainstream is based on lectures. A very little space is available for more creative teaching methods.
- Regarding special events, perhaps the most continuous event is the workshop called "Winter Schools." The workshop focuses on chosen aspects of entrepreneurship and running under the framework of the project Unipranet focusing on connection praxis with universities. Nevertheless, at present there were several guest lectures performed on various entrepreneurship topics.
- However, the entrepreneurship research is quite developed and stillin process of

developing at the Faculty of Economics. In connection to the mentioned V4 project the Center for Entrepreneurship was officially established at the Faculty and it should be a contact point for developing entrepreneurial activities and research at the Faculty. The Center is currently at its early birth stage, but several activities in the innovative ways are already conducted. Hence, the prospects of future development in the field of entrepreneurship education promise a significant boom.

3. CONCLUSION

It is possible to find many examples of good practices especially in foreign countries, in which there is a clear emphasis on cohesion of education with the entrepreneurial sector, cooperation between schools and enterprises and obtaining not only theoretical but practical experience within entrepreneurship (Entrepreneurship Development through Entrepreneurship Education with Special Emphasis on the Role of Business Incubators: Evidence from the Czech Republic). This paper outlines the basic outcome of the V4 project focused on the entrepreneurship education and mentions the certain knowledge and examples of the best practices. The aim of this paper and project V4 Scientific Centers for the Enhancement of Financial Literacy and Entrepreneurship Education is to contribute to the debate about the on-going transitioning process of universities regarding their entrepreneurial orientation. The universities need to change the process of learning to enable their students to develop their entrepreneurial capabilities. Theorizing is not the key factor; success dwells in continuous innovation and connection to the real world situation. The simplest way how to continue this successful way is to share knowledge from the more experienced partners. Afterwards, young people can be empowered for change and present them as one of the absolutely equally life carrier the entrepreneurial one. The awareness about entrepreneurship education has been flourishing for several years. Some institutions adapted to this situation quite fast, some of them are still at the beginning or in the middle of their transition. Since the transition represents a complicated process regarding sharing knowledge and learning from more experienced partners and institutions, also enthusiastic and supporting environment and people represent the core of such a successful process.

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VARIOUS PERSPECTIVES ON ENTREPRENEURSHIP EDUCATION: EMERGING TRENDS IN ENTREPRENEURSHIP SUPPORT

Petra Tausl Prochazkova

Abstract:

The importance of entrepreneurship has boomed in several last decades. Currently, the new age of entrepreneurship is discussed a lot. The new age is primarily connected to innovation and technological trends. There are no doubts that entrepreneurship and its support has got into the focus of public policies. One of the very efficient ways of supporting spreading of entrepreneurship is considered development of entrepreneurship education. Therefore, higher education institutions play a very important role in the support and entrepreneurship development. Entrepreneurship education represents a strong mainstream which has the ability to raise nascent entrepreneurs, foster innovation and arrange a continuous flow of information and knowledge. Universities are perceived as agents of a valuable source of skilled people who can be led to an entrepreneurial career. From universities it is expected to use innovative approaches in their teaching methods and curriculum in general. However, most of them recognize this process of change very slowly. To better understand the current position of the entrepreneurship education and call for a change several experience and knowledge from the most successful universities can be used. The paper presents particular outcomes of entrepreneurship research the V4 project *V4 Scientific Centers for the Enhancement of Financial Literacy and Entrepreneurship Education* and examples of entrepreneurship teaching methods used by two close international partners of the Faculty of Economics of the University of West Bohemia. The examples of entrepreneurship teaching methods are considered to be good model examples and can be used as inspiration for creating of own method of entrepreneurship education.

Keywords: entrepreneurship; entrepreneurship education; method; approach

JEL Classification: I23, O31, M21

THE ROAD TO ENTREPRENEURSHIP AMONG HUNGARIAN UNIVERSITY CITIZENS

Bedő Zsolt, Csapi Vivien, Posza Alexandra

INTRODUCTION

The word entrepreneur comes from the French word "entreprendre", which means "to do something", and it was originally used in the Middle Ages in the sense of a person who is active, who gets things done (Hoselitz, 1951). Entrepreneurs take personal risks in initiating change, and they expect to be rewarded for it (Harold, 1994). Entrepreneurship has been frequently documented in the literature of development economics as a critical factor in social and economic development opportunities of a country (Schumpeter, 1934; Baumol, 1968; Drucker, 1985), as the engine of economic growth and job creation (Wong et al., 2005), or as a response to the increasingly globalized, uncertain and complex environment we live in (Gibb, 2002).

This is the reason why entrepreneurial or entrepreneurship education has seen recently an exponential growth worldwide, especially in higher education (Kuratko, 2005). United States and United Kingdom are leaders in entrepreneurial education (Erkkilä, 2000), with a defined focus on the specific context of setting up a venture and becoming selfemployed (QAA, 2012, Mahieu, 2006). In Europe, the education of entrepreneurship focuses more broadly on personal development, mind-set, skills and abilities.

The question that never seems to go out of fashion is "Can entrepreneurship be taught?". Among others, Kuratko (2005), Gorman et al. (1997) and Pittawy and Cope (2007) bring up evidences in favour of a "Yes" answer. According to them, with entrepreneurial education we can develop some level of entrepreneurial competencies in terms of knowledge, skills and/or attitudes (more about entrepreneurial competencies in chapter 1). There is a significant group of researchers against the learnability of entrepreneurship. They argue that entrepreneurs are primarily born, not made (Nicolaou and Shane, 2009). We opt for a middle way. We believe that certain aspects of entrepreneurship cannot be taught, such as self- confidence or persistence. While we agree with Martin et al. (2013) who questioned the measurability of education, and stated in their work, that the difficulty lies primarily in measuring the effects of entrepreneurial education.

1. ENTREPRENEURIAL COMPETENCIES

Competency is a concept which includes the knowledge, attitudes, behaviors and skills which help a person capable of transforming his/her ideas into realities. Moore et al. (2002) go further and distinguish competence, competency and competencies. Competence relates to an area of work, competency relates to the behaviors supporting that area of work, and competencies relate to the attributes underpinning these behaviors.

By defining entrepreneurial competencies we prefer the definition of Lackéus (2013) who summarizes all the ups and downs of the assessment of the area. According to him, entrepreneurial competencies can be defined as knowledge, skills and attitudes that affect the willingness and ability to perform the entrepreneurial job of new value creation; that can be measured directly or indirectly; and that can be improved through training and development. The theory of entrepreneurial competencies is based on the examination of the behaviour, attitudes and knowledge of successful leaders, and combining the observed aspects to form a picture of an individual with superior "power".

Authors often focus on the identification of different categories of entrepreneurial competencies (see Table 1). Summarized: competencies that have the strongest impact on

the growth of a company are self-efficacy, technical skills, personal marketing, innovation/production guidance and passion to work. The weaker competencies relate to the company vision, organizational skills, growth objectives, skills of identification of opportunities and experiences in the business (Baum, 1994).

Table 1: Literature review of the categories of entrepreneurial competencies

Source	Categories of entrepreneurial competencies
Bartlett & Ghoshal (1997)	attitudes and personal characteristics, knowledge, experience and skills
Stuart - Lindsay (1997); Man, Lau & Chan (2002)	individual skills, knowledge, personal characteristics
Mitchelmore - Rowley (2010)	entrepreneurial skills (identification of potentially successful market niches, creating ideas, developing strategies, etc.), business and managerial skills (development of management systems, fundraising, operational and business skills, etc.), relationship skills (developing appropriate organizational culture, delegation skills, recruiting skills, etc.) conceptual and relational skills (skills of organization, customer management skills, interpersonal skills, communication skills, analytical skills, etc.).
Chandler - Hanks (1994), Shane - Venkataraman (2000)	competent entrepreneurs successfully manage the business and their management role
Chandler - Jansen, 1992; Herron - Robinson, 1993; Timmons et al., 1987	identification and selection of business opportunities and self-management
Hofer - Schendel, 1987	motivation and willingness to work long and hard
Smith - Morse (2005)	the importance of functional competencies (e.g. marketing, finance) and organizational competencies (e.g. skills of organizing, motivating, personal skills and people management skills).
Man et al. (2002)	identification of opportunities, maintaining relationships, conceptual skills, organizing skills, strategic skills and commitment.
Baum (1994)	knowledge, cognitive skills, self- management, administration, human resources, decision-making skills, management, identification of opportunities and further development, organizational skills (human relations and administrative practices).
Hood & Young (1993)	leadership skills, human relations skills skills of verbal and written communication, management skills, reasoning skills of the transaction, logical thinking, analytical skills, decision-making skills, goal setting, recruiting, preparing a business plan.
Vukasović (2013)	social networking

Source: Own construction

2. DEVELOPING ENTREPRENEURIAL COMPETENCIES THROUGH EDUCATION

Competencies are changeable and learnable, allowing intervention in terms of the selection, training and development. The development of entrepreneurial talent is important in sustaining a competitive advantage in a global economy that is brought about by innovation. Educational programs have significant impact on the entrepreneurial attitudes of potential entrepreneurs. Empirical evidence confirms that entrepreneurial programs have successfully imparted relatively higher confidence among the potential entrepreneurs to pursue their own line of entrepreneurial activities (Schroder and Rodermund, 2006).

This is why the identification of the entrepreneurial characteristics and the knowledge of the entrepreneurial profile of potential entrepreneurs have been gaining a growing importance in the development of entrepreneurship oriented educational programs and start-up processes. Research findings indicate that entrepreneurship education is the most relevant factor in what concerns the willingness to business creation. On the other side, personal characteristics have an important role in shaping motivation to start-up a business as well (Raposo et al. 2008). Chandler and Jansen (1992) found that education can contribute to the development of the competencies of business founders. Maxwell and Westerfield (2002) argue that an entrepreneur's innovativeness, which is an aspect of his/her competencies, depends largely on the level of his/her formal education as well as prior managerial experience. Bird (1995) suggests that it is worth looking at education, prior work experience, and industry experience as factors that could influence the development of entrepreneurial competencies. While Krueger and Brazeal (1994) also indicate that entrepreneurship education prior work experience could potentially improve one's skills and abilities, particularly in recognition of business opportunities.

Parker and Van Praag (2006) went further and found that education enhances entrepreneurs' performance both directly - with a rate of return of 13.7% - and indirectly, because each extra year of schooling decreases capital constraints by 1.18 percentage points. The indirect effect of education on entrepreneurs' performance is estimated to be 3.0-4.6 %.

The ultimate goal of entrepreneurial education is to develop entrepreneurial competencies among students. Various initiatives put varying emphasis on knowledge, skills and attitudes respectively. There is also a variety in focus of initiatives in terms of educating about, for or through entrepreneurship. Many initiatives apply a narrow definition of entrepreneurship (QAA, 2012; Mahieu, 2006) focusing primarily on opportunity identification, business development, self-employment, venture creation and growth, i.e. learning about, or for becoming an entrepreneur. Fewer initiatives apply a broader definition focusing on personal development, creativity, self reliance, initiative taking, action orientation, i.e. becoming entrepreneurial. What definition and approach is used profoundly affects educational objectives, target audiences, course content design, teaching methods and student assessment procedures, leading to a wide diversity of approaches. Nevertheless, many scholars state that there is only one way to learn to become entrepreneurial, and that is by learning through own experience.

University equips the potential entrepreneurs with those attitudes that help them to take responsibility of their own actions, be creative and innovative, and also to develop their creativity in their lives. Universities enhance entrepreneurial potential of the potential entrepreneurs (Van Burg et. al, 2008). Now entrepreneurship has become a prime university function (Fitzkowitz, 2004). The common perception of universities as merely institutions of higher learning is giving way to one where universities are viewed as engines of economic growth and development (Chrisman et. al. 1995).

Almost everywhere in the world universities are trying to focus on entrepreneurship – not least

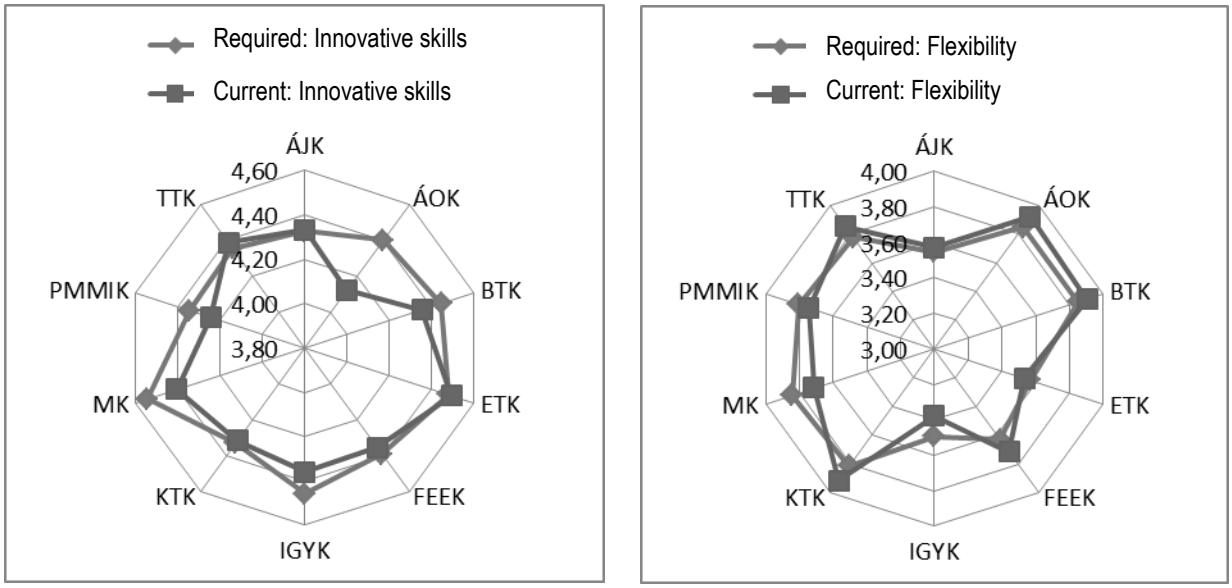
because future pool of the entrepreneurs mainly consists of university students (potential entrepreneurs). Academic researchers have begun to explore the entrepreneurial interests of potential entrepreneurs. As a result of an exploratory study, Rodermund (2004) felt able to generalize that in Germany an entrepreneurial personality (low agreeableness and neuroticism, high extraversion, openness, and conscientiousness) and authoritative parenting styles were linked to the entrepreneurial competence of future entrepreneurs. According to him entrepreneurial competence could predict entrepreneurial interest which in turn relate to entrepreneurial career development in the potential entrepreneurs.

3. ALUMNI RESEARCH RESULTS

In the following section we provide results of our research conducted in 2014 with the aim of analysing the early effects of the incubation program and getting information about the entrepreneurial motivation of university citizens. The research was made among alumni of University of Pécs focusing on the innovative skills and flexibility competences. In our result analysis we sorted the students in groups according to the above mentioned competence categories.

The opportunity competence group is one of the key competences of the successful entrepreneur (McClelland, 1987). One of the most important entrepreneurial roles is the competence of opportunity recognition and utilization. As shown on Figure 1, the analysis concentrates on existing and required competencies applied both as employees and as entrepreneurs. As it was anticipated from the employment patterns of graduated students at the University of Pécs, the required innovative skills only exceeded the existing competence level in case of the Faculty of Music and Visual Arts (MK), the Illyés Gyula Faculty (IGYK) and the Faculty of Engineering and Information Technology (PMMIK). The most self-employed students graduate at these faculties. Every education unit shows fallback in connection with flexibility competence except the Faculty of Law (ÁJK), The Faculty of Sciences (TTK) and the Faculty of Business and Economics (KTK). Students face difficulties in their later life situation due to lack of flexibility.

Figure 1: Opportunity competencies at University of Pécs

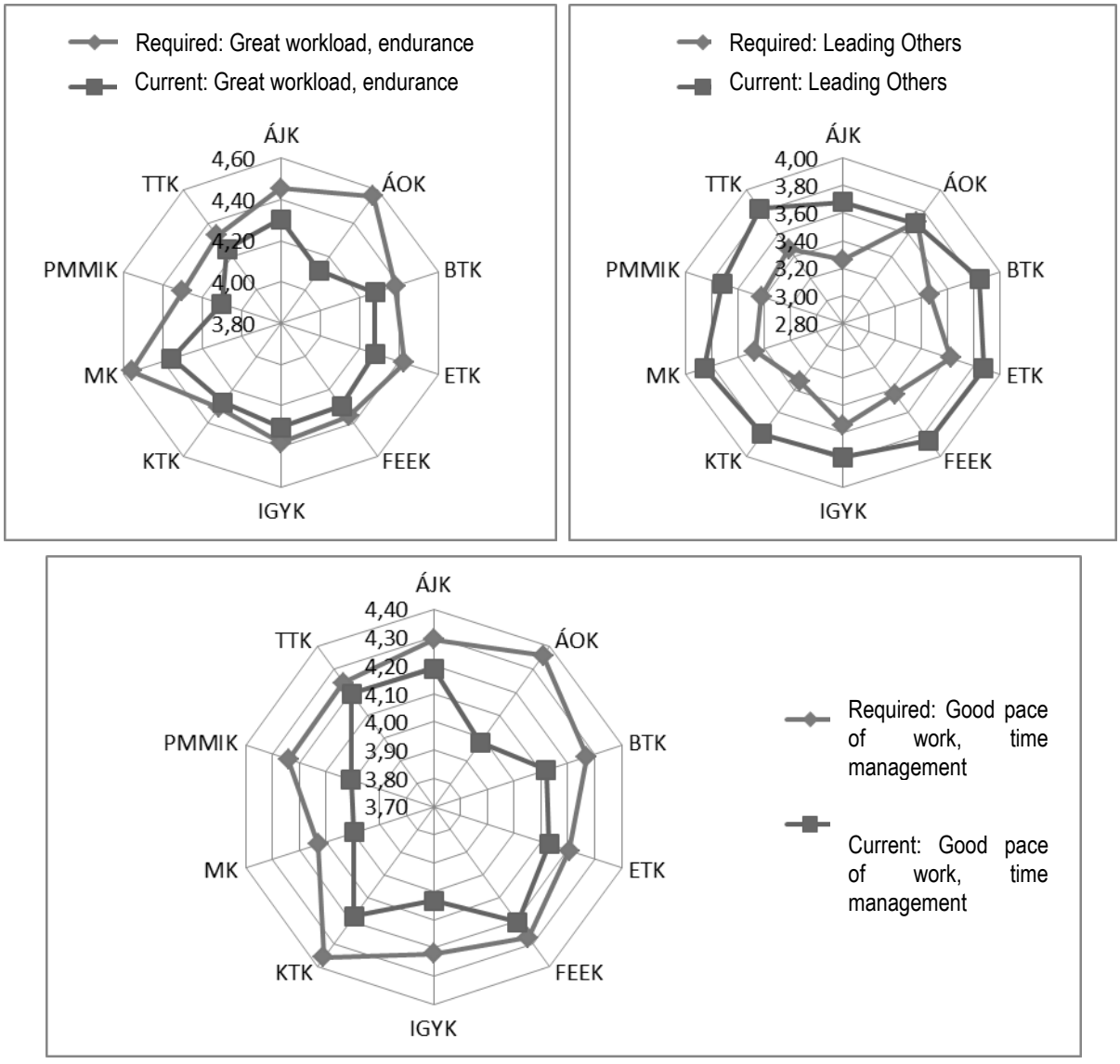


Source: DPR kutatás, PTE, 2014

The organizational competence group is similar to the management competence group it is necessary to operating a successful and efficient enterprise. Typical management competencies are efficiency orientation, pursuit of high quality work and the traditional skills of leading, monitoring, organization and development of outer-inner resources. The following competencies of the research were categorized in this group: great workload, endurance; leading others, good work organization and time management.

As shown in Figure 2, the students find the first years spent on the labour market exhausting. Students from all faculties especially from the Medical School (ÁOK), the Faculty of Music and Visual Arts (MK) and the Faculty of Health Sciences (ETK) noted that there is significant difference between the existing and required endurance level. However, students are not able to exploit their skill to lead others, except the Medical School (ÁOK). This is definitely in connection with the number of employed respondents.

Figure 2: Organizational competencies at University of Pécs



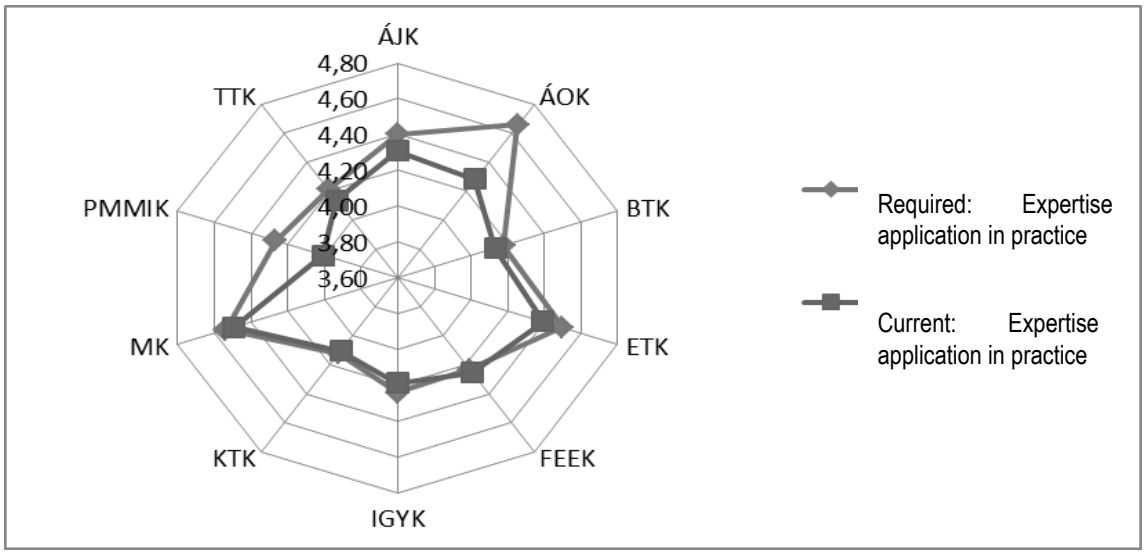
Source: DPR research, University of Pécs, 2014

In the area of work organization and time management skills, the students also feel that they are lagging behind. After the flexible student years the tight pace of work and organizing work without guidelines challenge

ALUMNI of University of Pécs. Especially among students of the Medical School (ÁOK), the Illyés Gyula Faculty (IGYK), the Faculty of Engineering and Information Technology (PMMIK) and the Faculty of Business and Economics (KTK) there is a significant gap between the existing and the required level of competence.

The strategic competencies group contains the key competencies that are vital for self-employment. The entrepreneur should be able to define the goals of the own enterprise, select the way of achieving goals and apply the strategy that is necessary to realize goals. This long-term approach can be linked with the competence of expertise application in the practice.

Figure 3: Strategic competencies at University of Pécs

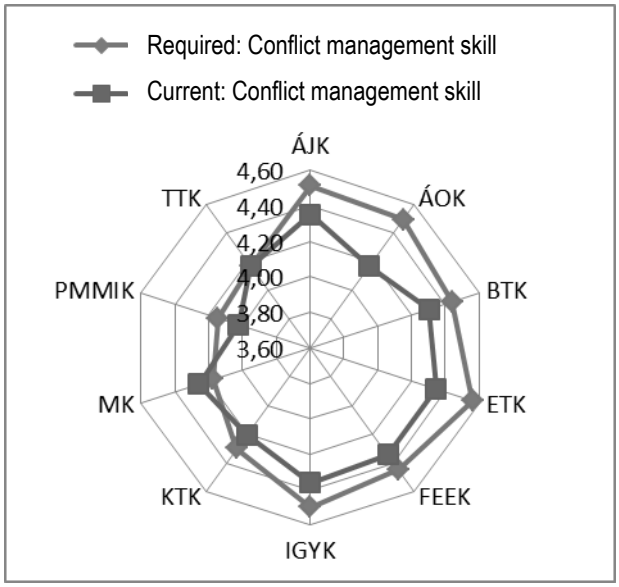


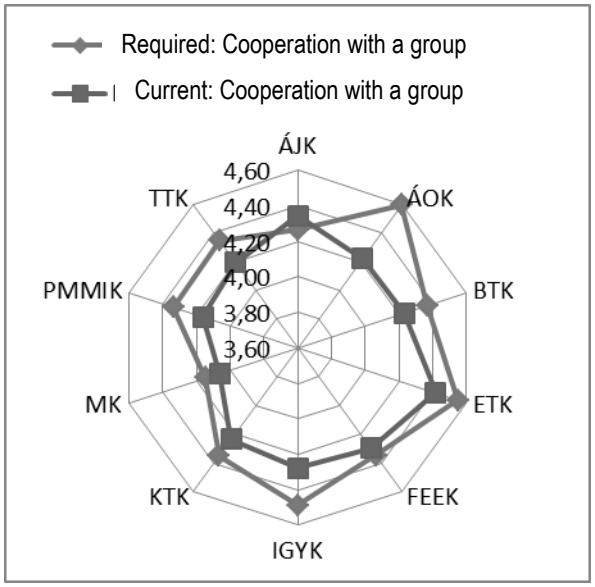
Source: DPR research, University of Pécs, 2014

As indicated in Figure 3, graduated students report significant lag between required and existing competences at the Faculty of Engineering and Information Technology (PMMIK), the Medical School (ÁOK), the Faculty of Health Sciences (ETK) and the Faculty of Law (ÁJK) but the cause of this problem can stem from different factors. In the case of Faculty of Engineering and Information Technology (PMMIK) the significant difference between required and existing practical knowledge raises the question about harmonizing the ratio of theoretical and practical training with the expectations of the actual labour market.

The contact competence group includes the individual-individual and the individual-group level contact management, cooperation, building of confidence of communication and interpersonal skills. As seen in Figure 4, the current competencies seem to be falling behind the required level in this competence group. Students are not forced to deal with conflicts during their studies and positive effects of spreading teamwork are also still pending.

Figure 4: Contact competencies at University of Pécs



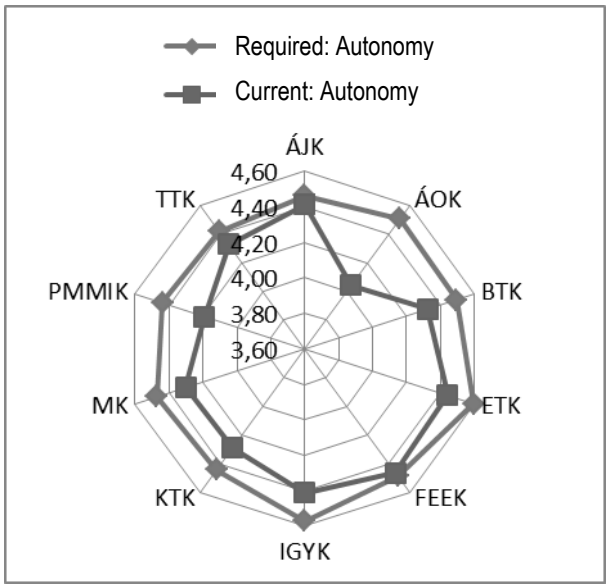


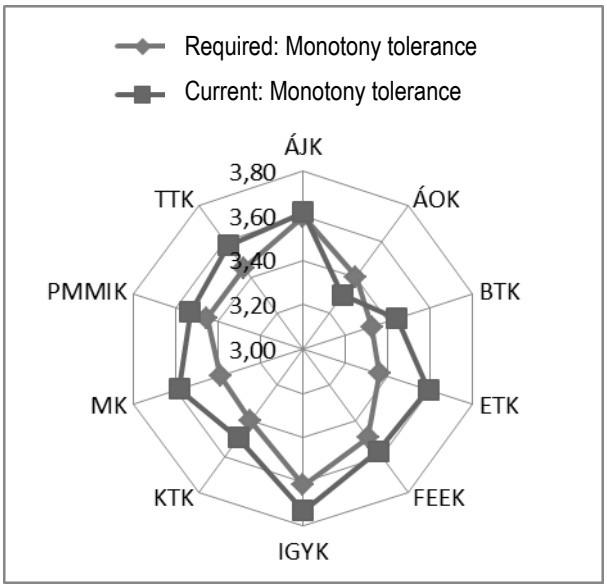
Source: DPR research, University of Pécs, 2014

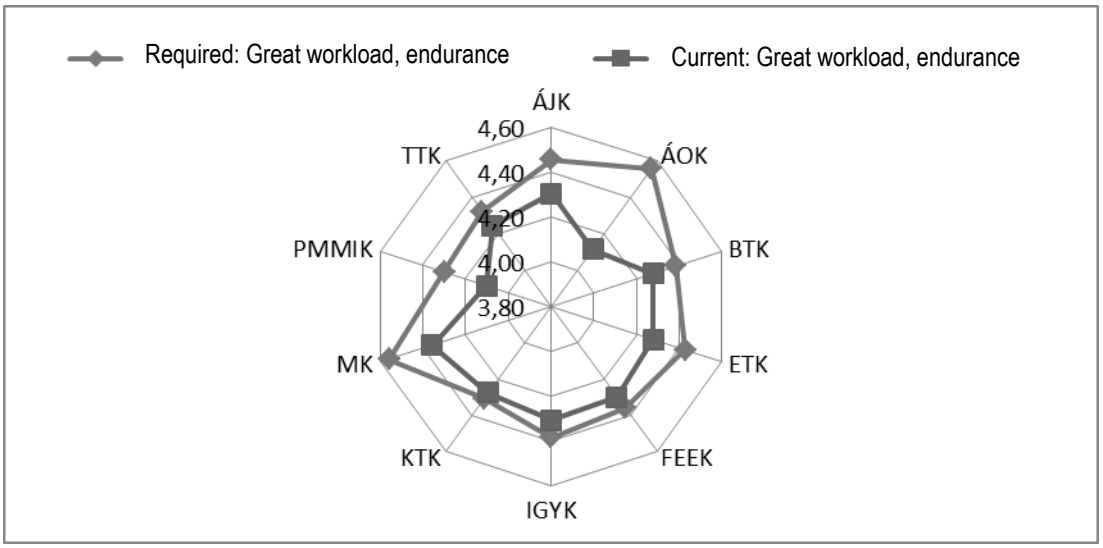
The commitment competence group covers the sum of competences required for the motivation of the individual. Successful entrepreneurs are often characterized by diligence, restlessness and proactivity. The surveyed competences are autonomy, endurance, monotony tolerance.

According to Figure 5 all graduates except from the Faculty of Sciences (TTK), Faculty of Adult Education and Human Resources Development (FEEK), Faculty of Law (ÁJK), ALUMNI of University of Pécs fear from the degree of autonomy when they enter into the labour market but they are able to deal with monotony which is part of their work. As it has been already indicated in connection with organizational competencies, workload of students is in sync with challenges of labour market at Faculty of Business and Economics (KTK) and Faculty of Science (TTK).

Figure 5: Commitment competencies at University of Pécs



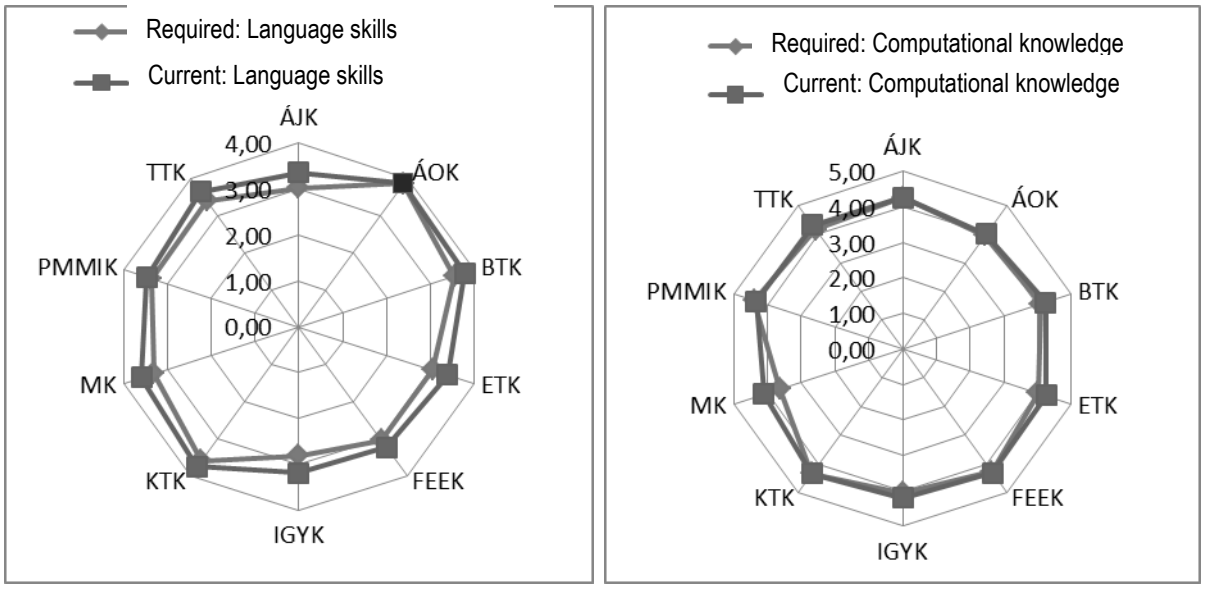


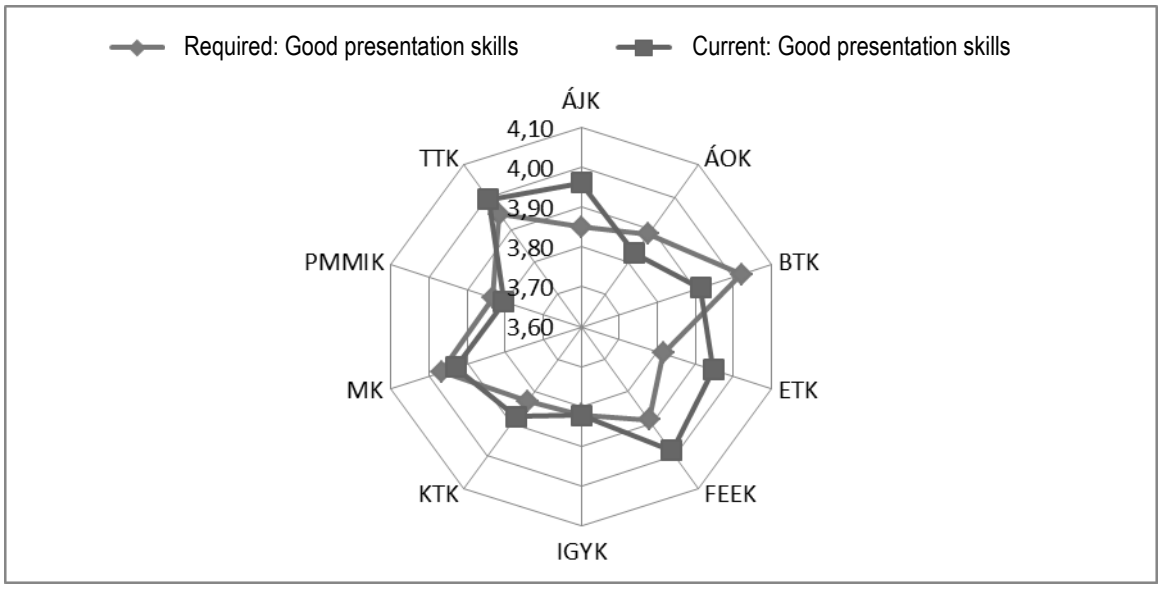


Source: DPR research, University of Pécs, 2014

Finally, the theoretical and the conceptual competency group contains norms of behaviour that are hard to define and identify but which are essential in a successful entrepreneurship. Analytical and cognitive thinking, learning, decision making and problem solving ability are some examples. We analysed only language skills, computational skills and presentation skills from the examined competences (as see Figure 6). The results reflect the strength of University of Pécs in the field of theoretical education. The students are satisfied with their acquired knowledge because it is in accordance with the one their work require. In connection with the presentation skills, the students of Medical School (ÁOK) and Faculty of Humanities (BTK) reported a slight deficit.

Figure 6: Theoretical, conceptual competencies at University of Pécs



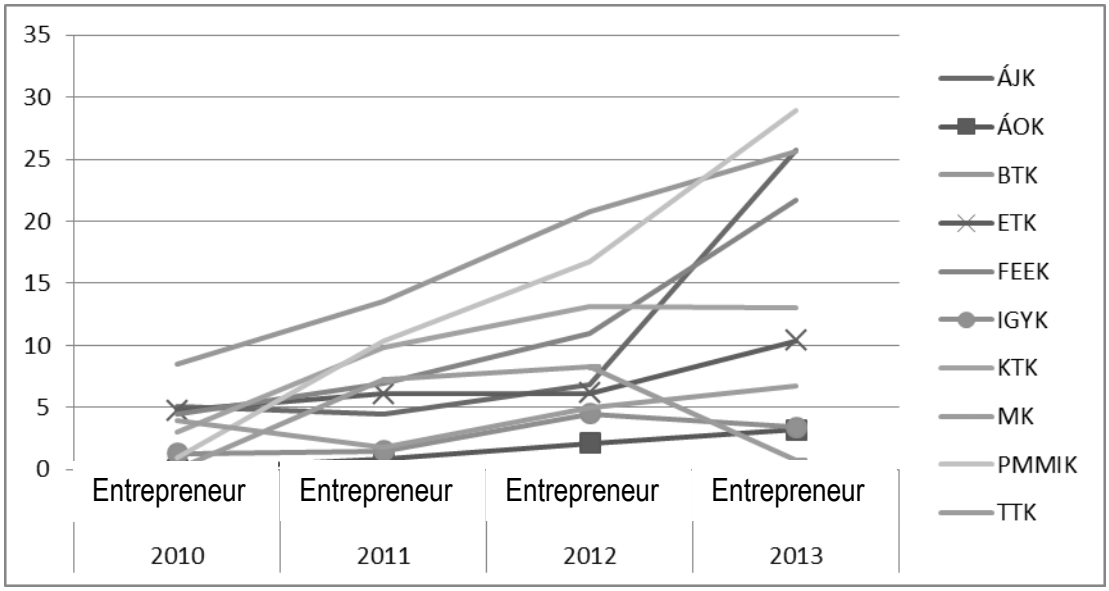


Source: DPR research, University of Pécs, 2014

4. ENTREPRENEURIAL UNIVERSITY

The younger generation of the 21st century becomes progressively entrepreneurial according to international results and researches of University of Pécs. As seen Figure 7, except Faculty of Music and Visual Arts (MK), the number of graduates who become entrepreneurs increased progressively during the reference period. Most of them graduated at Faculty of Humanities (BTK) and Faculty of Engineering and Information Technology (PMMIK) but it is important to note that most of the graduates henceforward become an employees.

Figure 7: The number of entrepreneurs among ALUMNI of University of Pécs between 2010-2013



Source: DPR Research, University of Pécs, 2014

CONCLUSION

We, members of the University of Pécs, believe that students have a better chance to succeed in life after getting the diploma, if their University has an incubation program. We tried to approach this thesis from defining entrepreneurship and the competences that

determine it. Our goal was to use a questionnaire based measuring system, which aim to identify the skills and competences required by our alumni compared with the skills and competences of the Hungarian job market and the number of students who become entrepreneurs after their university studies within five years. With this identification scheme we are able to monitor the long term effects of our incubation program. Since we launched our incubation program, our students have a more direct route to joining a startup or launching their own business. A university based incubator can connect the persons with entrepreneurial desire with experienced professionals. These professionals, our so called mentors advise them on creating new technology, marketing, funding and other kinds of sources. Our incubator is special, since we welcome local entrepreneurs as well as students from any faculty of the university who are excited to launch a new venture, or a new market.

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THE ROAD TO ENTREPRENEURSHIP AMONG HUNGARIAN UNIVERSITY CITIZENS

Bedő Zsolt, Vivien Csapi, Posza Alexandra

Abstract

With our incubation program, which we launched about 3 years ago, we provide a unique service for our students and our colleagues at the University of Pécs. Anybody, who has a viable business idea, can apply for our program. We give the applicants a mentor, access to our networks and community, and an opportunity to pitch their idea before investors and venture capitalists. In this paper we tried to proof that our initiative is for the personal development and carrier opportunities of our students, for the development and wider national and international recognition of our university and for the greater good of our region.

Keywords: entrepreneurship; university; Hungary

JEL Classification: A20, L26

EXPECTATIONS OF EMPLOYEES ON THE EFFECTS OF THE WORKPLACE HEALTH MANAGEMENT AS A PART OF AN INTERNAL DIVERSITY MANAGEMENT - AN EXPLORATIVE STUDY

Matthias Reich, Csilla Czeglédi, Jürgen Fonger

INTRODUCTION

n the near future the difficulties in finding skilled workers will exacerbate for Europe´s companies especially as a result of the demographic change. Aging societies will lead to a reduced workforce and to a reduced supply of workers at the labour markets. Additionally, the economic pressure on European countries will rise, caused by the globalisation of the markets in general and particularly by the increasing economic strength of e.g. China, which has been extraordinary successful during the last decade, as well as many other emerging countries. These two aspects, among many more others, show exemplarily that it is necessary for the European companies to establish new ways to find and hire the staff with the needed skills and qualifications and to keep their body of personnel. The latter can be supported by several measures of a proper Workplace Health Management (WHM), which is in this part similar to measures of the Diversity Management. Basically, the Diversity Management respects the difference of every member of the organization and aims to use the social and cultural variety of a company to generate competitive advantages and to improve the work effectiveness and efficiency. It is common scientific sense that Diversity is a promising approach into that direction and it allows an "open spirit" within the companies which usually leads to a higher tendency to *entrepreneurship*. This *entrepreneurship* is highly correlated with the ability to be innovative concerning services or products and to improve and accelerate processes.

The conscious care of the body of personnel is a part of a solution for companies to avoid reduced staff capacities caused by early retirement or long-term illness. The WHM measures are an adequate way to encounter problems followed by a lack of manpower, because they avoid absences from work. These WHM measures could accompany an operational Diversity Management and support systematically the self-care and health care of the employees. Thus the WHM can be seen as an advantage for the companies because it influences positively the perception of the company in general and increases the attractiveness of the company for potential trainees or employees.

Summarized there are many reasons to install WHM measures. However, a systematic process depends on a differentiated knowledge of the Management about what is needed, which processes need to be improved and so on. There are only very few data bases on research results and how the theoretical framework described above could be verified. Away from that, the Management needs detailed information about the concrete processes within its company. A good starting point to get some general, basic insights is to find out the expectations of the employees about which measures are considered to be successful. If the expectation of the employees about a concrete measure is that it will improve the cooperation, it is an appeal for action for the Management. This paper tries to shed some light on the expectations of employees on WHM measures by data which has been recently collected in a survey. By these results a piece of the gap between the theoretical framework and the expected impacts of the measures is filled.

4. THEORETICAL FRAMEWORK

1.1. Diversity management

The description of the Diversity Management approach and its aspects (Eger et al, 2012) has been largely explored in nowadays science. Therefore the Diversity Management approach and its essential measures are described in a nutshell with the intention to point out the theoretical context of the survey.

In the scientific literature is no unique definition for diversity. Because diversity is a phenomenon of interest in biological science or social sciences in general each definition focuses on some elements or factors of the certain scientific field. Wagner made a basic, general approach to define diversity in conjunction with social sciences: "Diversity is everything, in which people can be decided from each other... both, externally perceptible as well as subjective differences. Races, gender, age or disabilities belong to the first category; education, religion and lifestyle to the second one." (Wagner/Sepheri, 1999). In conjunction with business management Stuber defines diversity "As a tool of a Companies´ Management that includes the sum of measures leading to an acceptation and appreciation of differences by an organisation and to use this differences for the company´s success. It is therefore an approach to purposeful internal and external consideration and implementation of all different stakeholders in order to increase the success of a company or organisation."(Stuber, 2004). Obviously one of the most relevant internal stakeholder or resource within a company is its personnel-body. In this sense diversity management measures can increase the success of a company if every member of the organisation is accepted without any prejudices. This leads to a high motivation of the employees and aims to support the willingness to identify with the company and its values. A high level of identification can lead to a high level of motivation and finally to a better performance which is showed in several recent studies (Gansser, Linke, 2013). To show the actuality and meaningfulness of the diversity approach in general, a recent study among the German thirty biggest companies limited by shares (DAX 30 companies) showed exemplarily that there is a strong convincement of the Management that diversity needs to be implemented into the companies. 22 of these companies provided a central point of contact within the company; even 25 companies signed the "Charta of Diversity" which is a business initiative. By this signature and agreement on the diversity Charta the companies bind themselves to follow the rules of it, i.e. basically to accept the differences of all members of the company and to this as an advantage in order to improve the performance. (Köppel 2013); the patron of business initiative "Charta of Diversity" is the Chancellor of the Federal Republic of Germany Mrs. Merkel and therefore ensures a high level of acceptance and political relevance.

1.2. WHM Measures

The Workplace Health Management (WHM) is parted into three pillars (iqpr 2005). The first pillar is the occupational safety, the second the workplace health promotion and the third pillar is the corporate integration management (CIM). About the aspired goal (to examine impacts of the WHM on Diversity) and the purpose of the two other pillars of the WHM, the present examination is limited to measures in the area of the workplace health promotion. The object of the examined workplace health promotion is prevention. This preventive measures are supposed to change the behaviour of the employees toward „healthier lifestyle" and in the ideal case to have positive impacts on the health of the employees. The measures are divided into behavioral measures and the situational prevention. In the area of behavioral measures among other movement exercises like sport groups, information events (e.g. nutrition), eye examinations, preventive medical check-up, vaccinations (e.g. flu vaccination) and stress management seminars or seminars for personal further development come into consideration (Baumanns & Münch 2010). The field of situational prevention pays attention to ergonomics at the workplace, management of working time, the organization of workflow, nutrition-related measures and health

promoting constructional measures. The impacts of WHM measures vary: Obviously there is an impact on the participating employees. But also the public perception of the company is improved, because this measures stress the intention of the Management to take care of their staff. Finally there is an impact on the perception of the employees who haven´t (yet) participated: There will usually be a positive reaction as well.

To manage the diversity of a workforce in practice Roberge M.E. et al. (2011, p. 9) suggest five managerial practices. One part of the practices are training programmes and activities which include team building. The activities carried out in the context of the diversity management are very similar to the measures of the WHM. In fact in some cases they are identical (e.g. high rope courses).

1.3. Aim of the survey

The aim of this survey is to examine which actions of the WHM are especially suitable to bring together particular groups within a company. Based on a current study (Gansser, Linke, 2013) for use of the present investigation the following measures have been examined:

- Health care day
- Active breaks
- Back training
- Counselling (Food or life situations)
- Sport groups
- Anti-smoking programs
- Stress- and Self-Management
- Joint participation in competitions
- Fitness studio (financial support to the fee by the employer)
- Coaching (Sport / Fitness)

Most of the surveyed measures can be attributed to the behavioural measures. This is explained by the fact, that in case of the behavioural measures mostly interactions between the participants are necessary or at least possible. While the measures of the situational prevention could also be experienced as an individual. Since the intention of this survey was to find out the possible impacts of the measures on the cooperation among the different groups, the „individually experienced“ measures could be neglected.

5. METHODOLOGY

The present data was gathered as a part of a survey which was done in Hungary and in Germany in the time between March 2014 and November 2014. Because of the framework of the survey, the data which this article is based on was collected only in Hungary. The survey was done among part-time university students with minimum some years of professional experience by the use of an anonymous online questionnaire which led to 224 evaluable responses (71 men and 153 women). All questioned students have been employees, not employers. The intention was to find out the employees ´expectations on the impacts of several WHM measures on the companies. It is important to stress, that only expectations of the employees are relevant in this survey. Obviously this does not explain which measures are needed or considered to be successful after an implementation within the companies' organization. That doesn´t mean that every participant knew each measure, neither. However, the expectations of the employees do have an important aspect: As being part of the "practical side" of the company the employees are usually able to estimate which measure would affect the company positively. They typically can also asses which measure might not have the wanted results, because the groups of employees which are addressed by the WHM measures don´t want or need a certain measure like this; in the latter case a measure would be counterproductive. So as a first step the opinions or estimations of the employees seem to be a promising approach for the Management during the planning stage of the implementation or extend of a WHM.

Basically, the survey was divided into three parts. In the first part general information and data were gathered. The second part asked for the expectation of the participants at WHM measures that improves the cooperation among disabled and able-bodied employees. The third part dealt with the question, whether the

indicated WHM measures are estimated to be a successful tool to improve the cooperation among younger and older employees or not. The research was done for these two groups of employees, because these two groups of diversity are classified as demographic diversity and thus can occur in all companies and are mostly perceptible for other employees (Kearny, Voelpel, 2012). The group of „younger" was defined as people aged 40 and younger. About what is meant by the terms "disable" and "able-bodied" there was no specification within the questionnaire. This was important, because the aim was to examine what different groups exist in the perception of the employees. For instance for some people a "disabled" colleague is somebody who is sitting in a wheelchair, while for other people a colleague is already disabled when he has a visual handicap. About this we waived to fix limits for this group. Each of the two parts (2-3) was divided into two sections: one section was the question if the employees expect an action as suitable to improve the cooperation inside the company as a whole and the other question was about the improvement within the own work-unit. This distinction is important, because there may be differences between the cooperation improvement between different teams, which may have few contact to other teams in the normal work-environment, and the cooperation within teams with many contact between the team-members during the normal work.

For the two groups the same list of measures was given and the participants had to fill in if they agree, not agree or don´t know if a certain measure is in their opinion likely to be successful in relation to improve the cooperation of the two groups of employees mentioned above. Therefore any question could be answered with "yes", "no", or "I don´t know". In the first part the survey (general information) among other things the type of ownership of the concerned organization was surveyed. For this purpose the participations had four options to answer: 1. "Fully or to a larger part state ownership", 2. "Multinational company ownership", 3. "Private ownership with headquarters in this country" and 4. "Other".

The present study is an explorative study to get a first idea how to establish a consistent follow-up research. The gathered data were prepared with the help of Excel and the software "R".

6. RESULTS AND DISCUSSION

6.1. Ecpectations on the improvement of the cooperation among disabled and able-bodied employees

In the second part of the questionnaire the employees were asked to estimate their expectations concerning the cooperation among disabled and non-disabled employees within the companies.

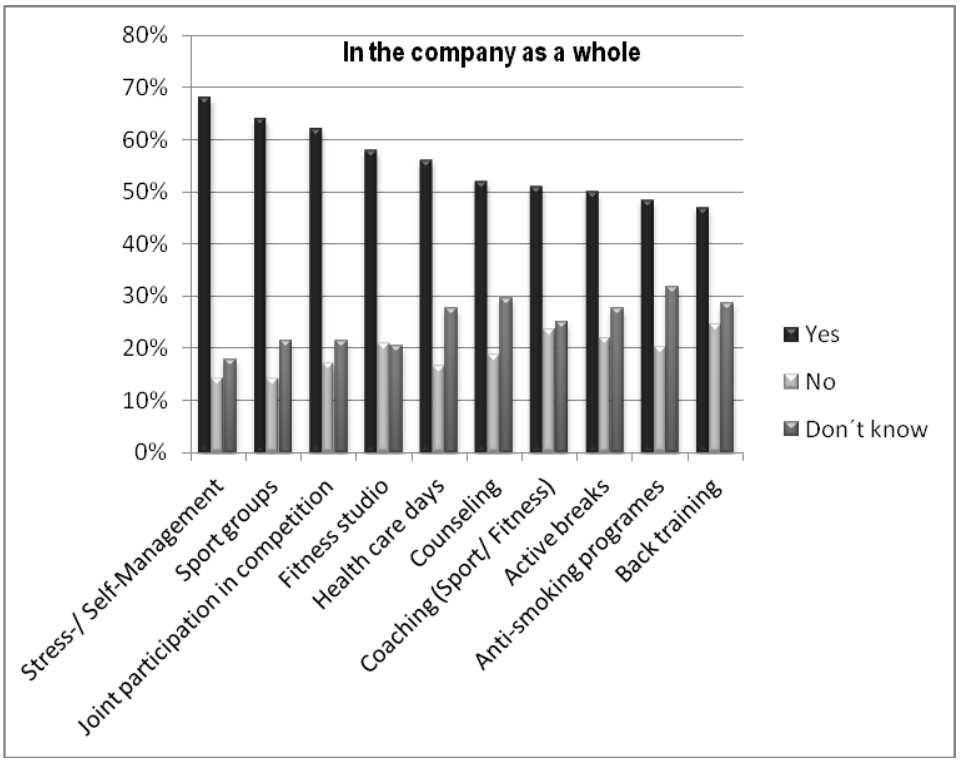
Table 1: Crosstable Ownership / Improvement of the cooperation expected caused by WHM actions

	Disabled / Able-bodied		**Company as a whole**						
Only "Yes"	**Workplace Health Management actions**								
Ownership	Health care days	Active breaks	Back training	Counseling	Sport groups	Anti-smoking programes	Stress-/ Self-Management	Coaching (Sport/ Fitness)	Joint participation in competition
Other	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %
State	37 / 57,8 %	35 / 54,7 %	31 / 48,4 %	36 / 56,3 %	40 / 62,5 %	29 / 45,3 %	43 / 67,2 %	34 / 53,1 %	40 / 62,5 %
Multinational	31 / 47,0 %	30 / 45,5 %	31 / 47,0 %	32 / 48,5 %	42 / 63,6 %	28 / 42,4 %	44 / 66,7 %	34 / 51,5 %	41 / 62,1 %
Private	56 / 60,2 %	47 / 50,5 %	42 / 45,2 %	47 / 50,5 %	61 / 65,6 %	50 / 53,8 %	64 / 68,8 %	46 / 49,5 %	56 / 60,2 %
Sum	125 / 55,8 %	113 / 50,4 %	105 / 46,9 %	116 / 51,8 %	144 / 64,3 %	108 / 48,2 %	152 / 67,9 %	115 / 51,3 %	138 / 61,6 %
Chi^2	9,0537	8,2420	3,1154	2,3877	5,1365	5,5163	3,0677	6,7921	8,0365
d.f.	6	6	6	6	6	6	6	6	6
p	0,1705	0,2209	0,7942	0,8808	0,5264	0,4794	0,8002	0,3404	0,2354

Source: Own Processing

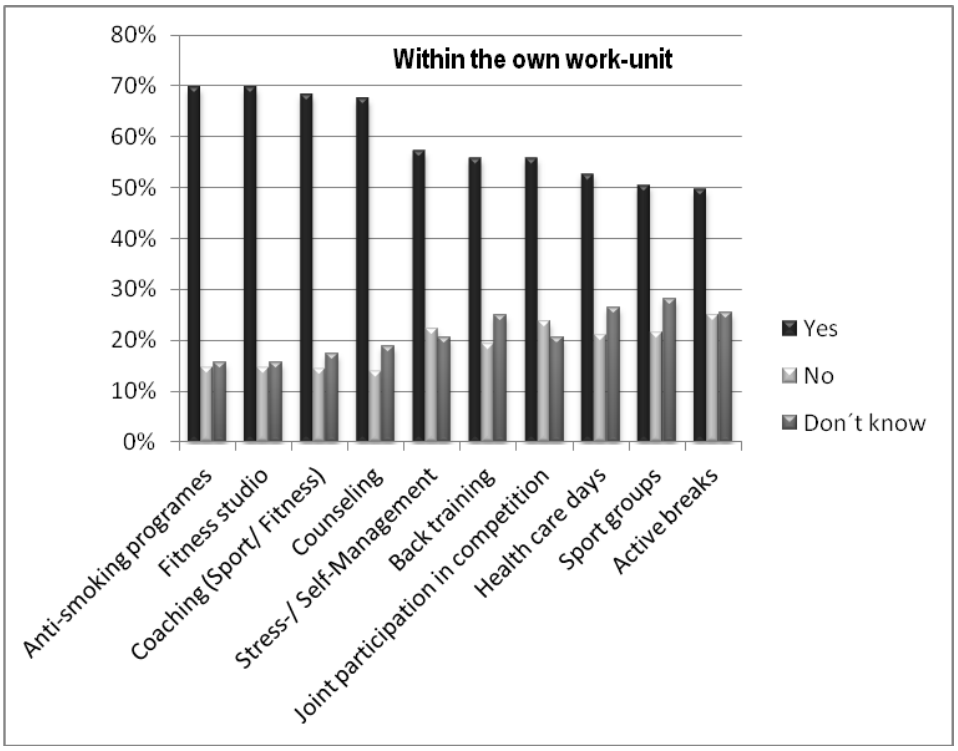
In table 1 all answers with "Yes" are shown and correlated with the type of ownership of the companies. The total sum of answers ("yes" / "no" / "don´t know") was 224 in each category. For each WHM action the total rate and the percentage of "yes"-answers is shown. The highest percentage was reached by the stress- and selfmanagement actions. They are assessed as suitable to improve the cooperation in the company as a whole from 67,9 % of the employees. In 68,8 % of the private owned companies the employees have this opinion, while in multinational companies 66,7 % and in state owned companies 67,2 % share this view. There were no significant differences between the different types of ownership of the companies and the WHM actions (in all cases: p>0,05), but we are able to show a tendency how the measures work in different kinds of companies.The rank of the actions is shown in addition in figure 1. The actions are sorted by the percentage of positive answers. In the case of the expected improvement of the cooperation for the company as a whole the actions in stress- and selfmanagement are the first rank. The next place is reached by actions in sport groups and the third are joint participation in competition. It is important to stress the fact, that in all three cases the opinion of the employees is nearly the same in all categories of companies. This is very different for health care days. While 60,2% of employees in companies with private ownership think this actions are suitable only 47,0 % of employees in multinational companies think the same (similar differences are observable in the measures "active breaks" and "anti-smoking programmes").

Figure1: Improvement of the cooperation between disabled and able-bodied employees expected (in the company as a whole)



Source: Own Processing

Figure 2: Improvement of the cooperation between disabled and able-bodied employees expected (within the own work-unit)



Source: Own Processing

As shown in figure 1 and figure 2 most of the actions of the WHM are assessed as suitable to influence the cooperation of disabled and able-bodied in a positive direction by the employees. Nearly all actions are judged with "Yes" by more than 50% of the questioned people. The only two exceptions with less than 50% agreement are anti-smoking programmes and back training in relation to the improvement of the cooperation in the company as a whole. The three favourites of the employees in case of the improvement of the cooperation within the own work-unit are different to the best three actions for improvement for the company as a whole. For the own work-unit anti-smoking programs are at the first place, financial support for fitness studio training takes the second and coaching in terms of sport and fitness the third place. These differences may exist, because for the cooperation improvement in the company as a whole it is the most important thing to get to know each other. This can be achieved by being in the same group of self-management courses or in the same sport group. While being within a team the people are already familiar with the team members, the actions can be more suitable for smaller groups only (like joint training in the fitness studio).

6.2. Expectations on the Improvement of the cooperation among younger and older employees

As the results of the questionnaire relating the actions concerning the cooperation of the younger and older employees improvement for the company as a whole show, the actions "joint participation in competition" and "stress-/selfmanagement" are again among the top-three positions (Fig. 3 and Fig. 4). And the action in sport groups, the third place action of the disabled / able-bodied part, is on the fourth rank. The differences between the different ownership types are large in the case of the "joint participation in competitions" (state: 75 %, multinational: 68,2 % and private: 63,4 %) (Tab. 2). What is strongly deviating to the same action within the group disabled / able-bodied (state: 62,5 %, multinational: 62,1 % and private: 60,2 %).

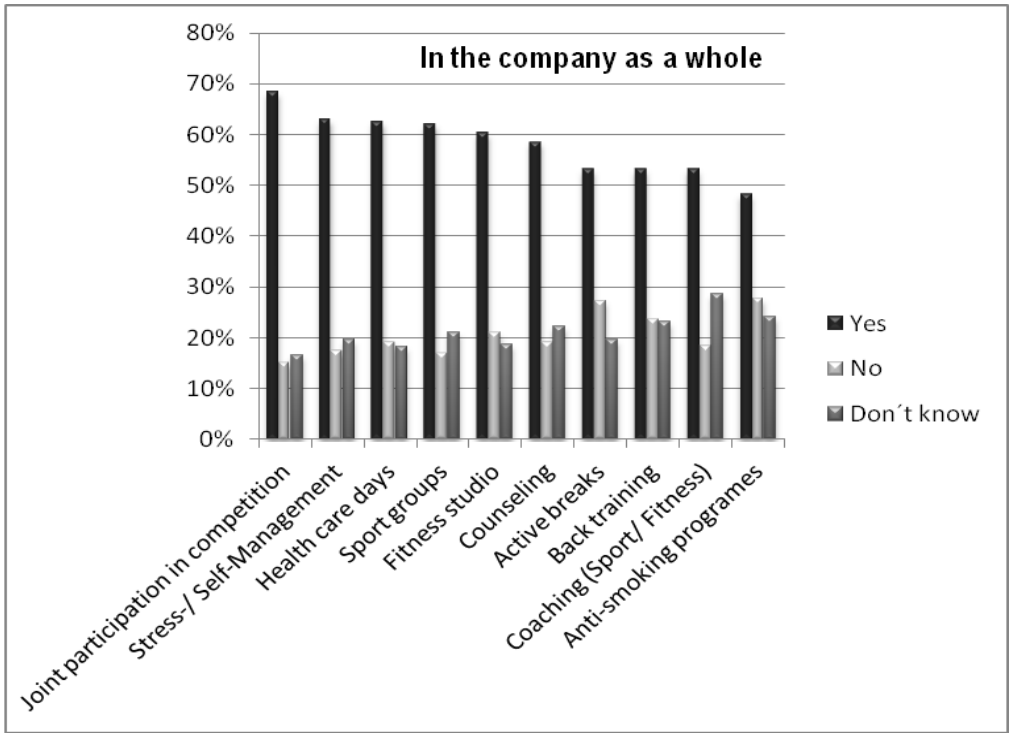
Table 2: Crosstable Ownership / Improvement of the cooperation expected caused by WHM actions

	Younger / Older		**Company as a whole**					
Only "Yes"	**Workplace Health Management actions**							
Ownership	Health care days	Active breaks	Back training	Counseling	Sport groups	Anti-smoking programes	Stress-/ Self-Management	Coaching (Sport/ Fitness)	Joint participation in competition
Other	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	0 / 0,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %	1 / 100,0 %
State	43 / 67,2 %	38 / 59,4 %	36 / 56,3 %	40 / 62,5 %	45 / 70,3 %	33 / 51,6 %	41 / 64,1 %	32 / 50,0 %	48 / 75,0 %
Multinational	36 / 54,5 %	34 / 51,5 %	31 / 47,0 %	40 / 60,6 %	39 / 59,1 %	28 / 42,4 %	42 / 63,6 %	38 / 57,6 %	45 / 68,2 %
Private	60 / 64,5 %	46 / 49,5 %	51 / 54,8 %	51 / 54,8 %	54 / 58,1 %	46 / 49,5 %	57 / 61,3 %	48 / 51,6 %	59 / 63,4 %
Sum	140 / 62,5 %	119 / 53,1 %	119 / 53,1 %	131 / 58,5 %	139 / 62,1 %	108 / 48,2 %	141 / 62,9 %	119 / 53,1 %	153 / 68,3 %
Chi²	4,1839	3,3718	2,651	5,8119	4,7962	2,9410	4,0932	6,8375	4,9993
d.f.	6	6	6	6	6	6	6	6	6
p	0,6517	0,7609	0,8510	0,4445	0,5701	0,8162	0,6640	0,3361	0,5438

Source: Own Processing

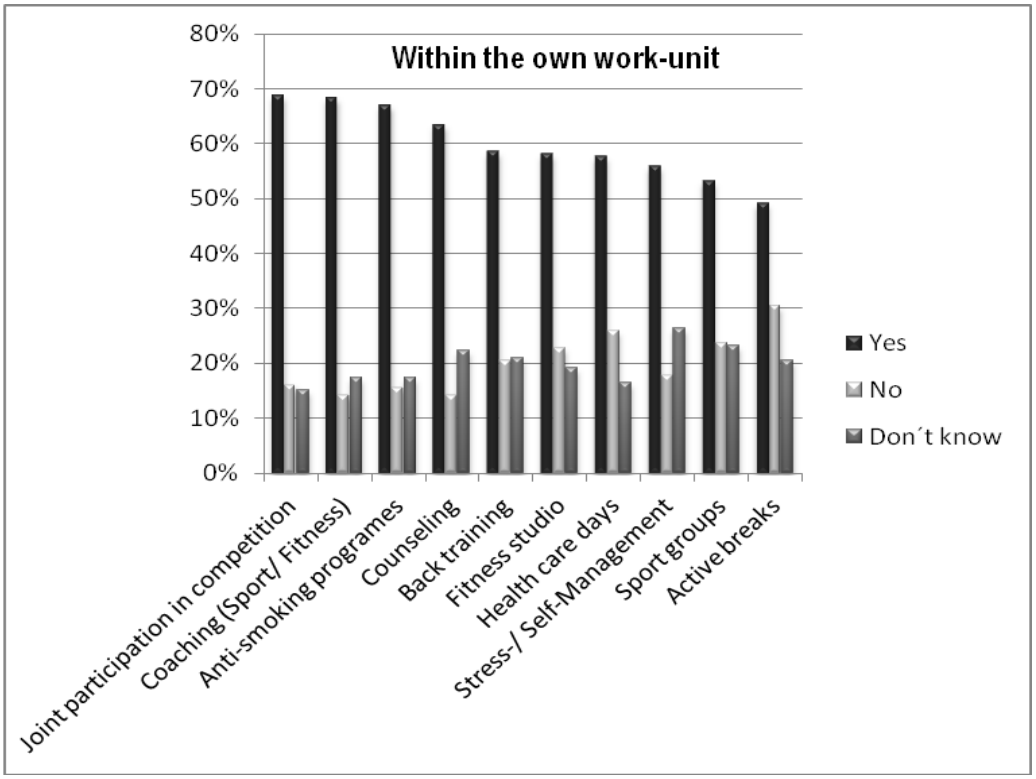
Nearly all actions are more distantly separated between the different types of ownership than the same actions in relation to the group of disabled / able-bodied. Why the employees of the different types of companies think different in these two cases could not be answered at this stage of examination. As in table 1 in table 2 there also were no significant differences between the different types of ownership of the companies and the WHM actions (in all cases: $p>0,05$). But we are also able to show a tendency how the measures work in different kinds of companies.

Figure 3: Improvement of the cooperation between younger and older employees expected (in the company as a whole)



Source: Own Processing

Figure 4: Improvement of the cooperation between younger and older employees expected (within the own-work-unit)



Source: Own Processing

Comparing the ranking of the actions in relation to the improvement of the cooperation "in the company as a whole" and "within the own work-unit" it can be shown that, as for the group of disabled / able-bodied, nearly all actions achieve a positive response of 50 % or more. Interesting is the fact, that the number one position for the company as a whole and within the own work unit is the same ("joint participation in competition"). While the number two ("stress-/selfmanagement"), three ("health care days") and four ("sport groups") positions take the last places in the graphic concerning the expectations for the own work-unit the same fact is obvious for the reversed case. About this a similar explanation like for the group disabled / able-bodied seems right.

CONCLUSION

The expectations of the employees on measures of a WHM, which could support the diversity management, are that these measures will have a positive influence on the companies in general, as well as on the working units. These expectations base on practical experiences the employees made and there are therefore most likely to depict the real possibilities. WHM measures have the order to be a successful improvement for the companies in general concerning the work atmosphere as well as for the efficiency within the companies. Additionally, it has to be taken into account that the perception of the companies´ environment will be positively influenced, too: customers or potential future employees for example would typically appreciate WHM measures. They show that the company is taking care of their employees in general and is willing to invest by spending time and money in organizing and realizing WHM measures. In a company with a diverse workforce the Diversity Management is a common practice to improve the solidarity of the employees. In many cases the WHM measures are very similar to the activities carried out in the context of the Diversity Management. The main object of this conducted survey was to examine if there exist

certain WHM actions which are assessed by employees as very suitable to improve the cooperation between different groups of employees and as a result support the Diversity Management. It can be stated that in the expectations of the questioned employees the actions of the WHM are very suitable for this purpose. The concrete results differ between different target-groups, different ownership types of the companies and between the cooperation improvement within a work-unit and the company as a whole. The results of this survey show that a manager has to take into account which groups of employees he wants to influence and in what kind of company he works because the impacts of the WHM measures on the employees differ. About the purpose of this examination as an explorative survey, the impacts have to be investigated closer in further studies. Beside the impacts on the employees, the implementation of WHM measures might be a good possibility for companies to improve their competitiveness and to establish a positive perception by potential (new) customers. A very important aspect in this sense is to find out how to create a strategically approach that allows to use this advantages for the company which could lead to options e.g. for SME to compete at the market successfully.

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EXPECTATIONS OF EMPLOYEES ON THE EFFECTS OF THE WORKPLACE HEALTH MANAGEMENT AS A PART OF AN INTERNAL DIVERSITY MANAGEMENT - AN EXPLORATIVE STUDY

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Abstract
The expectations of employees on the effects of actions of the Workplace Health Management (WHM) as a part of the Human Resource Management are relevant for a successful implementation within the companies. The diversity approach can be able to improve the cooperation among different groups of employees. In this relation the measures of the WHM can support the existing Diversity Management efforts of a company. A successful Diversity Management has to meet the expectations of the employees. Therefore the Management needs to know what the employees expect from measures to be implemented in order to improve the performance of the companies. The theoretical framework of the Diversity Management in general, the Work Health Management (WHM) measures and the results of a survey carried out among Hungarian employees and their expectations on a WHM are depicted within this paper. As important diversity groups the expectation on effects of the WHM actions on the groups of disabled / able-bodied employees and the groups of younger / older employees are examined. For all groups the cooperation exchange within the own work-unit and in the company as a whole is surveyed. As a result for all groups the most recommendable actions, in consideration of the employees, could be determined.

Keywords: Diversity; Work Health Management; employees´ expectations; Human Resource Management

JEL Classification: M1, M5

A COMPARISON OF ICT USE (E-BUSINESS TOOLS) IN COMPANIES OF SELECTED COUNTRIES

Jan Petrtyl, Ludvík Eger

INTRODUCTION

Information and communication technologies (ICT) are definitely a phenomenon that has been able to change the world, both positively and negatively. Households, companies, and even governments have tools that can make performances of many of their tasks and activities easier. If implemented and used correctly, the information and communication technologies can increase competitiveness of national economies, organizations and individuals.

According to the European Commission (2008a, p. 13), ICT can be defined as follows: "ICT is an umbrella term that encompasses a wide array of systems, devices and services used for data processing (the information side of ICT) as well as telecommunications equipment and services for data transmission and communication (the communication side)".

Following this we also respect the approach of OECD when defining ICT products (OECD, 2009, p. 18): "ICT products must primarily be intended to fulfill or enable the function of information processing and communication by electronic means, including transmission and display". According to the UNCTAD (2011) we underline that ways and possibilities of business, provision and realization of government (administration of national concerns) etc**.** are basic areas ICT have a significant impact. The issues of ICT use in a company are fairly wide. The technologies connected with a term ICT are so called "General Purpose Technology" since all economic sectors use ICT within their production process (OECD, 2003, p. 23, cf. Brynjolfsson & McAfee, 2014). We add that the General Purpose Technology is used naturally in a non-profit sector, too.

The development of ICT is also linked to the development of information and knowledge society. The term 'information society' (Pintér, 2008, Soumitra & Mia, 2011, p. vii) is related to the issues of ICT use everywhere; the use in business creates the context of our research study. Nevertheless, information society could be studied from various points of view. For instance, the United Nations emphasizes primarily the consequences of the existence of information society in economic, social and environmental area (UNCTAD, 2011, p.2).

Framework model of the ICT influence is presented i.e. by UNCTAD (2011). Relevant data in basic areas are e.g. provided by the Eurostat (2011). For the purpose of our study, also the conceptual model according to the OECD (2009) is appropriate since except the conceptual model of ICT use in society a model for the measurement of the impact of this use is formulated. These resources are then the basis for international comparison model. This leads to searching for relevant variables and construction of overall index.

The purpose of this study is to present one possible approach to the construction of composite ICT indicator as a means of international comparison in the field of business ICT/e-business intensity.

In fact we are looking for an answer to the question "How do particular states differ in use of selected tools of e-business, and does company-size matter?" We will build on this in ourfurther research while focusing on the real impacts of such technology.

ICT is a rapidly evolving area, and has profound impacts on whole society. It has become powerful tool for participating in global economy and for offering (not only) new business opportunities. ICT improve public and private services and increase economic productivity.

For example Reynolds (2010, p.33) adduces that: "…the benefits of appropriate ICT

investment in general are potentially huge, leading to lower transaction costs, higher productivity, and the enhanced capability for innovation and revenue growth...".

This statement can clearly be applied everywhere: to a business sphere**,** a sphere of households**,** as well as to a national sector (cf. Legris, Ingham & Collerte, 2003).

The European commission dedicates itself intensively to the issues of ICT extension support. It is stated in one of its key documents (Europe's Digital Competitiveness Report i2010) that: "In the context of the current economic and financial crisis, it is important to remember the central role played by the production and take up of ICT in driving innovation, productivity and growth." (European Commission, 2009, p. 82). The same source adduces that:

- ICT producing industries contribute directly to productivity and growth through their own rapid technological progress,
- ICT use improves the productivity of other factors of production (or inputs),
- there are 'spill over effects' on the rest of the economy as ICT diffusion leads to innovation and efficiency gains in other sectors.

From the point of view of the national economy, ICT have impact on the area of gross domestic product creation. The European Commission (2010) states that ICT participate directly by 5 % in the European GDP and they contribute to the total growth of productivity by 20 % directly through the ICT industry, by 30% through the investments in the ICT area).

The World Economy Forum could be considered as another important organization that deals with a comparison of ICT influence on society. This institution examines within so called Network Readiness Index (NRI) three main areas that relate to ICT (Dutta & Mia, 2011):

- the conduciveness of national environments for ICT development and diffusion, including the broad business climate, some regulatory aspects, and the human and hard infrastructure needed for ICT;
- the degree of preparation for and interest in using ICT by the three main national stakeholders in a society (i.e., individuals, the business sector, and the government) in their daily activities and operations; and
- the actual use of ICT by the above three stakeholder groups

The Economist Intelligence Unit (2010) also presents its ranking since 2000; it was changed in 2010 to 'Digital economy rankings' that by its name depicts the way of development of ICT use.

The information about the global ICT market is considered to be of great importance. Therefore, we suggest an indicator covering ICT development, that reflects ICT adoption in the field of e-commerce and e-business (cf. EITO Report, UNCTAD, 2013; OECD, 2013). Moreover, in the following period, it will be more and more important to observe also the cross-border impacts of e-business that are important especially for e-commerce (Gomez-Herrena, Martens & Turlea, 2014).

E- business

The nature, scope, and impact of e-business technologies are connected with development of ICT. „These technologies range from hardware to software, from web browsers to email and social network, from mobile web to location based services and from e-procurement hubs to enterprise ressource planning system." (Reynolds, 2010, p. 1)

Alongside with the increasing importance of information and communication technologies in the area of entrepreneurship (cf. McAfee & Brynjolfsson, 2008) the necessity to capture and describe this issue theoretically has emerged. The IBM company was probably the first one that used the term e-business. Some possible definitions of this notion follow:

- A generic term covering information definition and exchange requirements within and between enterprises by electronic means (UN/CEFACT, 2001).

- Prieger and Heil (2010) use the term "e-business" in its most general sense: any use of ICT by a firm to conduct its business."
- e-Business: automated business processes (both intra-and inter-firm) over computer-mediated networks. (OECD). e-Business covers the full range of e-transactions as well as collaborative business processes, such as collaborative online design processes which are not directly transaction focused. (European Commission, 2010). This definition is considered as initial for our purposes.

We can summarize, that e-business (electronic business) means the execution of business processes over the Internet, or at least with use of computers and/or their networks. And these electronic business processes include buying and selling products, supplies and services; servicing customers; processing payments; managing production control; communicating and collaborating with business partners; creating and sharing information; supporting and running automated services for customer and employee; also recruiting; and more.

In the European Union, significant research in the e-business area was realized for instance in 2008 (Renner, Vetter & Sheiding, 2008), and later more known E-Business W@tch (it was finished at the beginning of 2011), see also Soto-Acosta & Meroño-Cerdan (2008).

Also Eurostat deals in the long term with a monitoring and classification of ICT in firms, and there are also national studies of member states of the EU. Except those main information sources, others are available, for instance CIO Top 100 (CIO Businessworld 2012).

Publications and other outputs from the OECD and the European commission are regarded as important source for realization of the presented study. By unifying methodology, the Eurostat creates also necessary platform for the international comparability of data.

7. METHODOLOGY

For the purposes of the research study, data available from the Eurostat's open electronic database for analyses of ICT use in a business sector (Eurostat, 2013) were used. In total, there are several hundreds of variables for the analysis. For the purposes of this study, some of them were analysed (in total 14 in 4 categories) – chosen on the basis of expertly set requirements.

The aim of the research study was to create a description tool that could enlighten the instensity of use of selected e-busienss tools in enterprises in various EU countries. We used data provided by Eurostat, put them in weighted groups, and constructed an index while having considered the approach of similar index construction like in case of European Commission (2008c).

Research questions

What is the level of the implementation of particular e-business tools in companies of selected EU countries?

The term Selected Tools covers: ERP systems, CRM systems, sharing of information within SCM, electronic sale/purchase, automated data processing, co-operation with suppliers and customers, employees´ remote electronic access, various means of electronic communication, and use of e-learningIs there any difference in the implementation of e-business tools between large, small and medium-sized enterprises in the selected countries.

Procedure

We started with creation of a composite indicator of the intensity of use of e-business tools in companies on the basis of literature research (particularly OECD - conceptual model, 2009, European Commission, 2010, 2008c, Reynolds, 2010, the project E-Business W@tch, 2011), and the evaluation of Eurostat database (2013) that was kindly provided to us.

Set of selected countries

The data for the research study are covered by several member states of the EU, i.e. the Czech Republic (CZ), Slovakia (SK), Poland (PL), Hungary (HU), Slovenia (SI) and Germany (DE). Some of the introduced countries belong to the Visegrad Group (CZ, SK, PL, HU); Slovenia is considered to be a country with relatively high level of development in the monitored area and Germany is regarded as a prominent state of the EU countries.

If possible, the data about the whole EU (EU27) are adduced. Data from four groups of variables are used for the calculation of the intensity indicator of e-business tools for individual states (see later in the text).

Small and medium-sized enterprises (SMEs) and large enterprises were included in the research. For the purposes of this work, small and medium-sized enterprises are defined as having 10-250 employees; according to the EU definition, large enterprises have more than 250 employees.

The division into large enterprises and SMEs is useful particularly since on the ground of historical data it could be expected that the rate of various ICT implementation is higher at larger enterprises than at SMEs. It was supposed that above mentioned division of companies into two categories would better display the real state rather than the data about all companies in all. Very small companies and micro-enterprises (i.e. companies having less than 10 employees, or individual businessmen) were excluded from the research.

Data

The data for the research were gained from the European Statistical Office (Eurostat, 2013) that represents an extensive database in MS Access format having ca. 388 MB. By its extent it covers member states of the EU and it could be stated that the data included in the database are representative and have high information value.

The data comes from 2010 and 2011, exceptionally from 2009. The mentioned delay of data is usual in this type of extensive supranational data gathering. The outputs are still valid for trends presented in tables 1 – 14 and in figures 1 – 6.

The database consists of various objects (tables) from which the answers to relevant questions by means of SQL language could be given. Main objects used during the work with the database are:
Variables (780 in total)
ExpVariables (code of a variable)
ExpVariableCaption (verbal description of a variable)
Year
Unit (monitored unit)
ExpCountry (country code)
ExpBrkDwn (a group of units)
DataWithAggregates (a table including values assigning to variables)

8. MONITORED CATEGORIES, VARIABLES AND PARTIAL OUTPUTS

There are four groups set up for the construction of an indicator of the use of e-business tools in companies, i.e. categories of variables; with regard to their characteristics the categories create logically ordered and internally compact units. In the tables, the data are presented by means of decimal numbers. The data are relative values and if multiplied by 100, the data would be given in [%]. Characteristics and importance of the categories and their variables are as follows:

The category: 'Business information systems' constitutes the core of ICT at enterprises. In this group, the variables indicating the use of ERP systems and CRM systems by companies are included (table 1 and 2).

Tab. 1: Enterprises who have ERP software package to share information between different functional areas (E_ERP1)

Year	Country	All enterprises	Large enterprises	SMEs
2010	DE	0.29	0.76	0.27
2010	SI	0.21	0.81	0.19
2010	CZ	0.21	0.73	0.19
2010	EU27	0.21	0.64	0.19
2010	SK	0.17	0.59	0.16
2010	PL	0.11	0.57	0.10
2010	HU	0.08	0.50	0.07

Source: Eurostat and own calculation

Tab. 2: Enterprises using software solutions like Customer Relationship Management (CRM) (E_CRM)

Year	Country	All enterprises	Large enterprises	SMEs
2010	DE	0.43	0.70	0.42
2010	SK	0.30	0.46	0.29
2010	EU27	0.25	0.54	0.25
2010	PL	0.18	0.49	0.17
2010*	SI	0.16	0.33	0.13
2010	CZ	0.15	0.49	0.14
2010	HU	0.10	0.28	0.09

*for SMEs and large enterprises, the data comes from 2009 Source: Eurostat and own calculation

Germany is found in the first place and above the EU27 average. Slovenia and the Czech Republic lie in the ERP area on the average of EU27, but they are sinking in the area of CRM systems use; contrarily, the situation in Slovak enterprises is evaluated better.

The category: **'Purchase and sale'**. In this category, three variables were examined – an electronic purchase, an electronic sale and an electronic invoicing (table 3, 4 and 5).

Tab. 3: Enterprises purchasing online (at least 1% of orders) (E_EBUY)

Year	Country	All enterprises	Large enterprises	SMEs
2010	DE	0.40	0.54	0.40
2010	CZ	0.33	0.51	0.32
2010	EU27	0.27	0.41	0.26
2010	HU	0.17	0.26	0.17
2010	SI	0.16	0.29	0.16
2010	SK	0.14	0.19	0.14
2010	PL	0.12	0.27	0.12

Note: For SMEs and large enterprises, the data comes from 2009. Source: Eurostat and own calculation

The information for SMEs was expertly estimated. Considering minimal differences between the SMEs category and All enterprises the entry 12% was added in order not to exclude a variable from a category or not to exclude a country from the whole sample due to one missing piece of information.

Tab. 4: Enterprises selling online (at least 1% of turnover) (E_ESELL)

Year	State	All enterprises	Large enterprises	SMEs
2012	CZ	0.25	0.42	0.24
2012	DE	0.22	0.42	0.21
2012	SI	0.14	0.38	0.13
2012	EU27	0.14	0.35	0.13
2012	SK	0.12	0.25	0.12
2012	HU	0.10	0.24	0.09
2012	PL	0.09	0.28	0.08

Source: Eurostat and own calculation

Tab. 5: Enterprises sending and/or receiving e-invoices (E_INV)

Year	State	All enterprises	Large enterprises	SMEs
2010	DE	0.36	0.55	0.35
2010	SK	0.34	0.43	0.34
2010	EU27	0.31	0.47	0.30
2010	CZ	0.17	0.44	0.16
2010	PL	0.16	0.30	0.16
2010	SI	0.10	0.27	0.10
2010	HU	0.08	0.19	0.07

Source: Eurostat and own calculation

In this category, Germany lies again above the average; however, at electronic sale and purchase of companies, also Czech enterprises come to the fore. In comparison to the EU27 average the decrease of SMEs in the electronic invoicing is considerable at enterprises of other monitored countries.

The category: '**Cooperation within a customer-supplier chain'**.

By means of electronic network the relationship between supply and demand side of a market (not only in B2C, but also in B2B environment). For the purposes of this study, six variables were monitored that are closely related to the mentioned issues (table 6, 7, 8, 9, 10 and 11).

Tab. 6: Enterprises whose business processes are automatically linked to those of their suppliers and/or customers (E_SISC)

Year	Country	All enterprises	Large enterprises	SMEs
2012	SK	0.39	0.55	0.39
2012	PL	0.25	0.41	0.24
2012	SI	0.24	0.37	0.24
2012	DE	0.23	0.50	0.22
2012	EU27	0.23	0.46	0.22
2012	CZ	0.15	0.38	0.14
2012	HU	0.11	0.30	0.11

Source: Eurostat and own calculation

Tab. 7: Enterprises that share electronically information with customers on inventory levels, production plans, demand forecasts or progress of deliveries (E_SICU2)

Year	Country	All enterprises	Large enterprises	SMEs
2012	SK	0.29	0.40	0.29
2012	PL	0.17	0.32	0.17
2012	EU27	0.16	0.34	0.15
2012	SI	0.16	0.27	0.15
2012	DE	0.11	0.37	0.10
2012	CZ	0.11	0.31	0.10
2012	HU	0.07	0.22	0.07

Source: Eurostat and own calculation

Tab. 8: Enterprises that share electronically information on the SCM with suppliers/customers or send/receive information in a format that allows its automatic processing (reduced comparability) (E_SIEXT2)

Year	Country	All enterprises	Large enterprises	SMEs
2012	PL	0.77	0.95	0.76
2012	SI	0.76	0.98	0.75
2012	SK	0.64	0.80	0.63
2012	HU	0.62	0.91	0.61
2012	EU27	0.58	0.84	0.58
2012	DE	0.50	0.82	0.48
2012	CZ	0.44	0.78	0.42

Source: Eurostat and own calculation

Tab. 9: Enterprises that share electronically information suitable for automatic processing within the enterprise and with external business partners (E_SIEXTINT)

Year	Country	All enterprises	Large enterprises	SMEs
2012	PL	0.77	0.95	0.76
2012	SI	0.76	0.98	0.75
2012	SK	0.64	0.80	0.63
2012	HU	0.62	0.91	0.61
2012	EU27	0.58	0.84	0.58
2012	DE	0.50	0.82	0.48
2012	CZ	0.44	0.78	0.42

Source: Eurostat and own calculation

Tab. 10: Enterprises that share electronically information with suppliers on inventory levels, production plans, demand forecasts or progress of deliveries (E_SISU2)

Year	Country	All enterprises	Large enterprises	SMEs
2012	SK	0.30	0.44	0.29
2012	PL	0.23	0.35	0.23
2012	SI	0.20	0.27	0.20
2012	DE	0.19	0.41	0.19
2012	EU27	0.19	0.36	0.18
2012	CZ	0.13	0.29	0.12
2012	HU	0.08	0.24	0.07

Source: Eurostat and own calculation

Tab. 11: Enterprises that share electronically information with suppliers and customers on inventory levels, production plans, demand forecasts or progress of deliveries (E_SISUCU2)

Year	Country	All enterprises	Large enterprises	SMEs
2012	SK	0.25	0.34	0.25
2012	PL	0.15	0.26	0.15
2012	SI	0.14	0.20	0.14
2012	EU27	0.13	0.26	0.12
2012	CZ	0.09	0.22	0.08
2010	DE	0.08	0.27	0.07
2012	HU	0.06	0.19	0.05

Source: Eurostat and own calculation

In this category, German and Czech companies lie often below the average of EU27, contrarily, the evaluation of Slovak, Polish and Slovene companies are found mostly above the average (tables 6 – 11).

High values emerge in the variable 'intensity of automated data processing' (table 9). Average values are very high in case of large enterprises; the average of EU27 is even 84%. It is apparently a key area whose correct use means not only a competitive advantage, but also competitive necessity.

The category: **'Internal education and remote access of employees to company data and applications, communication'**.

Last examined group of variables includes factors that are oriented rather on the inside of a company – remote access to company applications and data, internal education by means of ICT and ICT use for the efficiency improvement of communication processes.

Tab. 12: Enterprises using e-learning applications for training and education of employees (E_IEDU)

Year	Country	All enterprises	Large enterprises	SMEs
2008	SK	0.42	0.42	0.42
2008	SI	0.40	0.68	0.39
2008	CZ	0.29	0.54	0.28
2008	PL	0.21	0.38	0.20
2008	HU	0.15	0.39	0.14
2008	DE	0.13	0.34	0.13

Note: The figure for EU27 is not available. Source: Eurostat and own calculation

Table 13: Enterprises that provide to the persons employed remote access to the e-mail system, documents and applications (E_ENVRA)

Year	Country	All enterprises	Large enterprises	SMEs
2011	SI	0.55	0.95	0.54
2011	CZ	0.53	0.93	0.52
2011	SK	0.41	0.82	0.40
2011	EU27	0.40	0.85	0.39
2011	PL	0.40	0.80	0.38
2011	DE	0.37	0.87	0.35
2011	HU	0.36	0.77	0.35

Source: Eurostat and own calculation

Table 14: (Companies that…) Have policies for using telephone, web or video conferencing instead of physical travel (E_ENVTRV)

Year	Country	All enterprises	Large enterprises	SMEs
2011	SK	0.48	0.72	0.47
2011	EU27	0.38	0.68	0.37
2011	SI	0.38	0.65	0.37
2011	DE	0.31	0.72	0.30
2011	CZ	0.29	0.59	0.28
2011	HU	0.24	0.59	0.23
2011	PL	0.13	0.31	0.13

Source: Eurostat and own calculation

In this category, the enterprises in Slovakia and Slovenia reach high results. In the area of remote access to applications and e-learning, these countries along with the Czech Republic overcome even Germany that lies in two preceding categories in the first place.

9. COMPOSITE INDICATOR OF THE USE OF E-BUSINESS TOOLS - EBSN

The introduced values of variables that are created on the basis of individual categories present the level of the use of e-business tools in enterprises of selected European countries (tables 1 – 14). They create data/information base that could be used also for a comparison of countries in the research study. The outputs of the analysis could be interpreted complexly and clearly in a graphic form. For this purpose, so called composite indicator (total indicator) of a use of e-business tools in European enterprises was established. For the indicator establishment, the data from the Eurostat (2013) database were used and then processed into the categories of the selected variables.

The structure of composite indicator EBSN

The composite indicator is designed as weighted total in the partial categories. The score of the partial categories is weighted total of the scores achieved in the individual indicators.

$$EBSN = \sum_{i=1}^{4} v_i S_i \quad (1)$$

where

EBSN = the compound composite indicator of the use of e-business tools in companies

i = the number of a partial group of indicators

v = the weight of a partial group of indicators

S = the score achieved within the variable of a partial group of indicators

The score calculation in a given partial group of indicators is explained by the following equation

$$S = \sum_{k=1}^{n} w_n P_n \quad (2)$$

where

k = the serial number of a given variable

w = the weight of a variable in a given partial category

n = the highest ordinal number within a given partial category

P = the value (score) that was achieved

The weights of individual categories and variables

For individual categories and variables that belongs to them the weights were expertly set. Their values are displayed in table 15.

Tab. 15: The weights of individual categories and variables

Category/Variable	Weight
Business Information Systems	0.29 (v_i)
E_ERP1	0.65 (w_n)
E_CRM	0.35
Purchase and sale	0.29
E_BUY	0.4
E_SELL	0.4
E_INV	0.2
Cooperation within SCM	0.29
E_SISC	1/6
E_SICU2	1/6
E_SIEXT2	1/6
E_SIEXTINT	1/6
E_SISU2	1/6
E_SISUCU2	1/6
Education, communication and remote access	0.13
E_IEDU	0.3
E_ENVRA	0.35
E_ENVTRV	0.35

Source: own

All weights were qualifiedly set on the basis of the executed literature research (mainly European Commission, 2008c) and consultation with other experts from the area of e-business. Business information systems, Purchase and sale and Cooperation within SMEs are prominent partial categories that have the same weight – 0.29. The partial category Education, communication and remote access was valued on the weight 0.13 (the weights were set by means of paired comparison with the set intensity of preference).

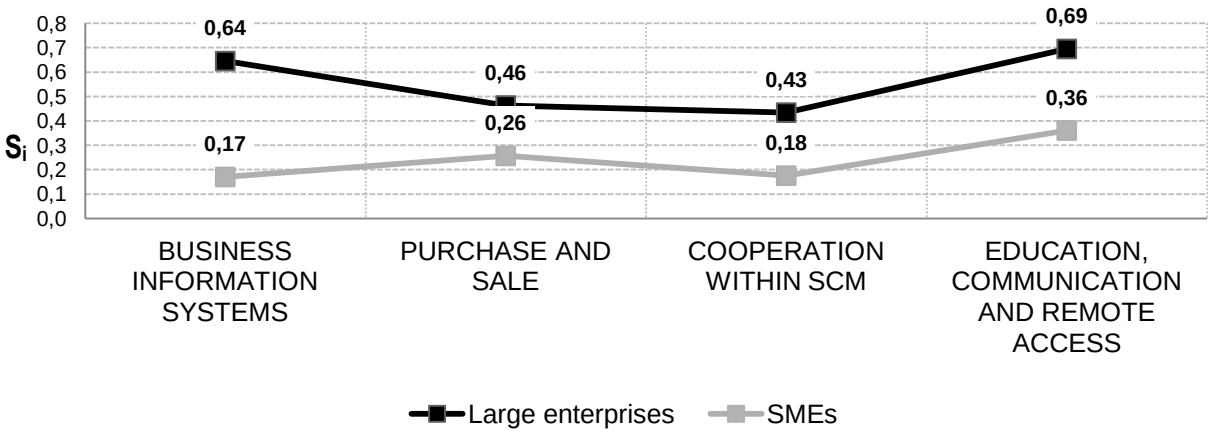
The weights of individual categories and variables reflect their expertly set importance, i.e. for instance E_ERP1 is more important than E_CRM, E_SISC is equally important variable as E_SISUCU2, etc.

10. GRAPHICAL OUTPUT – INTERPRETATION OF THE RESEARCH RESULTS

Following outputs are presented for individual selected countries and the level in each

category is always presented separately for large, medium-sized and small enterprises.

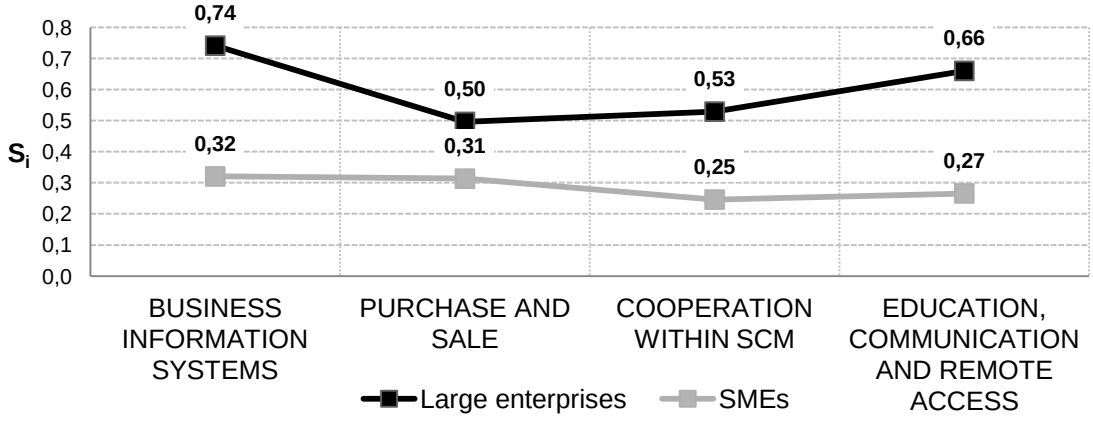
Fig. 1: Indicator of the use of e-business tools in Czech enterprises



Source: own

The extent of the ICT use, more precisely of defined e-business tools, is generally higher at larger enterprises (Figure 1). The largest difference between large companies and SMEs lies in the ICT implementation. The slightest difference is evident in the area of purchase and sale. The highest score was reached in the category Education, communication and remote access. Relative simplicity of the implementation of those tools is a possible cause.

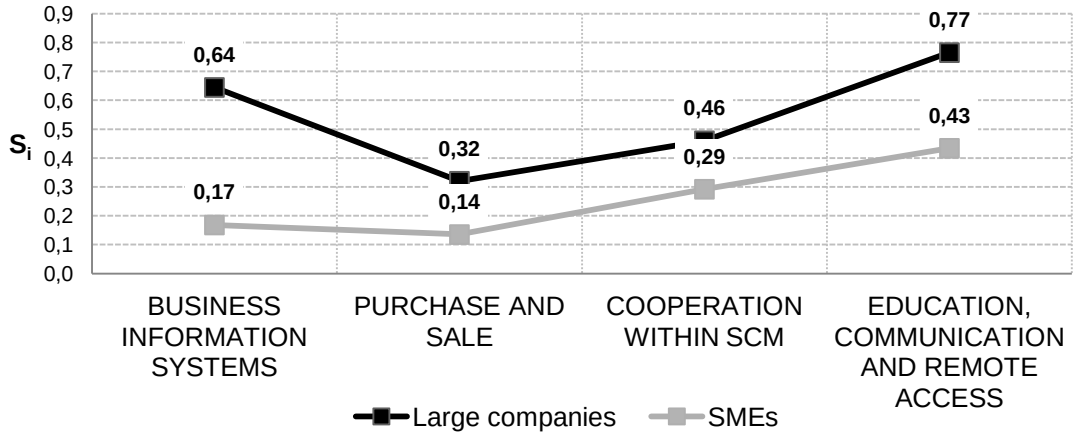
Fig. 2: Indicator of the use of e-business tools in German companies



Source: own

Figure 3 presenting the situation in Slovenia shows interesting differences when compared to the situation in the Czech Republic and in Germany. The curve of largest enterprises is similar to those in above introduced Figures 1 and 2. At SMEs, there is a difference. The intensity of electronic purchase and sale is very low; however, the cooperation of small and medium-sized enterprises within SCM is even slightly higher than in Germany, in comparison with the Czech Republic even by one third. The slightest difference between large companies and SMEs does not lie in the area of purchase and sale, but in the category Cooperation within SCM. The course of the SMEs curve is different from the two above mentioned countries; the highest score is reached in the area of education, communication and remote access, including SMEs.

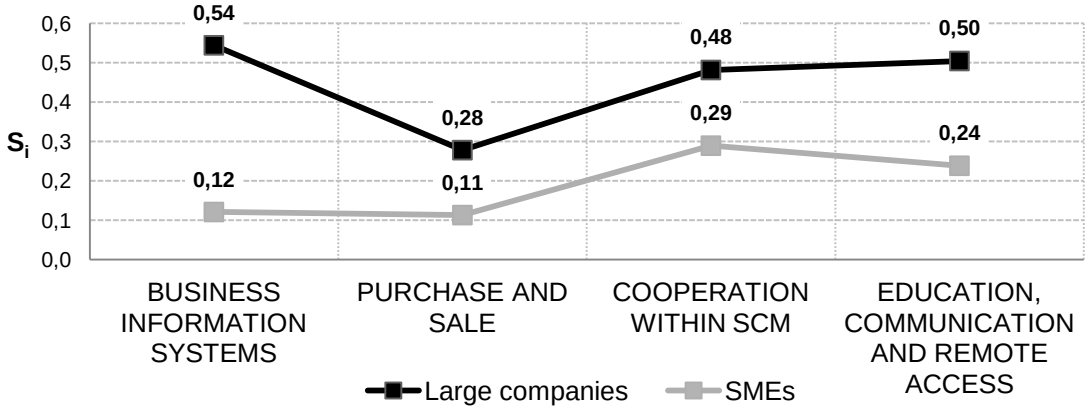
Fig. 3: Indicator of the use of e-business tools in Slovene companies



Source: own

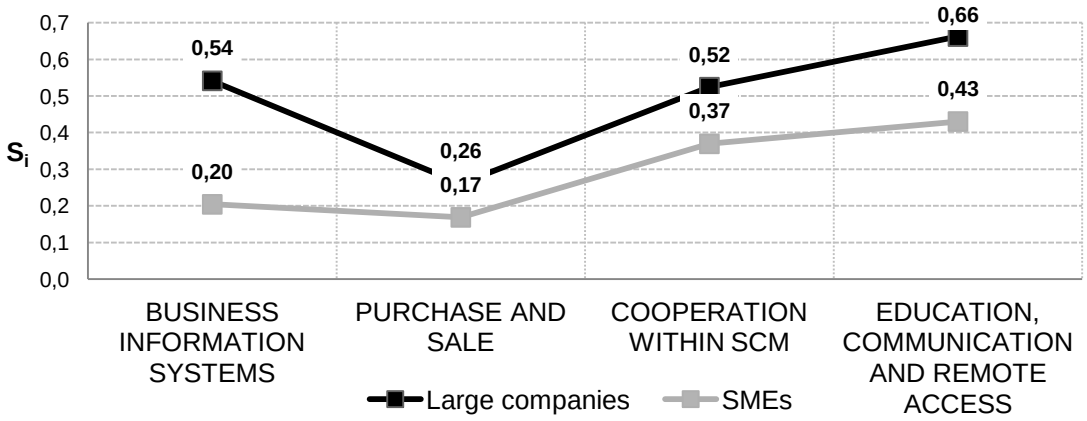
For Poland, the lowest intensity of purchase and sale in the whole set is typical – the score is only 0.11 (see Figure 4). Very low score is also in the category Education, communication and remote access. Within the set, relatively high score was reached in the category Cooperation within SCM at small and medium-sized enterprises – 0.29. This value is even higher than for Germany. Only Slovakia reached higher score in this category (SMEs) – see later in the text.

Fig. 4: Indicator of the use of e-business tools in Polish companies



Source: own

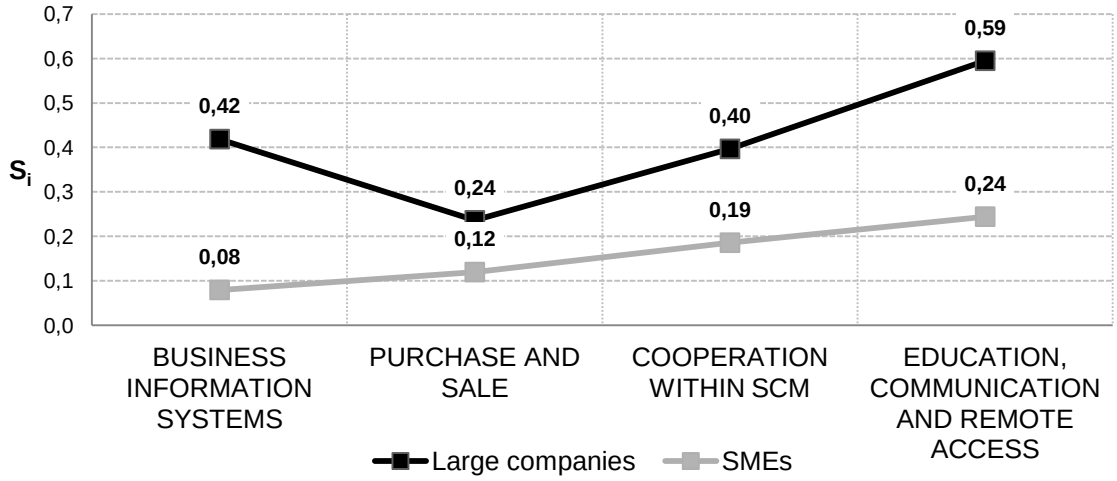
Fig. 5: Indicator of the use of e-business tools in Slovak companies



Source: own

Slovak companies show reserves primarily in the category Purchase and sale where the difference in the score between SMEs and large enterprises is only 0.09 and the value 0.26 (large companies) is the second lowest within the whole set. Impressive results were reached in the category Cooperation within SCM where the values 0.52 and 0.37 shows relatively high level of advancement.

Fig. 6: Indicator of the use of e-business tools in Hungarian companies



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Within the researched sample**,** Hungarian companies show very poor results (Figure 6). In several categories (namely Business information systems and Education, communication and remote access – SMEs; Business information systems, Purchase and sale, Cooperation within SCM /together with Poland/ - large enterprises), Hungary reached the lowest score within the whole set. Better results were reached identically in the SMEs group and at large enterprises in the last partial category – Education, communication and remote access.

CONCLUSION

A brief commentary according to the individual examined items (also the variables and their categories) with a final summary follows.

The intensity of the use of ERP systems is significantly different between the categories of small and medium-sized enterprises (SMEs) and large companies. The highest degree of the ERP implementation of these technologies (within the examined sample) is found in Germany and in the Czech Republic. The lowest degree of the ERP implementation is shown in Poland and Hungary, independently of the company size.

The highest intensity of the use of CRM systems is in Germany, then, the Czech Republic follows. The degree of implementation at large companies is roughly two times higher than at SMEs.

The highest intensity of the electronic purchase within the examined sample is found in Germany. The lowest intensity is shown in Slovakia. Hungarian and Polish companies use least the possibilities of online sale.

Electronic invoicing is related directly to trade transaction; therefore it is suitable to monitor also its intensity. The highest intensity of electronic invoicing is found in Germany and in the Czech Republic. Hungary, Poland and Slovakia show the lowest intensity. Large companies are roughly two times more active than SMEs independently of geographic differentiation.

It seems there still is unused potential in the field of intensive cooperation between suppliers and customers (prediction of demand, production plans, etc.). The degree of the use is

again roughly two times higher at large companies.

The degree of data/information sharing that could be automatically processed is very high primarily at large enterprises, independently of their geographic location. For instance, the average value of E_SIEXT2 indicator makes in EU27 84%, more precisely 58% at SMEs.

Close cooperation with customers (sharing the information on delivery, prediction of demands, etc.) presents an area that is not still widely used. As for EU27, it is on average 34% of large companies and only 14% of SMEs. The most active companies are in Slovakia and Germany (although big differences between countries in the sample are generally not found). SMEs use such cooperation with suppliers rarely.

Close cooperation with suppliers is more intensively realized in Slovakia and in Germany. Large enterprises cooperate with suppliers by means of ICT almost twice more than SMEs.

Majority of large companies provides their employees with the possibility of remote access to company data and applications. As for the EU27, the degree of intensity in the SMEs category is roughly half than at large companies. In the examined sample, the most active companies are in Slovenia and in the Czech Republic. In this category, the ICT tools are used at the lowest level in Hungary, the most in the Czech Republic and in Slovenia.

Teleconferences, videoconferences, etc. are the most frequently used by large enterprises in Germany (although a significant difference is seen between SMEs and large companies).

E-learning is popular particularly in Slovenia and in Slovakia; in Germany and Hungary, it is used at least. (As for EU27, the data for this indicator are not available.)

On the basis of the executed research investigation, it could be stated that there are significant differences between the use of ICT at large companies and at small and medium-sized enterprises.

The authors of this study are not aware of the realisation of a similar study in the EU after the finishing of the e-Business W@tch project. They suppose that the information and conclusions resulting from the realized research study could be helpful to both other researchers and representatives of a private sector.

The contribution of the presented study is to mediate the picture of the implementation of e-business tolls in the selected EU countries on the basis of large database of the Eurostat (2013) data. Their transparent interpretation is an important output for discussion about e-business development, and so about implementation of ICT at SMEs and large enterprises.

Research limitations are mainly apparent in three cases: the selection of variables, their grouping and weights. The presented indicator (ESBN) uses a combination of existing variables and existing data collected by Eurostat, and puts them in a new combinaton. The grouping, as same as the weights are based on literature review, discussions with professionals and own experience from both private and academic sector. The authors have also taken into account the models of the OECD**,** European Commission**,** United Nations, and other respected international organizations.

In further research it would be interesting to compare the index-scores with scores like Global Innovation Index (2014) that underlines human aspect for business development. Pillars of this index include infrastructure, technology and business. In the year 2013, Germany was the tenth in the world and Hungary (23) was ahead of the Czech Republic (26), Slovenia (34), and Slovakia (45). But in our research – focused on e-business – Hungary is the last from the compared countries, and of course Germany again proves its strong position also in this field.

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A COMPARISON OF ICT USE IN COMPANIES OF SELECTED EU COUNTRIES

Jan Petrtyl, Ludvík Eger

Abstract

Information and communication technologies (ICT) are definitely a phenomenon that has changed our world. According to the European Commission (2008, p.13): "ICT is an umbrella term that encompasses a wide array of systems, devices and services used for data processing (the information side of ICT) as well as telecommunications equipment and services for data transmission and communication (the communication side)". Institutions such as for instance Eurostat deal with statistical monitoring and classification of ICT use at companies. The presented research is focused on the comparison of e-business in selected countries.

For the purposes of the research study, the data available from the open electronic database of Eurostat (2013) for analyses of ICT use in a business sector were used. A composite indicator was established and the level of e-business (a notion introduced by the European Commission, 2010) in selected countries in categories: Business information systems, Purchase and sale, Cooperation within SCM, and Education, communication and remote access was monitored. The attention was paid to the differences in monitored categories for SMEs and large enterprises. The contribution of the presented study is to mediate a picture of the implementation of e-business tools in selected EU countries on the basis of the large database of Eurostat (2013). The comparison between the Czech Republic and Germany, but also between other relevant competitors from the Visegrad group shows the Czech level of e-business. The outputs also show that the level of e-business at SMEs is lower than at large enterprises, that is in all selected countries.

Keywords: Information and communication technologies, e-business, SMEs and large enterprises, implementation of e- business tolls, comparison

JEL Classification: O1, O3

REVIEW OF THE CONFERENCE PROCEEDINGS "OPPORTUNITIES AND THREATS TO CURRENT BUSINESS MANAGEMENT IN CROSS-BORDER COMPARISON 2015" (UNIVERSITY OF WEST BOHEMIA, PILSEN)

Dirk Beyer

In May 2015 the annual conference "Opportunities and Threats to Current Business Management in Cross-border Comparison 2015" of the University of West Bohemia Pilsen/Czech Republic took place. The recently published conference proceedings are edited by Lenka Čechurová and published by GUC-Verlag/Germany. As in the past, this year's proceedings present a diversity of ambitious research by scholars from various universities and other institutions in the Czech Republic and Germany. They provide interesting insights into current economic trends and issues from a specific perspective spanning the borders between the two countries.

During the last decades, developments in economic and social life have become more and more dynamic and global. Markets have been permanently changing and businesses nowadays can hardly be run with a solely national focus. New communication technologies based on the internet have massively intensified these impacts. This has special relevance in particular for border regions because tendencies from both countries usually overlap there. National effects can be accelerated or relieved by such interferences. Specific opportunities and threats for businesses are the result. An illustrative example of that is given by Ungerman in a case study, where he uses several analysis methods of strategic management to describe specific risk factors when entering foreign B2B markets.

Changes in the way business is done occur especially rapidly in the trade or service sector, where required investments are usually lower and business is based rather on human capital than on machinery and plant. This is especially valid for tourism in border regions. Therefore, it is not surprising that these fields are of special interest for research. Comparisons and analyses of Czech and German conditions can provide valuable findings in order to improve growth and profitability as well as to avoid risks in these businesses on both sides of the border.

In this sense, Čechurová analyzes key problems in project management and their success rates in terms of time, cost and quality based on surveys of Czech and German service sector companies. Using a case study and an additional customer survey, Dědková looks at customer behaviour and satisfaction in rail transportation within the border region. ZIPS asks generally for reasons why people visit the neighbour country and collects data on their spending. A cluster analysis identifies several typical customer profiles with interesting results for tourism and retail-related businesses. Svoboda/Severová characterise the level of sales of direct-from-farm products and organic food products on markets in the Czech Republic and Germany based on secondary data and present suggestions for improvements.

As mentioned above, recent developments in trade and tourism are strongly furthered by new technologies. Therefore, Janeček/Tlučhoř explore the use of online communication in the field of tourism. They conduct a content analysis of the websites of Czech and German Destination Management Organizations comparing in detail several factors like primary focus, navigation/interactivity, visual presentation style or textual information. A similar look at new technologies is to be found in the following articles: Králová describes the use of QR codes in retail businesses based on an online questionnaire on the demand side. Kunešová/Mičík compare internet use and online purchases for the EU, Germany and the Czech Republic based on secondary statistical

data and their own survey of typical online shops in the B2C sector. In addition, new telecommunication technologies can also help to collect research data. Herget/Vogelová show how positioning data from mobile networks combined with classical face-to-face interviews can be used to assess the impact of big events in terms of number and origin of visitors and their estimated total expenditures. Another aspect of new technical developments is indicated by CIMLER. He describes the current technical and administrative burden for businesses linked to the new electronic sales registration which is intended to support taxation purposes in the Czech Republic.

Other articles show a stronger focus on developments within the Czech Republic. HOMMEROVÁ conducted an extensive survey among non-governmental and non-profit organizations in the Czech Republic. She elaborates specific characteristics and the use of classical management techniques, such as long-term planning, PR management, internal communication, funding or staff evaluation and development, in these organisations. Rodonaia/Šrédl characterise the market conditions and the degree of competition for bakery and confectionary products. Šrédl/Mikhalkina demonstrate the correlation between the number of workers and the economic performance of the agricultural sector and evaluate year-to-year changes in the structure of agricultural production in the Czech Republic. Comparable impacts could be assumed for other countries.

Most of the studies mentioned above collected empirical data by conducting original surveys. In most cases, the results are presented descriptively. Statistical tests for significant differences and influencing factors provide interesting opportunities for further research in these fields.

A need to carry on with the work done so far also is evident, of course, for research projects of which interim results are presented. Štolfová introduces the first phase of a four-year research project entitled "Sustainability of Cultural Heritage in the Czech Republic" which is intended to measure the economic and social impact of tangible cultural heritage. The importance of human capital is emphasized by Myslivcová. She analyzes marketing concepts for human resources via secondary research and individual in-depth interviews with HR experts from several international companies in order to prepare further quantitative research in this field.

Border regions can be seen as a kind of melting pot where influences from two countries interact in manifold ways. The broad spectrum of research work presented at the conference impressively reflects this diversity. The identification of trends, specific driving forces and risk factors is one of the most important goals for economic research that can help business ventures to succeed in this complex and dynamic business environment. Therefore, even more effort - especially in empirical research - is needed to explore and analyse these aspects. This makes one curious about the results of new or continuing research projects which are expected to be presented at this conference in coming years. It would be favourable, if the contributions of German research scientists could be increased again in the next years in order to provide a more equally weighted view from both countries. In addition, the involvement of the manufacturing industry sector could be strengthened so that all parts of the economy could be covered. Nevertheless, the presented results are very interesting and helpful for both practitioners and researchers. They provide a solid and inspiring basis for further research and a successful continuance of this conference in the coming years.

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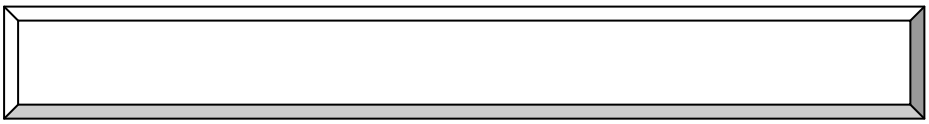

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