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PREFACE

In nowadays society, research activities are an integral part of a higher education. Therefore the role of teaching staff of higher education institutions is also to participate in preparation and implementation of research projects. The results of their work, whether on a theoretical or practical level, are presented at international scientific conferences or scientific seminars and also published in proceedings of scientific conferences, in scientific monographs and journals.

In order to encourage starting teachers and young researchers in presenting results of their scientific work and its publishing, we have decided to organize annual Scientific Conference focused on young science. First such a conference was held by the School of Economics and Management in Public Administration in Bratislava in 2012. Now this 3rd annual conference on young science was held as a cooperation of four institutions representing Slovakia, Croatia, Poland and Ukraine:

- *School of Economics and Management in Public Administration in Bratislava, Slovakia*
- *Croatian Quality Managers Society, Croatia*
- *Institute of Production Engineering, Czezstchowa University of Technology, Poland*
- *Volyn Institute for Economics and Management, Lutsk, Ukraine*

We assume it as an importance, to provide support to starting research and teaching staff from experienced domestic and foreign colleagues and to give them an opportunity for the mutual exchange of scientific knowledge and experience. The long-term cooperation within the V4 countries and Ukraine can bring many positive results.

We are sincerely glad that young scientists from various universities in Slovakia, Czech Republic, Hungary, and Ukraine attended the conference „Young VŠEMvs Science 2014". The conference proceedings contain contributions with the focus on areas:

- *Public Administration and Regional Development*
- *Economics and Management of Small and Medium Enterprises in Regions*
- *Civil Security*

We believe that the conference focused on the young science will bring positive effects not only in supporting young, starting research and teaching staff of higher education institutions, but also in supporting the development of all participating higher institutions and particular regions.

Michal Fabus[1]

HOW THE FOREIGN DIRECT INVESTMENTS INFLUENCED WAGES IN SELECTED SLOVAK REGIONS

Abstract.

Purpose. The aim of the paper is to analyze correlation between foreign direct investments and wages (further - FDI) in selected regions of the Slovak Republic based on the Pearson correlation coefficient and regression analyses.

Design/methodology/approach. The article used basic scientific methods like analysis, synthesis, deduction, induction, critical analysis and statistical methods like Pearson correlation coefficient and regression analyses.

Findings. This paper presented partial outcomes of a scientific research project focused on FDI and their influence on regional disparities. Dependence of FDI inflows and direct monthly salary was confirmed in several regions. Bratislava and Kosice region reached interdependent variables near to 0, which means that the average monthly salary is not dependent on the inflow of FDI.

Practical implications. FDI which are in Slovakia currently one of the forms of increasing regional development and reducing disparities in what leads to the penetration of foreign capital into our economy through the introduction of new production technologies, know-how, creating healthy competition, effective integration of our economy into the international division works. Acquisition of new FDI and maintaining existing foreign investors is becoming an important part of a policy aimed at increasing the competitiveness of national economies.

Originality/Value. Research presented main findings based on statistical methods, namely the correlation between FDI inflow and wages in Slovak regions, and the importance of FDI on the Slovak economy.

Keywords: foreign direct investment, FDI inflow, wages, regions, Slovakia

Research type: research paper

JEL classification: E22, E24, F21

INTRODUCTION

The general argument in relation to FDI is the effect of growth and performance of the economy. The impact of FDI on the economy can be direct or indirect. On the one hand, the flow of capital into the domestic market from abroad. On the other hand, there are countless accompanying phenomena such as reducing unemployment, supply technology, the involvement of subcontractors and the like. Especially in economies that are open to foreign trade and focus on one or several strategic sectors such as Slovakia, FDI can have a significant impact.

The aim of the paper is to analyze the correlation between FDI in the Slovak Republic and wages in regions based on the Pearson correlation coefficient and regression analyses. Confirm or disprove the argument that FDI is an important factor affecting the Slovak economy and its economic growth.

Paper presents main findings based on statistical methods, namely the correlation and regression analyses between FDI inflow and wages in Slovak regions, and the importance of

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FDI on the Slovak economy. This research builds on some Slovak authors such as T. Dudas, and J. Tancosova, and elaborates the interdependence of FDI inflows into the region and their impact on the average wage, whose rapid growth may lead to a reduction of attractiveness of the region.

The contain of the papers are brief theoretical background based on foreign and domestic authors and results of own research based on Pearson correlation coefficient and regression analyses which analyze the impact of FDI inflows and the average monthly wages in regions of Slovak republic.

1 THEORETICAL BACKGROUND

Definition of foreign direct investments

The issue of investment attractiveness determinants, which is very live at present, is being dealt with in numerous publications of Slovak and foreign authors. The importance of several determinants of investment attractiveness is stressed by A. Bevan (2000, 2004), S. Estrin (2000, 2004, 2014), K. Meyer (2004) and Y. Gorbunova, D. Infante, J. Smirnova (2012), who divided them into two basic groups (of political and economic factors) and distinguished between the factors influencing the hosting and domestic economies.

Theoretical background of the investment attractiveness investigating and the theories of FDI creation were made by prominent foreign scholars. The most comprehensive is J. H. Dunning's (1979, 2001) eclectic theory based on three categories of factors, which determine decision-making of investors. It is well-known OLI paradigm and the motives which prerequisite investment decision-making are the benefits resulting from the ownership and ownership rights, advantages from having information about the human resources and new information, and the specific benefits resulting from the locality.

According to the definition by the UN Conference on Trade and Development FDI are defined as investments based on a long-term relation to a company and reflecting permanent interest and control by the resident entity of one country (foreign investor or parent company) in the company of other country's resident. *(Kordos 2008)*

FDI has been one of the main drivers of economic restructuring in east central Europe and significantly contributed to the region's integration into the European and global markets. *(Medve-Bálint 2014)*

The level of wages is assessed in the literature as one of the most important factors affecting the decision to invest in a large number of sectors in transition economies. Dunning (1998) establishes that labor costs were a significant variable for market seeking type FDI during the 1970s, and remains a significant variable during the 1990s along with the existence of skilled and professional workforce. For efficiency seeking investors, labor costs are included in the category of the main production related costs during the 1970. *(Paul, et. al. 2014*)

The FDI are part of equity, reinvested profit and other capital (especially inside the company or group – loans). Individual countries not always gather the data for every item separately and for this reason the submitted data about the FDI cannot be fully compared among individual countries. Especially the data about the amount of reinvested profit

dependent on the resolutions of global companies is often not disclosed in many countries. *(Dunning 2001)*

Borders of capital ownership

The countries vary according to the threshold value for defining the foreign ownership of capital that they consider to be an evidence of the relation to the FDI. It represents the level of participation on the company's economic activities management. The threshold value usually used for foreign direct investments is 10 %. *(Dudas 2006)* Some countries do not state the threshold value, but they rely on completely different basis. In quantity terms, the impact of differences in the threshold values used is quite small considering the high share of the FDI focused on majority ownership of foreign branches. *(Dudas 2010)*

There are also other possibilities of having a share on the equity of companies by which the foreign investors may efficiently obtain a vote. These include subcontracting and manager contracts, turnkey agreements, franchising, leasing and granting of licenses. For instance, the OECD considers the financial leasing between direct investors and their branches, subsidiaries or affiliated companies as current loans, i.e. these relations are included in the modified definition of the FDI. *(Bevan et.al. 2001)*

FDI is an important part of the Slovak economy, the labor costs are only one of many indicators. It may therefore be agreed with the view of several authors, pointing to the importance of wages as an important indicator affecting FDI inflows into an economy.

2 RESEARCH METHODOLOGY

Methodology of the research is based at the Pearson correlation coefficient and regression analyses. The Pearson (1896) correlation coefficient is a measure of the linear dependence of two variables. It is used when variables are measured on at least an interval scale. This method is independent of the scale at which variables were measured. Pearson's correlation coefficient ρ ("rho") estimated from the random sample is written r_{xy} and is calculated by the following equation:

$$r_{xy} = \frac{\overline{xy} - \overline{xy}}{S_x S_y}$$

We assume that the statistical features of character X and Y is a linear relationship, and expresses its course function:

$$yi = \beta 0 + \beta 1x1 + \varepsilon i, \text{ where } i = 1,2,.....n \quad (\varepsilon i - \text{sum } i)$$

Function parameters express the basis of data from the statistical sample file.

The compensatory function has the form:

$$y'i = b0 + b1xi \text{ , where } i = 1,2,.....n$$

The coefficients b0 and b1 we deal with the following formulas (Hindls, 2007):

$$b0 = \frac{\sum_{t=1}^{n} x_i^2 \sum_{t-1}^{n} y_i - \sum_{t=1}^{n} x_i \sum_{t=1}^{n} x_i y_i}{n \sum_{t=1}^{n} x_i^2 - (\sum x_i)^2}$$

$$b1 = \frac{n \sum_{t=1}^{n} x_i y_i - \sum_{t=1}^{n} x_i \sum_{t=1}^{n} y_i}{n \sum_{t=1}^{n} x_i^2 - \left(\sum_{t-1}^{n} x_i\right)^2}$$

The coefficient b1 is called the regression coefficient, if its value is positive we are talking about direct dependencies, if negative, so the inverse. This coefficient indicates how many units of measure the average change in the dependent random variable, if the nondependent random variable changes by one unit of measure.

Data used in the research were collected from statistical databases of Ministry of finance of the Slovak republic, Statistical Office of the Slovak Republic and UNCTAD.

FDI inflows will be expressed in millions € (x axis) and the average monthly wage in € (y axis). We use time frame from 1998 to 2012 in the analysis.

3 RESULTS AND DISCUSSION

Foreign investors became interested in Czech-Slovakia after 1989, because the country showed new opportunities to investors, such as, unsaturated markets, solid macroeconomic situation in comparison with other countries of the region, economic potential. Comparison with developed countries, FDI is a new phenomenon in the Slovak economy. At the optimum ratio of domestic and foreign capital were several views, as well as the optimal volume in the economy in various stages of transformation *(Tancosova 2013 2014)*.

Crucial part of foreign direct investment in Slovak economy was mostly in form of foreign capital. With these investments coming to our country modern technologies were transferred that underpin the structure of the economy and the creation of new products and services, which have been successfully applied to the domestic and foreign markets.

Development of FDI inflows in Slovakia from 1993 until 2000, had low value, few investors were coming to our territory. During this period, Slovakia has not used its potential to attract foreign investors. Entry of foreign capital into the economy didn't match the demand for foreign direct investors. Slovakia lagged mainly due to political and economic weaknesses which are a threat to investors while investing. In the years 2000-2008 the situation changed rapidly in the inflow of FDI into Slovakia. The program of the new government was focused mainly on increasing FDI inflows, implement measures to meet this objective. In 2008 crises began on international financial markets due to problems of mortgages in the US, which escalated into a global financial crisis, which was reflected in the amount of global flows of FDI. As a result of the global recession TNCs its activities in the field of foreign investment significantly reduced, and the decline was reflected until the next year 2009.

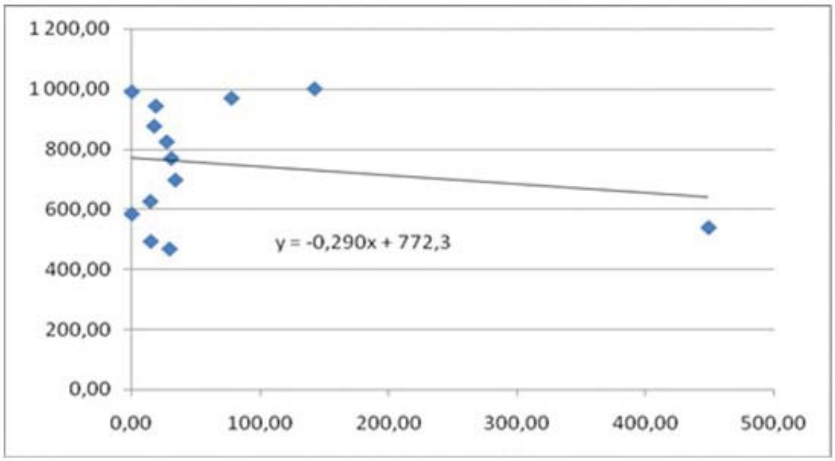
Slovakia has an open, export-oriented economy with a small domestic market and limited material resources. The advantage is membership in the EU, OECD, IMF, WB, WTO and other international economic institutions that allow SR to exploit the potential of economic growth and competitiveness in a global environment. Key source of economic growth and innovation performance SR are the foreign direct investment. Slovakia is located in Central and Eastern Europe, which means its economy, is forced to compete for foreign investment with other economies in the region, especially with the Czech Republic, Hungary and Poland. Slovakia can offer to foreign investors lower transaction costs, based on the integration of the Eurozone, entry into the Schengen Area, political stability, the introduction of the euro, investment and favorable tax conditions, a skilled workforce and low labor costs.

In this following part we will analyze the impact of FDI inflows and the average monthly wages in regions of Slovak republic. FDI inflows will be expressed in millions € (x axis) and the average monthly wage in € (y axis). We use time frame from 1998 to 2012 in the analysis. Correlation coefficients are calculated according Hindls *(Hindls 2007)*.

Bratislava region

Correlation coefficient expresses the value of -0.075, indicating a relatively weak negative relationship, which is quite surprising. This means that FDI inflows and average monthly wage in the period analyzed (1998-2012) tended to move in the opposite direction. Like by the GDP, FDI inflows may affect the average monthly salary in the following year. The result of the correlation analysis of the n + 1 is the coefficient -0,179 thus confirming the offset effect.

Figure 1 Linear regression analyses of the relationship between the average monthly wage and FDI inflows in Bratislava Region



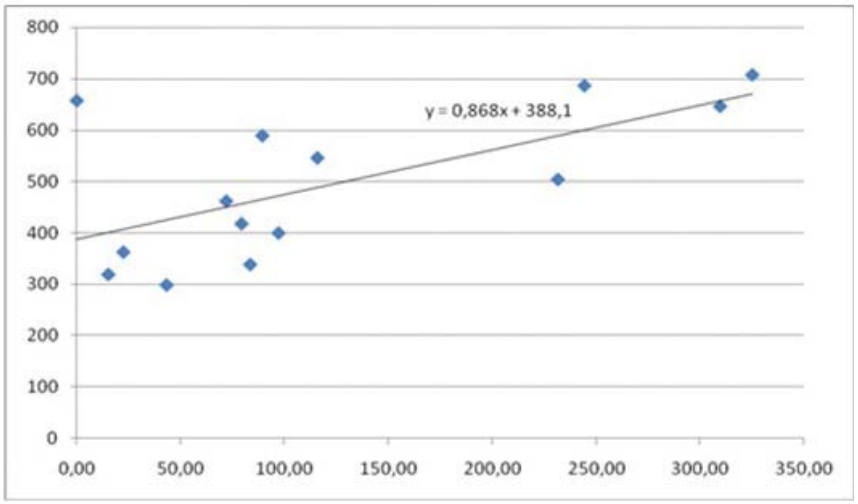
Source: own processing

Zilina region

The correlation coefficient of 0.665 we confirmed high relationship between indicators. After examining the correlation method n + 1, we get a smaller value of 0.531, it means that the inflow of investment has proven to affect wages in the Zilina region even in the year when the investment are coming into the region. In the next step of our analysis, we used

a linear regression model where we investigated a very strong relationship between FDI inflows and converting monthly wage in the Zilina region. Thus, FDI inflows into the Zilina region contribute to the increase of the average monthly wage.

Figure 2 Linear regression analyses of the relationship between the average monthly wage and FDI inflows in Zilina Region

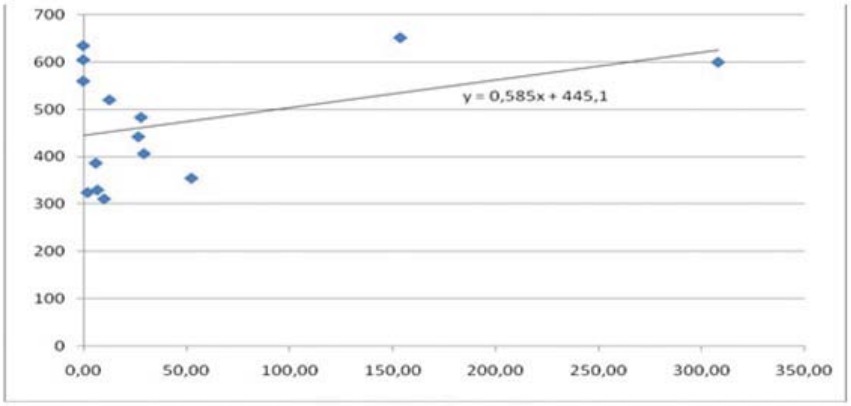


Source: own processing

Banska Bystrica region

Correlation analysis of Banska Bystrica region is 0.405, confirmed middle interdependence. In examining the correlation coefficient of n + 1, we achieved a lower value 0.247, which describes the interdependence between indicators in the same year. Regression analyses tells us about the relationship between FDI inflows and the average monthly salary in the region of Banska Bystrica, which is medium positive, FDI contributes to increase of the average monthly wage.

Figure 3 Linear regression analyses of the relationship between the average monthly wage and FDI inflows in Banska Bystrica Region

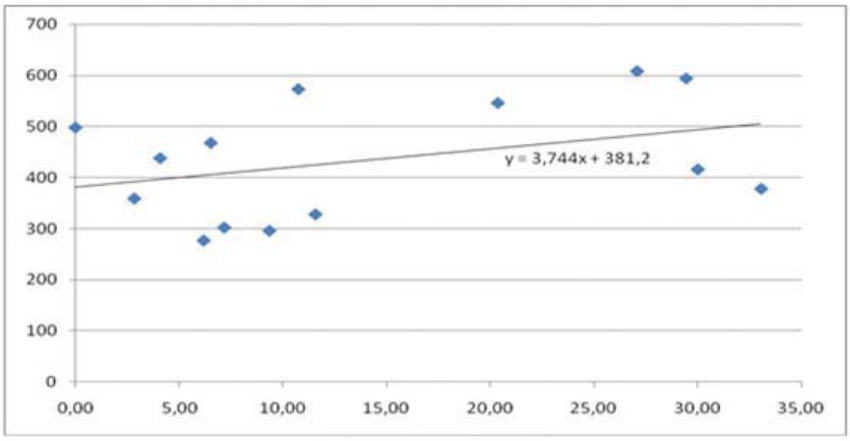


Source: own processing

Presov region

The correlation factor has a value of 0.368, while the correlation analysis n + 1 has a value of 0.250, thus confirmed delayed effect. Correlation analysis showed that the analyzed years showed medium correlation between FDI inflows and the average monthly wage in the Presov region.

Figure 4 Linear regression analyses of the relationship betwee the average monthly wage and FDI inflows in Presov Region



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This paper presented partial outcomes of a scientific research project focused on FDI and their influence on regional disparities. Dependence of FDI inflows and direct monthly salary was confirmed in several regions. Bratislava region reached interdependent variables near to 0, which means that the average monthly salary is not dependent on the inflow of FDI.

4 CONCLUSIONS

The analysis of the Pearson correlation coefficient confirmed the assumption that some of region in the Slovak Republic the foreign direct investment directly affects the development of the wages. While by the regression analysis we were able to point out a strong dependence on foreign investment in Slovak economy, it does not mean that FDI inflows into Slovakia have only positive effects. We have to take into account that there are more analyses to be made to show the impact of foreign direct investment to other macroeconomic indicators, such as employment and others.

One important factor of FDI inflows into the host economy is low cost of production factors, which is essential to working capital. One of suitable indicators of labor costs are hourly labor costs in the industry. If this costs are very high, the country is on the bottom in terms of competitiveness.

Precisely in Slovakia were the lowest labor costs in the V4 countries, which had led to a positive impact on FDI inflows. When we compare the average labor costs in the V4 countries to the EU-15, it is apparent that costs in EU-15 are several times higher. View of the overall labor costs, therefore, do not provide a complete picture. It should also monitor the binding

hourly cost on labor productivity. In terms of labor costs, Slovak Republic in recent years has lost some of its advantages against neighboring countries and mainly due to the impact of the crisis in 2009. Domestic enterprises have not been able to pass the decline in labor productivity in labor costs. The situation has stabilized and the following years there was a partial correction.

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CLUSTERING AS A TOOL OF REGIONAL DEVELOPMENT IN SELECTED REGION

Abstract

Purpose – The main purpose of this research paper is to promote cluster-based approaches – linking companies, people, knowledge and natural sources at selected region in Slovak Republic, in Čiernohronský region which is situated in the central part of Slovak Republic.

Design/Methodology/Approach – Methodology is focused on the regional analysis of researched region through selected social, economic and natural regional development indicators.

Findings – Through analysis and findings authors want to evaluate regional advantages and disadvantages and estimate the level of regional development.

Practical implications – Implications which are based on the regional analysis, are aimed at short recommendations through which is possible to reduce regional disparities and support regional development through cluster initiatives. Practical results are focused also on the evolutions in regional policy, technology and enterprise converging on the objective of supporting clusters at the selected region.

Key words: cluster, competitiveness, regional development, localization quotient

Research type: Research paper.

JEL classification:
R11 – Regional Economic Activity: Growth, Development, and Changes
R58 – Regional Development Planning and Policy

INTRODUCTION

Regional competitiveness, by materials of EU, is defined as the ability of the people, companies, industries and regional policies through using of natural sources generate a high level of income and support employment, while exposure to foreign competition. The EU policy requires taking step towards cooperation, which will take into account many players playing to a common goal, which are assumed in Europe 2020 objectives. Such cooperation requires cooperation with clear-cut benefits for all participants. An important role plays in this way clustering as a significant tool for regional development.

Regional development can be seen as a general effort to reduce regional disparities by supporting economic activities in region. How we can stimulate regional economic growth, influence the employment rate, affect the inflow of investment into the region, promote innovation and improve the business environment? Clustering is one of the significant ways how it is possible to support the competitiveness of the region as a whole.

Clustering can be defined as a concentration of interconnected companies and institutions in specifics industry of economy. These companies have to compete with each

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other, but on the other hand have to collaborate together. Relationships that exist between these companies have the potential for increase their competitiveness and for innovations development. One of the greatest assets, from which the successful clustering is depended, is the advantage that depended on the concentration of local sources necessary for business development *(Pavelková 2009)*.

Cluster is the group of independent companies and associated institutions which:

- co-operate together and compete each other,
- are localized in one or more regions, although sometimes clusters may have a global scope,
- are specialized in a particular industry of the economy, which is characterized by specific technologies and skills *(Rajčáková 2006)*.

The aim of this article is to promote cluster-based approaches and to applicate selected regional analysis, through social and economics indicators, in Čiernohronský region which is situated in the central part of Slovak Republic. Through these regional analysis is the purpose of the article to find and to specify the regional advantages and disadvantages of the region and to find the ways how it is possible to support regional development through cluster initiatives – support the regional economic growth, influence the employment rate, affect the inflow of investment into the region, promote innovation and improve the business environment.

1 MATERIAL AND METHODS

With clusters are associated many benefits for companies. One of the most important are:

- availability of specific natural resources and other unique assets may contribute to the concentration of firms in region,
- geographical proximity – the way how to reduce transaction costs (transfer of knowledge),
- saving from scale of production can be achieved more effectively through companies concentrated in a particular geographic area,
- through concentration in a particular area can be reached the specialization of suppliers who respecting labor resources, capital and technology,
- better access and share of information and sources,
- the interaction among customers starts the process of learning and more sophisticated demand.

The proximity of companies also opens the ways for joint promotion, stronger bargaining power, easier access to public resources, better cooperation with financial institutions and new possibilities for implementation of joint projects.

For identify of clusters and for determine their possible incorporation are used several techniques. Farkašová (2006) describes the most famous techniques – Localization Quotient (1) and Coefficient of Comparative Advantages (2).

1.1 LOCALIZATION QUOTIENT (LQ)

Localization quotient (LQ) indicates the proportion of employment in the region and employment in selected industry in the whole country. This coefficient monitors the ratio of employment in the selected industry in the region and employment in the this industry in the country. The formula for calculation is defined as follows *(Strážovská 2000, 80-93)*:

$$LQ = \frac{\frac{x_i}{X}}{\frac{y_i}{Y}} \quad (1)$$

xi - the number of employees working in the industry in the region
X - total number of employees in the region
yi - the number of employees working in the industry in the Slovak Republic
Y - total number of employees in Slovakia

1.2 COEFFICIENT OF COMPARATIVE ADVANTAGES (CCA)

This coefficient (CCA) reflects the proportion of the whole regional export of monitored industry to export of all industries in the region. For reveal the comparative advantage we can use the following formula *(Strážovská 2000, 80-93)*:

$$CCA = \frac{x}{X} \quad (2)$$

x– the share of exports in the industry in the region
X- export all manufacturing industries in the region

Each company operating in the defined territory should be aware which development potential this territory has. However, if we want to support the development of companies in the selected territory it is necessary to identify what are regions strengths and weaknesses and which development possibilities region has. This analytical process can be described as the definition of regional competitive advantages and disadvantages *(Hajko et al 2010, 356-357)*.

One of the most important steps in the research of competitive advantages of the region is the selection of such indicators through which we can measure the rate of development in the monitored region. The most common indicators used for assessing of the level of regional development in Slovak republic and also in the wider context of the whole European Union can be considered follows (Table 1):

Table 1. Indicators of regional development

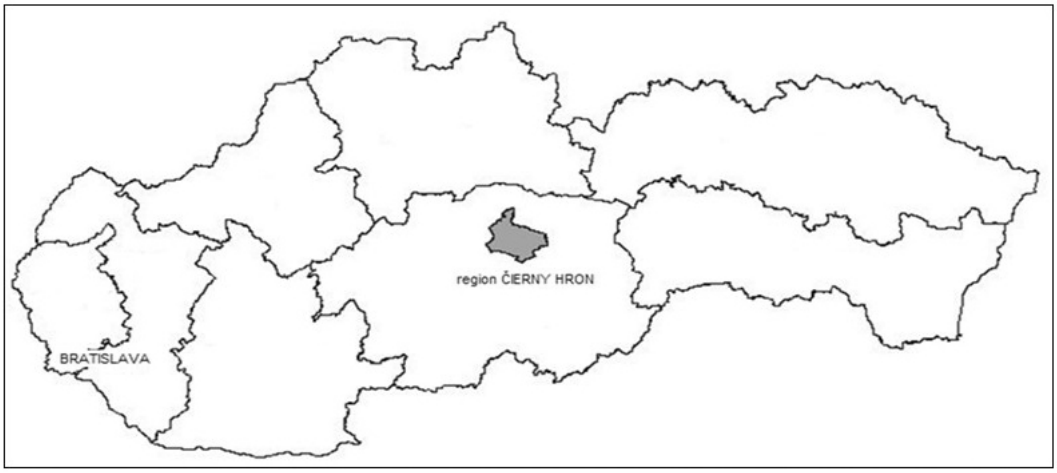
social indicators	- age structure of the population - educational level - the unemployment rate
economic indicators	- the amount of the gross domestic product - economic activity of the population
others	- the level of regional infrastructure - natural resources of the region

Source: Sloboda 2006, 26-28

2 APPLICATION OF SELECTED FACTORS FOR REGIONAL ANALYSIS

Region Čierny Hron consists of 7 municipalities and is situated in the central part of the Slovak Republic in Banská Bystrica self-governing region, approximately 250 kilometers north-eastern of the capital city Bratislava (Figure 1):

Figure 1. Localization of region in Slovak Republic



Source: own study based on web page: www.maps.google.com, 2014

The region is situated in district Brezno and has typical rural and mountain landscape. The region has, because of its nature, a high potential for the development of the wood processing industry and potential for development of tourism in all its forms.

Table 2. Basic informations about region

REGION	AREA (km sq)	Number of municipalities	Population (31.12.2013)	Population density (inhab./sq km)
ČIERNY HRON	318,66	7	11 203 ihnabitants	35,16

Source: own study, based on statistics of Ciernyhron´ municipalities for the year 2013

The main objective of regional development is recovery municipalities, companies and move towards self-sufficiency of region through the efeective use of own resources of the region and increase the economic prosperity and importance in the regional as well as national meaning.

2.1 ANALYSIS BASED ON SOCIAL INDICATORS

A) Age structure of population

The age structure of the population is an important attribute in assessing the socio-economic potential of the region. Based on information provided by local municipalities, we can analyze follows (Table 3):

- pre-productive age (0-14) : 1 749 inhabitants;
- reproductive age (15-59) : 7 005 inhabitants;
- post-reproductive age (60 and more) : 2 449 inhabitants;

Table 3. Age structure

Territory	percentual rate (%)		
	pre-reproductive age	reproductive age	post-reproductive age
region Čierny Hron	15,61	62,53	21,86
Slovak Republic	15,28	72,34	12,38

Source: Statistical Office of the Slovak Republic 2013 (April 2014)

Based on data (Table 3) we can conclude that the region has the significant population decline in the reproductive age and the increase in post-productive age, in comparision with median in Slovak Republic.

This fact demonstrates not only the gradual aging of the population in region, but the fact is that many young people leave region to find work outside. This fact greatly reduces the possibility of the internal dynamics of territorial development.

B) The rate of unemployment in region

An important factor, which is closely related with the economic development of the region, is the unemployment rate. In direct response to the negative influences of the economic crisis, the region records that the unemployment rate has been still increasing, especially since 2008. The unemployment rate in Čiernohronský region is defined in the following Table 4:

Table 4. Rate of unemployment (31.12.2013)

Territory	Unemployment rate (%)
region Čierny Hron	23,38
Slovak Republic	13,61

Source: Statistical Office of the Slovak Republic 2013 (April 2014)

2.2 ANALYSIS BASED ON ECONOMIC INDICATORS

A) Regional GDP

The Statistical Office of the Slovak Republic, in assessing of development of self-governing regions, monitors also value of regional GDP at NUTS IV (districts). The average regional GDP in the selected region is 9 270.00 EUR/inhabitant (actual at 31.12.2012). The rate of regional GDP is significantly influenced by the close regional companies which has international character – Železiarne Podbrezová Inc., Rettenmeier Polomka Timber Ltd., Lesy SR Inc.

Table 5. The level of GDP in EUR

Territory	GDP / per capita (31/12/2012)	GDP / per capita (31/12/2013)
region Čierny Hron	9 270	(not found)
Slovak Republic	12 990	13 260

Source: Statistical Office of the Slovak Republic 2013 (April 2014)
Program of Economics and Social Development of BBSK

Based on the above information, we can estimate that the GDP in region Čierny Hron oscillates at 70 % compared with the average GDP in Slovak Republic. This means, that the observed region is with GDP rate significantly below than is the national average of GDP.

B) Economic activity of the population

The main objective of this indicator is to analyze the economically active population in the surveyed industries of the national economy.

Table 6. Economically active population (EAP)

Selected industries of the national economy	EAP		Δ %
	2011	2013	
Agriculture	222	241	+ 8,56
Forestry	294	324	+ 10,20
Wood-processing industry	471	517	+ 9,77
Manufacturing	1 831	1 725	– 5,79
Contruction	213	209	- 1,88
Wholesale and retail trade (trade, lease, sale)	380	436	+ 14,74
Tourism	319	311	- 2,51
Transport and storage	174	171	- 1,72
Finance and insurance	35	118	+ 237,14
Public administration	319	272	- 14,73
Health service and social care	267	267	0,00
EAP (not specified industry)	739	776	+ 5,01
TOTAL	5 264	5 367	+ 1,96

Source: own study based on information of regional Office of Labour in Brezno (Januar 2013, November 2014)

In Table 6 percentual changings (Δ %) in selected industries in Cierny Hron region, after 2 years, were compared. There was compared changing of economically active population

from year 2011 with year 2013. Based on the results it is possiblle to conclude that the most significance positive changes are in the following industries:

1. agriculture
2. forestry and wood processing industry
4. whole and reatil trade
5. finance and insurance

Many of the economically active population in region works particularly for the primary industry: manufacturing companies, forestry, wood-processing industry and agriculture. Manufacturing has an important role in the employment of the people. But most of the manufacutring companies and construction companies, where economically active population of Čiernohronsky micoregion have worked, are operated out of Ciernohronsky microregion. It means that many people travel for work to the near villages (Podbrezová, Valaská – Piesok) and to the district city Brezno.

The tertiary industry is mainly represented by small private companies and organizations operating in the tourism – VYDRA, n.o. (Rural development activity, non-profit organisation), Čierny Hron Forestry Railway (tourist attraction with narrow truck gauge), 3 hotels and restaurants.

In the region have operated together more than 40 small enterprises and 1 medium-sized company (LESY SR – Forestry of Slovak Republic, state corporation) as we can see in the Table 7:

Table 7. Enterprises in Cierny Hron region to date 31/12/2013

Enterprises in Cierny Hron region	Number of companies	Type	Ownership
Agriculture	5	small companies	privacy
Forestry	6	4 small companies 1 medium sized	privacy state corporation
Wood-processing industry	9	small companies	privacy
Manufacturing	1	small companies	privacy
Contruction	1	small companies	privacy
Wholesale and retail trade	2	small companies	privacy
Tourism	6	small companies	privacy
Transport and storage	2	small companies	privacy
Finance and insurance	4	small companies	privacy
Others	8	small companies	privacy
TOTAL	44	-	-

Source: own study based on information of Cierny Hron municipalities (November 2014)

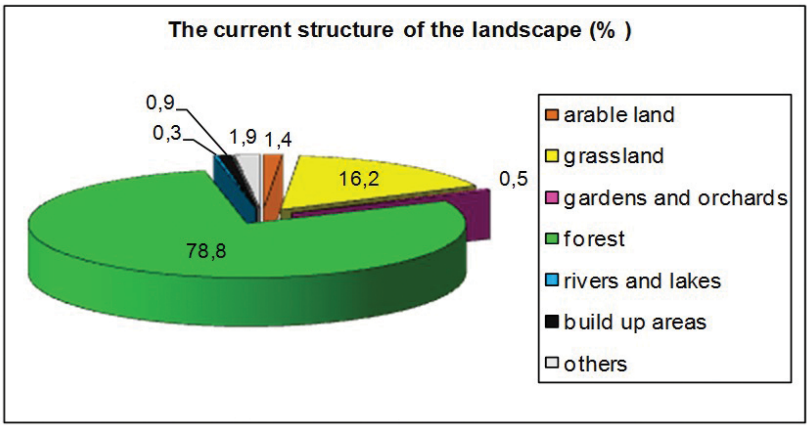
Due to the rural and mountain character of territory, are particularly important companies operating in tourism, forestry and wood processing industry. Forestry small companies and state corporation – LESY SR have closer cooperated with small companies in wood processing industry. But this cooperation has not uniform coordination wihtout strategic steps and mutual targets.

2.3 ANALYSIS OF NATURAL RESOURCES

The territory of region Čierny Hron could be characterized as a mountainous landscape, with many forestry areas with sparse rural settlements. In the region is prevailing forestry, tourism and recreational and agricultural functions. The forest is almost 80 % of the area. The region has rare and preserved natural environment with very good care about forest fund and significant agricultural activity. It is a typical mountain environment, whose territory extends in National Park Muránska planina and protected landscape Poľana. Region belongs to the territories with high environmental quality.

Representation of current landscape structure of the region is illustrated by the following figure (Figure 2):

Figure 2. Structure of the landscape



Source: Development strategy of Micoregion Cierny Hron, 2010

3 SHORT EVALUATION OF THE ANALYSIS

Analysis of the region we can summarize in following statements:

- relatively low rate of the population in reproductive age;
- low level of education;
- high registered unemployment rate;
- low regional GDP;
- employment mainly in the industries of manufacturing, wood processing industry, finance and insurance and services;
- the most important position from the volume of enterprises which are operating in the selected region have – forestry, wood processing industry and turism
- quality natural environment and high forestation;

4 RESULTS AND DISCUSSION

Based on the above results from the analytical part, we would like to claim that the area has a rural character with an attractive natural environment. The region has, due to the high forestry cover (78,80 % of territory) and a good environment, potential for further

development of the wood processing industry (WPI) in closer and better cooperation with forestry industry, which has also important postion in region. On its territory operate 44 small and medium sized comapnies. From this volume are several companies (total 15 comapnies – 9 in WPI industry, and 6 in forestry), that employ a significant proportion of the population in a given industry of the economy (Table 6, Table 7).

The aim of this papier is focused on supporting the regional development in the region Čierny Hron through cluster initiatives. Cluster is one of the supporting tools for the development of small and medium-sized enterprises in the region. The basic aim of cluster existence is to promote cooperation among companies in the selected industry. Through the mutual cooperation we can see opportunities for growth competitiveness of enterprises, new possibilities for development of human resources and promoting innovations.

The observed region has a potential for further development of cooperation among enterprises in wood proccesing industry, what we can verify through following formula – LQ – Localization quotient (1):

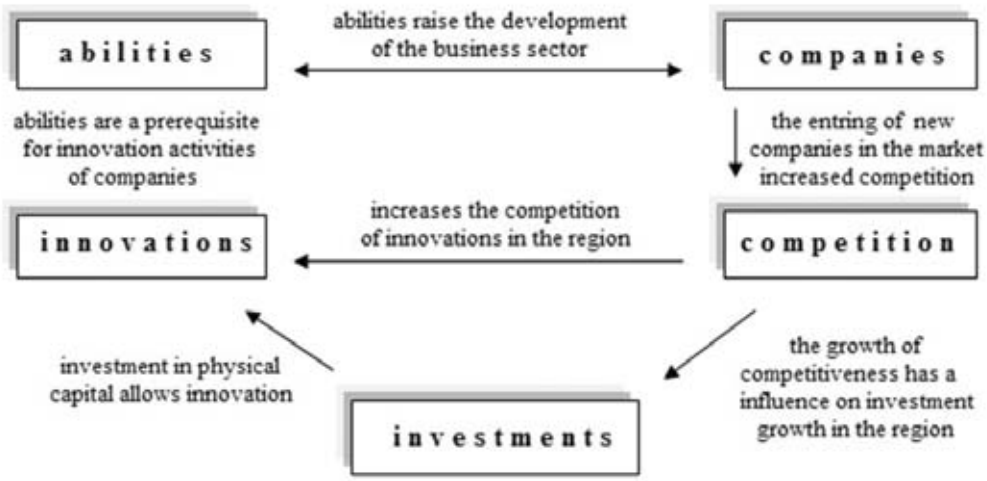
$$LQ = \frac{\frac{517}{5367}}{\frac{37939}{2412657}} = \frac{0{,}0963294}{0{,}0153105} = \underline{\underline{6{,}29}}$$

The above calculation state that the share of employment in the wood processing industry in the region is 6.29 times higher than average proportion of total employment in the selected industry in the Slovak Republic. This calculation can confirm our statement that the selected region has a high potential for cluster initiatives in the wood processing industry.

This recommendation is based on the development potential of the territory. Successful clustering can be considerable advantage for region, which is based primarily on the local concentration of resources necessary for its development.

The main precondition for a successful clustering is mutual cooperation of companies and their mutual productivity. The following figure interprets 5 basic assumptions upon which depend the successful development of regional competitiveness.

Figure 3. Assumptions of regional productivity



Source: own study, HM TREASURY 2004, 45

To build up the cluster in the wood processing industry in the Čiernohronský region is one of the basic assumption for the next development and improvement of cooperation between companies and for implementation their further developing common visions and projects.

Cluster initiatives in the selected industry are based mainly on:

- analysis of region, which indicates that wood processing industry has significant position in the region (Table 6, Table 7),
- territory of the region has a high forestation (Figure 2) and a good natural environment.

SUMMARY

The realization of cluster initiatives in the wood processing industry in the region Čierny Hron can bring a successful cooperation between small companies in WPI and forestry, higher economical growth and through this steps higher and better investments to the physical capital, which can bring innovations. There are many ways, how can companies obtain the external financial sources for their development. To balance regional disparities within EU was created the system of fincnial instruments, which is know as Structural Funds. For companies operate in wood processing industry there is Operational programme (in the period 2007 – 2013) – Competetiveness and economics growth, or in the programming period 2014 – 2020 mainly Operational programme Research and Innovations, Integrated Regional Operational Programme.

Higher investments have an impact on the development of skills which are the basic requirement for further development of the regional businesses. Ultimately, is it the way how to improve not only competitiveness of companies but also competitiveness of the region as a whole. The development of companies has a good preconditions for the development of the whole region by reducing of unemployment, improving the regional infrastructure quality (positive externalities) and increasing the regional global attractiveness.

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CURRENT CHALLENGES AND SECURITY RISKS

Abstract

Purpose – The main purpose of this paper is to provide an overview of changes in the security environment and highlight the most significant risks and threats of the 21st century. The paper describes in more detail only selected instruments of crisis management. Firstly, we focused on operations of the international crisis management, assistance and support operations of the national crisis management in Slovak republic. Next part is focused on financial instruments used in the system of the crisis management and on the opportunity to change „ex post" to „ex ante" instruments.

Design/methodology/approach – At the beginning of creation our paper we found both authors dissertations connection. On this basis, we made an analysis of the available literature from relevant areas, namely in funding of the crisis management and deployment of the armed forces in operations. A significant part of the paper was created from the synthesis of lessons learned.

Findings – Due to changes in the security environment new risks and threats emerge. It is necessary to create instruments, which would be able to response at the risks and threats effectively. Deployment of the armed forces into operations is slightly different. They are not aimed only on finding solutions of existing conflicts, but also on preventive action in risk areas. In the case of Armed Forces of Slovak republic is also significant involvement in support and assistance operations, where they cooperate with other security forces (e. g. Police of Slovak republic). Change of using instruments is related to the necessity of change the crisis management funding. It is accentuated the substitution financial instruments from „ex post" to „ex ante". The purpose of „ex ante" instruments is to transfer the state budget costs on other subjects (e. g. municipality).

Research limitations/implications – The main research limitation was the lack of relevant Slovak academic resources, which would be dealing with the themes. Although foreign literature is high quality, not everything in it can be applied in Slovak republic.

Practical implications – The meaning of this paper is to provide an overview of the issues and to achieve that the reader would be interested in further study in the field. Recommendation for practical application related to the paper is deployment of the Armed Forces of the Slovak republic into more operations on the territory of the Slovak Republic (assistance and support operations), as well as changing crisis management funding connected with change of financial instruments from „ex post" to „ex ante".

Originality/Value – The value of the paper is approach contents of both authors' dissertations. It will be possible to apply results related to the topic of the paper after careful processing of dissertations, and not only in theory but also in practice.

Keywords – Crisis management, Risk, Challenge, Financial Instruments, Peace Support Operations

Research type – Viewpoint

JEL classification – H12

INTRODUCTION

The world is changing in many ways, in the natural, political, social, technical, and technological environment. Present is characterized by intensifying impacts of climate changes, continuing political instability of countries, increasing the activities of the terrorist groups, raw material and energy deficiency, large-scale migration of population, or dissemination of contagious diseases. These changes often cause the existence of the new

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threats, but tools which are used nowadays to reduce them are not sufficiently effective. Therefore it is necessary to create and use in the practice new efficient and more complex instruments.

Crisis management system is an important tool during the prevention process at potential crisis events, as well as effective response to emerging crisis situations. The international crisis management uses peace support operations to ensure peace and to increase level of the global security. The crisis management system at the national level uses to solve crisis events through the deployment of the armed forces in the support and assistance operations. Naturally, in the whole system armed forces does not act individually, but there are also public authorities, armed security forces and emergency teams. Activities linked to prevention and solution of existing crises events are also associated with the question of how they are or how they could be funded.

The aim of this paper is to provide basic information, starting points and nature of the crisis management. This aim was possible to fulfill only by the fact that we used different methods of scientific work. The most important ones, the analysis of the available literature and synthesis of lessons learned. The main purpose is to provide short overview of changes in the security environment and to highlight the most significant risks and threats of the 21st century. We focused on the instruments, which are applied to prevent and resolve crises events. Because of the limited scope, we decided to consider only partial section of the issue. Attention is given mainly to importance of peacekeeping operations as an instrument of the international crisis management, to approach the deployment of armed forces members into assistance and support operations on the national crisis management level and to financial instruments used in the system of crisis management.

THEORETICAL BACKGROUND

1 CHARACTERISTICS OF THE CRISIS MANAGEMENT

The existence of humanity is from the beginning accompanied by crisis events. They arise independently of human activities in the nature, but they also arise in the direct relation to human action and behaviour. A man with continuous improvement of his knowledge began to realize that there are a lot of impacts which threaten him directly or indirectly in the environment. Investigation and research progress directed to the technical and technological discoveries brought many risks. The history and two world wars were conditioned by the fact that a man deemed military risk as the most serious risks in the past. This understanding has not changed even after the World War II. The division of the world into two camps, and the constant possibility of further armed conflict caused the emergence of the crisis management. For the first time, that term was used during the Caribbean crisis (also called Cuban crisis) in 1962. At that time, the crisis management meant working group created by J. F. Kennedy and the main task of it was to reduce the military conflict risk between USA and USSR. Current meaning of risks and threats is slightly different. Traditional military risks are gradually replaced by the new ones. The new asymmetric threats emerge. Terrorism, proliferation of weapons of mass destruction, climate changes, lack of strategic raw materials, lack of drinking water and food, epidemics, pandemics, or vulnerability of information

systems is becoming more dangerous. All these facts caused the need for a specific type of management, and that is the crisis management.

The crisis management means:

- system of political and military-political measures,
- system of international humanitarian aid,
- system of state measures (public administration) aimed at preventing and responding to crisis events,
- system of economic measures aimed at supporting crisis event response in the society or in the state economy *(Šimák, 2012, 54)*.

It is necessary to understand the crisis management from three perspectives, functional, institutional and theoretical. Firstly, from a functional point of view, the crisis management means specific activities of managers which are aimed at crisis events response. There are using specific principles, methods and procedures. The main aim is to overcome the crisis event, its negative consequences and to ensure system restore. Secondly, from an institutional aspect, the crisis management is perceived as a set of institutions and personnel. Their work is aimed to analyze the emergence of the crisis events, their causes and consequences, and also to search measures for prevention and response to existing crisis events. Lastly, from a theoretical point of view, crisis management is a logically organized package of information about potential crisis events, their causes and consequences, methods and procedures to solve them *(Šimák, 2004, 84)*.

The theoretical model of the crisis management shows phases and relations of crisis events solution. The first step is prevention. This one overlaps with the phase of emergency planning. It means that if prevention would be absolutely comprehensive and effective emergency planning would not be necessary. Preventive measures are focused on prevention crisis events. Nevertheless, the task of emergency planning is to prepare procedures for solution of crisis events if it cannot be avoid to emergence of crisis events by preventive measures.

In the case of the crisis event emergence, it is necessary to react for it timely and effective, because of reduction potential damages and losses. The recovery phase is not explicitly directed by the crisis management system. Subject, who was threatened or damaged by the crisis event, is also participating in the recovery phase. However, the crisis management system does not end with the recovery phase. It is important to pay attention to the feedback. It is necessary to evaluate the crisis event and its progress and then to formulate conclusions and recommendations to improve preparedness of the system *(Šimák, 2004, 158*).

The main task of the crisis management is to prevent and to solute crisis events. The object of the crisis management is to assess risk, to analyze them, to describe progress of the crisis event, to implement effective preventive measures, and to react in such a way to cause the least damages and losses *(Šimák, 2012, 56)*.

2 CURRENT CHALLENGES AND SECURITY RISKS

Character of security risks has changed in the 21st century. The second half of the last century was characterized by central planning, therefore risks, whether military or non-military, had been largely managed from top to bottom. After the fall of the iron

curtain, Slovak republic had undergone an elaborate transformation from command to mixed economy. Slovak republic had prepared and transposed a lot of laws into its legal environment.

A significant step in Slovak history was successful accomplished accession process into the organizations of the international crisis management, such as North Atlantic Treaty Organization, the European Union (hereinafter „EU") or the Organization for Security and Co-operation in Europe. However, our membership in these organizations is not connected only with benefits, but also with many new risks. These risks have an international character and they are directly related to the facts, like opening of markets and borders, the common security policy with other individual member countries, or participation in military operations.

The most serious current global threats and risks are:

- large-scale migration of population,
- lack of water on the planet,
- power blackouts,
- epidemics, pandemics,
- cyber security,
- food security,
- terrorism,
- proliferation of mass destruction weapons,
- lack of strategic raw materials and others.

These risks are determined by unequal distribution of wealth and natural resources in the world. The increase of population density on the planet is related to the increase of diversification countries on rich and poor ones. In addition to these risks, there is a pronounced effect of climate changes, which cause more frequently floods, but also extremely drought. The influence of these risks have negative impact on loss of property, lives and health of people, the environment, cultural heritage, but also on the overall state economy. The main aim of the society should be focused on consequences minimization and on preparedness to response on crisis events. This is the starting point for define the crisis management role in the society, mainly its subsystem of prevention. Prevention should not be understood only as an implementation of protective measures, but it should consist also the ability to learn from other countries and to communicate with them. Despite the various priorities, the state role should be to keep direction of anti-crisis policy aimed at effective prevention. However, the economic development of the world economy reduces the amount of resources spend on prevention, because priority areas are education, health and social issues. In the relation to the above we can see a big challenge. That is the change of funding the crisis management system, particularly subsystem of prevention from public budgets to multi-source funding.

2.1 PEACE SUPPORT OPERATIONS AS A TOOL OF THE INTERNATIONAL CRISIS MANAGEMENT

The direct involvement in the fighting, wars and armed conflicts has always been associated with armed forces. Nowadays, it is even more important and more necessary to use the armed forces peacefully. The countries deploy their armed forces members into

peace support operations. These activities are not focused on warfare but also for aid and reconstruction of the countries devastated by the action of terrorist groups, dictatorship or other negative impact of the human factor.

The peace support operation is the operation of the international community to prevent and resolve conflicts. The peace support operation is impartial and multinational operation under the mandate of the United Nations (hereinafter „UN") or Organization for Security and Cooperation in Europe, which, however, requires also the use of the armed forces except the diplomatic and humanitarian ways and means (Jurčák, 2009, 14).

The nature of peace support operations has significantly changed. The peace support operations meant the occasional use of the UN as a solution or guidance. They were held mostly after the end of fighting in the conflict and they were focused on the monitoring and surveillance of the situation in the affected region. The current situation is much more difficult because of the increasing number of intrastate conflicts, so it is expected something more from the peace support operations. They include a variety of measures, like monitoring, supervising disarmament, ensuring humanitarian aid, training local security forces, mine-clearing, checking respect for human rights, and the overall recovery of the government.

Minister of Foreign Affairs of Algeria, Lakhdar Brahimi, responded to change the tasks of peace support operations in 2000. He divided peace support operations into four species. After eight years the UN doctrine respected the classification of Brahimi and divided the peace support operations into:

- conflict prevention,
- peacemaking,
- peacekeeping,
- peace enforcement,
- peacebuilding (United, 2008, 17).

Each one of the above five types of peace support operations has its own specifics. In reality, they often overlap and rarely take place separately and independently. As far as conflict prevention and peacemaking happen before and during the conflict, peacekeeping and peacebuilding follow after reaching an armistice between the warring parties.

2.2 SUPPORT OPERATIONS AND ASSISTANCE OPERATIONS AS A CRISIS MANAGEMENT INSTRUMENT IN SLOVAK REPUBLIC

The issue of peace support operations is indeed very extensive, therefore it is not possible to clarify it in the paper. The aim of the paper is to inform and provide an overview about peace support operations, but also about the work and activities of the armed forces. The primary role of the armed forces is the defence of the state. Moreover, the armed forces involve in many operations. Those are foreign operations led by the organizations of the international crisis management or assistance and support operations used to support and to assist the crisis management subjects, especially at home. Specific attention will be given to the Armed Forces of the Slovak Republic and their activities.

The Armed Forces of the Slovak republic participate in operations aimed at support of public administration and local government, alternatively in operations aimed at assistance and help eliminate the negative effects of non-military crisis events in the Slovak republic. In many cases, the main meaning of the activities of the Armed Forces of the Slovak republic in assistance operations and support operations is to strengthen the Police Force. The tab. 1shows the possible deployment types of the Armed Forces of the Slovak Republic into the above mentioned operations.

Table 1. The types of the involvement of the Armed Forces of the Slovak republic into the operations aimed at cooperation with the Police

Deployment of the Armed Forces of the Slovak Republic		
Assistance operations The allocated forces and resources for the operation are in the subordination of Police of the Slovak republic	**Support operations** The involvement of the whole units are used to help Police, but remain subordinate their commanders	**Operations relating to the provision of services** They are associated with the loan of materials, buildings, equipment etc.

Source: (according to Kelemen, 2011)

The Armed Forces of the Slovak Republic conducted many activities in specific conditions and situations during the assistance or support operations, such as:

- natural disasters, technical and technological accidents, catastrophes,
- pandemics, epidemics,
- large – scale migration,
- terrorism, etc.

During this period, they carry out a range of activities, such as survey, decontamination, restoration of damaged infrastructure, the security service. However, the Special Forces and resources are not intent to solve non-military crisis situations, and it is using only what is available (Kelemen, 2011, 94).

2.3 STARTING POINTS TO CHANGE FUNDING OF THE CRISIS MANAGEMENT

Nowadays, the issue of crisis events prevention funding or the whole crisis management system funding is really current. Crisis management sources for funding are equal or smaller, however, we can see prevailing trend of increasing costs on protective measures. Globally the importance of „ex ante" financial instruments for planning a reserve on future losses grows. In the world, there are accentuated extra-budgetary instruments, which follow from growing trends of indebted countries. Funding from state budget mainly prevails in cooperation with co-funding from the European Structural Funds in Slovak republic. The national economics still suffer from the effects of the economic crisis, which is reflected by small growth of gross domestic product. As a result of these events it has started to talk more about filling up budget and increasing the effectiveness of using resources in the world. Slovak republic is forced by EU to be stricter in managing its resources. Slovak republic has to do a lot of interventions in the state budget. This can be done in two ways, the first one is on revenues side and the second one is on expenditures side of the budget. Budget cuts are based on various criteria. One of them is the measurability of outcomes in relation to used resources. That is the reason why crisis management and prevention of crisis events does not receive sufficient resources.

The current system of funding the crisis management of Slovakia gains from following resources:

a) The state budget

- through the crisis staffs of district offices, through the Government Office and Government reserves,
- through specialized government organizations responsible for prevention at any point, according to special regulations (e. g. Slovak Water Management Enterprise),
- financial resources of central government authorities,
- reallocation between the different chapters of the state budget,
- from a specific funds (e. g. Environmental Fund),

b) Non-state sources

- from corporate and personal own resources,
- sources of municipal authorities,
- implementation of an insured event within the commercial insurance,

c) Other sources

- EU funds (Solidarity Fund),
- Council of Europe Social Development Fund,
- humanitarian aid (Klučka, 2013, p. 58).

Table 2. Financial instruments appropriate to the requirements of crisis management

Ex ante financial instruments	Ex post financial instruments
The Reserve fund	State budget
Catastrophe bonds	Taxation
Contingent Credit	Reserves in foreign currencies
Forgivable debt	Domestic bonds and loan (the central bank)
Macro insurance	Loans (multilateral and international)
	Aid
	The European Structural Funds

Source: (according to Klučka, 2013)

However, policy of success against disasters requires acting of government in ahead of loss, rather than waiting until after it has occurred. If we cannot have prepared money for solving huge consequences of big catastrophes, these events can destruct our economy. That is the reason, why is better to use„ex ante" financing instruments. The biggest disadvantage of„ex post" disaster policy and budgeting is that the expectation by individuals and households of recovery assistance reduces personal incentives to prepare for disasters. It can reduce precautionary saving, increase risky behaviour and reduce the gains from private mitigation. „Ex post" government policy and budgeting therefore can diminish private„ex ante„efforts to reduce the costs of disasters without replacing those efforts with effective public counter measures (Miller, 2005, 7).

„Ex ante" financial instruments were not characterized in more detail in Slovak academic community. Therefore, within the scope of the paper we try to provide only theoretical expression of certain instruments.

Reserve fund can be created to provide a source of post-disaster liquidity. It could be also used to accumulation of resources on prevention. While original resource allocation and

replenishment are insufficient, reserve funds eliminate the uncomfortable, common practice of apportioning the national budget for loss financing. Simultaneously, if the state does not have sufficient liquidity at time of crisis event, the problem of acute response also consists in the length of waiting for the financial resources of loans from banks or international institutions. The problem with creating the fund can be connected with defining of the amount to response on crisis event, because the amount that remains in the account of the fund could be used on other purpose. The reserve fund will not reduce the size of crisis events consequences. It only serves to mitigate the impact on the state budget. It represents a proactive approach to planning for any losses (Hochrainer, 2006, 98).

Finally, it is necessary to create the mechanism of accumulation the fund resources and to determine a method of partial use as an instrument for funding or co-funding projects in prevention. Priority in public administration of Slovak republic should be aimed for co-funding project from the European Structural Funds (in particular priority axis Environment), through which government, but mostly municipalities increase the protection against effects of climate changes.

Contingent credit is similar to an overdraft loan, which importance is visible after the occurrence of crisis events. Basically it consists in time dimension, so it is not necessary time to prepare and process of written documentation. We can say that resources are immediately available. The disadvantage of this instrument is based on potential containment of further increasing indebtedness (Klučka, 2013, 60).

We can say that contingent credit as a financial instrument is created for prepare a reserve, which is used when state or organization spend resources on current accounts, or on the funds created to deal with crisis events.

Catastrophe bonds are securities designed for cover damage from future crisis events. The advantage of financial instruments follows from transferring risk to business sector, which is involved in its funding. The importance of that financial instrument rises proportionally with the growing volumes of trading on the stock exchange. Therefore it is used mainly in the United States (Klučka, 2013, 60). In the crisis events prevention funding field exist large space to improve the present situation in Slovak republic. The reserve fund would be suitable variant of solution, which priority will aim to co-financing crisis events prevention measures in conjunction with the European Structural Funds. This would largely relieve the state budget.

FINDINGS

The main task of the armed forces is to defense the national territory and to fulfill obligations arising from international treaties. Slovak republic as a member of international crisis management organizations is closely linked with other member states, as commonly face the similar threats and risks. The most serious threats are terrorism, proliferation of weapons mass destruction, failed states, the vulnerability of information systems and others. However, if we assess what risks and threats are constantly affected Slovak republic and which of them cause damages, we have to mention natural disasters, namely floods, widespread frost, storms, and landslides. The reaction, which means consequences elimination of crisis events, is primarily in the scope of the integrated rescue system and its basic and other forces. The Armed Forces of the Slovak republic have their place among those. It means they are also involved in the

consequences elimination. The Act of the National Council of the Slovak republic No. 321/2002 Coll. about the Armed Forces says that the Armed Forces of the Slovak republic can be used to eliminate the consequences in the case of state of emergency or emergency event.

Most of the available literature discusses about the activities of our soldiers in foreign operations. They fulfill challenging tasks and help to build peace and to increase level of security in the world. This cannot be denied. However, we did not want to mention only this type of deployment of our troops in the paper. In our opinion, it is necessary to mention the fact that members of the Armed Forces of the Slovak republic fulfill important tasks in the case of crisis events solution emerging in our state area. They build barriers against floods, fill bags with sand, and provide technique and material. They assist to protect the lives, health and property of the inhabitants of towns and villages affected by crisis events through the assistance and support operations. It would be appropriate to pay more attention the role of members of the Armed Forces of the Slovak republic in national crisis management, what conditions they have to prepare for the these tasks. Marginally exercises and simulators are mentioned, but it could be interesting to learn more at least. Our findings related to the lack of such information lead us to further examine the relevant areas.

As we mentioned previously, the most serious risks and threats which affect Slovak Republic are natural disasters, especially floods. Floods cause high damages, which can be avoided only by effective prevention. Nowadays, we can see increasing trend in expenses associated with preventive measures in the world. State resources are not sufficient on everything, due to the growing indebtedness of countries. Various social and political actions some fields have bigger priority. It is prevailing trend of transferring the preventive measures costs from national budgets to the budgets of local governments, municipalities, companies and citizens in the world. This is represented by the change of crisis management system funding from „ex post" to „ex ante" financial instruments. The main idea in „ex ante" financial instruments is creation of various funds, specific loans and insurance. The Slovak Republic is still strongly involved to „ex post" instruments, which is caused by using of European Structural Funds, where Slovakia has accumulated a large amount of money. The primary task will be creation a specific fund from which mainly villages and towns could draw in the reconstruction of infrastructure. Otherwise, it could be used as a resource for co-financing projects from EU.

CONCLUSION

Development of the security environment is the reason why nature, progress and range of risks existing in this environment change. It is required to response on these changes flexibly and it is possible only through changing existing and applied instruments, or creating and implementing new ones. New instruments should be able to prevent and solve existing crisis events comprehensively and effectively, what constitutes the key role of the crisis management.

The aim of this paper was to provide basic information and an overview of the starting points and the nature of crisis management as such, but it is mainly about current threats and challenges of the security environment and about instruments implemented to prevent and solve crises events. We fulfilled this goal, so in the connection on it we can make a few conclusions. The first partial conclusion of this paper is the statement that it would be appropriate to change the way of funding the crisis management system in the Slovakia from public budgets for multisource funding. This is closely related to the use of financial instruments, so it means that Slovakia should use „ex ante" financial instruments more than „ex post".

The next part of our paper was about response of the Slovak republic to existing threats through the deployment of armed forces members in operations. There are meant peace support operations at the international crisis management level, support operations and assistance operations at the national level. In our view, it would be more appropriate to deploy the armed forces into assistance and support operations performed in territory of Slovak republic and related with activities such as eliminating negative consequences of emergency events.

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Lukáš Kopanický[1]

COMMERCIAL INSURANCE FOR SMALL AND MEDIUM-SIZED ENTERPRISES

Abstract

Purpose – is the clarification Small and Medium-Size Enterprises (SMEs), identification of risk of SMEs and how to help to start-ups with commercial insurance.

Design/methodology/approach – with theoretical explanation of SMEs, risks of SMEs and general commercial insurance products. I use my own experience about the problem.

Findings – For start-ups SMEs is so hard to start their own business. For the start they need permissions for their business, money when something went wrong, be prepared when unexpected problem come. Or they could deal the problem with commercial insurance through insurance products.

Research limitations/implications – find out how many SMEs are in Slovak republic and which proportion have on the market.

Practical implications – thesis clarify an example what the SMEs who are trying start have to do if they want to be successful.

Originality/Value – This thesis show another type side of view on the problem with SMEs and opportunities how solve it.

Keywords: small and medium-sized enterprises, insurance, risks of small and medium-sized enterprises

Research type: viewpoint

JEL classification: G22

INTRODUCTION

In this study we are focusing on the importance of entrepreneurship. With the emphasis on small and medium-sized enterprises (SMEs) which play an important role in the economy. They are considered the backbone of the labour market because of their rapid ability to adapt to current changes, meeting the needs of clients and because of their high potential to create jobs. We characterize the risks of small and medium-sized enterprises and the ability to transfer risk and insurance underwriting. We also deal with the importance of the commercial policy for business and it potential to help companies during bad times and how they can help run the business. The entrepreneurship in small and medium-sized enterprises is very important in all countries with a market economy. They belong to the largest regional employers and they have very rapid adaptation to changes in the labour market and economy. They are called the backbone of the economy. The aim of study is to characterize the risks of SMEs, the possibility of applying and what are the possible forms of insurance. I am working for an insurance company and I could see and I have meetings with SMEs who wants to starts their own business. But on their way are a lot of troubles which they could solve only with insurance (if they do not have money).

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THEORETICAL BACKGROUND

SMEs are the worldwide biggest employer. In each country programs have built-in support for launching their existence. Further there are long-term sup- ported the government in the development and progress. The article states slaughtered theoretical and statistical data from the Slovak Republic concerning SMEs and the risks that threatens them. And how is possible to cover against them.

1. CHARACTERISTICS OF ENTERPRISE

Enterprise is an essential element of modern economies. It is called a planned organized economic unit in which production processes are combined to produced and sell products or services. Enterprises thus form part of the economy and production as well as counterparts to households, creating a part of the consumer economy. It is important to perceive the difference between the terms „enterprise" and „firm". While the enterprise is an economic unit, the firm is a trade name under which the enterprise acts and performs transactions on the market. The basic objective of the enterprise is achieving and maximizing profits. Furthermore, it increases the market value of the company itself and the ability to „survive". In addition, enterprises fulfill another aim that is related to their operation of making goods and satisfying human needs. Enterprises therefore have important social mission of serving the customer and all the activities of the company links. (Turcsányi 2009, 8)

Enterprise is as a separate legal, economic, financial and organizational unit. It can be characterized by different characters and viewpoints. We can say that the most preferred classification considers the size of enterprise. The criterion may be a number of employees, annual turnover, size or position on the market. Practically, the most widely used distribution is according to the number of employees. Reference of European Commission divides enterprises into microenterprises employing with less than 10 employees, small enterprises with 10 – 49 employees, medium-sized enterprises employing 50 – 249 employees and large enterprises employing over 250 employees. (Martinovičová, Čejková, 2013, 16)

1.1 CHARACTERISTICS OF SMES

The evolution of SMEs is dating back to the 18th and 19th century. The first wave ended by introducing the rise of big enterprises and mass production. This has resulted into a slow decline of small and medium-sized enterprises in Europe. The second wave began in the 1970 s when the saturation of big enterprises came and this decline increased the unemployment rate. And this opened a space for services and small companies that were able to cover demand with lower expanses. It began to increase the employment in SMEs and by that time they exceeded the number of employees in the large companies. Another advantage of SMEs is their flexibility and rapid adaptation to market changes which underlines their importance in a market economy. Due to their small capital they can adapt and respond to market fluctuations more quickly than large enterprises that have some inertia, until they realize that is necessary to change something. At the same time SMEs ensure competition and militates against monopolistic tendencies. (Martinovičová, Čejková, 2013, 18)

SMEs are characterized as:

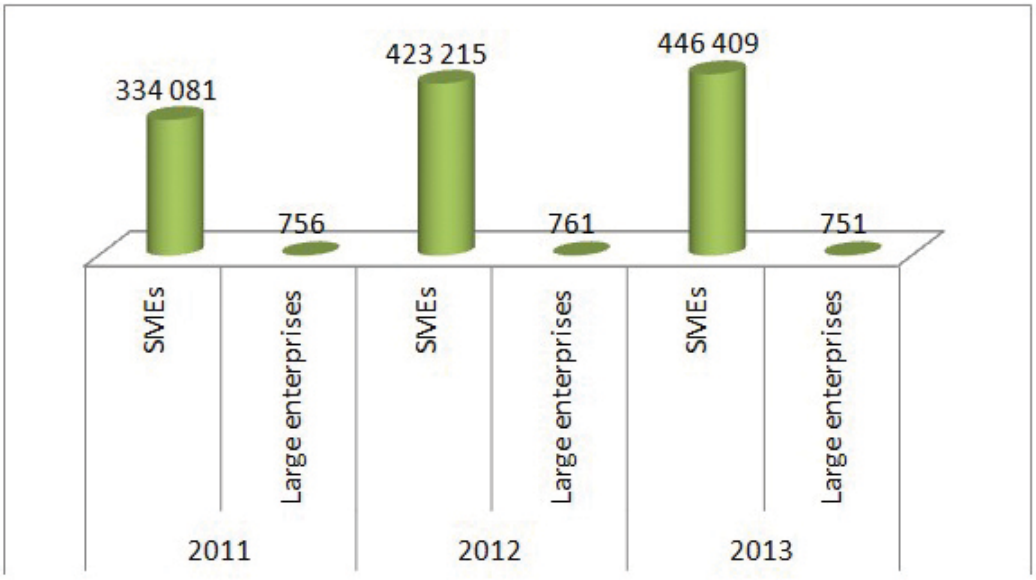
- *legally separate units – direct participants of tax, credit, financial and legal relations*
- *directly performs business*
- *enterprises having a single organizational structure*
- *independently controlled, usually one leading, most often by the owner (centralized executive assistance)*
- *companies with equity (complex approach outside capital)*
- *enterprises in the business are mostly close to the place in the region.*

Decisive advantages of small and medium-sized enterprises

- *dynamism, adaptability demand conditions*
- *Narrow specialization – unsuitable for large enterprise – a flexible option for innovation and quality production*
- *direct contact with customers (Čejková 2013, 3)*

As mentioned above, SMEs are the driving force of the economy and they are irreplaceable. On the Table no. 1 we can see the comparison of the number of SMEs and large companies in Slovakia where SMEs in 2013 accounted for only 98.4 % of businesses that create jobs in the market. Only 1.6 % are large enterprises. Therefore, it can be argued that SMEs are crucial for the economy. Hence, it is necessary that the government form a working environment towards SMEs and support them. Unfortunately, the current trend is rather the opposite. The government does not seek to create favorable terms for entrepreneurs but rather aggravates their situation. It concerns the legislation, regulations, excessive administration and high taxes which often lead to the demise of these SMEs.

Table 1. Number of SMEs and large companies in Slovakia

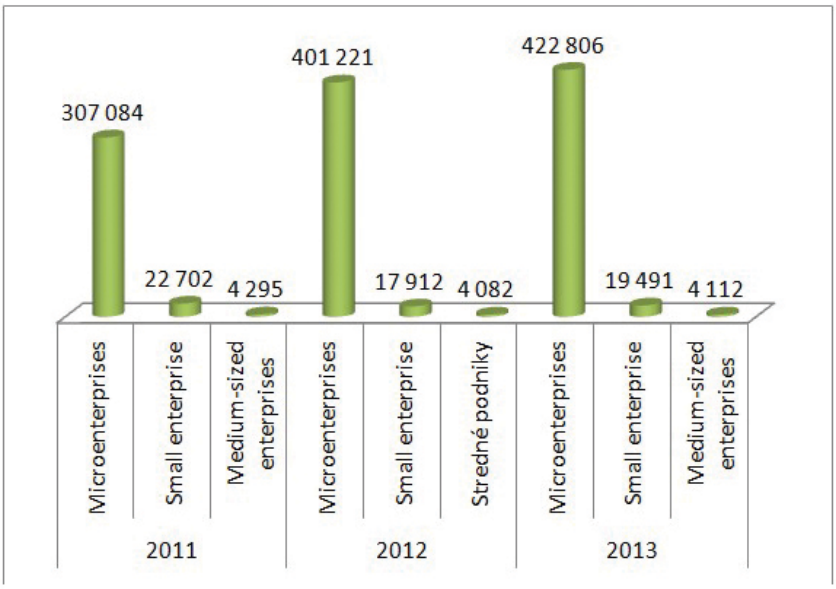


Source: own processing (slovak.statistics 2014)

Table no. 2 Structure of enterprises SMEs in Slovakia in 2011 – 2013 further points out the divisions of SMEs. Microenterprises, which formed about 94.7 % in 2013 were mainly self-employed and microenterprises up to 9 employees. Small businesses accounted for

4.3 % and medium-sized enterprises accounted for 1 % of the total share. Their main tasks are mainly meeting the demands of households, individuals and other businesses. They are consumers, owners and regulators of economic conditions in satisfying public interests. Therefore, it is necessary to create a pro-business environment in the regions and to increase support for SMEs starting in the Slovak Republic.

Table 2. Structure of enterprises SMEs in Slovakia in 2011 – 2013



Source: own processing (slovak.statistics 2014)

1.2 RISKS OF SMES AND THEIR CLASSIFICATION

The basic risks of SMEs typically include the probability of occurrence of an event caused by a random factor, the value of assets, the vulnerability of assets and the severity of the damage (size threats). (Fotra, Dědiny, Hruzová 2006)

Parameter size determines the amount of damages typically cost to repair the damage. Here is an example of recommendations to use successive sets of criteria:

- The *size of the damage in monetary units*
- *The impact of the damage to the establishment*
- *The effect of the damage on the overall cost of enterprise*
- *The necessity of drawing financial reserves*
- *The need to use some of the measures minimizing the negative consequences of the damage (Martinovičová, Čejková, 2013, 35)*

The risk is a random occurrence which may occur several times or may not occur at all. Therefore, companies should put off the so-called reserve in case of accident or damage event or they can use the commercial insurance and transfer the risk to a commercial insurance company.

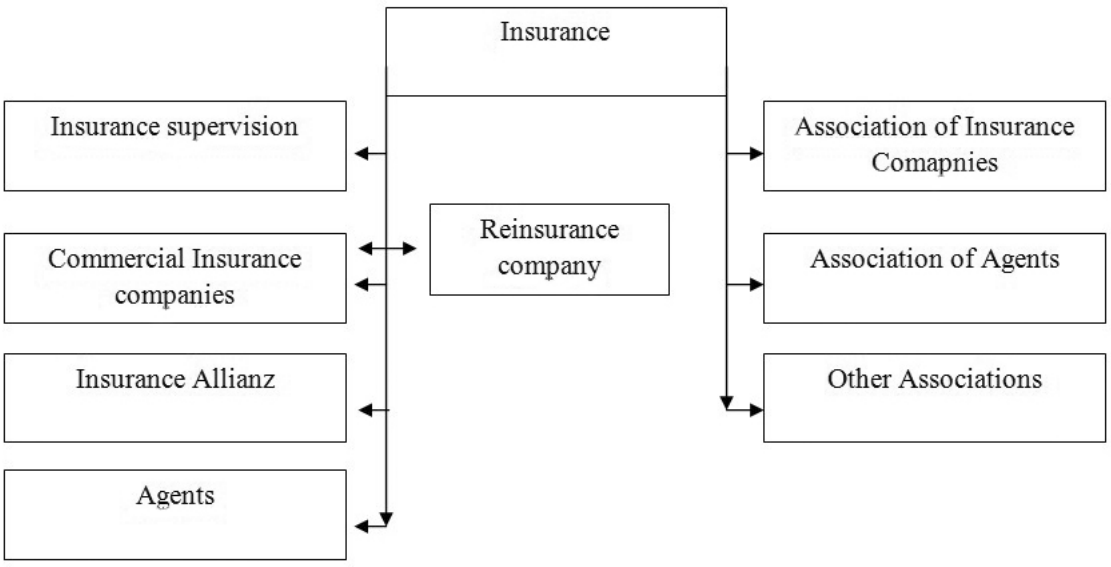
2. INSURANCE AS AN ECONOMIC AND LEGAL CATEGORY

Insurance is a factual basis in its economic or monetary nature, such as the insurance company and the insured entity also. The main obligation of the insurance is to pay out a relevant amount in the form of insurance claims after the implementation of the contingency, which is the responsibility insurance. The client has to pay premium insurance according to the agreed policy conditions and policy in the agreed insurance period or all at once in the form of money. Therefore insurance is usually defined as an effective way of creating and distributing cash reserves to cover the needs of incurred as a result of an insured damage. (Čejková, Martinovičová 2007, 11)

Insurance also operates as an incentive activity of an already existing enterprise. This is done so that the financial resources of the company, which should be maintained as easily accessible reserves to cover future losses, released for investment in productive activities of the enterprise. Medium-sized and larger companies would certainly know to create sufficient reserves to cover sudden damage such as fire, theft or any serious injuries. By doing so, these funds are not able to enter the business and are valued. Therefore, it is easier to invest a much smaller amount to the insurance and the rest of the money they can invest in, or inserted into the operations of the company. (BLAND 1993, 2/2)

Insurance stabilizes the economic level of business and living standards. Insurance is therefore an economic category. It has an impact on the economic results of enterprises. In the occurrence when will come damage incited, which are cover than the loss of business are improved and thereby stabilize their economic situation. Insurance also has an impact on living standards. In the incident that adverse events occur which are the subject of insurance, decline in living standards is mitigated or does not occur. Insurance of one's foundation promotes the conservation of values, which have ultimately a very positive effect on the economy of the state. It reaches out to all activities of the market economy. It concerns people, businesses and the state itself. (Čejková, Grmanová, Adamko, 2012 5)

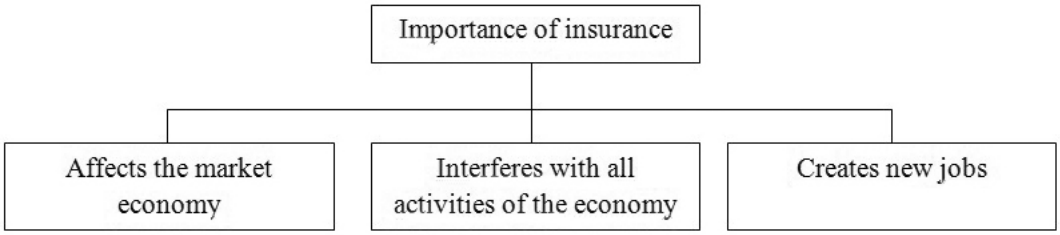
Figure 1 The structure of insurance



Source: (Čejková, Grmanová, Adamko, 2012, 69)

The picture no. 1 shows the insurance structure. On the right side there are advisory organizations and on the left side there are mainly insurance entities. These include mainly commercial insurance companies, their clients and agents.

Figure 2 The importance of insurance in a market economy



Source: (Koščo 2005, 57)

The picture No. 2 shows the importance of insurance in a market economy. As we can see, insurance is an important whole economy, which significantly affects the behavior of the market economy, market operators, stimulates business, and thanks to the insurance can also create new jobs.

2.1 INSURANCE RISKS FOR SMES

Companies conclude policies enforced by law (i.e. compulsory insurance policies) and voluntary insurance policies which they decide for. Compulsory insurance includes e.g. liability for damage caused by motor vehicle operation, liability for environmental damage and other policies. Voluntary insurance includes motor hull insurance for the events of damage resulting from several risks, e.g. traffic accidents, theft, vandalism, unauthorized usage of a means of transport or a natural disaster. Such risks can include windstorms, hailstorms, floods, fires, landslides, earthquakes, etc. Insurance covers damage during the transport of goods as well as damage to property of a company.

Many risks were found during the identification of risks, with only a negligible part having insurance coverage. Risks having catastrophic effects on a company, e.g. natural hazards and risks of theft are sometimes not covered at all. To cover these risks, property insurance or motor hull insurance can be implemented, and the most appropriate life assurance can be implemented as one of the forms of the motivation of employees of a company. (Čejková, Fabuš 2014, 3)

Table 3. Risk division – model

EXTERNAL RISKS	• Natural hazards • Risks of theft, vandalism • Credit risk • Risk of non-payment of debts • Payment risks • Transportation risks – risks of national and international Transport
	• Risk of the occurrence of a work injury
INTERNAL RISKS	• Risk of the loss of qualified workers

Source: (Čejková 2013, 6)

Examples of insurance products those are possible to sign:

Insurance General Liability which covers liability of insured, for damage caused to another (third person), or activities in connection with the activities carried out under the certificate of incorporation or business license. This insurance is very used by all businesses irrespective of their business plan. Most of them use it for starting entrepreneurs as taxi drivers, trucking and bus transport. To get permission to perform this action one must demonstrate equity worth at least € 9,000.00 but if they are the new entrepreneurs of course it is impossible to have a large sum of money and they may make insurance. With this insurance they can start a business and they can help their region and employment situation in the Slovak Republic.

Liability of shipping where the subject of insurance is the responsibility of the internal transport carrier for damage to a consignment or part thereof incurred other („third parties") as a result of insured incident occurring during the internal transport carriage of goods or insurance international transport carriers liability for damage to the consignment or part thereof arising else („third party") due to the damage incident occurring during international transport of goods. In the Slovak Republic there are a lot of shipping companies that seek to do business in this sphere. But unfortunately they face big administration and ignorance of the start-up – carriers.

Property insurance for legal entities is divided into certain categories and the insurance of real estate property for all risks as to the business premises, warehouses and all real estate property owned by legal entities, insurance of equipment and supplies where the owner can insures movable property that is used for business and their goods, which serves for sale. The insurance facilities may be additional insurance: insurance of glass, which is the subject of insurance of glass such as windows, glass panes, and other advertising. It usually negotiates All risk-risk against all risks, which are not excluded by the policy conditions. Insurance of electronics may also agree to cover the All-risk where damages are covered as poor handling, clumsiness, short circuit and other risks. Insurance of machinery and technological equipment, considering the machinery and technological equipment of any kind, such as industrial production lines, machine building industry, agricultural machinery, technology in buildings – elevators, air conditioners and the like. Insurance of transport money where is cover subject to domestic and foreign banknotes and coins, stamps, securities, articles of precious metals and other valuables specified in the insurance contract during transport.

Elementally insurance – this risk is most commonly insured. The policyholder can insure damage caused by fire, explosion, lightning, storm, crash courses, flood, hail, earthquakes, landslides, falling rocks, soils and avalanches, earthquakes and other hazards. Buildings and properties can also be insured against damage weight of snow or frost. A tap water facility is the second most insured insurance coverage. Policy protects goods and furniture goods potential for damage from water.

It provides insurance protection in case of theft or robbery if the perpetrator breaks the barrier protecting insured case or he uses violence. Insured things must be protected against theft in a manner that corresponds to their value (security locks and foil, safes, etc.). Insurance may cover the robbery and money during their transport managers. (Čejková 2013, 13)

Insurance during transport can concern a domestic shipment. The holder can insure the consignment during transport largely on All-risk foreign or during transport, which can be

solved either by road, rail, air or combined transportation. There is also the all-risk coverage. This insurance is recommended for more expensive shipments because the carrier is not responsible for any possible risk that may occur during the transport.

Mandatory contractual insurance of a damage caused by a motor vehicle which is the subject of insurance liability in respect of any other motor vehicle referred to in the policy.

Accident insurance: the objects of insurance are motor vehicles and their trailers, and standard and optional equipment built in or attached. It is possible to do against damage caused by a vehicle accident, collision or vehicle strikes in wildlife, damage, or destruction of the vehicle when it is parked, damaging cables, hoses, tiles or insulating materials on the vehicle caused by biting or by rodents, damage, or destruction of the vehicle glazing, vandalism, natural event, theft and robbery.

Guarantee insurance for clients who enter, for example, to tender, which must deposit cash in hand you can make guarantee insurance and they do not have to freeze the money. The most preferred form of guarantee insurance is fuel cards insurance. Shipping companies are seeking the policy contracts from Union commercial insurance because they have a lot of experiences with this risk.

FINDINGS

We can choose a small company which can do business in the Slovak republic. It can by a shipping company. The owner has bought two transport cars with which he can transport the goods of clients. At first he has to get permission for shipping. It means he needs 14.000,00 EUR in the company – it is impossible. Here is the first time he can use a policy contract which helps him get permission (the price is about 140,00 EUR per year). After then he expects that he will do liability insurance for cars. He has to make a policy contract called liability of shipping therefore, if anything happens with the goods during the transport he has to pay a fee and the exact price of damaged goods. (It could be more than 100.000,00 EUR). Then he needs money for fuel. And the easy way to get it is to make a contract with Fuel Company. But here is the problem. Our enterpriser has to freeze money for Fuel Company or he will make a Guarantee insurance (premium insurance is 6 % of the price) and he can put the money into the business.

All of these forms of insurance products have a role to assist SMEs in the incidents that unforeseen damage occurred that could affect the operation and life of the enterprise.

The example shows you everything you need to start-up firms to be able to fully function. At the entrance to the market needs a large financial capital to cover and ensure their needs, unforeseen problems or running a business. But this capital not every company or impossible borrowed it from a bank or other entity. Therefore, the possibility to insure is one of the economically acceptable ways to solve the problem. Through insurance it is possible to get a license for business as well as ensuring a fuel they need for business. Another reason is that it is necessary to guard against risks that may threaten the existence of the entity. Elemental risk may cause damage on property or motor vehicle. Without insurance, the company would have to cope with the weak situation. Damaged property would have to replace new and it would be a sustained effort and especially cash. But with the insurance

the subject could transfer risk on the commercial insurance companies that they help him in that wrong time. My suggestion is also to create a special commercial insurance product which has been designed for SMEs and especially for startups. It would cover the risk that the liability for damages, property insurance and civil liability insurance. This is mainly because, in the Slovak Republic and SMEs constitute 98.4 % of enterprises. Are the largest employers and therefore recommends the creation of special commercial insurance product for them.

CONCLUSION

Small and medium enterprises have a big importance for the economy and the economy and they create jobs and the gross domestic product. As written above, SMEs are the backbone. But these companies are not invincible and there are different risks that could affect their business. And they are affected by the global impact of the malfunctioning of SMEs within the region and within the economy. Therefore, the best way to avoid the business or urban risk is to transfer it to another entity – commercial insurance company. Insurance can stimulate and diversify risks that could prevent another business. The SMEs have created 98,4 % from all enterprises. It is huge number and therefore the government should make a decision to support them.

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Barbora Kovaříková[1]

STRESSFUL SITUATIONS AND WAYSOF HIGH SCHOOL STUDENTS TO MANAGE THEM

Abstract

The purpose of the submitted paper is to identify stressful situations affecting high school students and techniques for managing them.

Design/methodology/approach – The research was conducted at a secondary grammar school in Bratislava with the participation of 171 students, whom we divided into two research samples – the first-year students and the last-year students. Questionnaire, which is among quantitative research methods, was used to obtain primary data. A partial objective of the research was to analyse and compare individual stressful situations of the first-year and last-year students.

Finding – By the research we identified the stressful situation of high school student and the ways of managing them. We found out also the differences between stressful situations between student, who are in high school first year and graduated students.

Research limitations/implications – This research paper summarize the theoretical knowledge of stress and stressful situation, which influence life of high school students in school and at home.

Practical implications – Findings can help to teacher for better understanding of their students.

Originality – the value of this article we see in its practical findings and recommendation

Keywords: Strain, stress, high school, conflict situation, psychology

Research type: research paper

JEL Classification: A10, A11, F16, L80

INTRODUCTION

People deal with stressful situations at their birth and stressful situations continue accompanying them all their lives; they test their adaptability to environment and pose challenges regarding their physical abilities and resistance. Throughout their lives, people are made to adapt to the requirements of their environment and cope with certain demanding processes, which create psychical load. As people are different, stressful situations affect us differently, respectively by different psychical load. What causes stress of one person does not have to cause stress of another, and vice versa. Age plays an essential role, as people gradually learn to manage individual problematic situations they often encounter in their lives.

THEORETICAL BACKGROUND

Interest in stressful situations can be deemed as old as human population. Long before experts precisely named individual phenomena, people had observed regularities and life experience. They had been interested in positive emotions like relief or joy after achieving

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their objective, and negative emotions like apathy, helplessness, aggression or sorrow, which appeared after a failure in achieving this objective.

Various life situations accompany us at every step and each of us responds to them differently, as they do not represent equal load for everybody.

The sources of stress include different circumstances, situations, events or obstacles to which people create an emotional relationship during their lives. They can include e.g. climate or physical changes of external environment, wars, loss of a beloved person and perspectives of life, relationship breakdown, health hazard, threat to a social status, sufferings, time pressure and others.

A relationship between external impacts and internal conditions of an individual, including mental and physical condition of an organism, personality traits, life values, approaches, inherent and acquired preconditions, their abilities, competence and experience, are decisive at stress assessment. (Bratská, 1992)

Stress of an individual can be divided according to the following viewpoints:

- According to individual stress degrees
  a) common stress – repeated tasks we need to solve
  b) increased stress – new situations for which our customary ways of acting are insufficient
  c) boundary stress – a discrepancy between our abilities and readiness and demands of environment
  d) extreme stress – a significant discrepancy between requirements of external environment and our possibilities and preconditions for managing them.
- According to the impact of stress
  a) body stress – physical – increased requirements for physical strength;
  b) physiological stress – endocrinologic – pressure of environment on biological functions and nervous system;
  c) mental stress – processes and phenomena affecting psyche. (Mišík, 1969)

It often happens in our lives that we encounter similar situations, reminding us of those we have already experienced and solved. The similarity in quality, content and form of an arising discrepancy between requirements and possibilities of dealing with such requirements leads to distinguishing the following basic types of requirements, often interconnected in practice:

- situations of inadequate tasks and requirements

The extent of physical and mental strength is much smaller or greater than necessary for making requirements. Factors affecting these situations are time, overloading, monotonousness, degradation of human dignity, inability to fully develop our abilities and skills, and others.

- problematic situations

They are related to new tasks, which often surprise us, and experience which we have acquired, learnt and gained by then help us solve them, e.g. solving new circumstances in life.

- frustrating situations

Their nature is in mutual relationships between a personality, goal, activity and obstacle. At the moment when an unsolvable obstacle appears, preventing us from goal achievement, our internal thought plan stops working adequately, and we gradually get into a state of distress, referred to as frustration.

- conflict situations

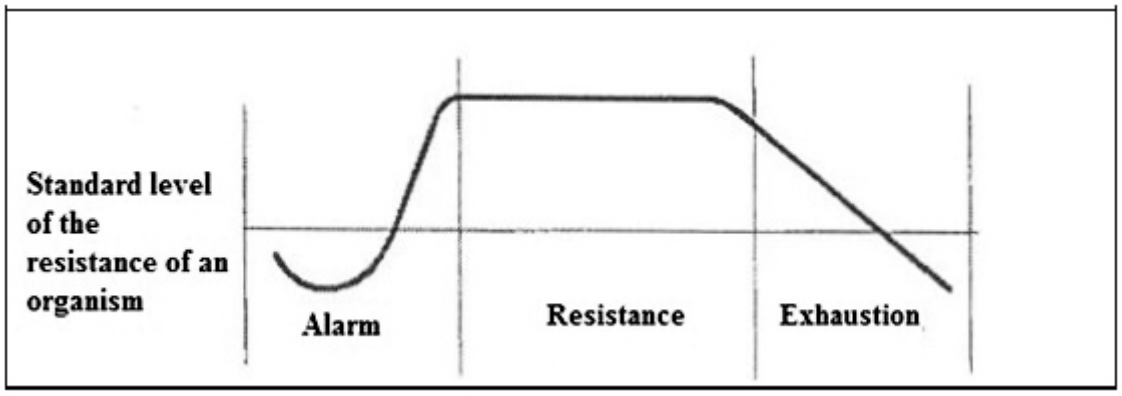
They represent another type of stressful situations, in which two or more equal, respectively almost equal powers affect a person, while they can be in harmony or in contradiction. We need to choose one of them; however we do not know which one (*Fürst, 1997).*

Research results and findings

In 1936, Canadian scientist H. Seyle published information on a set of changes in an animal organism, caused by a number of harmful impacts of environment, and he named it general adaptation syndrome (Seyle, 1976). All three components of the name are justly explicated. It is general because it is only caused by those factors affecting great organism parts; adaptation because it supports body stamina and helps maintain a level of fitness and dependency, and syndrome because its individual manifestations are mutually balanced, sometimes even partially dependent (Seyle, 1966).

The course of changes goes through three stages, whose length, mutual interconnection and dynamics of changes in them condition the nature of stressful situation elements:

Figure 1. Individual stages of stressful reactions



Source: Lacko et al., 2007

The first stage is an alarm (panic) response, representing a general mobilisation of the defence powers of an organism. Hormones secreted by adrenal and hypophysis cause a general condition of mental strain and excitement. That is how the mobilisation of energy sources occurs and greater energy expenditure is necessary. Organism prepares itself for reversing danger, coming to the second stage.

The second stage (resistance) – organism increases its resistance to different impacts. If the activity of a harmful stimulus continues, whole adaptation efforts can be in vain and organism gets in the third stage.

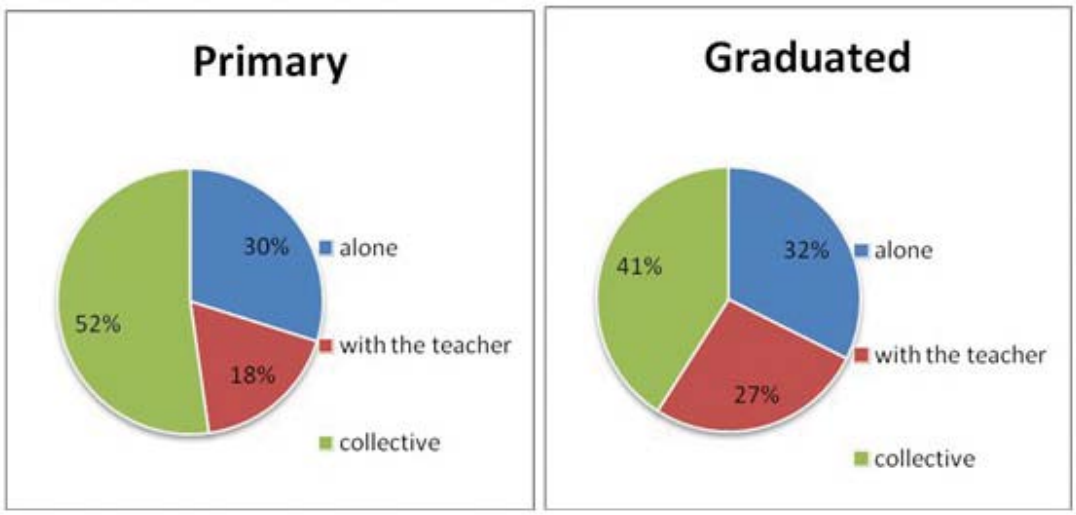
The third stage (stabilisation, exhaustion) – refers to handling mental strain and renewing a balance with environment (the feelings of relief and euphoria appear) or, on the contrary, the result can be a failure (apathy, resignation) in a stressful situation and succumbing to stressful impacts (The stress of life, Seyle, 1976).

Unfavourable and stressful situations can cause the following changes in a person:

- body and physical changes
- increased occurrence of emotions
- affecting of cognitive processes – concentration, attention, detachment
- creation of a certain set of responses like aggressive, not self-accusing, self-accusing and avoiding responses (Bratská, 1992).

Overall, 170 students of a secondary grammar school in Bratislava participated in the research, of whom 67 students (28 boys and 39 girls) were in their first year of study, i.e. at the age of 14 – 16, and 103 students (39 boys and 64 girls) were in their last year of study, i.e. at the age of 17 – 20.

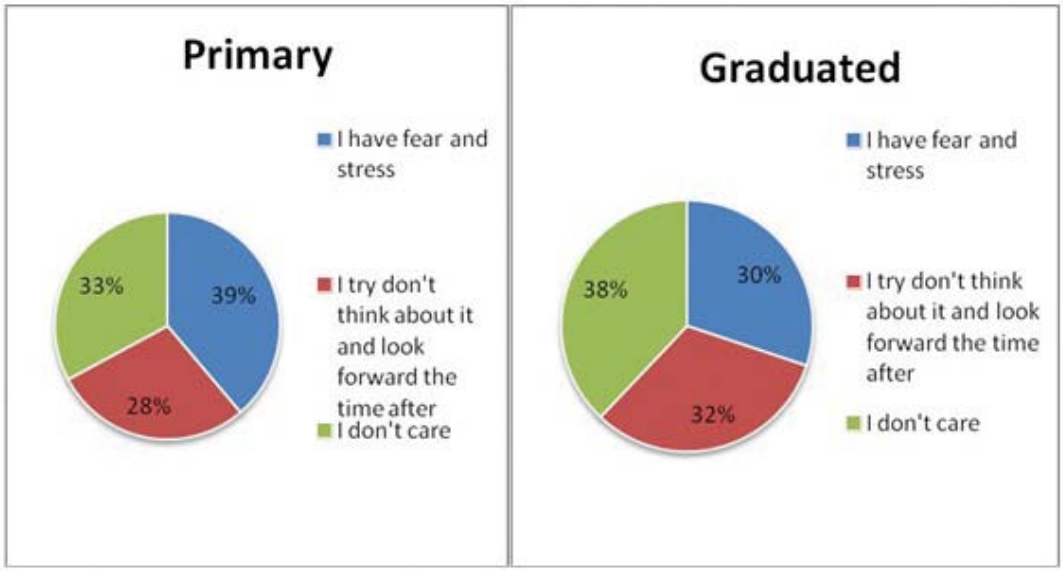
Figure 2. Solving a problematic task



Source: Own processing, 2014

More than a half of the first-year students (52 %) declared that they prefer working collectively, similarly to 41 % of the last-year students. Approximately a third of the first-year and last-year students would rather solve tasks on their own, and only 18 % of the first-year students and 27 % of the last-year students would ask a teacher for help.

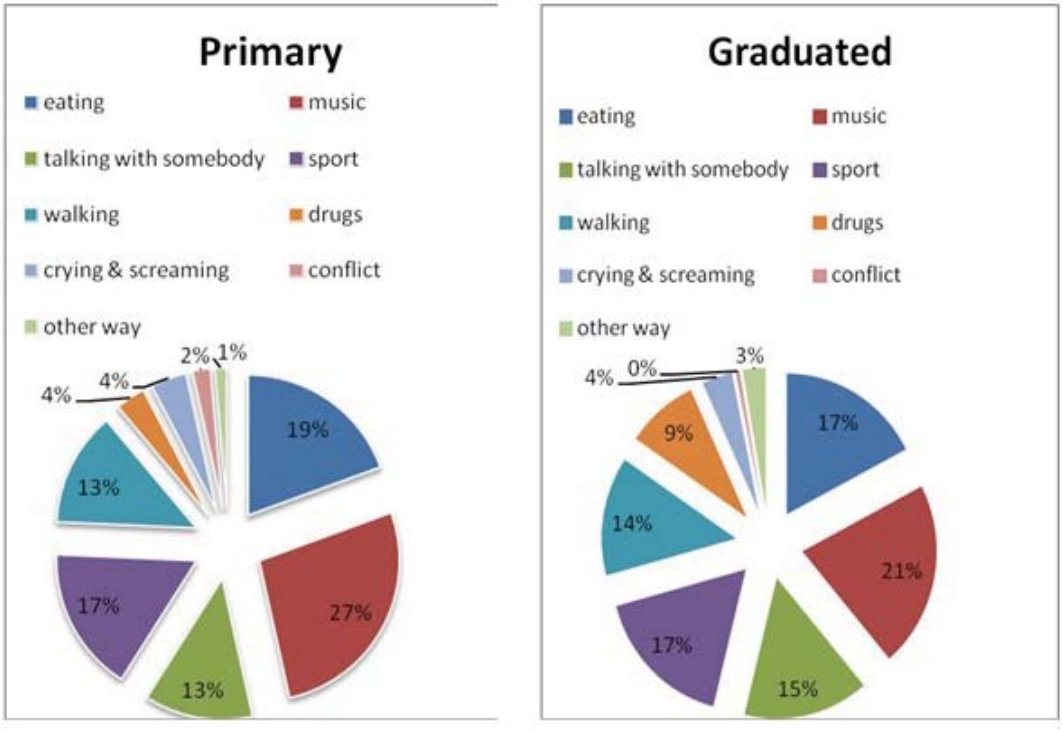
Figure 3. Feelings of students before a test



Source: Own processing, 2014

Each question was always answered by approximately a third of the first-year and last-year students; 39 % of the first-year students feel stressed before a text, however the number decreased at the level of 30 % for the last-year students; 28 % of the first-year students and 32 % of the last-year students look forward to the time after the test, and 33 % of the first-year students and 38 % of the last-year students do not feel stressed about the test. The graph indicates that the feeling of stress before a test decreases in every year of study, which can be a result of „getting accustomed to" this stressful situation.

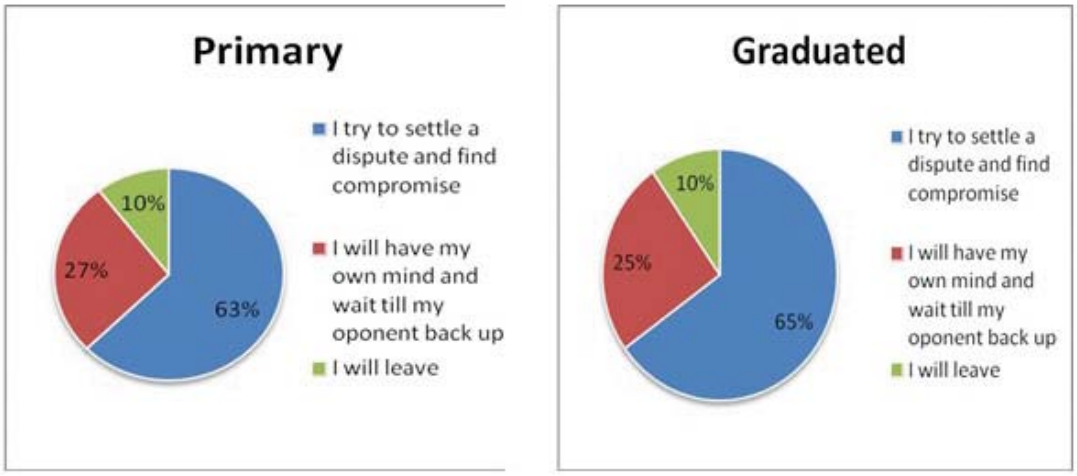
Figure 4. Ways of coping with stress



Source: Own processing, 2014

Both groups had the same succession of answers. The greatest number of the first-year students (27 %) and the last-year students (21 %) answered that they try to get rid of stress with the help of music. The second most frequent answer to the given question was food and the third most frequently repeated answer to „how to cope with stress" was a talk with a close person and sport. Only 4 % of the first-year students and 9 % of the last-year students cope with stress by means of drugs, which indicates that drug use increases with age. The least frequent method of coping with stress is crying, screaming and conflict. Only 1 % of the first-year students and 3 % of the last-year students indicated other methods of coping with stress, e.g. reading a book, long sleep, going to the theatre or cinema, or cocoa drinking.

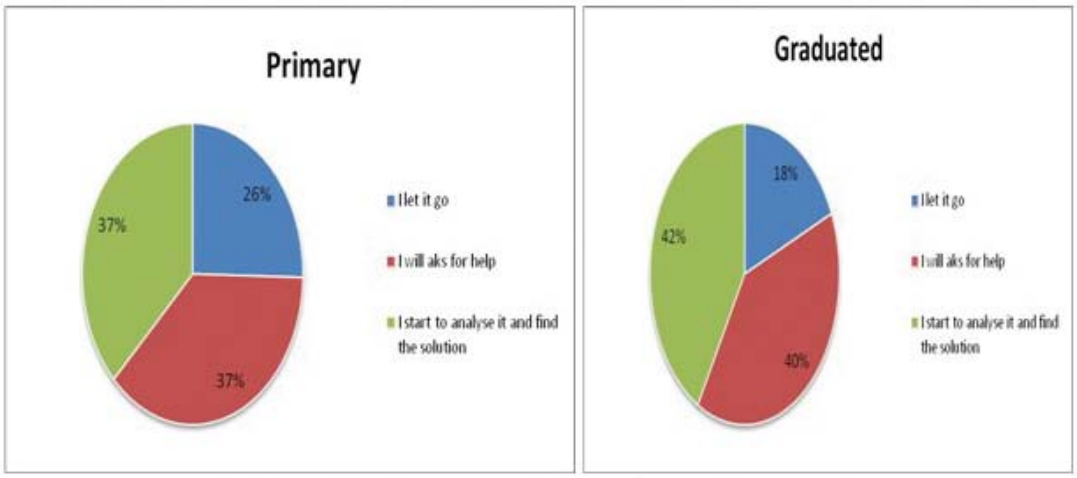
Figure 5: Conflict solving



Source: Own processing, 2014

Percentual number of answers to this question was almost identical for the first-year and last-year students. Approximately two thirds of the first-year students (65 %) and the last-year students (67 %) answered that they try to settle a dispute and find a compromise. 27 % of the first-year students and 25 % of the last-year students insist on their own attitude in a conflict situation with another person until their opponent refrains, and 10 % from both research samples answered that when they get in a conflict situation, they leave.

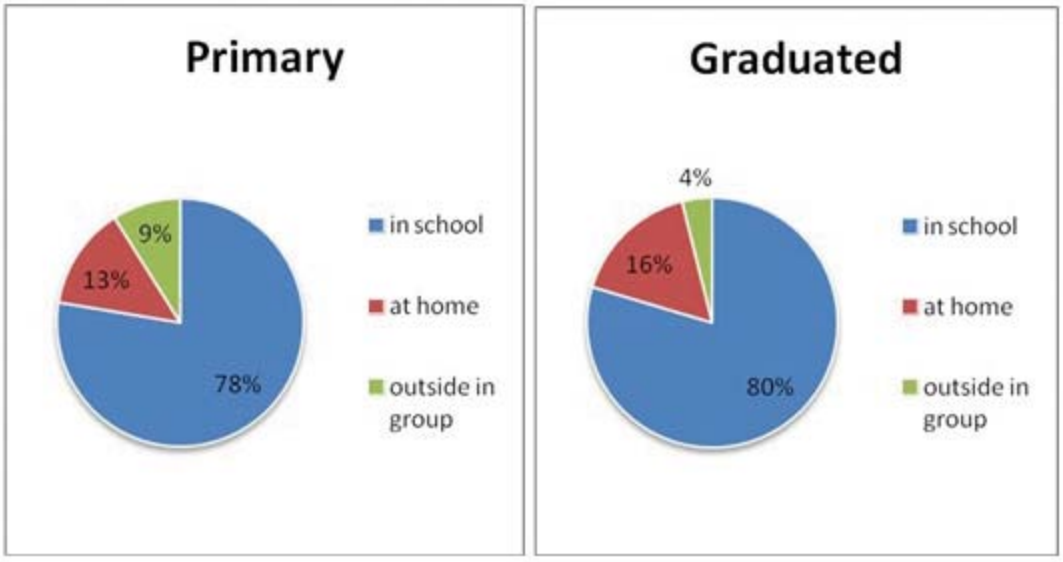
Figure 6. Reaction to a problem which is difficult to solve



Source: Own processing, 2014

If there is a problem which students are not able to solve, they either search for a solution on their own or ask someone for help. Both options had very similar percentual representation in both groups of the interviewed. It suggests that students almost always try to solve the given problem. 26 % of the first-year students and 18 % of the last-year students stop dealing with the given problem, from which we can derive a conclusion that older students make more efforts to solve problems.

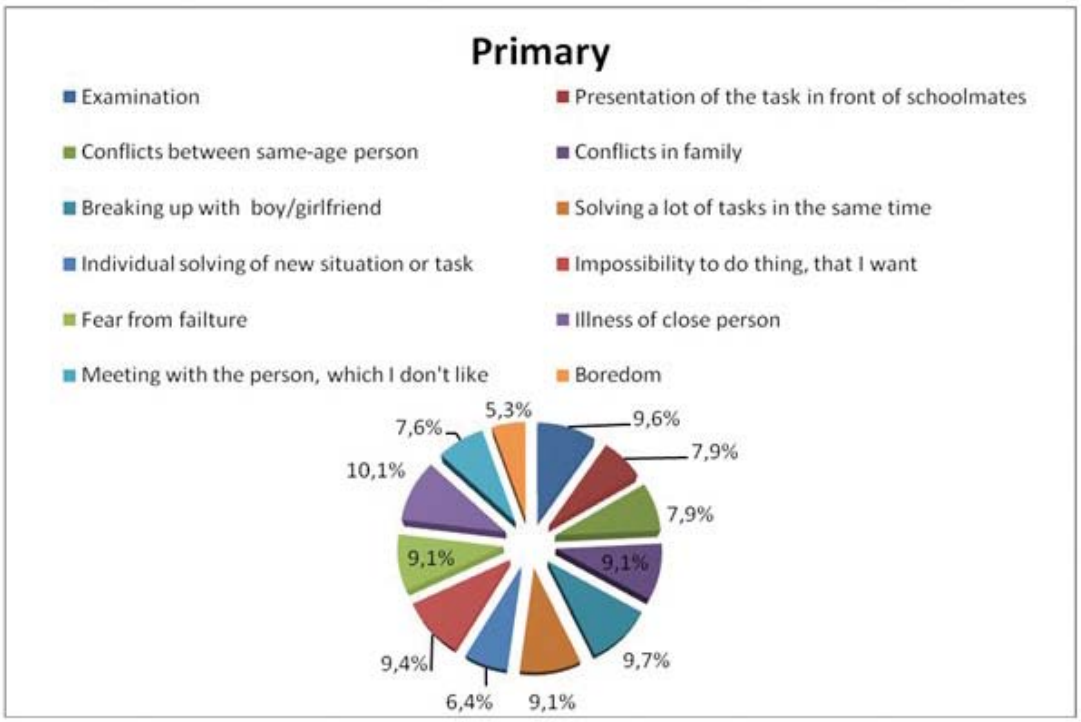
Figure 7. Stress situations in different environments



Source: Own processing, 2014

The greatest number of stressful situations is experienced at school by the first-year students in 78 % and by the last-year students in 80 %. Compared to school, a minimum number of stressful situations is experienced at home or outside among friends. With an increasing age of students, the number of stressful situations among friends decreases, while tension in families grows.

Figure 8a. Most stressful situations

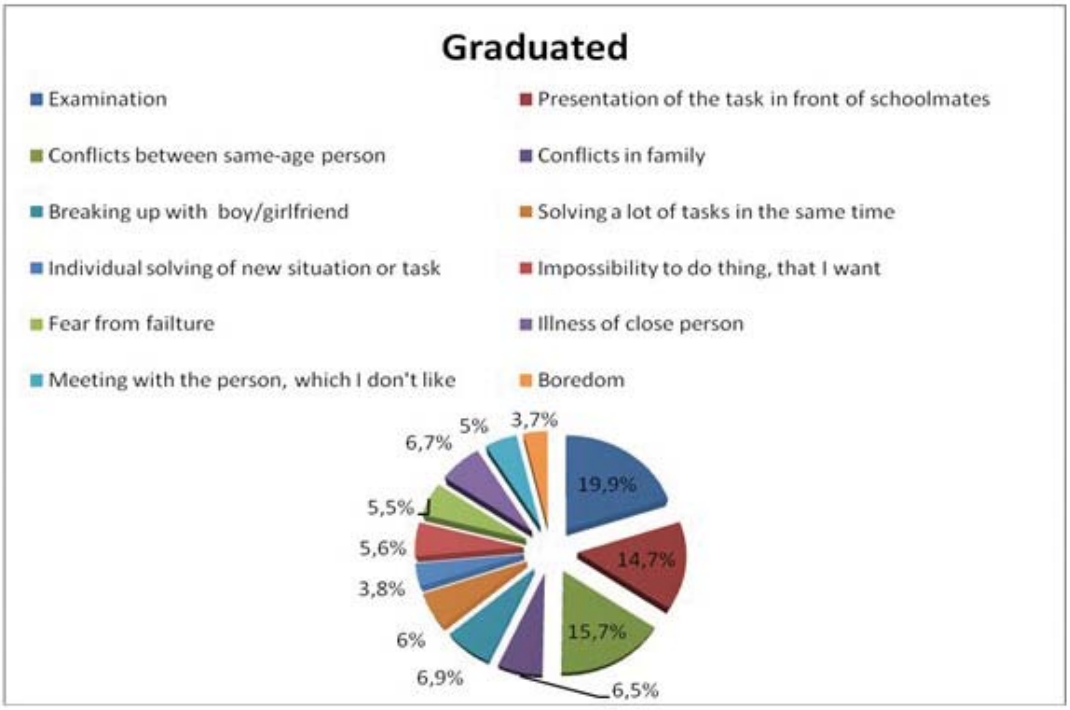


Source: Own processing, 2014

In the last question, question 17, students were to assess individual stressful situations from 1 to 5 according to the level of stress intensity they cause (while 5 is the most stressful, 1 is the least stressful). The number of points attributed to individual stressful situations according to the first-year and last-year students is shown in Annex D. The responses were subsequently assessed in %. They present a ratio of the number of points attributed to individual stressful situations and the total number of points attributed to all stressful situations.

Almost each answer was attributed approximately 9 %. The result clearly indicates that several stressful situations have an equally stressing impact on the first-year students. The greatest stress is caused by an illness of a close person (10.1 %); as well as a breakup with a boyfriend or a girlfriend (9.7 %) and oral examination (9.6 %). The fourth stressful situation according to percentual points (9.4) is inability to carry out activities students want. An identical number of percentual points (9.1) was attributed to fear of failure, family conflict and dealing with many tasks at once. The following situations are less stressful from the viewpoint of the interviewed, compared to the aforementioned situations, as the students assessed them with a lower number of points. Students feel moderate stress at presenting in front of other classmates, in conflicts among friends and at meeting a person they do not like. The least stressful is task solving itself and boredom.

Figure 8b. Most stressful situations



Source: Own processing, 2014

The most stressful situation for 19.9 % of the last-year students is examination. The second most stressful situation is a conflict among friends (15.7 %), and the third one is presenting in front of classmates (14.7 %). Other situations are less stressful for the last-year students, which is also indicated by the ratio of the overall number of points. So called „moderately" stressful situations for the last-year students include a breakup with a boyfriend or a girlfriend (6.9 %); an illness of a close person (6.7 %); family conflict (6.5 %) and dealing with many tasks at once (6 %). Inability to carry out activities the interviewed want (5.6 %), fear of failure (5.5 %) and meeting an unfavourite person (5 %) can also be deemed rather less stressful. Stressful situations causing the least stress to the last-year students include unaided solving of a new task (3.8 %) and boredom (3.7 %).

CONCLUSION

Stressful situations have an impact on each of us, however as we are born with different genetic makeup, we gain knowledge and skills, acquire habits of conduct and respond to different impulses differently during our lives. If an individual is sufficiently strong, he or she can also handle more demanding situations without a greater effort. However, as we have demonstrated, there are situations which cause us greater stress and mental strain at the times of high school studies. They predominantly include the problems and moments we encounter at school, related to examination.

We found out that some situations cause comparable stress to students regardless of their age, however there are also situations in which stress differs depending on the age of student, as students deal with different life issues as they grow older.

The contribution of the paper is in a brief summary of theoretical knowledge on the given issue and in presenting outcomes of a questionnaire research focused on the fulfilment of objectives, i.e. on the identification and perception of particular stressful situations of high school students. We believe that this work can be used as a supporting material for pedagogues or psychologists dealing with the issue of coping with stress at high schools. Pedagogues could get certain detachment and understand the psyche of their students better (especially which critical moments cause stress and which do not), thus avoiding unnecessary conflicts and misunderstandings.

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SELECTED ASPECTS OF HUMAN RESOURCE MANAGEMENT IN SMALL AND MEDIUM-SIZED ENTERPRISES IN THE BEEKEEPING INDUSTRY

Abstract

Purpose - The presented article focused on the quality of human resources in apiculture and their impact on the economics aspects of small farms represented by direct utility of hives in case of Slovakia

Design/methodology/approach – Primary data were collected by questionnaire survey. The structured questionnaire was prepared and 162 beekeepers took part in the survey. With respect to the aim and the stated hypotheses, the paper analyses the variety of relevant statistical tests. Shapiro - Wilk test and Kolgomorov - Smirnov test are applied in order to test normality of distribution. Based on the results of normality and other assumptions of non - compliance further tests related to non-parametric methods are performed.

Findings – Additionally, we assumed that the quality of human resources was influenced by educational level, the length of practice in the beekeeping industry, frequency of participation in educational activities. The results of questionnaire survey showed that 95.7% of beekeepers regularly or at least occasionally attended the educational or learning activities such as exhibitions, seminars, workshops. We also assumed that beekeepers with longer beekeeping practice would achieve better results in honey production in comparison to less experienced; however, this assumption was not confirmed again.

Research limitations/implications – If we assume that the quality of human resources in apiculture has significant effect on the production of honey, we can conclude that this statement cannot be confirmed based on the performed methodology and data used for testing.

Practical implications – It is important to state that the nature of the production process including biological principles, natural conditions, and weather has the greater impact on economics of beekeeping.

Originality/Value – Whereas in the studied area is not known published results, the originality and the value of this article increases.

Keywords: beekeeping, human resources, education, qualification structure

Research type: research paper

JEL classification: J24

INTRODUCTION

Labour is a key factor of production for any production process. The basic characteristics of the labour are as follows: quantity, age, gender and qualification. Qualitative aspect of the workforce is represented by its qualification structure. Qualification refers to the ability to perform a particular job or tasks. The achieved level of qualification depends on the level of education but also other acquired theoretical knowledge and gained practical experience influence the level of qualification. It can be assumed that intensity of production might be increased by higher qualified labour (higher levels of workforce skills/qualifications).

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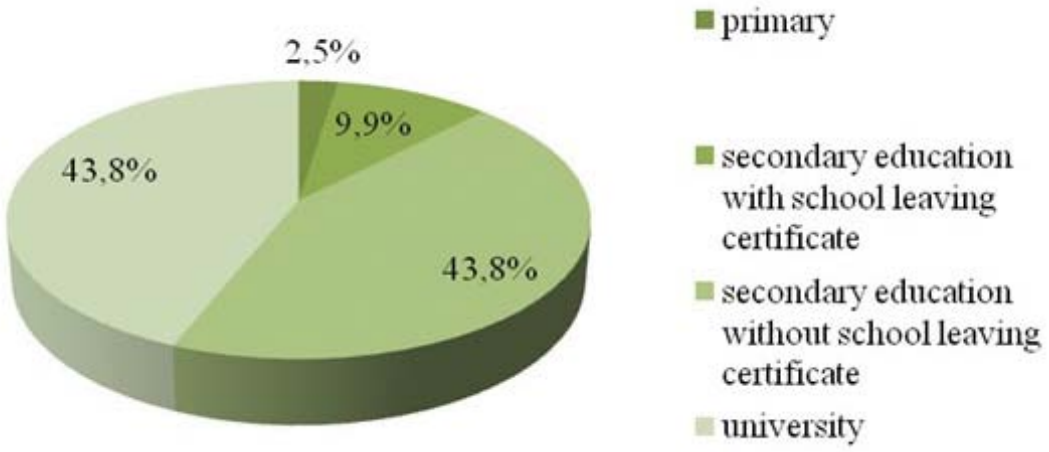
The main aim of the paper is to verify the validity of selected theoretical assumptions regarding to the quality of human resources in the sample of 162 beekeepers. The data were collected by the questionnaire survey conducted in 2012. The sample of the selected respondents was chosen in such a way that they reflect the structure of the total population. With respect to the aim and the stated hypotheses, the paper analyses the variety of relevant statistical tests. Shapiro - Wilk test and Kolgomorov - Smirnov test are applied in order to test normality of distribution. Based on the results of normality and other assumptions of non - compliance further tests related to non-parametric methods are performed. Kruskal - Wallis one - way analysis of variance by ranks is another approach to be applied in the paper in case of comparison of several populations according to quantitative variable (OBTULOVIČ 2010, p. 171). The testing of hypotheses is done at 5 per cent significance level. The data are analyzed using SPSS software and XLSTAT.

RESEARCH RESULTS AND FINDINGS

1. THE QUALITY OF HUMAN RESOURCE ACCORDING TO EDUCATION

The quality of workforce is considered to be quite specific in apiculture due to the fact that the majority of beekeepers take their work as a hobby. We are able to investigate and gather relevant data related to the individual level of respondents' education by using questionnaire survey. In general, we assume that the beekeepers are more able to provide sophisticated solutions and put theoretical knowledge into practice, if they have higher level of education. Professional specialization is also an important aspect of education and we assume that beekeepers lack the professional specialization and training in their field. Therefore the continuing education and gaining more work experience play an important issue in case of beekeeping. Usually, one beekeeper or a beekeeper together with other family members is involved in beekeeping business. It follows that the key job requirements have to be fulfilled by a beekeeper which include: keeping bees, processing of honey and other bee products, packaging, branding, distribution; furthermore it is important to have knowledge required for business compliance with legislation.

Figure 1. Respondents according to their educational level



Source: own calculations

As shown in Figure 1, which depicts the structure of respondents according to their educational level, the majority of respondents have completed university education and the secondary education with school leaving certificate, both of these groups represent 43.8% (71) of respondents. On the other hand, 9.9% (16) of all respondents have reached the secondary education without school leaving certificate. The respondents with primary education represent only 2.5% (4) of the total examined sample. Based on the results the higher proportion of beekeepers with university education is observed due to the fact that the majority of respondents are members of Slovak beekeeping associations.

In this section we have decided to investigate if there is a statistically significant difference between different educational level of beekeepers and their honey yields in 2011 (beekeeping season 2010/2011) and in 2012 (season 2011/2012). The reason why these time periods have been chosen is the fact that they differ in terms of natural conditions for nectar production. The year 2011 was characterized by excellent natural conditions for beekeeping; therefore, high yields were reached. On the contrary, drought in 2012 had an impact on the honey production and caused its decline. Additionally, we assume that qualification levels are ceteris paribus in short-term.

Table 1 shows the results of correlation between honey yields and different educational level of respondents. The Kruskal - Wallis test is performed due to the fact that assumptions to apply parametric methods have not been fulfilled. The Kruskal - Wallis test is a non-parametric method for testing whether independent samples originate from the same distribution. Based on the results, we observe that the value of the Kruskal - Wallis test equals 1.415 and reached significance $p > 0.05$ ($p = 0,702$). It implies, that null hypothesis (H0: „Honey yields do not differ in educational groups of beekeepers“) cannot be rejected. The results show that there is not statistically significant difference in honey yields between the different educational levels of respondents in 2011. Null hypothesis is also accepted while testing differences in honey yields in 2012. The result of the Kruskal- Wallis test is as follows: $\chi 2 = 4.405$; $p > 0,05$ ($p = 0.702$). Test confirms that there is not statistically significant difference between different educational levels of beekeepers and their honey yields.

Table 1. Impact of education level on honey yield – evidence of Kruskal - Wallis test

	Average honey yield per 1 hive in 2011	Average honey yield per 1 hive in 2012
Chi – square	1.415	4.405
Df	3	3
asym. sig.	0,702	0,221

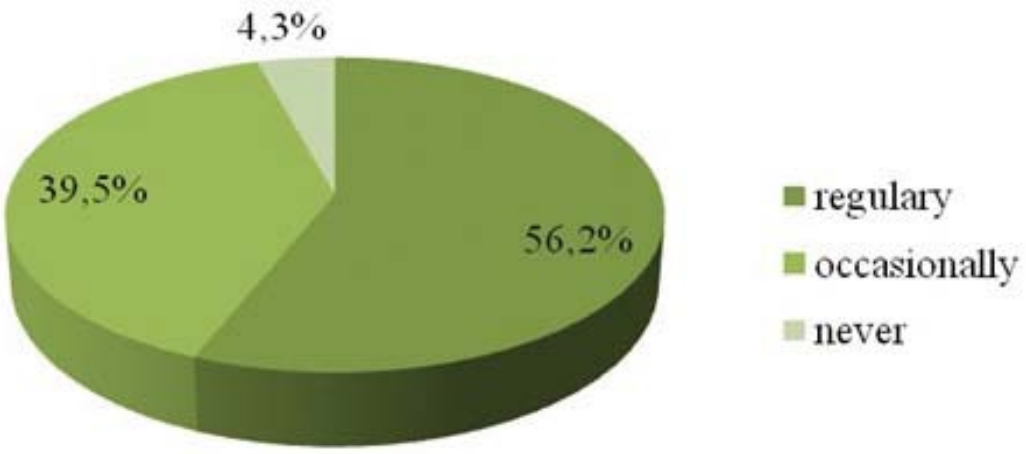
Source: own calculations

2. LIFELONG LEARNING IN THE HUMAN RESOURCE

Continuing education is an important aspect of career development in beekeeping that could be commonly achieved through courses and seminars about issues and problems in beekeeping industry presented by experts in the field. Exhibitions represent the bridge between the research and business and are useful for transferring knowledge from research to practice. Additionally, exhibitions offer a great opportunity for beekeepers to become familiar

with the new technologies that are quite often presented directly by their constructors. The educational activities are significantly supported by the National Programme for the stabilization and the development of Slovak apiculture (NPSRSV) for the time period 2010/2011 and 2012/2013. Within the programme, the measure called Technical assistance to beekeepers and the members of associations includes educational activities, coordination, lectures, seminars, training courses, consultations, publication of leaflets, brochures, literature, assistance in organizing exhibitions, promotion of beekeeping, product packaging and expert advice. The sum of 2 910 000 € was allocated for the entire three year programme NPSRSV.

Figure 2. Respondents according to the frequency of their participation in learning activities



Source: own calculations

The interest of beekeepers in educational activities is presented in Figure 2. According to obtained results of survey, more than half of the respondents are regularly participants. 95.7% (155) of respondents attend educational activities regularly or occasionally. There were only 7 respondents who never attend such activities.

3. THE FREQUENCY OF CONTINUING EDUCATION AS A FACTOR OF QUALITY IMPROVEMENT OF HUMAN RESOURCES

In the sample, we also examined whether the frequency of respondents´ participation in educational activities had an impact on honey yields obtained from one hive. Respondents answered the following question: "How often do you attend workshops, seminars, exhibitions etc.? " They had an option of a simple choice between several alternatives indicating the frequency of their participation in educational activities. The non-parametric method Kruskal - Wallis test is used due to the small sample size and the distribution of the data is not normal distribution at the 0.05 significance level. The null hypothesis is as follows: „The honey yield does not differ with regard to frequency of respondents´ participation in educational activities." The hypothesis is stated both for the years 2011 and 2012. Kruskal - Wallis test performed for 2011 reveals: $\chi 2 = 5.574$; $p > 0.05$ ($p = 0.336$) and for the year 2012 it states: $\chi 2 = 2.183$; $p > 0.05$ ($p = 0.062$). The null hypothesis cannot be rejected for both time periods. The test confirms that a statistical significant difference does not exist between the frequency of respondents´ participation in educational activities and honey yields in 2011 and 2012 (Table 2).

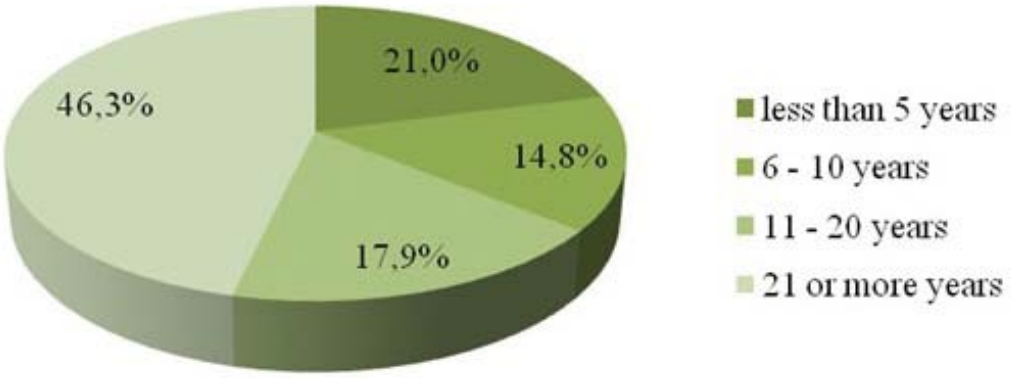
Table 2. Impact of frequency of respondents´ participation in educational activities on honey yield – results of Kruskal - Wallis test

	Average honey yield per 1 hive in 2011	Average honey yield per 1 hive in 2012
Chi – square	5.574	2,183
df	2	2
asym. sig.	0,336	0,062

Source: own calculations

4. LENGTH OF PROFESSIONAL PRACTICE AND GAINED EXPERIENCE

Figure 3. Respondents according to length of beekeeping practice



Source: own calculations

Structure of beekeepers according to their practice in apiculture corresponds the respondents´ age. Figure 3 shows that the majority of respondents have been in beekeeping practice longer than 21 years (46.3%, 75). The second biggest group is represented by respondents (21%, 34) who have been involved in beekeeping for the shortest period of time (less than 5 years). 14.8% (24) of all respondents indicated that they have had practice in apiculture from 6 to 10 years. On the other hand, 17.9% (29) respondents have been in practice for 11 - 20 years.

The length of beekeeping practice provides information concerning the gained experience. Several authors demonstrate that the length of beekeeping practice and the amount of gained experience are essential factors in economics of beekeeping. Therefore, we have decided to test the following hypothesis: „There is not any effect that different years in beekeeping practice have on honey yields." Quantitative variable "The number of years of beekeeping experience" refers to ordinal data presented by intervals in questionnaire. Kruskal - Wallis test is again performed for both years (2011, 2012) because of comparison of more independent groups and ordinal or interval level of data. Table 3 shows the results obtained through the Kruskal - Wallis method. Based on these results, we conclude that the null hypothesis is accepted. There is not statistically significant difference between the honey yields and length of beekeeping practice both in 2011 and 2012.

Table 3. The impact of length of professional practice in beekeeping on honey yield – evidence of Kruskal – Wallis test

	Average honey yield per 1 hive in 2011	Average honey yield per 1 hive in 2012
Chi – square	4.303	3.268
Df	3	3
asym. sig.	0.231	0.352

Source: own calculations

CONCLUSIONS

If we assume that the quality of human resources in apiculture has significant effect on the production of honey, we can conclude that this statement cannot be confirmed based on the performed methodology and data used for testing. Additionally, we assumed that the quality of human resources was influenced by educational level, the length of practice in the beekeeping industry, frequency of participation in educational activities. The results of questionnaire survey showed that 95.7% of beekeepers regularly or at least occasionally attended the educational or learning activities such as exhibitions, seminars, workshops. Therefore, in our opinion organizing such educational activities makes sense due to the fact that beekeepers have considerable interest in taking part in them and they represent appropriate way of improving quality of human resource in apiculture. We also assumed that beekeepers with longer beekeeping practice would achieve better results in honey production in comparison to less experienced; however, this assumption was not confirmed again. The explanation is as follows: the younger beekeepers are more able to adopt and apply new approaches to apiculture comparing to older beekeepers who rather stick to traditions. Additionally, it is important to state that the nature of the production process including biological principles, natural conditions, and weather has the greater impact on economics of beekeeping.

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SECURITY MANAGEMENT IN THE PUBLIC ADMINISTRATION

Abstract

Security management in the public administration is a part of the Public administration management process, however there is usually a lack of focus on this issue in the preparatory phase of crisis management. Resolution of the Committee of the Regions 2006/C 192/07 shows that there is a need of closer focus on security in municipalities. The part 19 says that local governments are prepared to participate on removal of sources of uncertainty in cities. The study is using critical analysis to monitor various municipality competencies related with citizens' security in Slovak Republic. Through knowledge about level of these security services there is a possibility of its quality monitoring and as well improvement. To solve such a complex problem there is a need of complex analysis and gaining data about how to monitor or compare current situation and to formulate common policy in this issue. Security management in public administration unit is mostly presented by such services which public administration body is providing for its citizens.

Purpose - A main purpose of this article is to identify the indicators to measure citizens´ security according to competences and tasks of self-government municipalities in Slovak republic. These indicators are essential for monitoring of a security status of territorial units and to be able to select the most suitable tool to enhance security through public sector services.

Design/methodology/approach – For identification of suitable indicators a critical analysis method is used, at first analysis of documents and texts and then after methods of comparison. Also methods of analysis, synthesis, induction, deduction and summarization are applied. Data were used mainly from a own survey focused on 248 respondents.

Findings and Originality – The findings consist of: - design of new methodology of security indicators identification; identification of gap in service opportunities from the side of self-government municipality. Such a complex identification of indicators due to the competences and tasks of self-government territorial units is new and original.

Keywords: crisis management, security management, critical analysis, public service, municipality

Research type: case study

JEL classification: D13, D31, D63, R13, I32.

INTRODUCTION

Human being as well as every living creature has an effort in his life to reach some status of contentment, however in comparison with other creatures such a status do not need to be related only with his basic physiological needs. Human kind as thinking being is not satisfied with living in just existing world. He is trying to change this world to a better place according to his needs. Democracy is in development as well according to development of human kind, technology, social relations and environment. Nowadays society is characterised as a rush one and this fact is according to some authors (Beck 2004) purpose of differentiations among people and nations. According to Filip and Šimák Some differentiations may be useful in society, other ones cause disruption of equilibrium in societal environment. (Filip, Šimák 2006). According to existence of such a risk to our equilibrium, there is a need of existence of some kind of mechanisms how to avoid realisation of such a threat to our various values.

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When describing human security it is usually distinguished from a protection against usual threats. For example Gary King and Christopher Murray in publication „Rethinking Human Security" define human security as a certain extremely important spheres of human well-being. (King, Murray 2001) Jan Stejskal in his article „Human Security in context of wider concept of security" express a categorical opinion, that it has no sense to categorise themes like human rights, human development, life quality or sustainable development into security agenda. (Stejskal 2005) It would surely be undesirable if every slightest variation would influence security environment, also in accordance to loss of transparency and ambiguity of competences. Therefore security cannot be understood as equal to the quality of life, but quality of life is mainly influenced by level of security. Thus, security can be considered as one of the key attributes of quality of life. Because citizen in some territory inside a country do feel secure not only in relation to the strategic challenges and threats, but rather in relation to direct threats for himself, his property, his family, to day-to-day threats. Therefore there is a need of existence of services which are provided by a state or municipal government for citizens, to ensure protection of their security needs.

1 SECURITY AS A SERVICE PROVIDED BY MUNICIPALITY

Definition of service: The service is "any activity or benefit that one party provides to another, its characteristics are: essentially intangible, does not result in its ownership. (Halásek 2005)

Based on the public sector schema according to Rektořík (Beňová 2005), the first block consists of societal needs segment. These are public administration, police, judiciary and army. Such pure public goods that are ensured by public authorities in relation to meeting the needs of security include: protection of citizens, protection of territory, protection of property, the right to justice. To ensure these needs for citizen a wide range of public authorities at different levels serves.

It is not possible to address local security issues using only the global security system and vice versa. Despite this fragmentation of security systems, the phenomena and processes existing at these levels do interact. Citizen within a territorial unit cannot feel secure if a state is not secure as well, from another point of view state is destabilized by conflicts existing at the local level.

Security as well as defense is undoubtedly public good that is ensured by a state and no one group of citizens can be excluded from the provision of these security services. It is in the public interest to look for differences in how and why public services are differently perceived by public representatives and by individual citizens, as beneficiaries of the public service.

Security is possible to be seen in terms of "New Public Management" as a service that government provides to citizens as customers.

According to the authors Balážová, Papcunová: "In considering any public service, management maz achieve reaching results by using the following criteria:

- The quality of customer service, including availability (eg time);
- Performance of public service;

- Cost of this service;
- Customer satisfaction and employee satisfaction."

(Balážová, Papcunová 2008, 9)

With regard to the application of the above mentioned criteria for assessing the public service in terms of the security of citizens in a municipal area we present modified criteria: Quality of service in the field of security of citizens;

- The real performance of services in the field of security in a municipality;
- Costs incurred to provide security services in the community;
- Satisfaction of citizens with the implementation of services in the field of security and satisfaction of municipal representatives with predispositions and support to ensure the security services for citizens.

2 PERCEPTION OF SECURITY SERVICES – SURVEY

In order to obtain an overview of the inter-subjective view of citizens on security issues we have decided to carry out initial survey of citizens' perceiving of their security.

Research question: "Try to Prioritize given security ingredients (national security, physical security, economic security, internet security)." Research sample n = 248.

After initial evaluation of the survey, results clearly show the dependence of prioritization of security according to age of respondents. The total number of 248 respondents was divided according to the age criteria into two groups with an aim to show various opinions of different social groups. For respondents with average age 19 (first year university students), there was a significant emphasis on a primary role of the State in citizens' security ensuring. For older respondents, by contrast, exhibits greater autonomy and diversity of perceptions human security.

Table 1. Summarisation of survey results, average age 19, research sample n = 159

Type of security	Percentage of prioritisation
National security	63 %
Physical security	30 %
Economic security	4 %
Internet security	3 %

Table 2. Summarisation of survey results, average age 28, research sample n = 89

Type of security	Percentage of prioritisation
National security	31 %
Physical security	53 %
Economic security	9 %
Internet security	7 %

As we can see from the above tables, the vast majority of respondents identified national and physical security as the most important ones. When comparing the responses according to age of respondents, a striking fact replacing the first position between these two sectors is seen. The fact that in the younger group the national security was leading, this can suggest a decisive differentiation of security perceiving in various social groups.

Since the survey was conducted among students in their first year of university study (full-time and part-time form of study), the result can be attributed to the fact of their visions of social order. Based on other social and economic issues, the following facts connections have been identified. Full-time students usually live with their parents or parents pay for their living expenses or make a significant contribution to meeting the necessities of their life. Thus the result of this survey was influenced by the context of their claims or the expectation of ensuring the security from external point of view (as something what is provided for them no-matter by whom) In contrast, majority of part-time students who already has own family, do live alone or significantly contributes to the common household, see security of individuals not only as a service obtained by external security systems.

Based on the survey, significantly less involvement of the respondents in the field of internet security can be observed. Several of them reported in this connection that internet is strongly linked to factors of economic security in case of electronic banking operations respectively with personal security issues. In relation to the different interpretations of each of the security sector as well as with respect to existing objective indicators and the possibility of their influence, it seems to be efficient to allocate the physical, economic and external security of the state. The national security could be replaced by external security and defense policy. In this way the sector can be better understood by respondents and there is also shown an emphasis on role of state external policy in this sector. Economic security would focus primarily on sustainability of work in the regions (Stachová, Stacho 2013), but also in the area of social security, savings and investment security. Physical security should include all of the efforts to prevent threats that affect humans in the physical area. In addition to violent crime of individuals and groups, property crime, the sector would also affect services in fire protection, civil protection, whether in the context of crisis management globally. Separate attention deserves health security with a focus on the availability and quality of health care, and the very well-being of the population and in relation to environmental threats. To manage such a security services properly, there is a need of their identification and developing a methodology for their measurement. Only those things we are able to measure, are able to be managed.

3 PROPOSED METHODOLOGY OF MEASURING SECURITY OF CITIZENS IN A TERRITORIAL UNIT

In the context of measuring the quality of services provided to citizens within a municipality as a territorial unit, we deem necessary to identify a set of services that the municipality should ensure in the security area for its citizens.

For this purpose we have decided to perform a critical analysis of existing laws relating to municipalities with respect to the following criteria:

- Tasks which should be ensured by a municipality;
- Tasks related to the security of citizens.

According to existing security definitions and their application on citizens as a reference objects, security of citizens we have defines as: "A condition in which the rights and freedoms of citizens are preserved and there is allowed further development of citizen and his rights in his own interest or in the interest of the whole society."

This kind of critical analysis of all legislation in the Slovak Republic according to the given criterions is resulting into a final set of services provided to citizens of the municipality in the security area by municipal government.

Result of such an analysis shows following qualitative and quantitative indicators of physical security of citizens.

Following indicators are based on a quality of services ensured by municipal government:

Economic mobilisation measurements; Civil protection measurements; Crisis management measurements; Safety of roads in the municipal administration framework; Physical security in a municipality; Protection against fires; Protection against floods; Social protection services; Criminality prevention and ensure of public order; Municipal policy services; Emergency services in municipal territory; Environmental protection in municipality.

Another group of indicators is based on quantity of services provided by municipal government:

Number of activities organised or co-organised by municipality with a focus on civil protection; Number of forces and means to ensure evacuation; Budget of local self-government crisis fund; Number of protective buildings usable for sheltering of residents; Number and capacity of accommodation and status of resources designed for emergency supplies; Number of civil protection unit members; Number of declared extraordinary situations; Actual amount of financial funds allocated to civil protection; Amount of the requested reimbursement of actual expenses incurred for civil protection; Amount of expenses associated with the storage of civil protection material, with the preparation of civil protection and with the maintenance of protective structures of civil protection; The amount of paid disposable financial assistance; Frequency and height of requested subsidies on creation and protection of environment and health protection of the inhabitants of Roma communities / support of removal of emergency dwellings after extraordinary event / support of electricity supply, thermal energy, fuel or water in cases threatening human life; Number of fines and their total amount granted to the municipality in the case of protection against air pollution; Amount of state subsidies for the municipality for fulfilment of state defence tasks; Number of members of municipal fire department; Municipal fire department budget; Number of forces and means of municipal fire department, material and technical equipment; Number of municipal fire department members as a full-time job; Number of fire announcement places; Number and capacity of water resources for firefighting; Frequency of use of preventive-educational fire protection activities; Number and frequency of stated II. degree of flood activity; Number and frequency of flood protection measurements ensured by municipality; Amount of funds allocated from municipal budget for Fire Department on its equipment and gear means necessary for the performance of flood rescue works; Number of existing emergency shelters and budget for their operation; Frequency of provided necessary immediate assistance to the people in municipality , who were distressed in relation to a sudden extraordinary event; Municipal financial funds remarked for such an aid; Number and frequency of municipality issued orders for the implementation of flood protection works; Frequency and budget in the area of criminality prevention in municipality; Extent of financial support of municipality for the Slovak Red Cross according to its tasks resulting from Geneva conventions; Number of judged offences in the municipal territory; Number of extraordinary events in the municipal territory; Frequency of immediate assistance providing to the people in municipality

in their sudden distress caused by extraordinary events; Number of forces and equipment means that could municipal unit use for intervention; Number of the measures implemented to prevent diseases; Number of established ambulances, first aid medical stations and specialized means of ambulant care; Number of measures for noise reduction, if the action level was exceeded.

For measuring the quality of services in the field of citizens' security within the municipality, we have been searching for such options that would allow complex multicriterial measurement, and would result into comprehensive data on the security of citizens in terms of a municipality on regard to needs and expectations of citizens as well as the existing capacities of municipal government. With respect to defined four criteria for assessing the quality of services in the field of security and taking into account existing previously published methods (Hastings, Mackenzie, Filip) for measuring the quality of services and for measuring the security of citizens we propose to carry out a measurement according to a methodology designed by our own. This methodology is based on GAP analysis methods for measurement of variations and differences among the actual provided services and their perceiving by reference entities. We also consider it as necessary to examine (in addition to the opinions of citizens and representatives of the municipalities) also data indicators to evaluate the objective security of citizens.

Our proposed methodology consists of two basic dimensions. Dimension of intersubjective security of citizens in terms of community inside a municipality. Another one is objective dimension of security of citizens in terms of a municipality.

Intersubjective security of citizens in terms of a municipality is given by:

- Emotional indicators from citizens regarding the expected services and perceived services according to citizens' security;
- Emotional indicators of municipal government representatives on citizens' security.

Objective security of citizens in terms of a municipality is given by:

- Data indicators related to the security of citizens.

Basis for defining both dimensions was the result of the critical analysis of the laws defining the role of a municipality in the security of citizens.

CONCLUSION

Measuring the level of citizens' security through the civil security index would allow individuals and social groups to better understand the factors of civil security. This would create preconditions for public authorities as well as for civic associations to enforce qualified and timely measures for its improvement. First there exists a possibility of change in general, but also specific real improvement through knowledge formula for each characteristic, and the effect of the results. There exists an assumption of usage of given solutions for the future expression of sub-indices of security by transforming subjective and objective indicators, so that they can create a shared assessment.

We do believe that the further procedure in dealing with the characterized problematic should be focused on consultation of identified and analyzed data indicators with public sector institutions, with which the indicators concern in different ways. In particular, the

most recent data from the initial source could allow the creation of relevant methodology for further investigation. Especially data that are not monitored at different territorial units of the country will need to be consulted with the appropriate institutions, or calculated so that all the indicators will be applicable and comparable.

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ENHANCING LONG-TERM FOOD SECURITY THROUGH SUSTAINABLE MANAGEMENT PRACTICES

Abstract

Purpose – the overall purpose of this paper is to put everyone in the picture about the economic essence of the term "food security" and to the search of the possible ways of enhancing long-term food security through sustainable management practices.

Design/methodology/approach – The methodology has been designed through a critical literature review. The study was descriptive and analytical in nature, because the relevant publications were consulted to investigate the changing concepts of food security in the world and to identify the contemporary approach in food security enhancing. A discussion of the reporting and analysis of the data is also included.

Findings – It has observed from the result that global food requirements will continue to increase in the nearest years, as population rise and as growing incomes both an increasing volume and a changing pattern of food consumption. In that case the food needs of the each country cannot be met by local production alone. Increased domestic production supplemented by an increase in export earnings from industrial, agricultural and services exports are needed to enhance long-term food security. Therefore, it is obviously that all sectors of the economy should develop rather than think superficially about agricultural production alone meeting the food needs of the territory. The findings of the analysis indicate that the need to develop sustainable agriculture became prominent issues affecting the whole world. If we want to succeed in overcoming hunger in the whole world and meeting the demand of today's and future generations, fundamental changes in food policy on any level, from local to global, are needed.

Research limitations/implications – It is recognized that the challenge of food security is considerably broader than a narrow focus of this paper. Food security issues, among a myriad of other things, cover the development of integrated food security policies at different levels, as well as agribusiness, global food distribution systems and even national and international economies. However, this paper is limited to a review of specific sustainable management practices, used to enhance long-term food security, as opposed to discussing broader economic issues.

Practical implications – This research paper reinforces available knowledge of food security problem and tries to use the specifics of its solving in order to provide a more practical context to the well-established theoretical understanding of the contemporary approach to food security enhancing.

Originality/Value – The paper contributes by developing a systematic view of the key challenges of the food security and the possible ways of its solving through sustainable management practices.

Keywords: food security, Food and Agriculture Organization, food availability, food access.

Research type: research paper.

JEL classification: Q18

INTRODUCTION

World Food Day, celebrated annually in every corner of our planet on the 16th of October, brings together all peoples and cultures in the global fight against the eradication of hunger from the world that we live in. Proclaimed in the early 1979 by the Conference of the Food

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and Agriculture Organization of the United Nations (FAO), it became a worldwide event, raising public awareness of the world food problem and strengthening solidarity in the struggle against hunger, malnutrition and poverty. Since 1981, World Food Day has adopted a different theme each year, in order to highlight special areas needed for action and provide a common focus. For instance, the theme of this year's (2014) observance was "Feeding the World, Caring for the Earth", chosen to recognize the important contribution of family farmers to solving the principal world food problem.

Taking into account the wide range of these annual themes, which provide a common focus and highlight the major areas needed for further action, it should be admitted that the problem of food security is the most significant problem facing the world's ever-increasing population.

That is why the overall purpose of this paper in the present day context is to put everyone in the picture about the economic essence of the term "food security" and to the search of the possible ways of enhancing long-term food security through sustainable management practices.

The paper draws upon collecting relevant data from different sources, including statistical publications. Most of the important information has been derived from the reputable paper-based and electronic information sources, such as well-known academic journals and official reports. Apart from a few fundamental documents, the review covered publications from 2000 to the present day.

THEORETICAL BACKGROUND

The first official reference to world food security had been made at the 1974 World Food Conference that, right after the world food crisis of 1972 – 1974, called for increased food availability through higher production and for greater stability of food supplies. The concept of food security has evolved greatly over the last few decades.

1.1. CHANGING CONCEPTS OF FOOD SECURITY IN THE WORLD

Until the 1980s the concept of food security by Food and Agriculture Organization of the United Nations (FAO) was based on absolute food availability, meaning an aggregate reduction in food commodities within a nation could cause a famine. In 1983, FAO's Committee on World Food Security expanded the new concept of the term "food security" to its current definition, encompassing several goals: ensuring adequacy of food supplies; optimizing stability of supplies; and securing access to available supplies for all who need them. The ultimate aim of the given concept was "ensuring that all people at all times have both physical and economic access to the basic food that they need" (Food Security. Policy Brief, 2006).

In 1986, the highly authoritative World Bank report, which was called "Poverty and Hunger" (The Post-2015 Development Agenda and the Millennium Development Goals, 2014), focused on the impermanent dynamics of food insecurity. This document introduced the widely accepted diversity between chronic food insecurity, traditionally associated

with a wide range of problems of continuing or structural poverty and low incomes, and transitional food insecurity, connected with some periods of reinforced pressure caused by natural disasters, economic crash or social conflicts and political violence.

The most recent careful redefinition of the term "food security" was offered at the World Food Summit of 1996, which was held in Rome, Italy. It was defined as a situation that exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle (Rome Declaration on World Food Security and World Food Summit Plan of Action, 1996). In other words, it should be mentioned that the considering concept of food security is further elaborated in terms of permanent access of people at all times to enough food for an active and healthy life. The general focus of the presented definition was revised to include the individual and household level, in addition to the regional and national level of aggregation, in food security analysis.

This definition was reaffirmed officially in the 2009 Declaration of the World Summit on Food Security (Declaration of the World Summit on Food Security, 2009).

Essentially, food security can be described as a multi-faceted concept, variously defined and interpreted. We completely agree with R. Fish, A. Butler, M. Lobley (Fish R. et al., 2011) and other scientists that it is about producing more food in ways that contribute to broader public health agendas, safe & nutritious food, active lifestyles, minimize environmental impacts of farming, reduce fossil fuel dependencies and ensure a fair price for both producers and consumers.

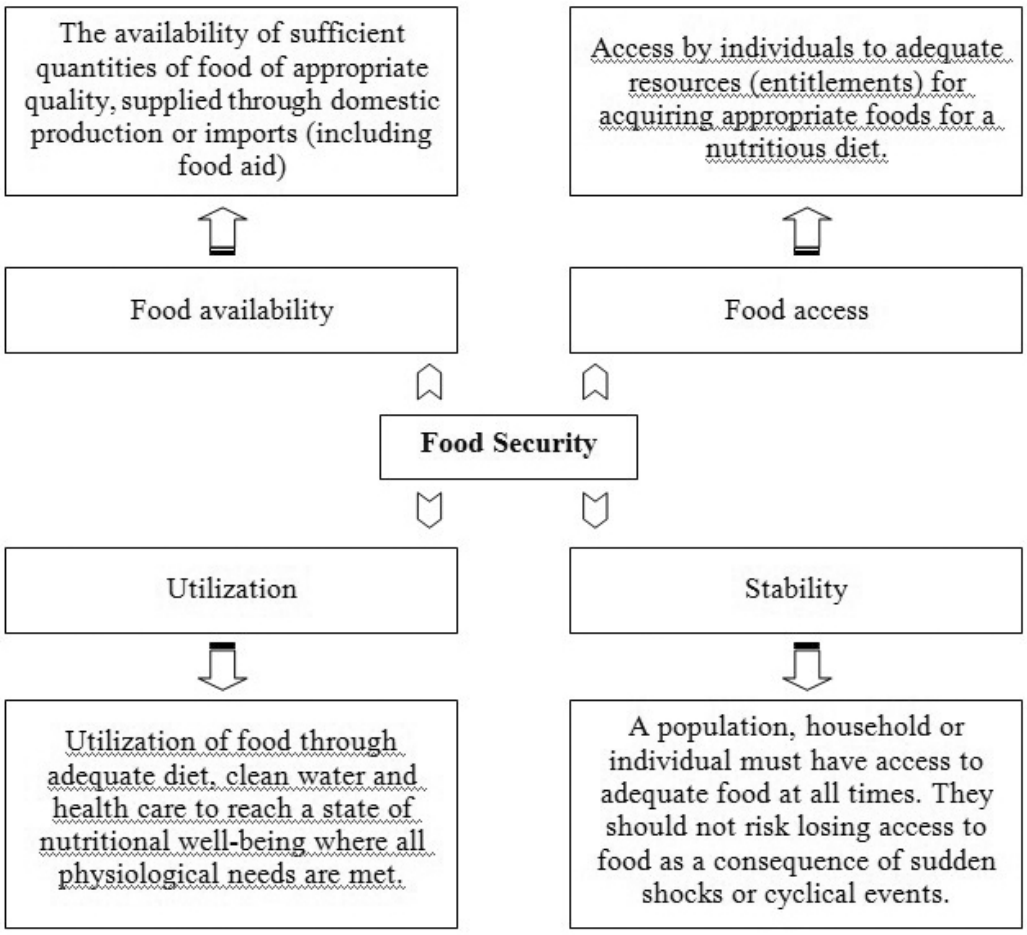
Subsequently, the conceptualization of food security goes beyond the adequacy of food quantity and quality and extends to the four "A": availability, accessibility, acceptability and adequacy. These variables are linked to each other in different ways.

Food security requires that a sufficient supply of food will be available (quantity) and accessible to all people equally. Acceptability addresses food's cultural and symbolic value, that the food available and accessible should respect individuals' cultural traditions. In turn, adequacy is usually defined in terms of the long-term sustainability of food systems (quality, in the broadest sense).

1.2. THE KEY PILLARS OF THE FOOD SECURITY

According to the numerous studies of the Food and Agriculture Organization of the United Nations, there are several basic pillars that define today's food security regulations and management practices (See Figure 1).

Figure 1. The key pillars of the term "food security"



Source: according to IICA's Definition of Food Security, 2009

As we have seen above, food security is the existence of the necessary conditions for human beings to have an access, in socially acceptable ways, to food and in keeping with their cultural preferences, so as to meet their dietary needs and live healthy and productive lives. Those conditions are as follows.

First of all, the physical availability of the basic foods in sufficient quantities and of sufficient quality produced in and imported into the country, including even food aid.

Secondly, access of all people in the whole world to food because they have the economic and other resources needed to acquire adequate nutritious and safe food.

Thirdly, reaching an optimal level of nutritional well-being where all physiological needs are met, thanks to an adequate diet and availability of clean water and health care.

And, finally, permanent access to the basic foods at all times, without the risk of running out of food as a result of unexpected climatic and socio-economic crises or cyclical events (seasonal food insecurity).

RESEARCH RESULTS AND FINDINGS

According to the latest economic forecast, the world's population is estimated to rise to nine billion by 2050 (World population projected to reach 9.6 billion by 2050, 2013). With two billion more mouths to feed by 2050, it will be necessary to produce 70 percent more food than today (Moir B. et al., 2011). That is why irreversible climate change will continue to desolate current and future crops with droughts, floods, and fires. In spite of population pressure increasing demand and natural disasters decreasing supply, world food security will continue to be one of the most important humanitarian and economic concerns worldwide. In order to feed a population of the planet in 2050, the world will need a new vision for agriculture, which means, first of all, delivering food security and environmental sustainability through agriculture. These important areas will require producing more food with more economical use of the existing resources while the development of rural economies. In our opinion, it can be achieved through collaboration, investment and innovation among all stakeholders.

Recent statistics indicate that combining expected population growth with income growth means food consumption will increase by 68 per cent between 2000 and 2050 (Moir B. et al., 2011). This implies an annual growth rate of 1.04 per cent, compared with growth of 2.2 per cent annually between 1970 and 2000 (See Table 1).

Table 1. Projected growth in population and food consumption in the world

Regions of the world	Average annual growth rates, %								
	1970 – 2000			2000 – 2030			2030 – 2050		
	kcal / person	population	food consumption	kcal / person	population	food consumption	kcal / person	population	food consumption
Developing countries	0,77	2,05	2,83	0,36	1,20	1,56	0,18	0,57	0,75
Sub-Saharan Africa	0,15	2,80	2,95	0,57	2,23	2,81	0,42	1,48	1,91
Near East / North Africa	0,00	2,57	2,57	0,17	1,56	1,74	0,09	0,82	0,92
Latin America and Caribbean	0,74	2,02	2,77	0,32	0,94	1,26	0,13	0,28	0,40
South Asia	0,47	2,23	2,71	0,51	1,29	1,81	0,33	0,53	0,86
East Asia	0,49	1,48	1,97	0,35	0,47	0,82	0,06	-0,17	-0,10
Industrial countries	1,19	0,74	1,94	0,07	0,47	0,54	0,03	0,13	0,16
Transition countries	0,41	0,08	0,49	0,28	-0,64	-0,37	0,19	-0,78	-0,59
Total (in the whole world)	0,49	1,70	2,20	0,29	1,03	1,32	0,15	0,48	0,63

Source: according to Moir B. et al., 2011

As can be seen from the Table 1, considerable population groups all over the world will remain deficient in the basic foods. With global food consumption growing at decreasing rates to 2050, agricultural production can also spread at a slower rate than in the past without prices rising.

At the beginning of the XXI century José Graziano da Silva, FAO Director General, in his Message on the occasion of World Food Day and TeleFood 2000 (A Millennium Free from

Hunger. Message on the occasion of World Food Day and TeleFood, 2000) admitted that "The scourges of hunger and poverty are morally unacceptable and have to be defeated, Hunger and chronic malnutrition diminish human life. The lack of physical access to safe and healthy food at all times leads to negative consequences for people and nations".

Turning to this fact, we realize that ensuring food security requires action in multiple dimensions, including: improving the governance of food systems; inclusive and responsible investments in agriculture and rural areas, in health and education; empowering small producers; and strengthening social protection mechanisms for risk reduction.

The recent food crisis has raised public awareness on the fragile nature of the existing global food production system and of the pressing need to develop agricultural production and to give an appropriate support to the food security.

2.1. CONTEMPORARY APPROACH TO FOOD SECURITY ENHANCING

"Twin-track approach", created for fighting hunger in the whole world by the well-known experts of Food and Agriculture Organization of the United Nations, combines sustainable agricultural and rural development with targeted programmes for enhancing direct access to food for the most needy (See Table 2).

Table 2. Contemporary approach for food security enhancing in the world, proposed by Food and Agriculture Organization of the United Nations

The name of the approach	Availability	Access and Utilization	Stability
Rural development / productivity enhancement	Enhancing food supply to the most vulnerable. Improving rural food production especially by small-scale farmers. Investing in rural infrastructure. Investing in rural markets. Revitalization of livestock sector. Resource rehabilitation and conservation. Enhancing income and other entitlements to food.	Re-establishing rural institutions. Enhancing access to assets. Ensuring access to land. Reviving rural financial systems. Strengthening the labour market. Mechanisms to ensure safe food. Social rehabilitation programmes.	Diversifying agriculture and employment. Monitoring food security and vulnerability. Dealing with the structural causes of food insecurity. Reintegrating refugees and displaced people. Developing risk analysis and management. Reviving access to credit system and savings mechanisms.
Direct and immediate access to food	Food aid. Seed/input relief. Restocking livestock capital. Enabling market revival.	Transfers: food / cash based asset redistribution. Social rehabilitation programmes. Nutrition intervention programmes	Re-establishing social safety nets. Monitoring immediate vulnerability and intervention impact. Peace-building efforts.

Source: according to Food Security. Policy Brief, 2006

As outlined in Table 2, first approach, concerned with rural development and productivity enhancement, addresses recovery measures for establishing resilient food systems. By the way, it is based on the factors that affect the existing food system include the structure of the food economy as a whole, as well as its separate components, which are: agricultural production, level technology, the diversification of food production and consumption. Unlike this, another approach focuses on the assessment of the main options providing support to vulnerable groups. In general, both approaches are intended to be mutually reinforcing, and the positive interaction between them should reinforce the path to food security enhancing.

Drawing on the conceptual framework of the presented approaches, the following principles contribute to the implementation of the main directions of the state policies in the field of global and national food security enhancing:

fostering sustainable agricultural and rural growth, which means promoting environmentally and socially sustainable agricultural development as the basis for further economic growth;

addressing the root causes of food insecurity, including promoting not only productivity growth, but also resource access and land tenure;

addressing the urban dimensions of food insecurity, especially addressing the unique factors behind increasing urban poverty and improving food security in terms of availability and access, market development and management of the existing natural resources.

2.2. MANAGING FOOD SECURITY: KEY CHALLENGES AND THE MAIN PERSPECTIVES

Despite the recent progress made in the struggle to end hunger and food insecurity, the international community should pay considerable attention to the most notable challenges to meet the needs of the millions of hungry people today and those of an extremely growing population on different continents. The environment that comprises food production and food consumption components has changed greatly in recent few decades. New forms of investment are flowing into various food and agriculture systems and new models of food system governance are forthcoming.

While current and future challenges differ from those of the past, responses to the new challenges can build on lessons learned. Experience tells us that there is an urgent need for the universal agenda, for country and context-specific strategies, and for people-centered approaches. Given the complex challenge of eradicating hunger and food insecurity, progress will depend on effective governance systems and the involvement of many stakeholders across sectors, with empowered participation, transparency, equity and accountability as key principles (The Post-2015 Development Agenda and the Millennium Development Goals, 2014).

In this context, we consider it necessary to emphasize that obvious political commitments need to be made and suitable resources allocated in a timely and effective manner for the hunger ending. Moreover, at the regional and national levels various sectoral programmes need to be developed and coordinated in ways that ensure relevance and important action towards the eradication of malnutrition and food insecurity. In many cases it is particularly obvious that at the global as well as the regional level, the food supply can be largely dependent on the dynamic impact of macroeconomic environment and the climatic phenomena, while at the national level, any disruption – be it due to the natural disasters or civil strife – can seriously destroy food production system, orderly marketing and the stability of the food supply.

A number of key issues arise from this statement. For instance, national governments and all major stakeholders should support the consistent realization of the right to adequate food, establish and protect rights to resources, especially the finite and vulnerable ones; encourage economic incentives that promote sustainable consumption and production patterns; promote well-functioning and favorable agricultural and food markets; and invest more resources in essential public goods, such as agricultural innovation and rural infrastructure.

We have identified a number of significant issues that present challenges to the actual food security development initiatives (See Table 3). These challenges are concerned with the need for more consistent planning, building inclusive partnerships that allow numerous stakeholders to interact effectively, and finding ways to provide that capacity building needs can be evaluated and addressed in perspective.

Table 3. Food security issues for the industrially developed and the developing countries

Fundamental pillars of food security	Key determinants of food security	Issues for developed countries	Issues for developing countries
Food availability	Domestic production of food. Food import capacity. Strategic good stocks. Food aid (given either as actual food items or as cash to buy food).	Supply to remote communities. Rising dependence on imported foods.	Rapid population growth. Serious crop failures. Depleted strategic food reserves.
Food access	Consumer purchasing power. Income of population. Transport and market infrastructure.	Disadvantage groups – some indigenous populations and some people in institutions. Persistent poverty.	Cost of food imports. Endemic poverty. Inadequate food transport and storage infrastructure.
Utilization	Food safety, which implies the use of resources and methods to keep food safe for human consumption. Hygiene and manufacturing practices applied in: primary agricultural production, harvesting and storage; food processing; transportation, retail, households. Diet quality and diversity: meeting needs in terms of energy	Fresh fruit and vegetables can be seasonal and import dependent. Ability to meet nutrient needs. Ready access to cheap food of poor nutritional quality.	Poor dietary balance. Reliance on imbalanced diets. Nutritional deficiencies.
Stability	Weather variability. Price fluctuations. Political factors. Economic factors.	Impact of urbanization and loss of horticultural land. Supply of fertilizers and agricultural and veterinary chemicals. Impact of severe and more frequent droughts and heat waves. Major pest and disease incursions.	Scarcity of water and arable land. Adverse climate events. Conflict and post-conflict. Variation in global food reserves. Reliance on aid programs. Food transport and storage infrastructure.

Source: according to authors' compilation

The findings from the Table 3 can be summarized as follows. No developing country has reduced poverty through agriculture alone and without institutional and industrial development, but almost none of them have reached it without appropriate increasing of the agricultural productivity. Despite the recent developments in the national economies, agriculture is still remaining perhaps the single most important economic sector for a large number of the developing countries in the world. We cannot ignore the fact that climate change has a great potential to damage irreversibly the natural resource base on which agriculture economy depends, with serious consequences for food security. However, agriculture has a real opportunity to transcend from being an important problem of nowadays to becoming an integral part of the solution to climate change provided there is a more complete understanding of food security, climate-change adaptation and the significant contribution of agriculture to pro-poor economic growth. What is required is a rapid change from traditional, industrial and

high-external-input dependent model towards a sustainable food production system, able to develop the productivity of small-scale farmers, and the essential transformation is much deeper than simply improvement of the available agricultural systems.

CONCLUSIONS

Through this research we have come to certain conclusions.

Our world is facing today a potential crisis in terms of food security. The challenge is to provide the growing population on the planet with a sustainable, reliable supply of safe, nutritious, and affordable food of high-quality through using less land, with lower inputs, and taking into account the global climate change, other environmental changes and reduction of nature resources.

Based on the available data and literature on the food security problem, it should be possible to emphasize that despite progress made in reducing chronic hunger, undernourishment still affects at least 842 million people worldwide. Guaranteeing fair access to resources, rural employment and income are key to overcoming hunger and food insecurity. Available data suggest that more than 700 million people in the developing world lack the food necessary for an active and healthy life (The Post-2015 Development Agenda and the Millennium Development Goals, 2014). We also must admit that the problem of food security is not caused by an insufficient supply of food as has been commonly believed, but by the lack of purchasing power on the part of nations and households.

Undoubtedly, strong economic conditions, as well as effective safety nets and increased agricultural production are needed to develop the food security of each country on the whole world. This is explained by the fact that increased agricultural production traditionally reduces the vulnerability of the country to food insecurity due to external impacts, such as high international prices caused by global food deficiency, reduced export capacity and balance of payments difficulties. As a rule, increased agricultural production serves the existing food needs of rural households and reduces the power of food insecurity in the country by increasing the supply and availability of food and by reducing prices on the basic foods.

It would be unfair not to mention that fact that significant investment in agriculture remains critical to sustainable long-term food security, but the food needs of the country cannot be met by only local production. Increased domestic production supplemented by an increase in export earnings from industrial and agricultural exports is necessary to achieve long-term food security. Thus, it is obvious that all sectors of the national and global economies should develop rather than think superficially about agricultural production and meeting the food needs of the country or the continent.

Coming to the conclusion, it should be mentioned that the lack of integration between national food and nutrition security policies and implementation mechanisms at the local level, such as investments in infrastructure to support farm-to-market transportation and greater farmers' access to the relevant market information, needed for better market pricing decisions, are some of the most striking examples of the significant factors limiting the food security enhancing, which should be considered in the future research.

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STRATEGIC MANAGEMENT OF EU STRUCTURAL FUNDS

Abstract

The purpose of the paper is to describe and compare the strategic management approach of implementation of program periods (hereinafter as "PP") of European structural and investment funds (hereinafter as "ESIF") 2004 - 2006, 2007-2013 and implications of the implementation to the Slovak economy for the next PP 2014 - 2020.

Methodology of the paper is based on the historic method, where the authors compare the strategic management approach of three PP of the ESIF implementation in Slovakia. Due to the up to date theme of the paper it is very important to set measures for evaluation and assessment of the experiences and benefits rose from the strategic management approach of using ESIF regarding regional and social development in Slovakia.

For ESIF strategic management system is most important to ensure simple administrative procedures and rapid use of resources available for all regions, mainly the less developed ones that can be ensured only through capability to see the importance of the strategic management approach.

Practical implications of the paper are identification of factors that should be achieved according to the strategic documents in 2004 – 2006 and in 2007 – 2013. In these two periods should be visible continuity and objective driven philosophy and should lead to the applications of the strategic management approach.

Originality of the paper is limited due to missing the overall final studies on the evaluation of the implementing period 2007 – 2013. Authors initiated to study the effects of the ESIF funds on the development of Slovakia.

Keywords: structural funds, regional policy, central coordination authority, strategic management;

Research type: viewpoint

JEL classification: R10, R58

INTRODUCTION

The paper is devoted to selected topics for the preparation of the third PP in the context of experiences with PP between 2006 and 2013. The first PP where the Slovak Republic (hereinafter as „SR") was in the real funding ESIF is dated in the period 2004-2006. In this paper authors are focused more on preparing the second PP, ie from 2007 to 2013 and the preparation of the third PP, ie from 2014 to 2020. The time focus is justified because of the fact that the drawing in the first PP until we entered the final phase 7 annual cycle of SR did not allow fully utilize the potential of financial resources and did not have a strong bargaining position or experience in creating operational programs, since all essential settings structural funds have taken place prior to SR in the EU. In connection with the subject of the paper there will be discussed the first program period only partly that will help shape the overall system of development management and the use of EU structural funds. In this paper there is used the concept of PP for the name of the time period, in which can be used funds from ESIF on seven year periodicity. Eligible entities, which may use resources from ESIF, are the Member States of European Union (hereinafter as „EU").

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THEORETICAL BACKGROUND

The origin of ESIF was conditioned on actual performance of EU regional policy, which is one of the most important policies of EU. For the most part, the Community tries to use it to meet its stated objectives. The main task of this policy is to compensate distortions in economic growth in different regions of EU and encourage their development. The definition of regional policies there are many. Authors selected the most completive one: "Regional policy can be understood as management by state institutions and territorial scope, which is directed towards the creation of favorable conditions for the dynamic and versatile development of regions with maximum use of their geographic, human and economic potential. It can therefore be regarded as an indicator of performance goals and objectives for regional development. "(Rajčáková, 2005).

It can also be seen regional policy as "a set of objectives, measures and instruments leading to a reduction too large differences in socio-economic level of individual regions, thus expresses a kind of instrument of solidarity." (Wokoun, 2003).

From the above definitions, regional policy, clearly shows that it is necessary the existence of a financial instrument that would be able to fulfill different objectives and thus can be called regional policy as a strategic investment policy, which focuses on all regions and cities in the EU in order to promote their economic growth and improve the quality of life. In this powerful financial instrument of EU regional policy is currently ESIF.

In order to be able to use EU structural funds effectively and to meet objectives, it is necessary to control their spending in a manner that is accepted by all EU Member State. Therefore, preparation of the management of the entire seven-year program period, during which the draw resources from ESIF must comply with all EU regulations as well as the proposed use of resources for a particular member country must be in accordance with the basic principles and rules of the current regional policy. All steps that have lead to successful ESIF management are therefore subject to the application of all the basic principles of management. "It is therefore very important from a strategic point of view the education of staff involved in the preparation of the program period, as one of the functions of personnel management, which presents a summary of activities providing extension of skills, personal development and work capacity." (Rudy, 1990).

In the system of structural funds always occurs when you change the program period to change the structure and nature of the management body in that Member State. This change is affected by the current regional policy of the European Community, which is valid for the whole of the next programming period. In these cases, there is a conversion of an existing entity, as well as management model, which is supported by the organizational structure.

The need for such changes results directly from the changes in the environment in which it operates. In these cases, we believe that it is necessary that the organizational structure consisting of a new model of governance entity choose to apply these principles of work: "must be simple, flat, flexible, team, networking, also should create conditions to ensure high quality management processes and as a whole, and should create conditions for the globalization of the organization's activities."(Rudy, 1997). The principles applied in the

development of organizational structures aim to effectively manage the entity. During these transformation processes, it is important in addition to the application of selected principles application of project cycle management methodology, which is a set of tools of project preparation and management. By applying the project cycle management leads to improvement of project planning which has an overall positive impact on achieving the results and raises the effectiveness of structural funds and thus the success of the application of regional policy.(Gozora, 2012).

Under the management of ESIF there must be clearly thought about strategic management. Resources from the structural funds could be used only in cases, where pre-evaluated process of all effects was described and the expected results of the ex ante allocation of financial resources from ESIF were identified in sectorial areas. Therefore, in the context of strategic management is necessary to know the starting point that is identified in analytical and strategic documents. This starting position crucially depends on what we have done in the past and how we respond to the ongoing changes in the past.(Papula, 2012).

Preparation of the third PP is now already in the last phase before beginning a drawdown of funds from ESIF through the new operational programs of the PP 2014 to 2020. In order to be able to actually publish a call for specific projects is to be set up within each operational program ((hereinafter as „OP"), internal management acts that will describe the entire management system in phases: creation, dissemination and evaluation of all processes within OP. Compared to the previous PP 2007-2013 is made smaller number of OP. Between 2007 and 2013 it was 11 OP in the period 2014-2020 is designed only 7 OP.

SR in the PP 2014 - 2020 draws ESIF through OP:

Table 1. OP in SR 2014 – 2020

Nr.	Operational programs	Executive body
1.	Research and innovations	Ministry of education, science, research and sport SR
2.	Integrated infrastructure	Ministry of transport, construction and regional development SR
3.	Human resources	Ministry of labor, social affairs and family SR
4.	Quality of the Environment	Ministry of the Environment SR
5.	Integrated regional OP	Ministry of agriculture and rural development SR
6.	Effective public administration	Ministry of interior SR
7.	Technical aid	Government office SR

Source: own proceedings according to Partnership Agreement 2014 - 2020

Before they could be made OP of the third PP was necessary to have created the so-called "Partnership agreement" (hereinafter as „PA") defining priorities and analyzes the environment in SR and on the basis of that describes the different needs and priorities would like to ne resolved by means of structural funds in SR.

PA 2014-2020 was concluded on the 20th of June 2014 between SR and the European Commission (hereinafter as „EC"). Concerned PA describes the intended use of ESIF in the years 2014-2020. PA defines the strategy and priorities for the effective and efficient investments in the amount of 15.3 billion Euro over 10 years. Structural Funds and Cohesion Fund are 13,7 billion Euro, European Agricultural Fund for Rural Development 1.55 billion

Euro and the European Maritime and Fisheries Fund 15.8 million Euro. On the basis of a broad consensus with socio-economic partners SR was able to present a proposal of PA, which ranked SR among the top five EU Member States, which EC approved.

SR's priority is focused on investment on key growth sectors and those are the transport infrastructure, research, development and innovation, support for small and medium-sized enterprises, environmental protection, the digital agenda, energy efficiency and renewable energy sources. Equally important will be investments in employment, education, social inclusion, and not least to increase the efficiency in public administration.

Similar strategic documents in the previous period, the National Strategic Reference Framework 2007 – 2013 (hereinafter as „NSRF"), (Kiss, Palko, 2013), which was valid for the second PP and the Community Support Framework, which was valid for the first PP 2004 to 2006.

In the first and second PP was the creation of strategic documents mainly with mechanical thinking, which emphasizes the analysis and creation of several variants, as well as the choice of solution with premeditated request. (Papula, 2012) However, we believe that the effective management of utilization of financial resources is essential to use strategic thinking, which responds to the often rapidly and unpredictably changing external environment. (Slávik, 1997).

PA, which is a strategic document of the third PP itself contains elements of analysis with a view to the future, through the so-called ex ante conditionality, which allow to evaluate the feasibility of setting up of funds from ESIF during the program period. Therefore, we can conclude that the team of high-level executive persons who meet the definition and description of the skills of managers with intuition, creativity, imagination and willingness to get rid of the shackles of the past leaded the creation of PA.(Papula, 2012).

RESEARCH METHODOLOGY

Methodology of the paper is based on the historic method, where the authors compare the strategic management approach of three PP of the ESIF implementation in Slovakia. Due to the up to date theme of the paper it is very important to set measures for evaluation and assessment of the experiences and benefits rose from the strategic management approach of using ESIF regarding regional and social development in Slovakia.

RESEARCH RESULTS AND FINDINGS

In the framework of the management of ESIF, there is also a hierarchy of governance specific in the ways of individual levels that are somewhat autonomous due to well-defined responsibilities that, in some cases extend to the other management entity. A major strategic coordinator of ESIF in SR is so called Central coordinating body ((hereinafter as „CCB"). CCB has specific position in management system, because is responsible for managing the whole PP and in some cases extends also to the board of established OP. Furthermore, in the management of ESIF are established OP already profiled on specific sectors of the economy that are profiled in support of selected activities. The OP may establish intermediate control

authorities, which carry only what is under the Treaty of the delegate management authority (hereinafter as „MA"). Such intermediate bodies create managing body usually due to a more efficient performance of the delegated activities through niche executive body.

For functions of CCB, in the current PP, is responsible section of CCB, which carries its duties at the Government Office. In the previous period was CCB of competencies assigned to the Ministry of Transport, Construction and Regional Development; in details until the end of March 2013. Even before that was CCB competency included within the Ministry of Construction and Regional Development.

CCB for the implementation of the reference framework and OP in the frame of PP directs the actors in the field of management of ESIF in order to ensure balanced use of these funds, provides the creation of ITMS and performs tasks related to the operation of the ITMS. It also provides publicity and awareness of the NSRF 2007 - 2013, monitors and evaluates the results in achieving the objectives of the NSFR and performs other tasks in the field of management of ESIF.

ITMS is a government information system that is used to provide a uniform method of recording, processing, exporting and monitoring of data on programming project and financial management, controls and audits programs financed by ESIF. ITMS is a tool for ensuring transparency, verifiability and auditability processes utilization of these funds. Information in ITMS are the main source of information for the government of SR, the public, the National Monitoring Committee for ESIF and the EC.

Generally authors can define the CCB as a national authority, which is established to ensure the coordination of programming, implementation, monitoring and evaluation of ESIF under the objective: Convergence and Regional Competitiveness and Employment. It provides a strategic level of implementation of the NSRF 2007 - 2013 and the preparation of the new PP 2014 -2020 through PA.

Concrete results of preparations for strategic management body for ESIF, which were conceived and implemented with certain modifications during the PP is described below. When comparing the roles and responsibilities of the strategic management body in various PP, authors can conclude that the duties and tasks were extended in strategic authority for each new PP but also the way of management.

In the first PP 2004 to 2006 was set by the Government Resolution no. 133/2002 "A draft of decision on the final form of the National Plan of Regional Development of the Slovak Republic" and was approved by the structure of the governing bodies in relation to the EU. MA CCB) was appointed in the Ministry of Construction and Regional Development. This managing authority was fully responsible for the Community Support Framework (CSF) as a whole, for drafting the NDP SR and discussed in consultation with the other ministries of the CSF and with the EC. The MA was also responsible for the management of ESIF support and for the effective and efficient management, for the implementation and in particular:

- establishment of a system for collection of reliable financial and statistical information on implementation, monitoring data and conformity assessment by using computer systems permitting the exchange of data with the European Commission
- if necessary, modify the program complement,

- developing, and obtaining the approval of the Monitoring Committee, submit annual implementation reports,
- ensuring the correctness of financial operations, particularly for the implementation of internal controls and compliance with the principles of economy in response to any finding or requests for corrective measures,
- information and publicity.

In the second PP 2007-2013 was a management system formed in accordance with the principles of structural policy and the use of ESIF for the period 2007-2013 as defined by the relevant regulations of the EU whilst respecting the existing legal framework of SR in compliance with the principles of correct financial management.

It represented a horizontal framework for the implementation of the OP, the defined basic processes and procedures for managing OP provided by governing bodies and the OP connection to the general framework formed by NSRF and the relevant EU policies (Lisbon strategy, Gotteborg Strategy). Under the basic processes and procedures it defined the outputs and deadlines. Management system through standardization of elementary processes in OP and relevant corresponding governing documents created for MA framework for the implementation of sustainable management and process management of the respective OP. This should allow the managing authority develop management systems of the OP to meet the conditions imposed by the relevant regulations of the EU and enable continuous and efficient implementation of ESIF allocated for the SR for the programming period 2007 – 2013. At the same time create the conditions for a high degree of mutual compatibility of each OP, thus simplifying the orientation of applicants and beneficiaries in the overall system of support from ESIF.

General principles of management of ESIF factually based methods of project cycle management practices and Logical Framework Approach as internationally recognized methodologies for the preparation, implementation, monitoring and evaluation of projects and programs to increase their quality while increasing the effectiveness, feasibility and sustainability of development aid programs financed by the public budget.

The basic programming documents, use of ESIF in the PP 2007 - 2013 in accordance with the General Regulation, subject to approval by the EC, were NSRF and OP, which had to be logically connected to each other. Preparation of the programming documents had to respect the fundamental principles defined by the General Regulation, namely gender equality, complementarity, partnership, non-discrimination and sustainable development.

CCB to serve as a role of the highest management body for OP of NSRF, which fulfills the meaning of § 6 par. 1 of the help and support and Act. 60/2013 Coll. amending and supplementing Law no. 575/2001 Coll. the organization of government activities and the central state administration as amended until 31.3.2013 at the Ministry of Transport, Construction and Regional Development and since 1.4.2013 at the Government Office. CCB for the implementation of the national strategic reference framework and operational programs in frame of reference is carried out in accordance with § 6 of the help and support of the following activities:

a) coordinates and directs the actors in governance:

- elaborates NSRF coordinating the preparation of the preliminary assessment and discussed with the European Commission for the NSRF;
- coordinates the preparation of OP of the NSRF;
- coordinates and methodological guides of MA of the OP of the NSRF in the system management of the ESIF with a view to ensuring balanced use of the SF and CF;
- elaborates system of management of the ESIF for the OP 2007 - 2013 and, if necessary, ensure the update;
- draws up guidelines for CCB for selected systems of management of the ESIF and, if necessary, ensure their updates;
- develops methodological explanations for individual Management Systems;
- organizes and coordinates regular coordination meetings attended by all governing bodies of OP of the NSRF, the certifying authority, audit and coordinators of horizontal priorities;
- deprives the National Monitoring Committee and the Rules of Procedure of the National Monitoring Committee;
- creates a system framework for promoting institutional development and capacity building of administrative bodies involved in the implementation of the Funds;
- ensures communication with the EC in the context of the review of the Community Strategic Guidelines in accordance with Art. 26 of the Regulation;
- provides information for the Slovak Government on the implementation and use of the SF and CF in the NSRF on a semi-annual basis;
- provides educational activities for MA and coordinators of horizontal priorities in selected areas of implementation of the Funds, which concern all across the board OP NSRF;
- draws up internal procedures manual CCB and ensures its implementation as organizational directive as institution performing the role of the CCB;

b) provides for the creation ITMS and performs tasks related to the operation of the ITMS:

- provides for the construction, implementation and management of updating IT monitoring system for the SF and CF;

c) ensures publicity and awareness of the NSRF

d) monitors and evaluates the results in achieving the NSRF

The purpose of the management system of ESIF is to define the basic processes and procedures to ensure the harmonized application of the provision of financial contributions for the PP 2014 - 2020 at the level of all those involved in the provision of financial contributions in SR. The management of ESIF defined entities involved in the implementation in the PP 2014 - 2020 and provides the basic framework of their duties. Standard basic processes, procedures and responsibilities for the various subjects treated in the management of ESIF should also ensure the full and correct application of the rules laid down in EU legislation and SR.

Deputy Prime Minister for investment in relation to the implementation of ESIF performs tasks in accordance with the approved status of the Deputy Prime Minister for investment and the leader of CCB.

CCB's tasks in accordance with § 6 par. 1 of the contribution of ESIF performed by the Office of the Government. Relations between the CCB and the Deputy Prime Minister for investments are set by organizational chart of the Central Committee of the SR. CCB for the implementation of Partnership Agreement and operational programs, in particular:

a) ensures the development of PA and undertakes any activities related to its changes;

b) coordinates and directs the actors in the system management of ESIF;

c) develops management system of ESIF and amendments thereto;

d) issues a model contract for the non-repayable grant (hereinafter„ the grant agreement„);

e) issues a model of a written contract between the managing authority and the intermediate body for global grant and the managing authorities and intermediate bodies;

f) provides for the creation ITMS2014 and performs tasks related to its operation;

g) establishes a steering committee ITMS2014 and prepares its statute and rules of procedure;

h) ensures the development of the model of the communication strategy for informing the OP and OP at the PD;

i) monitors and evaluates the results of the implementation of ESIF;

j) is the sponsor of an integrated network of information and counseling centers;

k) ensures the preparation of opinions and positions of SR to the legislative and strategic documents of the EU cohesion policy and coordinates and ensures the preparation of legislative, strategic and conceptual documents cohesion policy in SR;

l) establishes the Council of the CCB, the status, composition and edits tasks status issued by the CCB;

m) is responsible for announcing the date and method of determining the MA and the certifying authority, the EC before submitting the first interim payment;

n) monitors compliance with the criteria for the exercise of powers MA and takes the necessary measures;

o) draws up guidelines for CCB selected system management of ESIF;

p) develops methodological explanations for individual quotes of system management of ESIF;

q) organizes and coordinates regular coordination meetings of entities involved in the implementation process of ESIF;

r) prepares the Statutes and Rules of Procedure of the National Monitoring Committee;

s) establishes a system framework to support institutional development and administrative capacity building of bodies involved in the implementation process;

t) ensures attendance at meetings of advisory committees and EC provides information on the results and conclusions of these negotiations;

u) provides information on the performance of the Slovak Government plans OP of ESIF on a semi-annual basis;

v) a comprehensive educational system of administrative capacity for PO 2014 - 2020 and ensure the implementation thereunder educational activities for those involved in the implementation process;

w) prepares a manual of procedures CCB provides its introduction as a binding internal measure of an institution performing the role of the CCB;
x) in cooperation with the governing bodies proposes reallocation of funds between programs, submitting them to assess CCB communication and coordination with EC at the request of MA;
y) assesses the compliance review of the proposals submitted by the relevant MA OP strategy with PA if the proposed revision of the OP linked to revise other / other OP;
z) establishes, if necessary, working groups and other advisory bodies and, where relevant, is responsible for drawing the Statute and the Rules of Procedure.

Of these management tools makes it clear that the CCB, respectively MA CSF consider in the implementation of EU cohesion policy instruments in SR strategic position and responsibility for the process of negotiations, SR to draft the relevant EU legislation and the preparation of strategic, conceptual and programming documents affecting the EU regional policy and SR. Furthermore, in the above report management tools can be observed constantly expanded competencies of CCB and precise measurement of management competencies, which are compared to the first program period significantly different. It also suggests that the system of drawing ESIF have large reserves still to be removed to make use of resources from ESIF have been effective, efficient and accessible to the widest part of the population in SR. Concrete proposals for improving the management of ESIF are presented in the next part of the article.

For ESIF strategic management system is most important to ensure simple administrative procedures and rapid use of resources. For this purpose authors propose the following measures:

Process optimization and establishment plan in the medium term for the current PP 2014-2020:

- to explore the possibility of merging some governing bodies, for example one joint MA for ESF, and one joint MA for infrastructure projects,
- to use of global grants - to explain an example: in the 2007-2013 period took place twenty National Projects with frequently recurring funding purposes, that funding was targeted for example on the identical active labor market measures. From the ESF the Headquarter of employment, social affairs and family and the offices of ESAF were the beneficiaries, which would be useful to transform in one joint office, which would be the beneficiary of one of the global ESF grant to fund all homogeneous activities. This would achieve a significant administrative simplification and saving human resources administration.

In strategic terms, it would also be appropriate to assess the conditions and procedures of public procurement law as such, in excess of strictness and limits of the Directive of the European Communities in this area. Optimizing administrative procedures that could be taken in the short term for the current PP 2014-2020 are as follows:

- allow the submission of applications for grant allocation, including a description of the project by the applicant solely in electronic form ITMS to the governing body of OP,

- allow the submission of applications for payment under the approved projects funded from OP for beneficiaries of non-repayable grant through the relevant intermediary or the managing authority solely in electronic form ITMS,
- predefine conditions for settlement of payments on the same terms and conditions applicable, which requires six months of the award of advance payments charged to 50% of its value,
- cancel hardly-defined condition about impossibility to award the contract to increase its grant recipient, which is valid in SR for the current programming period,
- selectively abolish currently governing bodies carrying out ex-ante administrative control of the procurement process, which is currently MA apply to all public procurements to organize the activities financed by the project structural and cohesion funds,
- more efficient way to implement the „spot checks" which governing bodies currently carried out prior to payment „payment applications" grant recipients,
- selectively reduce the number of documents and certificates that are candidates for the grant and / or grant recipients to submit to the governing bodies of operational programs.

CONCLUSIONS

At the end of this paper authors clearly stated that in the process of strategic management of ESIF have more important role the computerization and optimization of various processes governed approved. The actual control measures as well as their real administrative power must be processed in a clear and easily understandable structure, which has a single logical connection that allows and make use of funding from ESIF widest mass of the population, based on the guiding principles of regional policy, which is balancing the disparities between regions surveyed community. We also need to build on the knowledge that less developed regions are backward because of more reasons and one of them just might be the availability of financial resources and therefore it is very important that the management system of ESIF is accessible to all and its own strategic management settings should encourage percentage obtain funding from ESIF.

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SIMILARITIES AND DIFFERENCES IN FINANCIAL MANAGEMENT IN SMALL AND MEDIUM ENTERPRISES AND MUNICIPALITIES

Abstract

Purpose

This paper deals with issue of financial management within the small and medium enterprises and municipalities. Main aim of paper is shown similarities and differences in financial planning financial analysis and financial risks.

Design/methodology/approach

Main method applied in this paper are analysis of processes a financial management and comparison them in SMEs and municipalities.

Findings

This paper provides information about common characteristics identified in enterprises as well as in the municipalities (financing by external resources, financial management objectives and financial risks too).

Research limitations/implications

Analysis made in this paper can be extended towards more information and characteristic of financial management within the selected SMEs and municipalities. There exists a real need for quantitative analysis of financial risks in small and medium enterprises compared to the ones in municipalities.

Originality/Value

This paper provides information about the issue of financial management processes and it is going to be helpful in relation to the development of both kinds of subjects and their managers. It means municipalities and its mayors as well as the SMEs and their managers.

Keywords

Small and medium enterprisers, municipalities, financial management, financial analysis, financial risks

Research type Viewpoint

JEL classification: G32

INTRODUCTION

Financial management is partial activity of every subject management. Entrepreneur of SMEs and mayor of municipalities should not fail observe this field. Thanks to the correct financial management development of subject as well as the prevention of adverse financial results can be supported. Financial management begins by business setting up. During this phase of SME existence it is necessary to secure a sufficient amount of financial resources.

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Financial management in enterprises, but also in the municipalities includes: financial planning, financial analysis, monitoring and comparison of financial objectives. Despite of it, the financial management of municipality has different features and characteristics in comparison to the enterprise. In case that SMEs are achieving a loss in long-term, SMEs will stop their activities and existence. Opposite this the municipalities cannot stop their activities and existence. Despite of this basic difference, municipalities have many common, but also a lot of different characteristics. Objective of paper is shown similarities and differences in financial planning (objectives, financial resources) financial analysis and financial risks.

THEORETICAL BACKGROUNDS

Financial management includes financial planning (financial resources and their structure), the financial position of subject and influence external environment. Euroekonom defines the role of financial management like subjective economic activity, especial to obtain money from various resources, to allocate them and to improve financial position and the market value of enterprise. (Euroekonom, 2013)

Criteria financial management:

- effectiveness,
- economical,
- accessibility,
- accuracy,
- completeness.

Vlachynský defines the role of financial management. Financial management are operation related to finance. Process obtaining financial resources is the first task for the enterprise. The investment is the second task, when enterpriser allocates finance efficiently. The third task of financial management is distribution of financial results, which are influenced internal processes and external environment of district and world (especially EU). (Vlachynský, 2002)

Tools of financial management are key performance indicators KPI (evaluate them), managing cash flow, according to CFO. CFO recommends financial planning for better decision making in every fields. (CFO, 2013)

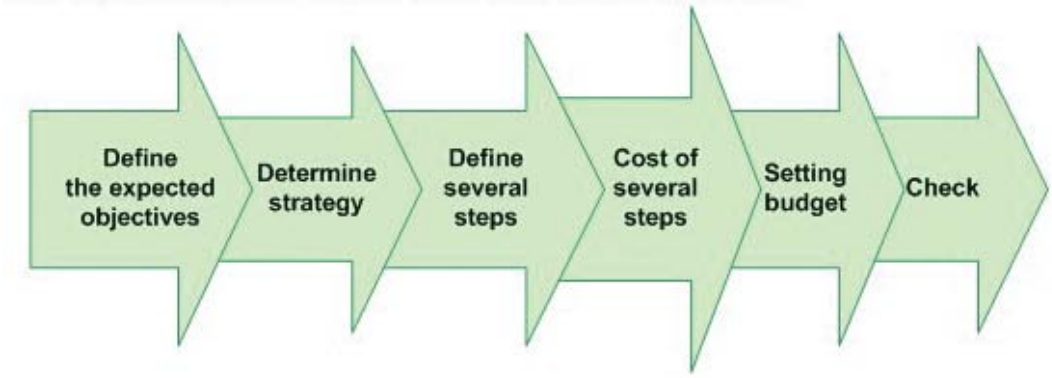
Entrepreneurs of SMEs often make decision and control intuitive. In the small business entrepreneur has multiple roles and responsibilities, which are solved more employees (departments) in medium and big companies. Businessman in small enterprise is also finance manager and he is responsible for financial situation of enterprise.

Financial management of municipality is depended on size, inhabitants, local economy and other factors. Financial health is situation subject, which is not threatened and not profit loss. If start-ups introduce processes of financial management in right moment, so start-ups will be longer in market and they will development to successful companies. If they miss this moment, it can be the cause of slow growth and profitability, because they have not information to manage and decision make. (CFO, 2013)

FINANCIAL PLANNING

Financial management begins financial planning not only for SMEs. Financial planning contains objectives, strategy, financial resources and etc. Elements of financial planning are shown on figure 1. Financial objectives are determined fundamental objective of enterprise, through business plan. Mayors of municipalities must to plan in short – term through plan expected implantation the budget. This plan contains income and expenses.

Figure 1 Process of financial planning



FINANCIAL ANALYSIS AND FINANCIAL RISKS

Role of financial analysis is detected the cause financial situation through analysis of balance sheet and monitoring income and expenses. (Szilágyi, 2004) Financial analysis assesses situation of subject through data from the past (analysis ex post) and estimate of future development subject (analysis ex ante).

Micro enterprises use data from petty cashbook, cashbook, order book, inventory of documentary, cash receipts journal, sales day book, assets register, journal, general ledger, purchase day book and etc. Companies use data from are final trial balance, assets register, balance sheet, income statement, statement cash-flow and statement of stockholders equity. Other information and data are found out from analysis of previous period, statistics, planning and etc. The results of financial analysis are compared with previous periods for the same time or subject is compared with other subject according common characters - size of subject, business sector, size of market, competitive businesses and etc.

Effective management of municipalities and enterprises are known recent situation through financial analysis. The basic element of financial analysis is budget in municipalities, which income and expenses include (fig. 2). (Grófová 2010 and Tkáčová 2007)

Results of financial analysis are financial indicators:

- liquidity,
- activities,
- indebtedness,
- profitability,
- market value. (Vlachynský, 2002)

Majority entrepreneurs do not used financial management or they start to use this management, when subject reports loss. It follows that entrepreneurs should always use financial management during all business´ activity and mayors of municipalities during his electoral term. Financial risks are reduced by entrepreneurs or mayors through financial analysis. Financial risks are related to structure finance, business partners, institutions, market, politic of state and etc.

Financial risks:

- *"risk related to loans,*
- *liquidity risk,*
- *market risk,*
- *tax risk*
- *operational risk,*
- *commercial risk*
- *risk of changes in interest rates,*
- *risk of insolvency*
- *risk from structure of suppliers and customers,*
- *risk from structure of the source of finance,*
- *risk connected factor of time,*
- *risk of cost flexibility,*
- *risk of accounting. "(Šimák, 2006)*

SMEs are often financed by the various forms of loans. This risk includes banks, partners and other institution. Relevant element of business is solvency, it is liquidity risk.

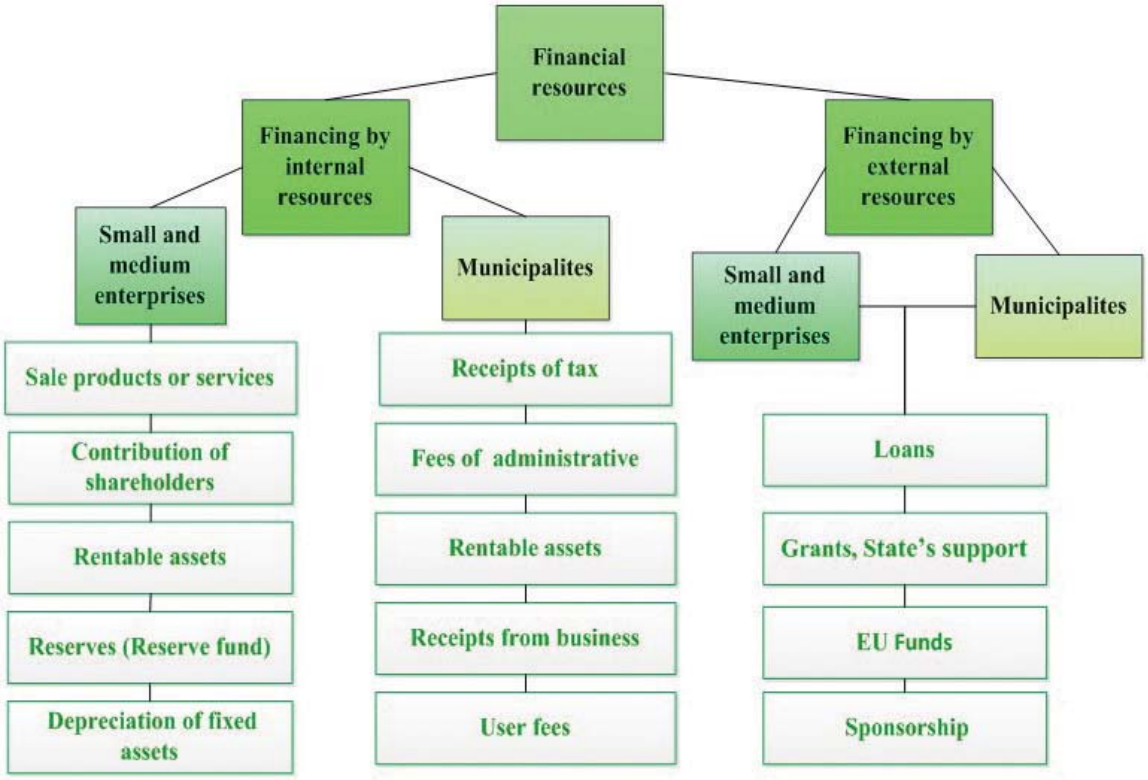
Risk management needs to be applied in municipalities. Main reasons are reduction and elimination of risks are increasing the quality of services provided to inhabitants and sustainable development. If municipality wants to manage with its assets effective, so it must to identify financial risks. Financial risks of municipalities are:

- *risk related to loans,*
- *tax risk,*
- *risk related to changes in interest rates,*
- *risk of inflation,*
- *risk of insolvency,*
- *credit risk*
- *liquidity risk,*
- *risk of defraudation,*
- *risk of accounting,*
- *risk of disaster. (Šimák, 2006)*

RESEARCH RESULTS AND FINDINGS

The first step is identified financial resources in financial planning. The structure of financial resources is shown in Figure 2 in SMEs and municipalities. Figure distributes funds from two perspectives – aspect internal and external. Financing by external resources are common for small and medium enterprises and municipalities. Rentable assets and receipts form business are common financing by internal resources.

Figure 2 shows the structure of the financial resources of SMEs and municipalities



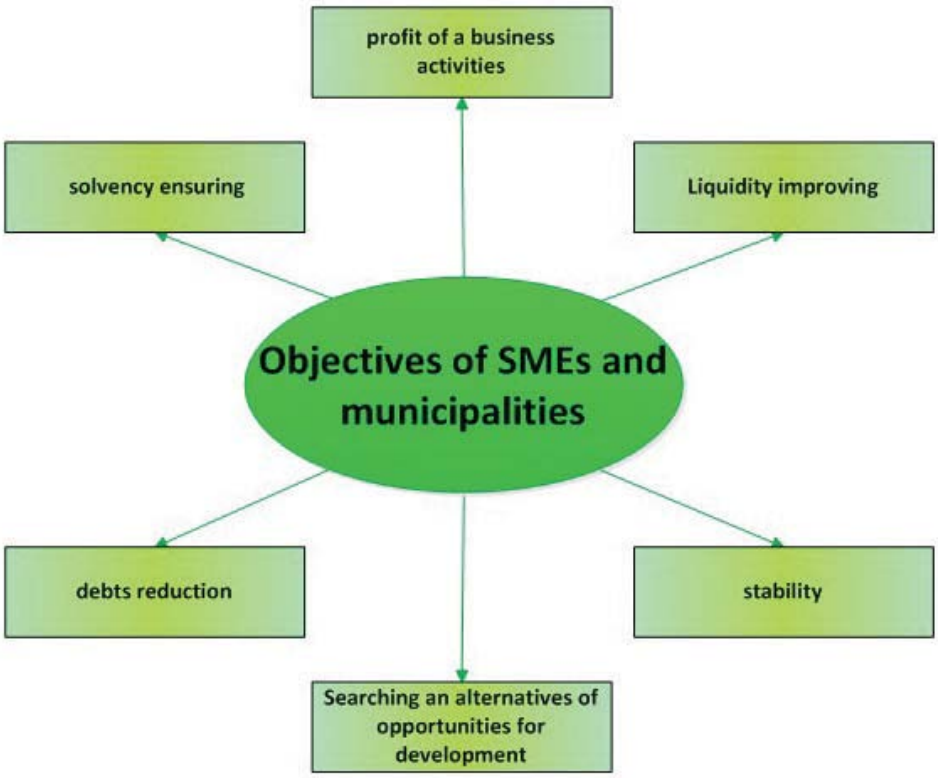
Source: (according to GRÓFOVÁ 2010 and VLACHYNSKÝ 2002)

Financial planning should be carried out in the short and in the long term. Entrepreneurs can plan within project lasts. A financial plan is the result of financial planning, which includes setting objectives, determining strategy and the draft budget of project or enterprise or municipality.

Every entrepreneur monitors to achieve annual growth in sales (turnover). The main objective of the SMEs is reported profit. The other objectives are improving liquidity, stability of enterprise, ensuring solvency, searching an alternative opportunities for development (including foreign SMEs), debts reduction and improving the company's market value.

The main target of municipality is budgetary control by mayor. But mayor can increase income in form rentable assets and business revenues. The other objective is profit of business activities. SMEs and municipalities have common targets, which are shown by figure 3.

Figure 3 Common objectives of financial management



Source: (according to MANCOVIČOVÁ 2012)

Process of SMEs´ strategy determination depends on recent enterprise´s financial situation and entrepreneur point of view related to the future enterprise´s market position. Enterprise´s Strategy can be focused on various different areas of enterprise´s activity. e. g.

- increasing of market share,
- conquering into the other market,
- canvassing for new orders,
- improving of products´ quality
- increasing of production capacity.

Financial risks, which are common for SMEs and municipalities:

- risk related to loans,
- liquidity risk,
- risk of changes in interest rates,
- risk of inflation,
- tax risk,
- risk of insolvency,
- risk of accounting.

CONCLUSION

Every decision of financial management (enterprise or municipality) has different effect. Results of this decision are income and expense. However, other factors influence on net earnings and development subjects especially financial by external resource. Financial by external resource are common for small and medium enterprises and municipalities. In paper, we want to show important set financial targets. These targets should take into the consideration all financial operations. Result of financial management (small and medium enterprises and municipalities) is reduction or elimination financial risks.

Common similarities are several objectives, financial resource of external and financial risks. If follows, that mayors and managers should be implement process of financial management. Operations of financial management are very important element successful of enterprises and municipalities.

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LEADERSHIP STYLES FROM THE PERSPECTIVE OF EMPLOYEES OF INDUSTRIAL ENTERPRISES

Abstract

Purpose

The purpose of the paper is to discuss the leadership styles from the perspective of employees of industrial enterprises and to share knowledge with people who devote to the same area of research. One of the aims of the paper is to define the concepts of leadership and leadership style, according to several authors, but also from the view of the authors of the paper. Furthermore, the individual leadership styles are characterized in the paper and there are also listed their advantages and disadvantages.

Methodology

The research was conducted through several available questionnaire surveys. The authors used questionnaire surveys from bachelor and master theses, which were recently solved and discussed the issue of leadership. The authors highlight the part of the research, which is aimed at the identification of the most motivating leadership style from the perspective of employees of industrial enterprises. Subsequently, the authors try to determine, which leadership style superiors apply towards subordinated employees in mutual cooperation.

Findings

The paper highlights the importance of leadership as a basic managerial function and emphasizes the need of managers to use such a leadership style that suits not only superior employees, but also subordinated employees. The majority of superiors apply authoritative leadership style, while subordinates works better, if they are led by democratic leadership style. These findings are particularly relevant for practice. The superiors in industrial enterprises should be aware of the effects of used leadership style. They should realize that the way they lead their subordinates affects their performance and thus ultimately the efficiency and performance of the whole enterprise.

Practical implications

A manager, who applies leadership style, which suits most of employees, creates a favourable working environment and faster achieves quality results. Hence the authors of the paper can state that there is a connection of the development and successes of the enterprise with leadership, as well as leadership style makes large differences in the results of enterprises, and thus a direct relationship between profit and leadership.

Research type

The paper is classified in the category research paper.

Key words: leadership, leadership style, authoritative style, democratic style, liberal style

JEL classification: L Industrial Organization

INTRODUCTION

Science and the art of leadership of co-workers is the content of one of the managerial functions. It is the work with people, which is in the modern management often regarded as the main content of activities of managers. People are regarded as the biggest capital of

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good enterprises. This applies to superior employees, as well as to collectives subordinated to them (Vodáček and Vodáčková 2009).

The question of ways of leadership is perhaps the oldest, the most attractive and also the most sophisticated topic of organizational behaviour (Bělohlávek et al 2001). Leadership has a great meaning, and therefore it is perhaps the most studied area of management (Sedlák 1997).

As apparent from the above, the issue of leadership and leadership styles is discussed by different authors for a long period. The aim of the paper is to highlight the differences between the preferred leadership styles in terms of employees of industrial enterprises and actually used leadership styles in practice. The purpose of creating of the paper consists in the exchange of information and knowledge among researchers dealing with this issue.

Authors of the paper used the method of questionnaire survey. They benefited from the bachelor and master theses recently solved at the Slovak University of Technology, Faculty of Materials Science and Technology, which discussed the same issue. The authors firstly determined which leadership style is preferred by employees and then, which style is applied by their superiors. The authors assumed that most superior employees use authoritative leadership style, while most employees prefer a democratic leadership style. The results of the questionnaire survey actually confirmed this assumption.

1. THEORETICAL BACKGROUNDS

In the following, the authors of the research paper state the theoretical backgrounds of the solved issue of leadership and leadership styles.

LEADERSHIP AND LEADERSHIP STYLE

The concept of leadership, respectively leadership of people is not in managerial literature uniformly interpreted. There are many ways how to look at leadership as well as many interpretations of its meaning. According to Crainer there are about 400 definitions of leadership and "it really is a minefield of misunderstandings and differences, through which theorists and practitioners must walk" (Dědina and Cejthamr 2005).

Although to define leadership is not easy, we can determine its main attributes, characterize its essence. For common, respectively general landmark of each leadership, we can consider the influence and the action of the holder of the function of leadership (Sedlák 1997).

Impingement on people has its meaning, purpose. The point is so that the activity of influenced people is directed to achievement of the group goals and the goals of the enterprise. Because people have the certain needs and goals, leadership should help them to know, that satisfying their own needs can only be achieved by using their potential and contributing to the achievement of common goals (Sedlák 1997).

The purpose of leadership is currently to encourage activities and initiate creative and entrepreneurial spirit, i.e. induce in workers activity, which is directed further than the disciplined performance of the set tasks (Veber et al 2001).

Belbin states: "There is a clear condition that leadership may not be the part of the work, but the characteristic, which can be brought into work...Work, which leadership clearly contains in its context, is not prescribed, but comes spontaneously" (Dědina and Cejthamr 2005).

The authors of the paper emphasize the claim of John Kotter: "Leadership defines how the future should look like, brings people together in the name of future vision and inspires them to achieve it despite all obstacles".

Nowadays it is not enough to direct enter commands, austere communication, minimum of information and impersonal approach of the leader to his subordinated employees. Effective leadership consists precisely in the accommodating approach to subordinates, two-way communication and right motivation from the side of superior. The consensus in opinions of subordinated employees and leader will bring the achievement of the set goals, not only goals of the enterprise, but also personal goals.

In the Table 1, there are listed definitions of leadership according to various authors. Since there are countless definitions, the authors of the paper chose such that will help the readers to better clarify the concept of leadership.

Table 1. Definitions of leadership according to various authors

Author		Definition
Jago	1982	Leadership can be perceived as a process as well as a characteristic. The process of leadership is the use of non-compulsory influence for guiding and coordinating activities of members of an organized group to achieve group goals. Leadership as a characteristic is the system of qualities or characteristics, which belong to those, who successfully use the influence.
Sedlák	1997	Leadership can be simply defined as the ability or process of influencing people, in which the leader with the use of his power aspires to voluntary, willing participation of subordinates in achievement of group goals, and thus the satisfaction of their own needs.
Veber et al	2001	On the one hand, the leadership is understood as a partial managerial function: "leadership represents one of the important functions of a manager, which consists in persuading and activation of executive workers by leader so that the set/planned intentions, goals, tasks were fulfilled", so basically we can consider this concept as a synonymous with the concept of influencing or guiding the employees. On the other hand, we can meet with approaches, which distinguish leadership from traditional management practices, emphasize the aspect of long-term vision as well as the activation of all employees to its achievement.
Bláha, Mateicius, Kaňáková	2005	Leadership contains the process of social influence, which is performed in a particular situation and it is directed towards achievement of a certain goal or goals.
Dědina, Cejthamr	2005	Leadership can be interpreted quite simply as "to force others to follow them" or "to force people to do things willingly", or it can be interpreted more specifically, such as "the use of authority in decision-making".
Vodáček, Vodáčková	2009	The mission of the managerial function of leadership of co-workers (people) is creation and then the efficient and effective use of skills, abilities and arts of managers to lead, guide, encourage and motivate their co-workers to quality, active and eventually creative achievement of the goals of their work.
Piškanin et al	2010	Leadership as a function of management reflects that part of managerial work, in which manager motivates employees, communicates, solves the conflicts and all that. Leadership means the ability to influence the actions of other people.
Trebuňa	2011	Leadership belongs to one of the basic tasks in personnel management. The seriousness of this task is already expressed in the fact, that it provides meaningful and permanent harmony of interests and needs of employees with the goals and tasks of enterprises.
Dvořáková	2012	Leadership was traditionally defined as the execution of authority, whether formal or informal, in managing and coordinating the work of others.
Kocianová	2012	Leadership occurs whenever one person is trying to influence the behaviour of other person or group, whether any reasons. It may be custom intentions or the intentions of others, which may or may not be consistent with the goals of the enterprise.

Source: Own elaboration

Leadership represents a voluntary relationship between people. The attribute voluntary expresses the important fact, that this is a social influencing of proceeding based on voluntary basis. Followers accept the leader on a voluntary basis. Otherwise we cannot talk about leadership (Piškanin et al 2010).

In order that the individual can influence other people, he himself must be affected in a certain manner. This means, that leader must be affected by subordinates (Majtán 2007).

Leadership uses specific methods of work aimed at creation of quality interpersonal relationships along with synergetic effects of economic nature (Antalová 2011). It is often associated with a willing and enthusiastic behaviour of those, who follow the leader. Leadership does not necessarily have to take up position in the hierarchical structure of the enterprise. Many people act as leaders regardless of that their role was sometimes clearly stated or defined (Dědina and Cejthamr 2005).

Based on the many definitions of leadership from different authors, the authors of the paper can state, that the main attribute of leadership is to influence subordinated employees. A very important fact is, that during a leadership is concerned a voluntary employee participation in achieving the goals of the enterprise. The attribute voluntary is indeed a key factor in the relationship superior - subordinate. Employees have to admire a leader and want to fulfil his commands and follow him. Only in this case they will meet the goals of the enterprise the best they can.

In the following Table 2, the authors of the paper describe the concept of leadership from their own perspective. Inasmuch as during the leadership, the superior employee, respectively leader is the subject and led employees are the object, the authors of the paper defined the leadership from the point of view of leader, but also from the point of view of led employee.

Table 2. Understanding of leadership by the authors of the paper

Leadership in term of leader	Influence of behaviour, action and thinking of subordinated employees in the work process, so that within meeting their own goals, they simultaneously achieve the goals of the enterprise.
Leadership in term of led employee	Voluntary adjustment to the wishes of the leader, who is admired by the subordinated employees due to his ability to treat them equally, motivate them properly and communicate with them effectively.

Source: Own elaboration

The interest devoted to the leadership as a category of behaviour drew attention to the importance of leadership style. In all situations at work, it has become increasingly clear, that managers can no longer rely solely on their position in a hierarchical structure as a mean of output of the function of leadership. In order that his subordinates achieve the very best results, the manager must also consider the need to support their morale, spirit of commitment and cooperation and willingness to work. This gives rise to reflection on the leadership style and the next view, according to which, the behaviour of the leader can be analyzed (Dědina and Cejthamr 2005).

There are various theories of leadership (leaders), which come from the behaviour and according to this characterize different leadership styles (Sedlák 2008). During the leadership of employees it is mainly about following (Dvořáková et al 2007):

- form of relationship of the manager towards the employees, which resulting from the personal knowledge of manager, from his experience, authority and ability to act on the internal and external environment;
- application of the power in combination with the mode of its use during leadership of the others.

The authors of the paper agree on the fact that the style, in which the leader approaches to his subordinates, pretty much depends on the nature and characteristics of leader. However, there are many other factors, that affect the way of leadership - the kind of task, a little or a lot of time to complete the task, the nature of employees, previous experience of leader, etc.

In the Table 3, the authors of the paper declare different definitions of leadership style, as defined by the individual authors.

Table 3. Definitions of the leadership style according to different authors

Author		Definition
Bělohlávek, Košťan, Šuleř	2001	Leadership style is considered to be a way, which is typical for the behaviour of the leader towards the group.
Dědina, Cejthamr	2005	Leadership style is the way, by which functions of leadership are carried out, ergo the typical way, by which the manager behaves towards the members of the group.
Bedrnová, Nový	2007	The overall way of behaviour of manager is usually referred to as his leadership style.
Dvořáková et al.	2007	Leadership style of employees or the style of managerial work represents a way of action of the manager, which characterizes the procedures of his decision-making and the chosen methods of achieving the set goals of the enterprise.
Sedlák	2008	Leadership style is a vertical relationship between a leader (a manager) and subordinated individuals or collective.

Source: Own elaboration

In the following Table 4, the authors of the paper present their own understanding of the concept of leadership style. The authors came from the above mentioned definitions of leadership style and also from their own theoretical and practical knowledge.

Table 4. Understanding of the leadership style by the authors of the paper

Leadership style	The way, in which the manager approaches to his subordinates in the work process, that is the way, in which he communicates with them, motivates them, allocates the tasks, powers and responsibilities.

Source: Own elaboration

CHARACTERISTIC OF THE CLASSIC LEADERSHIP STYLES

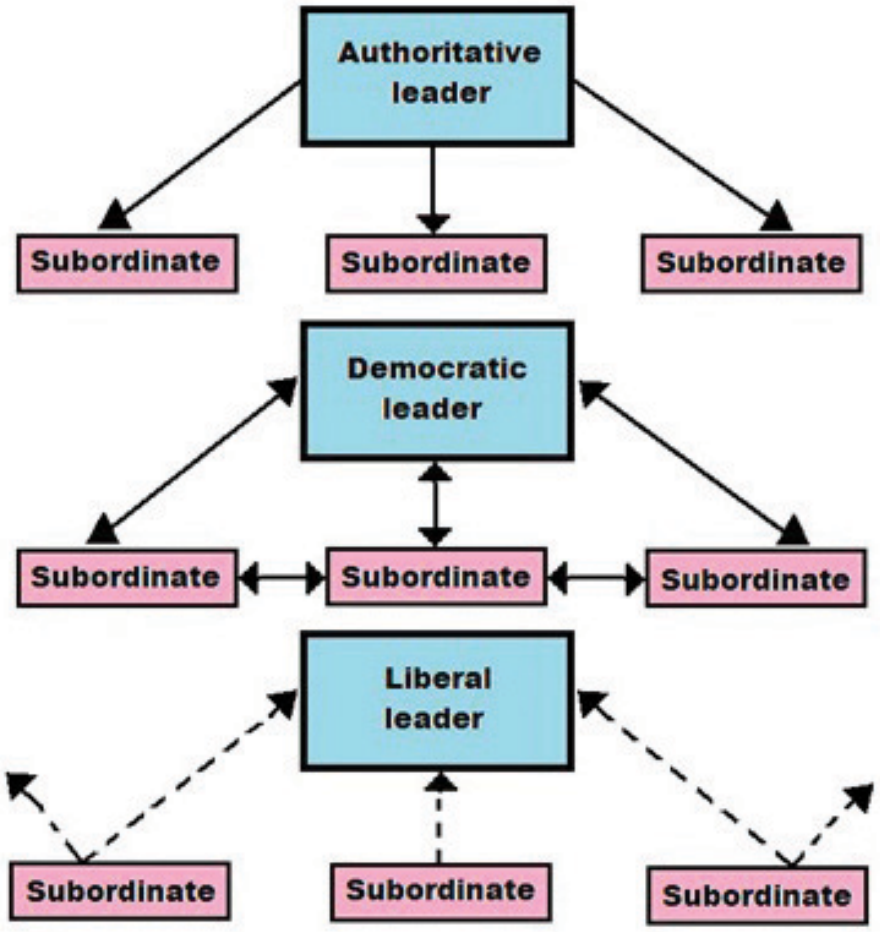
Forasmuch as leadership is very important, it is perhaps the most studied field of management. At the same time there are countless research papers - theoretical and practical nature - on the subject of leadership, respectively effective leadership, and many theories, which try to explain it. Even though, the conclusions are controversial and often there is a

lack of an adequate comprehensive theories of leadership and even the best way how to lead people cannot clearly be determined. That results from the complexity of this human activity, which is incidental to the complexity of determination of human behaviour (Sedlák 1997).

In the paper, the authors focus on leadership styles based on the use of powers, namely the classical leadership styles (Figure 1). According to this aspect, the most often mentioned three basic leadership styles are as following:

- authoritative style;
- democratic style;
- liberal, free style, respectively „laissez-faire" style.

Figure 1. Leadership styles based on the use of powers



Source: Sedlák 2008

In the following, the authors of the paper present more detailed characteristics of each of the above mentioned three leadership styles, whereby identify the advantages and disadvantages of each style.

AUTHORITATIVE LEADERSHIP STYLE

Authoritative leadership style is distinctive in exercitation of the will of leader, regardless of the opinions of subordinates, for what he uses respective power means (Sedlák 2008). The

might and decision-making are concentrated in the hands of the leader, the leader assigns to people clearly defined roles, communication is one-way from top to bottom (Bělohlávek et al 2001). Leader uses the authority to determine the policy, procedures for achieving the goals, work tasks and relationships and control of rewards and punishments (Dědina and Cejthamr 2005) and he requires absolute obedience. Relationships between leaders and their subordinates are highly formal (Kocianová 2012). Leader uses for motivation his position, differentiated remuneration, about which he decides, and a punishment of collaborators (Majtán 2007), so as far as subordinates do not show sufficient productivity, sanctions come. Any initiative from employees is not expected, the employees are rather discouraged from it (Kocianová 2012).

The advantage is achievement of regular and high performance of employees (Bělohávek et al 2001). Requirements and mutual relationships are clearly defined, decisions are carried out quickly and the task will be very likely finished on time (Kocianová 2012).

The disadvantage is the suppression of the individual motivation and initiative of employees (Bělohlávek et al 2001) and their knowledge and experience are not fully utilized (Kocianová 2012).

DEMOCRATIC LEADERSHIP STYLE

Democratic leadership style is characterized by two-way communication between a leader and subordinates. A leader is a person with accommodating approach to subordinates (Majtán 2007). He delegates the significant proportion of his authority (Bělohlávek 2001), consults with employees on the proposed tasks and decisions, as well as on procedures to deal with them. Not only he consults with them, but carefully considers their opinions (Majtán 2007). Members of the group have an important say in decision-making, determining policy and the incorporation of systems and procedures (Dědina and Cejthamr 2005). Leader, however, retains his responsibility in final decisions (Bělohlávek et al 2001). He coordinates the accomplishment of work, assists in the performance of duties and achieved results, respectively necessary corrections discusses with subordinates. He also uses the participation of subordinates in the evaluation and remuneration (Majtán 2007).

The advantage is a personal engagement of employees, who participate in decision-making (Bělohlávek et al 2001) and also the support of joint liability of employees and the strengthening of interpersonal relationships (Kocianová 2012).

The disadvantage is a considerable loss of time, which results from democratic decision-making (Bělohlávke et al 2001).

LIBERAL LEADERSHIP STYLE

Liberal leadership style occurs, when a manager deduces, that the members of the group work well on their own. Manager knowingly transmits power to the members and gives them the freedom of negotiation and does not interfere, however, he is ready to help if it is necessary (Dědina and Cejthamr 2005). This style can lead to totally "free flow of activities" (Kocianová 2012). Leader rarely uses his power and leaves collaborators great freedom in

the proceeding, so they are appreciably independent. He relies on subordinates, that they themselves will assign or in a large extent elaborate the objectives of their activities and the means to achieve them and select also a procedure for their implementation (Majtán 2007). Communication is mostly horizontal - between individual members of the group (Bělohlávek et al 2001). Leader helps subordinates to obtain the necessary information and to ensure the contact with the outside environment. He acts as a representative of a subordinated collective (Sedlák 2008).

The advantage is that workers can do things according to themselves, without a leader, who tells them into the things (Bělohlávek et al 2001). There is an increase of job satisfaction, the abilities of workers to accept complex tasks are increasing (Kocianová 2012).

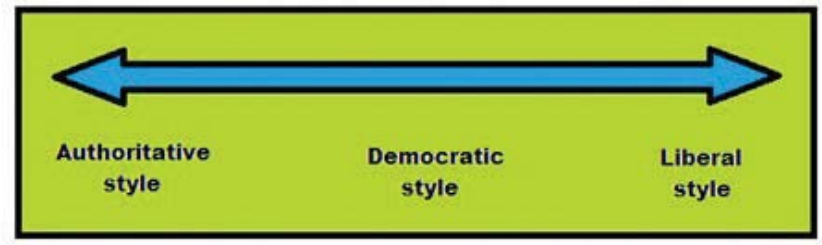
The disadvantage can be aimless groping, when some sort of leader is needed (Bělohlávek et al 2001) and also the slowness of processes, possible loss of direction and also the fact, that some people are not able to decide independently or work without consequences of control (Kocianová 2012).

The above mentioned leadership styles represent a simplified form of their classification. In practice, there is not usually a leader, who would absolutely use only one of the styles. He rather tends to a certain style, which means that in his activity prevail the characteristics of one of the styles (Sedlák 2008).

Currently mainly liberal and democratic style of leadership is implemented. This does not mean that authoritative style does not have justification in the practice. There are urgent cases when it is necessary to decide immediately and mobilize all sources for action, so the leader must necessarily be highly authoritative. But this is not the style for ordinary leadership in the practice (Majtán 2007).

The relationship between three styles expresses a continuum with authoritative style on the one side, democratic in the middle and liberal on the other side (Figure 2) (Bělohlávek et al 2001).

Figure 2. Continuum of leadership styles



Source: Bělohlávek, Košťan, Šuleř 2001

Thus, as the above mentioned figure indicates, these three leadership styles are diametrically distinct. However, each has its advantages, but also disadvantages. Using of the style depends in a large extent on the situation and also on the nature of the leader and subordinated employees. We cannot say which of the mentioned style is the best. In practice, we will not find a collective, in which the leader and all employees led by him would agree on the fact, that the leadership style is suits them completely. In many cases, leaders do not place emphasis on the way, by which they lead subordinates, whereby they do not realize many positives, which the mutual convenient leadership style would have.

2. RESULTS AND FINDINGS

One of the aims of this paper is to detect, which leadership style employees of industrial enterprises consider as the best and which leadership style according to their opinion is applied by their superiors.

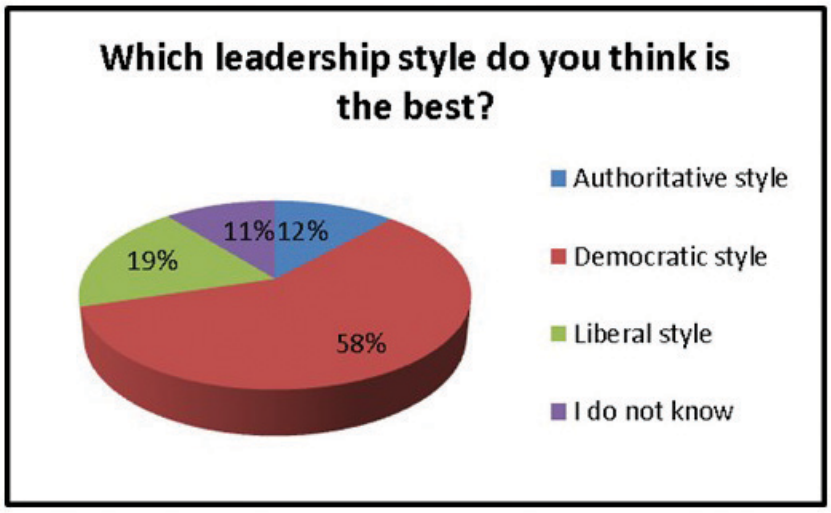
The authors of the paper used the findings from several available questionnaire surveys, which included answers of respondents from industrial enterprises in Slovakia. The authors used for demonstration of the results of the surveys answers of 101 production workers.

All respondents receive daily orders from their superiors, communicate with them and insure the continuous run of all processes in the enterprise. Therefore, the authors of the paper focused just on the way of leadership of these employees from the side of their superiors.

The authors of the paper firstly intrigued, which leadership style is the best according to the respondents, namely under which style they would work the best.

As it can be seen in Figure 3, the most, i.e. 58% of respondents claim that the best leadership style is democratic style. 19% of respondents think that it is liberal style and 12% of surveyed workers consider as the best style authoritative leadership style. 11% of respondents could not express to this question.

Figure 3. The best leadership style in terms of respondents

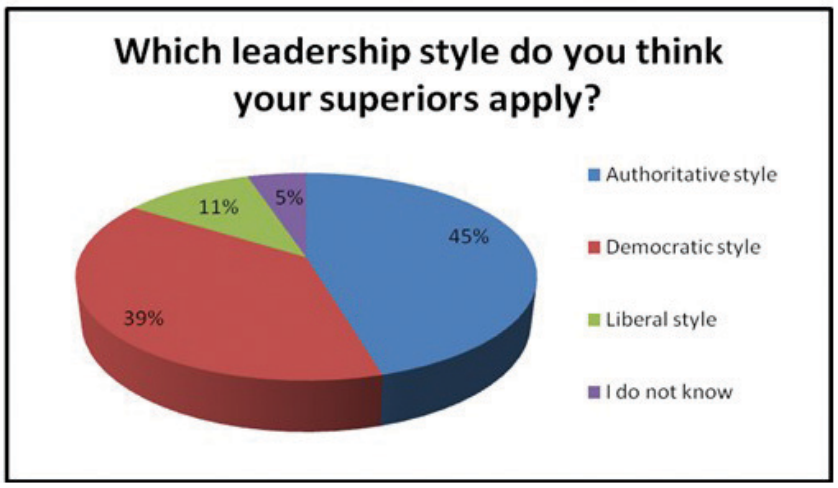


Source: Own elaboration according to [9, 10, 12, 13, 17]

After detection of the best leadership style from the perspective of the respondents, the authors of the paper wanted to know, what respondents think about the leadership style, which their superiors apply.

As it is evident from the graph (Figure 4), almost half, i.e. 45% of respondents think that their superiors apply authoritative leadership style. 39% of respondents claim they are led by democratic leadership style and 11% consider as the leadership style of their superiors liberal style. Only 5% of respondents were unable to answer this question.

Figure 4. Leadership style, which superiors apply to subordinates



Source: Own elaboration according to [9, 10, 12, 13, 17]

Two above mentioned questions, which were answered by respondents, are very closely linked. In the framework of good and productive cooperation of employees and their superiors, superiors should detect the needs and desires of their subordinates, as well as under which leadership style, they will work the best. Satisfied employees quickly bring quality results.

Of the two graphs, it can be stated that the most surveyed production workers prefer democratic leadership style, and it is positive that 39% of them also think that they are led exactly by democratic leadership style. Nevertheless, there is no need to ignore the fact that only 12% of respondents prefer authoritative style, yet 45% of respondents said that according to them, superiors apply precisely this leadership style. Only a small number, i.e. 19% of surveyed workers favour liberal style and also only 11% think that their superiors are using it.

DISCUSSION AND CONCLUSION

The authors of the paper confirmed their assumption – the majority of superiors apply authoritative leadership style, while subordinates works better, if they are led by democratic leadership style. These findings are particularly relevant for practice. The superiors in industrial enterprises should be aware of the effects of used leadership style. They should realize that the way they lead their subordinates affects their performance and thus ultimately the efficiency and performance of the whole enterprise.

The authors of the paper, however, recognize the limitedness of findings due to the small number of respondents of the questionnaire survey, and therefore they consider important to further deal with this issue, as well as other aspects of leadership and leadership styles.

Researches confirm the connection of the development and successes of the enterprise with leadership, as well as leadership style makes large differences in the results of enterprises, and thus a direct relationship between profit and leadership (Sedlák 1997).

Leadership refers to the motivation, interpersonal behaviour and the process of communication. Leadership is important in attempts to mitigate dissatisfaction of employees. Good leadership also includes an efficient process of delegation. Relationships of leadership do not mean just the behaviour of the leader, which results from the behaviour of subordinates. It is a dynamic process. Relationship of leader/subordinate is mutual and effective leadership is a process, which affects individual performance as well as the performance of the whole enterprise (Dědina and Cejthamr 2005).

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JOB CREATION POTENTIALS OF RENEWABLE ENERGY SOURCES

Abstract

Purpose. Renewable energy sources may provide a potential solution and jobs based on their utilisation can offer one of the greatest opportunities for the improvement of the areas affected by high unemployment, therefore, we would like to investigate how the utilization of renewable energy resources can provide more jobs.

Design/methodology/approach. In our study we present the state of the labour market in Heves County by means of using data provided by the Hungarian Central Statistical Office (HCSO) emphasising the employment opportunities inherent in renewable energy sources. We investigate the installed capacity of Mátra Power Plant in MW, and we reveal that this productivity may be able to eliminate or reduce unemployment in Heves County if the plant applies solely renewable energy sources.

Practical implications. According to preliminary calculations 70.000 - 90.000 people in Hungary can be involved in the field of renewable energy sources. It can be thought of as a great achievement if approximately one fifth of the jobseekers can be provided work this way.

Originality/Value. Even if it is impossible to reduce the rate of unemployment totally, it can be reduced significantly in the next years.

Keywords: renewable energy sources, job creation, unemployment, socially disadvantaged groups, regional development

Research type: Literature review

JEL classification: J23

INTRODUCTION

Due to increasing of standard of living and technical development we require more and more energy. Pollution, energy dependence, and the substitution of the limited fossil fuel resources mean an increasing problem. Sustainable energy production is not feasible solely with the reliance on fossil energy. New, primarily renewable energy sources are a prerequisite as they may provide at least a partial solution to social problems such as the mounting problems of unemployment since many unskilled workers could be employed in the production and utilization phases and thus lead back to the labour market. It is a complex question in which economic, social, and environmental aspects must be handled simultaneously while companies must be made interested in the increase of employment figures despite the fact that in the short run the maximisation of employment increases the cost of operation. If we take the requirement of sustainability into consideration, the favourable effects of the use of the effective labour-force such as increasing production, increasing government revenues, lower social and a healthcare spending can be utilized. Job creation based on renewable sources of energy can be one of the greatest opportunities to tackle unemployment.

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In our study we present the state of the labour market in Heves County by means of using data provided by the Hungarian Central Statistical Office (HCSO) emphasising the employment opportunities inherent in renewable energy sources. Our method is based on secondary research. We investigate the installed capacity of Mátra Power Plant in MW, and we have been able to reveal that this productivity may be able to eliminate or reduce unemployment in Heves County if the plant applies solely renewable energy sources. The method is used to estimate the number of direct jobs. The impact of the indirect jobs is not covered in this paper.

1. THE SOCIAL-, ECONOMIC- AND LABOUR MARKET SITUATION IN HEVES COUNTY

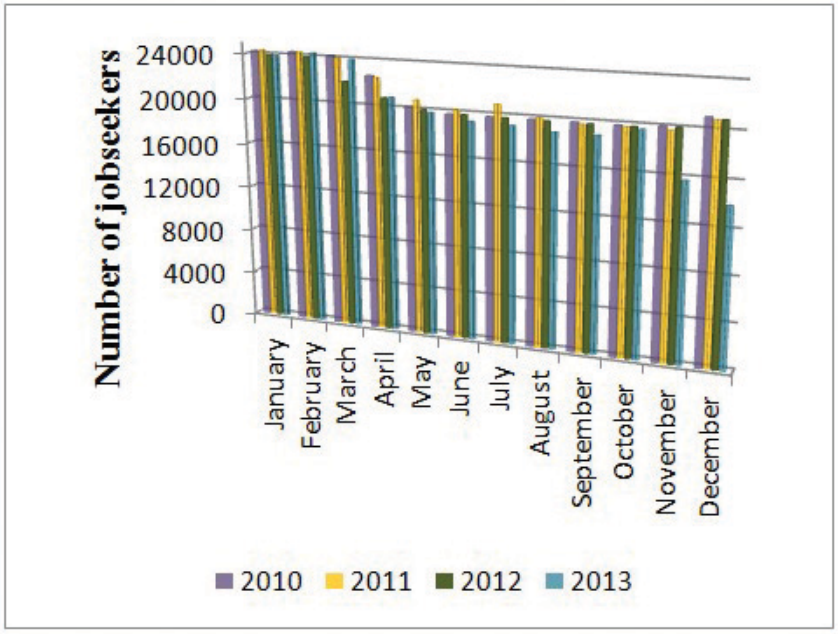
The area of Heves County is 3637km2 and its population was 306.300 people in 2013 according to HCSO data. It is one of the most underdeveloped counties in Hungary, and its micro regions - with the exception of Eger, Gyöngyös and Hatvan - are either underdeveloped or severely underdeveloped. There are currently 11 cities and 110 villages in the county, but until 2013 (up to the investigated period) there were 9 cities and 112 villages. The difference is due to Verpelét and Gyöngyöspata which became towns in 2013. The most developed area of the county is the middle part including the towns of Eger, Gyöngyös and Hatvan where there are more jobs and lower unemployment than elsewhere in the county. In the Gyöngyös micro region the most important segments are the industry, the service sector and the non-productive infrastructure. In addition to the electricity production sector where 2.5 thousand people are employed mainly by the Mátra Power Plant Ltd. (MPP) the significance of the engineering industry and trade are also outstanding. As in the past grape- and the fruit cultivation, as well as the advanced educational network can play a great role in the area in the future.

I n connection with the industrial production of the county the latest statistical data show positive results since the total production value increased significantly, and this value is higher than the country's average. But the fact the percentage ratios do not necessarily reflect the initial low level must not be ignored. Although the value of investments grew in 2013, they are still around 60% of the country's average per person. There is a favourable process in the tourism industry of the county, which is reflected by the increased number of guest nights.

At least two conclusions can be drawn from the development of the number of job seekers presented in Figure 1:

- Except for a couple of months the number of jobseekers reduced by 2013 compared to the previous period.
- Seasonality has a great impact on the number of jobseekers.

Figure 1. The development of the number of jobseekers in Heves County between January 2010 and December 2013



Source: KSH, 2014.

If we take a closer look at the data presented in Table 1, we can conclude that the average number of the 19.646 jobseekers is primarily the consequence of the results observed in the Egri, Hevesi and the Pétervásárai micro regions.

Table 1. The development of the number of jobseekers in Heves County in 2013

Micro regions	Jobseekers			The rate of jobseekers in the economically active population	
	Number of people	Changes in the number of jobseekers compared to the previous year		2012	2013
	The average of 2013	Number of people	%	%	%
Eger	5 485	–472	–7,9	13,9	12,9
Gyöngyös	3 875	–224	–5,5	12,7	12,1
Hatvan	2 729	–56	–2,0	12,1	11,9
Heves	3 623	–281	–7,2	29,1	27,2
Füzesabony	2 453	52	2,2	18,9	19,5
Pétervására	1 481	–125	–7,8	20,1	18,7
Heves County	**19 646**	**–1 105**	**–5,3**	**15,7**	**15,0**
Hungary	527 624	–31 479	–5,6	12,6	11,9

Source: KSH, 2014.

In addition to the differences amongst the micro regions the development of the number of unemployed can be examined according to gender, occupation, age, education level, as well as how long someone has been out of work. (Table 2)

Table 2. The number of jobseekers and their distribution according to different criteria

Description	Registered jobseekers						Changes in number (%)	
	Number of people			%				
	2011	2012	2013	2011	2012	2013	2012/2011	2013/2012
Male	11 128	10 415	10 186	52,1	50,2	51,8	-6,4	-2,2
Female	10 233	10 336	9 460	47,9	49,8	48,2	1,0	-8,5
Unskilled worker	5 406	5 243	5 047	25,3	25,3	25,7	-3,0	-3,7
Semi-skilled worker	5 637	5 716	5 639	26,4	27,5	28,7	1,4	-1,3
Skilled worker	7 098	6 764	6 288	33,2	32,6	32,0	-4,7	-7,0
Blue collar total	18 141	17 722	16 974	84,9	85,4	86,4	-2,3	-4,2
Intellectual	3 180	3 007	2 656	14,9	14,5	13,5	-5,4	-11,7
25 years and below	3 901	3 857	3 630	18,3	18,6	18,5	-1,1	-5,9
26-50 years	13 485	12 689	11 663	63,1	61,1	59,4	-5,9	-8,1
Over 50 years	3 975	4 205	4 353	18,6	20,3	22,2	5,8	3,5
8 elementary or less	9 377	9 149	8 876	43,9	44,1	45,2	-2,4	-3,0
Vocational school	6 167	5 900	5 513	28,9	28,4	28,1	-4,3	-6,6
Grammar school	4 779	4 686	4 381	22,4	22,6	22,3	-1,9	-6,5
Tertiary	1 037	1 014	875	4,9	4,9	4,5	-2,2	-13,7
Length of unemployment								
1-3 months	6 761	6 394	6 079	31,7	30,8	30,9	-5,4	-4,9
4-6 months	4 500	4 033	3 485	21,1	19,4	17,7	-10,4	-13,6
7-12 months	4 502	4 888	3 806	21,1	23,6	19,4	8,6	-22,1
13-24 months	3 559	3 452	3 784	16,7	16,6	19,3	-3,0	9,6
> 24 months	2 039	1 984	2 493	9,5	9,6	12,7	-2,7	25,6
Total	**21 361**	**20 751**	**19 646**	**100,0**	**100,0**	**100,0**	**-2,9**	**-5,3**

Source: KSH, 2014.

The following conclusions can be drawn from Table 2:

- Among the registered jobseekers the ratio of males and females is almost identical.
- There are more blue-collar jobseekers than white-collar ones.
- Among the registered jobseekers the age group between 26 and 50 years of age dominate similarly to the trends observed in previous years.
- People with 8 elementary or less education represent more than 50% of the registered jobseekers.
- Although the number of jobseekers out of work longer than 2 years has increased, it is still lower than the number of jobseekers out of work for less than 2 years.

The labour-market status of the county is essentially identical with the national trends. This means that the inhabitants of the county have the same types of problems as their fellow Hungarian citizens living in other regions of the country.

Summarizing the above-mentioned facts it must be highlighted that the jobseeker programs and subsidies must relate primarily to those who do not have any qualifications and come from the disadvantaged or the most disadvantaged regions, but would otherwise be able to work, and we must find suitable solutions about how they can get back into the labour market.

According to László (2007, 65) currently the most persistently disadvantaged social groups on the Hungarian labour market are the following ones:

- unskilled people and those who do not have any marketable professional specialization;
- people who live in underdeveloped areas or settlements and cannot leave as they would wish
- a significant part of the Roma population;
- people with disabilities;
- women, especially before childbirth and child rearing;
- permanently unemployed people
- ex-offenders

The chances of these groups to find employment are made more challenging by their skills, acquired knowledge, the economic and social situation, as well as the preconceptions against them, what is more these factors can even worsen their disadvantaged situation.

In Heves County discrimination afflicts primarily the Roma population, and in addition to the above mentioned facts the following reasons must also be stated:

- Disadvantages due to the lack of education since it is difficult to find a job not only with a general elementary education but also with an apprenticeship certification.
- More often than not disadvantaged people, and thus the majority of the Roma population, live in small villages in economically underdeveloped areas and settlements, which are already hit by high levels of unemployment.
- Many worked in industries (e.g.: mining, metallurgy) which were first ruined after the political changes, and the acquired knowledge and experience is difficult to utilise in other areas.

As a general problem the credit crunch of 2008 must also be mentioned, which also did not help the increase of employment levels.

Accordingly, due to the effect of all of these and the previously mentioned factors disadvantaged people often find their livelihood in the black economy.

When labour market policies are created these facts must be taken into consideration. Naturally it cannot be excluded that some people try to avoid employment deliberately. The most frequent explanations are the following:

- family and health problems;
- preference to working "around the house";
- absolutely do not want to work (special group: permanently unemployed);
- not satisfied with the offered income;
- no suitable jobs matching qualifications (this problem can be tackled by the counselling and courses organised by Employment Centres).

The results of a comparative survey concerning 11 countries led by the Canadian Statistics Office clearly reveal that the necessary skills of the Hungarian population with low levels of education are deeply below the European average, which creates the greatest obstruction to employment possibilities. Therefore, one direction of human development procedures must focus on improving the education level of the people in question. (Világgazdaság Online 2010)

2. THE CONTRIBUTION OF RENEWABLE ENERGY TO THE INCREASE OF EMPLOYMENT

It is a well-known fact that it may take long to earn tertiary level qualification but by no means is it guaranteed that it can be regarded as a practicable option. In such a case it is more appropriate to try to ensure a job which is adequate to the qualifications.

It seems that these days the alternative sources of energy can provide a realistic opportunity, because their production and use can contribute positively to the low-value agriculture areas(800,000 to 1,000,000 ha) as well as to the employment of undereducated people, which will boost the chances of rural Hungary to get into a better situation.

Job creation based on renewable sources of energy can be one of the greatest opportunities to tackle unemployment, and this may have many other advantages such as:

- harmful emission and thus environmental pollution can be significantly reduced;
- local interests are taken into consideration and such investments offer numerous opportunities for local SMEs since the implementation does not require the involvement of foreign multinational companies;
- the creation of green jobs will inevitably bring about the necessary educational and training programs, which also help development;
- those who obtain a good position in the green-energy market will dominate it in 10-20 years' time;
- it can have an effective role in the achievement of EU obligations in respect of the utilisation of renewable energy sources.

The most important aim is that the renewable energy sources ensure the daily necessities. A further benefit may be that the new technical knowledge in the field of environmental friendly energy production is used in other sectors of the economy. However, the major obstacles are that the authorization of the renewable energy technologies are difficult and over-regulated and also that some elements of the system are yet unknown and are bound to be changed.

Hydropower, wind and solar energy options are negligible in Hungary owing to the scarcity of potential opportunities. In our country the utilisation, profitability, and the population retention ability of lands withdrawn from food production after our EU accession can be linked to the partial satisfaction of the increasing demand for renewable energy sources. (Marselek 2010, 119)

In addition to the utilisation of renewable energy sources energy efficiency, energy saving, the green economy, and the agro-energy must have priority in maximizing employment.

According to calculations the utilization of the renewable energy sources and the related agricultural, industrial and R+D+I activities can provide work for about a total of 70-90 thousand people. (MTI, 2011)

We believe that creating jobs for 70-90 thousand people seems realistic, but only if this number is projected to the entire renewable energy industry and not only for only one segment of it e.g. biomass. There are a number of good examples from abroad.

The first example is Germany, which is among the first countries in the application and development of renewable energy sources and the production and sales of the facilities.

By 2007 the number of employees involved in the utilisation of renewable energy sources reached 250 thousand, the majority of which (about 200 thousand people) is connected with job opportunities in biomass and wind energy. According to Bundesministerium für Umwelt (BMU) survey it is clearly visible that this number is going to increase dynamically in the future, so even 400.000 people may be employed in these sectors by 2020.

The case is similar when the USA is considered, where biomass and wind energy are the sectors which ensure provide jobs, and in which the total number of indirect jobs almost reached 350.000 in 2006. (Michael Renner et al. 2008, 7)

In Spain, where the crisis had a strong impact, there were significantly fewer jobs totalling around 70.000 in the renewable energy industry in 2007, but the forecasts predict that there will be around 120.000-150.000 employees in these sectors by 2020. (EREC/GREENPEACE 2009, 9).

The joint study of European Renewable Energy Council (EREC) and Greenpeace compares the number of jobs that are likely to cease and the ones that will be created according to a traditional and a so-called Energy [R]evolution scenarios in the electricity industry.

They estimate that the newly created green jobs will significantly exceed the number of ceased ones should the reference scenarios be realized. Table 3 illustrates that without the spreading of the renewable energy sources, we can lose jobs. However, their application can create a further 2 million jobs in nearly 20 years.

Table 3. The number of ceased and newly created jobs in the energy sector according to different scenarios

"business as usual"		"energy revolution"	
2010	9,1 million	2010	9,3 million
2020	8,5 million	2020	10,5 million
2030	8,6 million	2030	11,3 million
Total loss (number of jobs)	500 000	Total gain (number of jobs)	2 000 000

Source: EREC/Greenpeace, 2009, 5.

Currently jobs linked with biomass activities are the dominant ones, especially because of the cultivation of the necessary raw materials for the biofuel. However, due to the fast development in recent years, the effect of wind and solar energy industries are becoming more significant for the labour market.

Nonetheless, these numbers should not be taken granted, but rather must be seen as estimates, because it cannot be guaranteed that 2 million more jobs will be created. It may happen that this number will be lower or higher, especially if there is a significant shift towards the application of renewable energy sources. What can be regarded as certain, however, is that the shift will have positive effects.

The estimation can be derived from the work coefficients, which does not include the number of jobs. In terms of job creation, the most important processes are planning, production, and implementation, while significantly less jobs can be created in operation, maintenance, the production of raw materials, research and development, and the consulting services. (Table 4)

Table 4. The work coefficients of renewable energy sectors

	Planning, production, implementation (jobs/MW)	Operation, maintenance (jobs/MW)	Production of raw materials (jobs/MW)
Wind energy	15,4	0,4	
Photovoltaic panels	38,4	0,40	
Solar Collector	10	0,3	
Biomass (electricity generation)	4,3	3,1	0,22
Geothermal (electricity generation)	6,4	0,74	
Coal	14,4	0,1	Vary
Natural gas	3,4	0,05	0,12

Source: EREC/Greenpeace, 2009, 15.

Another important element of the estimation is the quota for the ratio of renewable energy sources by countries. According to this, for example, Hungary agreed to increase its share of green energy to 13% by 2020, and even the 14,65% is not impossible as revealed from the Renewable Energy Action Plan (although this share is still below the nearly 20% EU average). This latter number is used to make economic decisions.

A further complication for making predictions is that it is next to impossible to derive exactly the number of jobs that might be created in a specific renewable energy industry from the relevant literature. Table 5 illustrates the average number of jobs/MW concerning the utilisation of biomass.

Table 5. Average employment per 1 MW in the biomass industry by different sources

Biomass	(Jobs/MW)
National Renewable Energy Laboratory (2008)	4,9
DTI (2005)	15
www.greenjobs.com (2008)	7,7
EREC, Greenpeace (2008)	8,22

Source: Varga and Homonnai 2009, 10.

The results presented in Table 5 show the differences by 1 MW, which will multiply with higher output so these differences may further intensify. Considering the highest and the smallest values the deviation is nearly 10 people by MW. Consequently if we would like to provide work for the above-mentioned theoretical number of 19.646 people solely relying on renewable energy – or more precisely biomass – it would require power plants of 1300 MW - 4000 MW capacity. At the same time most blocks of the MPP have a capacity of 100 and 200 MW and a further 1000 MW is planned to be installed. (Giczey 2011, 31-33) Currently the total capacity of MPP is 950 MW.

Accordingly, it can be thought of as a great achievement if approximately one fifth of the jobseekers can be provided work this way. In order to have better results other alternatives must be thought of and utilised and implemented.

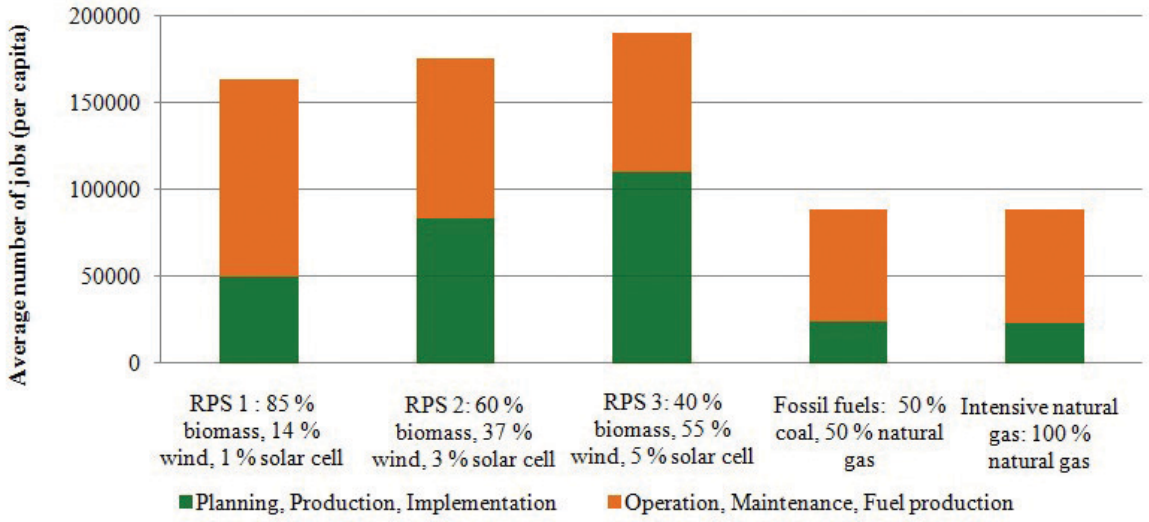
We truly believe that if we succeed in replacing the sources of the current electric power production with renewable energy resources, which processes have already begun (cf.

MPP has been dealing with biomass production for years), we may be able to avoid mass unemployment in the region after 2025 when the licenses of the power plant expire.

According to the Heves County Regional Development Concept the MPP is planning to utilise not only biomass but also solar energy and the company is considering the construction of a pumped-storage hydroelectric plant. (Szlávik and Kovács 2014, 20)

Relying on only one type of renewable energy source to satisfy demand for energy cannot be a viable solution. Instead, their combined application is needed, as Kammen et al. (2004, 11.) argue. They set the goal to maximise the effects of employment. Based on the results, the highest employment can be reached by the observance of the renewable energy mix illustrated in Figure 2.

Figure 2. Effects of employment by different scenarios



Source: Kammen et. al., 2004, 11.

The renewable energy industry can only partially solve the question of unemployment. It is necessary to trigger positive changes in the industry, in the agriculture and in the service sector, too. The outlooks definitely seem favourable and promising. In 2014 almost 25.000 jobs have already been on offer, which is considerably higher than in 2012 (9.595), and on the other hand it is more than the earlier mentioned total number of jobseekers.

The limits of the research were that no information was available on the ratio of jobs available in the renewable energy sectors nor was it possible to find out how many of those jobs had been taken. Even if it is impossible to reduce the rate of unemployment totally, it can be reduced significantly in the next years especially if new investors are attracted into the region, about which more and more positive feedback have been published.

CONCLUSIONS, SUGGESTIONS

The number of unemployed people reduced in Heves County but it will remain an important task in the future to solve the employment of the disadvantaged people who have so long been forced out of work. Unless there are opportunities to improve their education level jobs that are in harmony with their qualification must be ensure for them. Renewable energy sources may provide a potential solution and jobs based on their utilisation can offer one of the greatest opportunities for the improvement of the areas affected by high unemployment. According to preliminary calculations 70.000 - 90.000 people in Hungary can get involved in this field. A further advantage is that incomes will increase, which is likely to enhance the population retention ability of the country. In the future special emphasize should be given to energy-efficiency, energy saving, the green economy and agro-energy beside the use of renewable energy sources in order to maximizing employment. To cover the energy need with only one type of renewable energy source cannot be an option. Instead, combined applications will be required.

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SUSTAINABLE AGRICULTURAL MANAGEMENT IN DEVELOPING COUNTRIES AND RESPONSIBILITY OF PUBLIC ADMINISTRATION: THE CASE OF BRAZIL

Abstract

Purpose: Agriculture plays an important role in the developing countries. It contributes to reduce poverty by provision of food at affordable prices and generates incomes via employment opportunities in rural areas of developing countries. The world population is estimated to grow and the agricultural production needs to be able to comply with this projection to produce a sufficient amount of food. However, intensive agricultural production methods that are based solely on the increased use of inputs such as fertilizers and pesticides are considered to be harmful for the environment. Sustainable agricultural management practices including the methods of conservation agriculture has the potential to lower the negative impacts on the environment.

Design/methodology/approach: An extensive literature review was carried out in order to investigate the environmentally friendly agricultural methods in developing countries. The findings are supported by the statistical data and the case study example.

Findings and practical implications: Developing countries are struggling with various problems hindering the adoption of sustainable management concepts including for instance insufficient education and knowledge regarding the subject matter, inadequately defined land and property rights or an access towards the machinery. The governments of developing countries should focus on these specific areas in order to overcome these obstacles and to introduce the concepts of sustainable agriculture in developing countries. On the other hand, it has been proven that successful implementation of conservation agriculture exists; as illustrated by the case of Brazil.

Originality/Value: The article proposes environmentally friendly methods of agricultural management and their application in developing countries. It stresses limitations of application of these methods and proposes options as how to overcome these difficulties. It also stresses the responsibility of public administration in this area.

Keywords: Sustainable agricultural management, Conservation agriculture, Land tenure

Research type: Viewpoint, Case Study

JEL classification

Q01 Sustainable Development

Q15 Land Ownership and Tenure, Land Reform, Land Use, Irrigation, Agriculture and Environment

Q56 Environment and Development, Environment and Trade, Sustainability, Environmental Accounts and Accounting, Environmental Equity, Population Growth

INTRODUCTION

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Agriculture represents an important sector of national economies of developing countries. However, agriculture also has a substantial impact on the environment and health due to the use of intensive methods of agricultural production and various inputs into the production including fertilizers and pesticides. Therefore, with regard to these effects, it is necessary to introduce, implement and use such agricultural methods that are able to reduce the negative impacts of agricultural production and ameliorate the state of the environment. This approach is constituted within the concept of sustainable agricultural management and its methods. On the other hand, it is not always simple to implement such methods especially in developing countries. These countries are frequently facing particular difficulties, including a lack of financial resources and working knowledge or stable economic conditions.

Therefore, the main objective of this research was to review the methods of sustainable agricultural management, including the concepts of conservation agriculture and sustainable land management, and explain the importance of their use especially in developing countries in relation to the environment and society. Another objective of the article was to investigate particular problems hindering the adoption of these methods in developing countries along with the focus on public administration and its responsibility towards implementation and adoption of the concept. The final objective of the research consisted in a review of successful case study where the concept of sustainable agricultural management was already implemented and works so that this case study could work as an evidence and example for other developing countries willing to adjust their agricultural production methods.

In order to accomplish the proposed objectives, following research methodology was determined and carried out. The research was based on an extensive literature review of relevant resources including the scientific journals, books, databases and reports and analysis of these resources. The theoretical analysis of the research was supported by statistical data and the case study of Brazil, where the concept of sustainable agricultural management has been successfully implemented and brought positive outcomes.

1. Agriculture in developing countries

Agriculture plays an important role in the developing countries. It contributes to reduce poverty by provision of food at affordable prices and generates incomes via employment opportunities in rural areas of developing countries, especially the low income ones. Agriculture has approximately 25% share on the GDP of low income countries, 9% share in the middle income countries, while only 1% share on the GDP of high income countries (Dethier and Effenberger 2012, 176). The percentage of people devoted to agriculture in developing countries amounts to 65% (Farming First 2014). The employment structure of the agricultural sector in developing and developed countries is shown in the Figure 1.

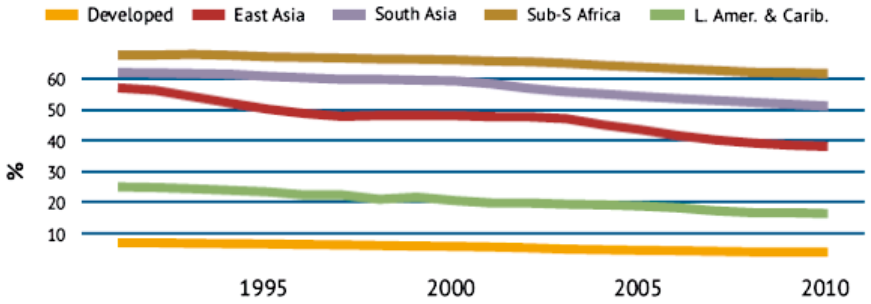

Figure 1 Employment in agriculture, share of total employment 1990-2010
Source: Food and Agriculture Organization 2012a, 19

According to the population prediction of the United Nations (2013), the world population is estimated to reach 9.6 billion people in the year 2050 and the agricultural production needs to be able to comply with this projection to produce a sufficient amount of food. On the other hand it is necessary to stress that the first Millennium Development Goal aiming to eradicate the poverty and hunger was not fulfilled (Farming First 2014). Therefore, particular focus on the agriculture and rural development needs to be stressed. The production systems of developing countries need to be adjusted towards higher production capacity while preserving the environment at the same time. The intensive production methods that are based solely on the increased use of inputs such as fertilizers and pesticides are considered to be harmful for the environment (Branca et al 2011). The use of fertilizers by the regions and markets in the year 2010 is shown in the Figure 2. From the graph it is possible to see that the highest use of fertilizers was monitored in Asia and particularly in East Asia.

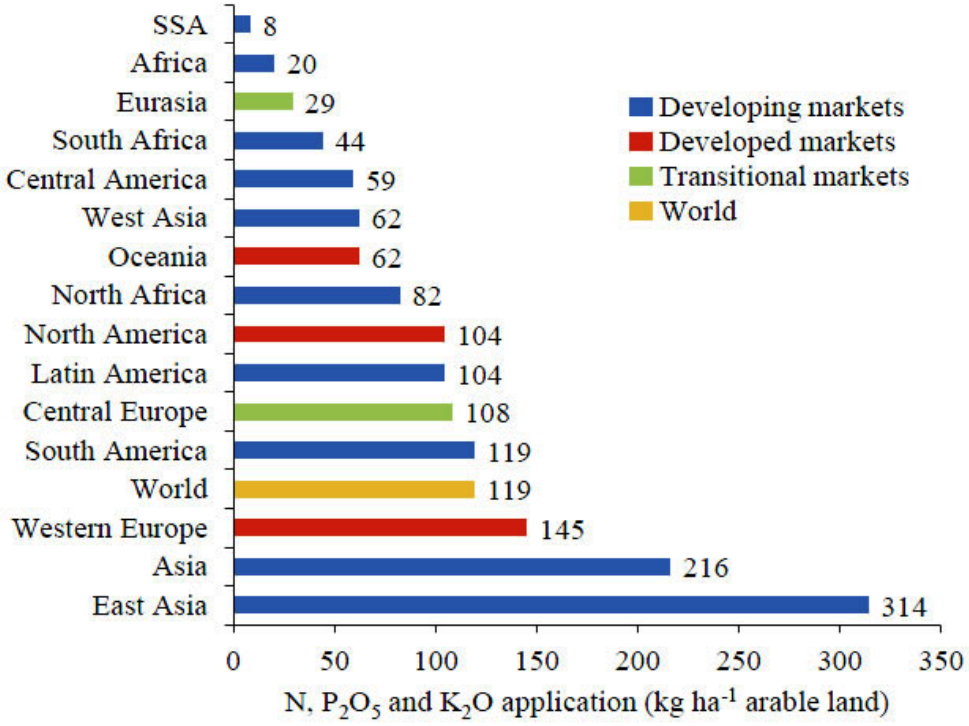

Figure 2 Use of fertilizers (nitrogen, phosphate, potash) by regions and markets in 2010
Source: Wendt 2012

2. Sustainable agricultural management

Therefore, the need for new environmentally friendly methods of intensive agricultural production has emerged. One of the possibilities for better agricultural management is represented by the sustainable land management technologies. These technologies are capable to bring several benefits to the environment while increasing the agricultural production and possibly also the yields at the same time. Among the main benefits of such technologies belong for instance the improvements in the fertility of the soils and in the soil structure, higher capabilities for water capture, improved content of nutrients within the plants while creating only negligible disruptions of the soils (Branca et al 2011).

With regards to agricultural crops production, this approach is known as the conservation agriculture. Conventional intensive arable agricultural practices are in most cases connected with the tillage of the soil by ploughs. Soil tillage results in improved fertility of the soil, however only in the short run. Considering effects in the long run, conventional methods result in a substantial degradation of the soil. The organic matter of the soil is shrinking which leads to the loss of biodiversity, nutrients and erosions (United Nations Environmental Programme 2006).

On the contrary, conservation agricultural methods strive for improvements of the soil quality (Bajwa, 2014). The concept of reduced disturbance of soil has been known since 1930s. However, the term conservation agriculture was first used in 1990s. Due to the fact that conservation agriculture has a potential to mitigate the climate change, the adoption of the concept has been recently encouraged. Within this concept, the method of tillage is not used either at all, which is called zero tillage, or the method is used only on a limited area of the land not exceeding 25%. This approach is called controlled tillage (Richards et al 2014).

The residua from the crop are kept on the soil which creates so called mulch. The main function of the mulch consist in protecting the soil from wind or rain, adjusting the temperature and humidity of the soil and improving efficiency of water management, while creating favourable environment for various organisms such as insects or bacteria. These organisms contribute to ameliorate the soil structure and this process is known as the biological tillage. However, it is also necessary to employ the system of integrated pest management into the process due to the danger of pests or diseases occurrence. Therefore, the principle of the crop rotations, intercropping and wise use of chemicals, pesticides and herbicides needs to be incorporated into the process (United Nations Environmental Programme 2006, Lybbert and Sumner 2012, Palm 2014).

The issues of biotechnology should be mentioned as well in relation to the integrated pest management. Current biotechnology has the capability to genetically improve varieties of plants in order to increase the productivity of agriculture. This could possibly lead, among others, towards higher crop yields and improved quality of agricultural products, increased incomes or reduced use of inputs such as pesticides, herbicides and fertilizers due to improved varieties of crops resistant to pests or drought and other influences. The production of genetically modified crops could also possibly contribute towards mitigation of greenhouse gasses via decreased need for agricultural land and inputs based on fossil fuels (Lybbert and Sumner 2012).

However, the genetically modified organisms (further - GMOs) have aroused many controversies and concerns because the genetic material of these organisms has been adjusted by the genetic engineering. The main concerns encompass the areas of food

safety, especially possible toxic impacts of GMOs, environmental fears with regards to the genes and also to the social and ethical issues. The scientific research regarding the effects of GMOs onto the health and environment is still ongoing (Food and Agriculture Organization 2012b).

3. Problems regarding the conservation agriculture and land tenure

In contrast to the benefits of conservation agriculture, particular limitations should be also stressed and taken into consideration. Wetlands and soils with improper drainage are very demanding concerning the methods of conservation agriculture as the thick layer of mulch can influence drying of the soil. This might lead to increased occurrence of diseases. A proper use of fertilizers and herbicides might be essential in the initial stages of implementation of conservation agriculture in order to increase yields of crops as well as crop residues and to mitigate weeds, especially with regard to smallholder farmers. The benefit of increased yields might be visible after longer time period which usually lasts 3 to 7 years. The concept of conservation agriculture is demanding on knowledge and machinery and the area of land tenure represents another obstacle hindering the adoption (Richards et al 2014).

3.1. Knowledge

One of the most important problems is represented by the fact that the concept of conservation agriculture is highly demanding on knowledge. Insufficient familiarity with the processes at the initial stages hinders the adoption especially in developing countries. Official authorities often lag behind with provision of necessary information regarding sustainable agricultural practices (Food and Agriculture Organization 2014).

On the other hand, concept of conservation agriculture has been successfully established in particular developing regions e.g. in Brazil, Argentina, Uruguay or Paraguay. The adoption of the concept of conservation agriculture expressed as a percentage of arable land by developing as well as developed countries is shown in the Table 1. With regard to other regions of developing world, the concept of conservation agriculture has also been established in Africa; however the pace of implementation is slower. There is not enough statistical data available concerning the developing countries in Asia (Richards et al 2014).

Table 1 Conservation agriculture as a percentage of arable land

Country	Year of report	Area under CA (1000 ha)	CA as % of arable land
Argentina	2011	27000	71.0%
Paraguay	2013	3000	68.0%
Uruguay	2013	1072	61.0%
Brazil	2012	31811	43.8%
Canada	2013	18313	39.9%
Australia	2014	17695	37.6%
USA	2009	35613	22.5%
Chile	2008	180	13.8%
Zimbabwe	2013	332	8.3%
Colombia	2011	127	8.0%
Spain	2013	792	6.4%
China	2013	6670	6.3%
Zambia	2011	200	5.6%
Mozambique	2011	152	2.7%
Malawi	2013	65	1.7%
India	2013	1500	1.0%
Kenya	2011	33	0.6%
Tanzania	2011	25	0.2%
Mexico	2011	41	0.2%

Source: Richards et al 2014

Therefore, the farmers willing to adopt the principles of conservation agriculture could draw on the knowledge from already experienced farmers. The knowledge sharing between farmers, experts and agricultural organizations regarding field experiences and information about crops, agricultural techniques or required instruments and machinery could facilitate the initial obstacles (Farming First 2014, Food and Agriculture Organization 2014).

The Empowering Smallholder Farmers in Markets program could serve as an example of such sharing and cooperation in the agricultural research among developing countries. This program has been established in 11 countries of Africa, Asia and Latin America. The main objective of the program consists in the research on a collaborative basis, the promotion of knowledge sharing and cooperation between farmers and in participation of farmers in research, development and innovations at the international level (Farming First 2014).

3.2. Access to machinery and equipment

On the other hand, an access to the machinery and agricultural equipment necessary for the conservation agriculture is not always simple in developing countries. This includes both financial as well as physical access to the equipment, availability of the machinery and also research and development in the area of conservation agriculture within the region (Wall et al 2014).

The governments supporting concepts of sustainable agricultural practices should therefore align the policies in a way that assist farmers with initial expenditures; namely in the form of direct subsidies or enabling the stable environment to minimize risks for investments. The method of conservation agriculture has a direct positive impact on the environment. Therefore, the use of subsidies could be justified by this reason. Nevertheless, the crucial impediments are also represented by attitudes of the people and other interested parties which need to be in agreement with the new approaches towards sustainable agricultural practices and technologies (Friedrich et al 2009).

It is also necessary to enhance the international cooperation in agriculture between the national governments and the international organizations and to increase investments into the agricultural sector (Farming First 2014).

3.3. Land tenure

Another problem related to the implementation of sustainable agricultural methods in developing countries is represented by difficulties concerning the area of land tenure. Property rights, land rights and ownership of the land are usually not properly identified and recognized and there are problems with registrations of the land. Insufficient revenues are usually generated while transferring the land to private companies. The main constrains with regards to the proper land use are represented by the fact that the legal framework and proper functions of many different institutions are not adequately clarified and the land markets are insufficiently developed. It means that the legal framework is very intricate. The policies of the government could vary in different regions; lacking the concepts of standardization and transparency and ability of simple comparison of resources. Also, the heads of regulatory institutions in the provinces and districts of developing countries may interpret the existing policies differently. These constrain hinder business investments and prevent the land to be used in its best value (World Bank 1994, Törhönen 2004, Wingqvist and Dahlberg 2008, Wall et al 2014).

Therefore, in order to improve the current state of land management in developing countries and to facilitate the sustainable development the governments should pursuit efforts towards transparency and clarity of the land policies and legal framework. The approach towards the land tenure and land registration should be based on adequate land administration including effective land policies and regulation, land reforms and valuation of the land. The connections between various institutions should be well defined and specified and the land marked should be supported by the government; facilitating for instance the investments. On the other hand, particular interventions from government are necessary; especially considering the protection of significant ecosystems and biodiversity and with regards to management of development efforts in urban as well as rural areas (World Bank 1994, Törhönen 2004).

4. Conservation agriculture success: the case of Brazil

Brazil belongs among the countries where the concept of conservation agriculture brought successful results. Conservation agriculture has been already introduced there in 1970s. The area that is being cultivated in compliance with the principles of conservation agriculture has reached more than 31 million hectares in the year 2012 (Richards et al 2014).

The incentive for implementation of conservation agriculture resulted from the governmental policy which intended to promote crop farming systems over the livestock farming systems in the 1960s within the hilly areas of Brazil with intensive rainfalls. The

farmers took the advantage of subsidized commodities, namely the soy beans (Centre for Advancement of Sustainable Agriculture 2005).

However, fast expansion of agricultural land increasing from 800 thousand hectares in the year 1969 to 4 million hectares in 1977 in Southern Brazil has caused severe environmental damages. The crop production was based on conventional agricultural practices leading to soil erosion and substantial degradation of the land. The productivity of the soils decreased rapidly and the farmers were facing difficulties with repaying their loans. Conventional agricultural practices caused compaction of the soil consequently decreasing the infiltration capacity of the soil during the intensive rainfall seasons. This led to run-off from the fields, floods and ruining of the infrastructure. Therefore it was necessary to develop and implement such crop farming system that would mitigate these negative effects on the environment (Centre for Advancement of Sustainable Agriculture 2005, Casão Junior et al 2012).

The environmental damage in the south of Brazil instigated a scientific research in the area of sustainable land management. An answer to the problem of sustainability was represented by the conservation agriculture. The results of the new scientific research were published in the year 1974 and represented the first research on conservation agriculture conducted in Brazil (Casão Junior et al 2012).

The interested stakeholders including national research organization, agricultural and chemical businesses, agronomical experts and university researchers facilitated the adoption of conservation agricultural system that was embraced by the large scale as well as small scale farmers (Abrol et al 2005).

Various conservation programmes were also launched by the Brazil Government in 1980s and 1990s to support the concept of conservation agriculture. The Soil and Water Integrated Management Programme (1982) or Rural Development Programme of Paraná could serve as an example (1998 - 1993). The main aim of these programmes consisted in lowering of the surface run-off and improved infiltration of water into the land. The programmes also aimed their attention on the encouragement of no till agricultural methods, research and development in the area etc. Some of these programmes were financed from the funds of international organizations. These governmental incentives played, among others, a crucial role in adoption of the conservation agriculture in Brazil. Necessity to lower the production cost due to economic and energy crisis and accessibility and availability of machinery and technology could be considered among other factors facilitating the expansion of the concept (Casão Junior et al 2012).

It should be also stressed that the extensive agricultural practices for production of soy beans, sugar cane, oranges etc. led to deforestation of the Amazon rain forest. Therefore it was necessary to come with such strategy to restore the productivity of the land and enhance the agricultural production without deforestation. The necessity to reduce the deforestation rate and aim towards more sustainable agricultural practices was promoted by the Brazil Federal Government by launching the Action Plan for Prevention and Control of Deforestation in the Amazon in 2004. The main objective of the plan was to reduce the rate of deforestation (Cordeiro et al 2010). The implementation of the plan was successful and the deforestation rate decreased by 77.5% between the years 2004-2011 (Viana et al 2012); as demonstrated by the Figure 3.

Another action was launched by the Federal Government in the year 2009 when the Government strengthen the policy in 43 Amazon counties with the share of total deforestation in the region of more than 55%. The main purpose of this intervention was to reinforce the authority of the Federal Police. The unauthorized logging companies were

closed down and the loggers were arrested as a result of this governmental intervention. The plan of the government to decrease the deforestation rate was successful, however at the expense of economic and social destabilization in the region (Cordeiro et al 2010). Therefore, in the year 2008, the Government proposed the Green Arc Operation to stabilize the economic and social situation. The main aim of the Arc was to clarify the land tenure policy and also to encourage the sustainable development within the area. The Sustainable Amazon Plan was also launched in 2008 with the objective of sustainable development of the Amazon Region and together with the Amazon Fund co-financed from the Norwegian development Agency created the foundation for the deforestation prevention and inspection (Viana et al 2012).

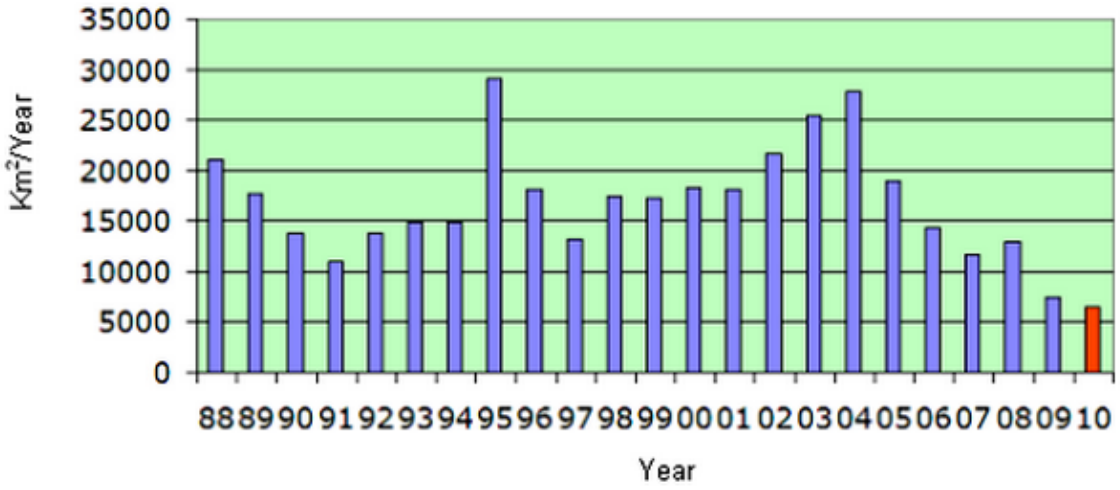

Figure 3 Annual deforestation rates in Amazon
Source: Cordeiro et al 2010, 1

Conclusions

The importance of sustainable agricultural methods was proven by the evidence from the literature supported by the statistical data. Conservation agriculture is capable to decrease negative impacts on the environment and improve the current state of the environment in contrast to the methods of conventional agricultural production; especially in developing countries where agriculture represents a substantial sector of their economies.

Despite the provable benefits, particular constraints and problems of conservation agriculture should be also considered; namely in the initial stages of its adoption and also with regard to the developing countries. Conservation agriculture requires a precise knowledge base, specific equipment and machinery and also high capital investments in the initial stages with the return on the investments coming usually in the long run and not all types of soils are suitable to employ this method without complications. Nevertheless, developing countries are facing particular problems that could hinder the adoption; including the lack of capital funds, insufficient know-how, unclear land tenure policy or unstable economic conditions. Conventional agriculture is still considered to be a norm in many countries; therefore the change in attitudes of the people is inevitable.

However, as proven on the case study of Brazil, it is possible, to a certain extent, to overcome these obstacles and introduce and launch the conservation land management practices also in the developing countries. As it was demonstrated, the implementation of

sustainable agricultural management practices was a lengthy process starting in the 1970s. It required solid scientific foundations, investments into the research and development, cooperation of the private sector and public sector on the national and also international level and it stressed the importance of knowledge sharing between the organizations and farmers. Therefore, other developing countries could draw on this case and experience when considering the adoption of sustainable agricultural management. As it was mentioned within the research, not enough data is available for the developing countries in Asia concerning the usage of conservation agriculture. Therefore, this topic could instigate further research.

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