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Obsah Contents

BUSINESS ENVIRONMENT IN SLOVAK CONDITIONS

Katarína KRÁĽOVÁ

Abstract

Quality and favourable business environment is a prerequisite for growth of any economy. The aim of the present contribution will describe characterize the business environment, assess the quality of the business environment through selected indices and then specify the limits and barriers that hamper businesses in their business activities and the way forward. Business represents driving force of economy development and is socially and economically significant in relation to economic growth on local and global level. Business is not isolated but placed in particular, specific and real environment. This environment significantly influences behaviour of business subject and is essentially obligatory input for a firm during its planning and business strategy formation. Every business subject is aware that the environment is independent from a company and the company cannot really influence it.

Key words

business, business environment, barriers to business, quality of the business environment

JEL Classification: M21,D36, D24

Introduction

Business belongs to basic characteristics of market economy and represents purposeful activity performed in order to satisfy needs of business subjects and their customers. Business represents driving force of economy development and is socially and economically significant in relation to economic growth on local and global level. Thus it's important to pay close attention to issues of business and business conditions, because healthy and favourable business environment motivates people to do business and it is one of essential assumptions of maintaining and securing long-term competitiveness of a country and the growth of market economy. Favourable business environment creates conditions for sustainable economic growth which is the main presupposition of long-term development of business activities, increasing of economic performance and thereby of living standards of population. That is the reason why we have decided that the goal of submitted piece will be descriptively characterise business environment, evaluate quality of business environment through chosen indexes and subsequently specify barriers and limits that hamper business subjects from business activities and their further progress.

Business Environment

Business is not isolated but placed in particular, specific and real environment. This environment significantly influences behaviour of business subject and is essentially obligatory input for a firm during its planning and business strategy formation. Every business subject is aware that the environment is independent from a company and the company cannot really influence it. Influence of external environment is very strong for a firm might influence the business activities positively or negatively. Presently, we need to realize that under influence of globalization trends the business environment was changed in a way that the surroundings of the company could be subdivided into direct (national) surroundings of the firm and indirect (global) surroundings of the firm.

Global surroundings of the company is currently represented for companies situated in Slovak Republic by European Union and basically also the whole world. In the analysis of influence of business environment the following structure of business environment is divided into three levels (Juríčková, 2006):

a) Macro environment (global environment)
b) Microenvironment (companies and individuals who the company is interacting and which have direct influence on the activity of the company)
c) Internal environment (processes inside the company).

It should be noted that the elements of the business environment are significantly shaped by the State through economic policy. Hence the importance of the state in shaping the business environment is significant. This means that the state should create a stable environment for the business activities in the

long term, thus gradually build a favourable quality business environment that does not create barriers to trade. Here we could suspend the term favourable or good quality business environment: "What is good quality business environment?" Often, different individuals who use this term, they mean something completely different. For some, the business environment is of good quality if it is good for them, for their firm or for their industry. And they often seek help through the government and the parliament approved privileges, exemptions, allowances and the like. However, the quality of the business environment in any case can not be considered good if it's understood this way. The business environment in this case is distorted by selective policy of favouritism, which provides a competitive advantage to selected entities or sectors, what is happening at the expense of all others who are disadvantaged. Quality business environment is therefore an environment that creates conditions as favourable for everyone, regardless of where they come from, what are the legal form, size etc. Quality business environment must therefore allow effective competition of businesses, which is the motor of the economy.

Public institutions should be used to strengthen and simplify the competition and not to complicate the whole process. Therefore, the state has to create in the entire territory of the Slovak Republic such business conditions that would encourage new investments, productivity growth, innovation and job creation, and simultaneously remove all the barriers to efficient business. In terms of economic policy instruments there should be tools or combination of tools used that have minimal negative impact on public finances. It would be advisable to prefer reducing the tax burden for all enterprises and the public expenditure used for individual business support should only be used in exceptional and clearly justified cases.

2 Measurement of quality of business environment

To be able to assess the business environment in the Slovak Republic, and then point out the limits of restricting the business activities, we must first measure the quality of the business environment with so-called indices. Through selected indices then we can evaluate a level of quality of business environment. Indices have different designs, use different data, different data sources and different variables. Several criteria are being used for their separation, such as by types, objectivity of evaluation subjects and the like. Index, which we choose for an assessment of quality of the business environment can be e.g.:

a) *unique* – data is acquired by an non-standard research and they pursue only preselected purpose
b) *composite* –is derived from a number of already existing surveys and indicators

Individual indices differ from each other also by a manner of their assessment. Goal of measurement of each index is (what is supposed to measure exactly) to measure the quality of the business environment through a chosen variable. To measure the quality of the business environment the following indices can be used:

- CPI – Corruption Perception Index
- Global Competitiveness Index, as measured by World Economic Forum
- Business Environment Index (Index podnikateľského prostredia - IPP)
- Doing Business report, done by the World Bank
- AGI – Aggregate Governance Indicators
- OI – Opacity Index
- CI – Capture Index
- EFI – Index of Economic Freedom
- CGR – Corporate Governance Risk Index

To evaluate the quality of the business environment in SVK we chose Corruption Perceptions Index, Business Environment Index, Global Competitiveness Index, Doing Business report and the Economic Freedom Index.

2.1 Corruption Perceptions Index

Corruption Perceptions Index serves as a reminder that abuse of power or bribery remains a problem of bigger amount of countries in the world. The rate of perceived corruption classifies countries and territories based on how corrupt their public sector is. Rated by Transparency International, corruption in the public sector on a scale from 0 (high level of corruption) to 100 (so-called. "Pure Country"), where 0 means that a country is perceived as very corrupt, and 100 means that it is perceived as very clean. Corruption Perceptions Index for 2013 includes 177 countries and territories.

From the following table 1 it can be determined that according to the latest assessment of corruption issued by Transparency International, Slovakia ended in 2013 in the 61st place out of the 177 countries assessed. This rank is the fifth worst among the countries of the European Union. Worse finished it only Italy, Romania, Greece and finally Bulgaria. From between the V4 countries Slovak Republic ended in terms of perceived corruption in last place. The world ranking is topped by countries as Denmark,

which ended in the first place and right after it New Zealand, Sweden and finally Finland and Norway. These countries are considered to be the countries with the lowest levels of corruption.

Rank of SR on a tail of either V4 or its placing among the last countries in the EU puts pressure on the government as to not to take lightly the problem of corruption and considered it an important factor in creating a successful and quality business environment. Entrepreneurs in SR perceive corruption problem as very serious. While the 2006 survey by PAS (Business Alliance of Slovakia) identified corruption as the fourth most serious barrier to doing business in Slovakia, four years later, corruption reached the very top of the rankings and there it remains to this very day. The problem of high levels of corruption in Slovakia does not lie in a lack of legislation, because from a formal point of view, Slovakia anti-corruption laws and control mechanisms are at the level of European standards, but it lags far behind in their practical application.

Table 1 Corruption Perceptions Index 2013

EU 27	Country	Ranking out of 177 assessed countries	Ranking within the EU	CPI Score
1	Denmark	1	1	91
2	Finland	3	2	89
3	Sweden	3	3	89
4	Netherlands	8	4	83
5	Luxembourg	11	5	80
6	Germany	12	6	78
7	United Kingdom	14	7	76
8	Belgium	15	8	75
9	Ireland	21	9	72
10	France	22	10	71
11	Austria	26	11	69
12	Estonia	28	12	68
13	Cyprus	31	13	63
14	Portugal	33	14	62
15	Poland	38	15	60
16	Spain	40	16	59
17	Slovenia	43	17	57
18	Lithuania	43	18	57
19	Malta	45	19	56
20	Hungary	47	20	54
21	Latvia	49	21	53
22	Czech Republic	57	22	48
23	Slovakia	61	23	47
24	Italy	69	24	43
25	Romania	69	25	43
26	Bulgaria	77	26	41
27	Greece	80	27	40

By: http://www.transparency.org/cpi2013/results, (2014-07-28)

2.2 Global Competitiveness Index

The Global Competitiveness Report 2013-2014 assesses the competitiveness of 148 countries, and provides insight into the growth of their productivity and prosperity. Global competitiveness index is the most comprehensive assessment of national competitiveness, and every year it is analysed and evaluated by the World Economic Forum. World Economic Forum assesses the competitiveness on the basis of available statistical data from global Executive Opinion Survey. In the following table (Table 2) we can see the ranking of individual EU-27 in terms of GCI in 2013 and 2014 and the scores that were assigned to them in 2013 (values from 1 - very low competitiveness after 7 - maximum competitiveness), as well as change in placing of the country in 2013 as compared with the previous year, namely to 2012.

Among the 27 EU countries the best rank was achieved by Finland, from the total number of

analysed countries it has occupied the 3rd place. It was followed by Germany and in third place has ended up Sweden. Last country from among the EU countries is Greece, which is in overall the ranking in the 91st place. For the fourth year the world leader is Switzerland. Based on the report, published by the World Economic Forum, we can assess that from among 148 participating countries of the world Slovakia placed on the 78th rank. The annual fall of Slovak Republic in competitiveness ranking by 7 positions is historically the worst rank for Slovakia since its accession to the European Union as well as since its inclusion in this prestigious international comparison (see Table 2).

Table 2 Position of SVK in ranking of competitiveness by World Economic Forum - temporal comparison since the accession to the EU

year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ranking	43	41	37	41	46	47	60	69	71	78	75
change	0	+2	+4	-4	-5	-1	-13	-9	-2	-7	+3

By: http://www3.weforum.org/docs/GCR2013-14/GCR_Rankings_2013-14.pdf, (2014-07-28)

In its report, the World Economic Forum has on the basis of its analysis also identified the most competitive disadvantages of Slovakia. Details are presented in the following Table 5.

Table 3 The most competitive disadvantages of Slovakia

The most competitive disadvantages of Slovakia	ranking
High level of cronyism, corruption	144
Law enforcement	143
Low public confidence in politicians	139
Wasted government spending	137
Low support for technological innovation by the government	134
The impact of taxation on incentives to work	131
Drain of talent abroad	130
Low quality education system	130
Ethical behaviour of firms	125
Quality of air transport infrastructure	124

By: http://www3.weforum.org/docs/GCR2013-14/GCR_Rankings_2013-14.pdf, (2014-07-28)

From the Table 4, we can see that in terms of the World Economic Forum survey Slovakia has reached extremely poor values. For the most competitive disadvantage WEF considers high level of cronyism, corruption and poor law enforcement. Out of the 148 countries the Slovak Republic ranked in 144 and 143 spot in terms of corruption and law enforcement.

Among the most prominent competitive advantages of Slovak Republic according to the World Economic Forum in particular:

- Low tariff barriers
- High openness of the Slovak Republic for the entry of foreign capital
- Low risk of terrorism
- Prevalence of Internet
- The banking system
- Energy infrastructure.

2.3 Business environment index

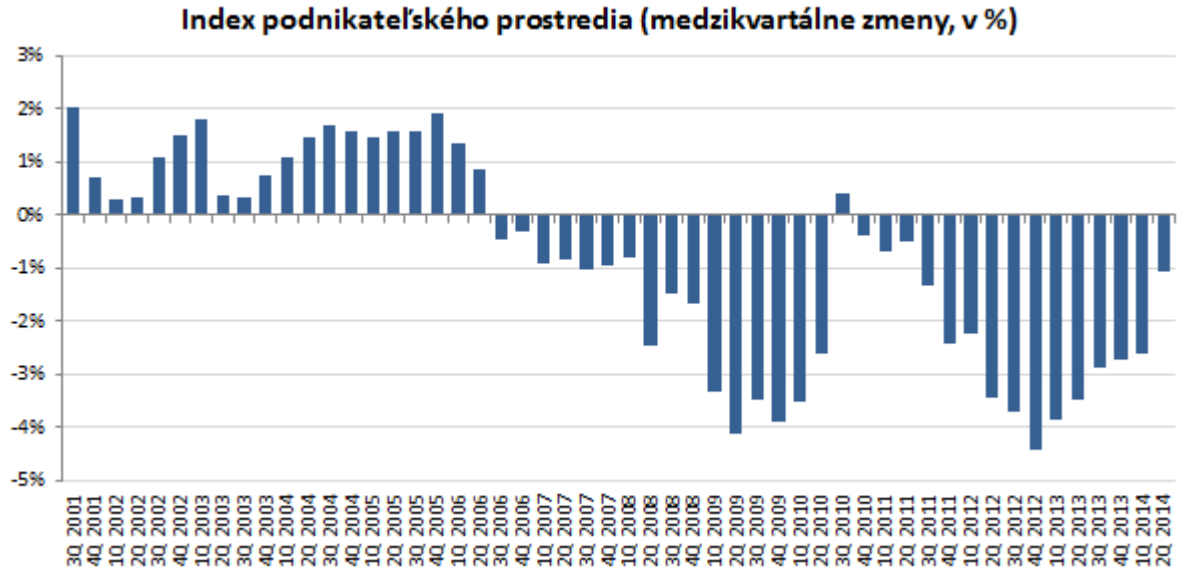
Business Alliance of Slovakia (PAS) constantly monitors and evaluates business environment. The results of these measurements and assessment of the quality of the business environment is the business environment index (IPI). PAS has its own assessment methodology, which is based on monitoring the business environment at quarterly intervals. Evaluation is carried out according to three evaluation categories, each category has 10 items:

- The first category monitors the development of legislative and regulatory environment,
- The second category monitors the impact of external macroeconomic factors on businesses

- The third category is made up of micro factors, i.e. the contribution of the enterprises to development of business environment.

IPP is evaluated on a quarterly basis and represents a weighted average of changes in individual items. Based on the following graph 1 we can see that the quality of the business environment in Slovakia evaluated by entrepreneurs continues to maintain its downward trend, although the pace of deterioration has slowed down over the last year. The current value of the Index business environment for the 2nd quarter 2014 is 63.9 points, compared with the previous quarter, it represents a decrease of 1.07 percent.

Figure 1 Business Environment Index of the Slovak Republic (qoq change in%)



Source: http://alianciapas.sk/category/pravidelne_aktivity/index_podnikatelskeho_prostredia/, (2014-07-28)

The item with the sharpest drop among the 33 items assessed by the Business Environment index (IPI) was the item the application of the principle of equality before the law. Second most decreasing item has become the bureaucracy and related delays in proceedings at offices and reporting. Forthcoming amendments to tax laws certainly contributed to the decrease of perception of administrative burden in area of reporting. The third worst rating by entrepreneurs became the law enforcement and judicial functionality. During the first quarter of 2014 were, of course, also items which recorded growth. Most of them were particularly from categories of subjective effects of firms on the business environment as an information openness of firms and relation of firms to the environment. Thus, firms despite worsening of external conditions of business can improve their functioning and in this way hinder the overall decline in the quality of the business environment. Among the external factors, the score was improved particularly in improved stability and predictability of the euro exchange rate, price stability and access to finance.

2.4 Doing Business Report 2014

Doing Business report published by the World Bank is another very well known and recognized indicator monitoring the state of the business environment. Advantage of Doing Business over other index-measuring the quality of the business environment is that Doing Business measures the regulation that affects the normal business activities of enterprises as well as conditions for opening and closing the business, but on the other hand, does not examine the broader factors affecting business such as the quality of human capital, infrastructure, economic policies ... From the perspective of methodology used Doing Business is based on the opinions of experts. Doing Business acquires data items relating to specific parts of the business environment. The more is country positioned closer to the lower number, i.e. the first rank, the better the business environment is.

Table 4 Areas of business environment of SR, which are part of the DB and their position in the overall ranking

	Areas of the business environment in Slovakia	Doing Business 2014	Doing Business 2013	Doing Business 2012	Doing Business 2011
1	Starting a Business	108	80	76	74
2	Obtaining building permits	53	50	50	50
3	Access to electricity	65	66	102	94
4	Registration of ownership	11	9	10	8
5	The availability of credit resources	42	40	24	21
6	Investor protection	115	113	111	108
7	Tax obligations for companies	102	100	130	126
8	Cross-border trading	108	111	95	91
9	Enforceability of contracts	65	65	71	74
10	Completion of business	38	38	35	33
	The quality of the business environment - ranking	49	46	48	43

By: http://www.doingbusiness.org/reports/global-reports/~/media/giawb/doing%20business/documents/profiles/country/SVK.pdf, (2014-07-28)

2.5 Index of Economic Freedom

Economic freedom index (EFI) is an international index of Heritage Foundation affirming the quality of the business environment. The scale EFI is in the range from 0 to 100. When a country obtains points from 80 to 100, it is considered to economic free,

where from 70 to 79.9 is considered mostly free,

range from 60 to 69.9 expresses relative freedom,

score 50 to 59.9 indicates relatively a non-free country

and below 50 points, the country is considered to be mostly unfree country.

It assesses the 10 freedoms:

1. trade policy (business freedom) - freedom of establishment;
2. the tax burden (fiscal freedom) - Tax freedom;
3. government intervention in the economy (government size) - the size of government interference;
4. monetary policy, monetary stability (monetary freedom) - monetary freedom;
5. the flow of capital and foreign investment (investment freedom) - investment freedom;
6. the banking and financial sector (financial freedom) - financial freedom;
7. wages and prices (labour freedom) - freedom to work;
8. property rights (property rights) - property rights;
9. regulation (trade freedom) - freedom of trade;
10. the black economy (freedom from corruption) - Freedom from corruption

Table 5 Evaluation of the SR by EFI index in the period 2008-2014

Year	2008	2009	2010	2011	2012	2013	2014
total evaluation of SR	70	69,4	69,7	69,5	67	68,7	66,4
verbal evaluation of SR	Predominantly economically free country	Relative economic freedom	Relative economic freedom	Relative economic freedom	Relative economic freedom	Relative economic freedom	Relative economic freedom

By: http://www.heritage.org/index/explore?view=by-region-county-year, (2014-07-28)

SR achieved the highest rating by the index EFI in 2008, when it was rated as mostly free country. In the entire history of the series this was the best rating. In recent years, Slovakia is rated as relatively free

country, the worst result in the observed period was reached in 2014, the worst rating in 2014 was the level of corruption (freedom from corruption), law enforcement (property rights) and freedom of labour (labour freedom).

3. Assessment

Because of the processes of globalization, the development of the business environment of the Slovak Republic are influenced largely by the development of world economy, therefore, it is necessary to place a strong emphasis upon the quality of the business environment, which affects the competitiveness and performance of the economy and also motivates actors to perform business activities. It might be said, however, that the Slovak Republic is still relatively less productive economy and because of this, it is even more important for our entrepreneurs to do business in a favourable business environment. Support and development of entrepreneurship is therefore also defined as one of the priorities of economic development of the Slovak Republic. The main assumption, however, is to create a suitable or in other words - quality business environment, in the process of development of business activities.

Table 6 Strengths and weaknesses of the business environment SR

Weaknesses of the business environment SR	Strengths of the business environment SR
corruption, bureaucracy, high rate of cronyism Law enforcement, the judiciary clarity, usability and durability of legislation effectiveness of state management and access to state aid insufficiently flexible labour market performance drain of skilled workers abroad unethical behaviour of business entities	SR location in the middle of a European area openness of the economy skilled workforce relatively cheap labour

On the basis of a synthesis of knowledge of the detailed analysis of individual selected indicators (Corruption Perception Index, Global Competitiveness Index, Business Environment Index, Doing Business Report 2014) we gained some insight into the strengths and weaknesses of the business environment of SR (see. Table 6). From the above analysis we can conclude that the quality of the business environment of SR is low and the state needs a systematic way to improve the quality of the business environment in Slovakia. The main priorities in the business environment should be as follows:

- Effective enforcement of laws
- Public institutions as a partner rather than a burden
- Efficient access to the capital market for all businesses
- Quality physical infrastructure and services in network industries

Conclusion

Functioning market and a healthy business environment are key prerequisites for economic freedom and voluntary economic activities, hence a free and prosperous society. Business environment must allow effective competition for entrepreneurs because most businesses operate the best and create value in an environment with clear, transparent and predictable rules that apply to everyone equally. Therefore the government should create a business environment that would create appropriate conditions for new investment, productivity growth, innovation and job creation in the whole territory of Slovakia. In terms of macroeconomic instruments that have an impact on public finances, the government should prefer particularly the tools that would have a positive influence on business activities such as reducing the tax burden for all businesses (not selectively but systematically), but at the same time not jeopardize the stability of public finances. General or individual support for business entities should be presently used in the SR through public expenditure only in exceptional and clearly justified cases. The goal of the state should therefore also be the establishment of an entrepreneurial environment in which entrepreneurs operate on the basis of clear, transparent and predictable rules that apply to everyone equally, which would contribute to improving the quality of the business environment.

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ECONOMIC SECURITY OF GAS SUPPLY BY USING ITS UNDERGROUND STORAGE

Alena BAŠOVÁ

Abstract

This article solves a very important questions to ensure the continuity of supply of natural gas by using underground storage. Safeguard security of natural gas resulted from the solution to the situation in January 2009, when the supply was stopped gas supply from Ukraine. In exploration and mining is our goal maximize the potential of our exploratory survey areas for using the most modern methods, but also has potential uses of extractive open bearings, while using sophisticated technology can extend bearing life by eight -ten years. Energy security is a multidimensional phenomenon and that different people under her understand the different things. Definition which integrates diverse views in my opinion the definition of prof. Catrinusa Jepmu and prof. Nebojsa Nakicenovica who define energy security as the availability of energy in any format, in sufficient quantity, within a reasonable, respectively. reasonable price or assurance that none of these factors is not compro mised.

Keywords

supply of natural gas, underground storage, exploratory survey areas, using sophisticated technology, energy security, sufficient quantity, reasonable price.

JEL Classification: Q4, Q48, Q 43

Introduction

Economic securing supply of energy commodities closely related with questions of energy security. The definition of energy security is quite difficult. The most simple formulation shows Daniel Yergin whom energy security is defined as sufficient supplies provided energy with affordable prices (2006, Yergin, D.) He has extended this definition on dimension of energy security, he reacted to an ever increasing tensions on the global market for energy resources, the impact of various natural disasters, technical failures and attacks on energy infrastructure. He also responds to to various market speculation, political instability and numerous other internal and external factors influencing the current energy security. Yergin defines four basic principles to secure the energy security. The first principle is traditionally diversification, access to alternative sources reduces the risk of ensure continuous supplies of energy raw materials.

For creating a flexible system Yergin emphasizes the need for strategic reserves, sufficient reserve production capacity, backup systems along the production and distribution chain.The third principle is the recognition of integration. The fourth principle is the need and importance of the information. This principle is based on experience.

Energy and energy media became so important the most developed countries,too are increasingly aware of their indispensable role. The threat that energy will decide about the future and prosperity of national economy and of economic groupings, is becoming more realistic.

Extraction of hydrocarbons plays an important role in the history of energy the Slovak Republic. A hundred years ago 13.1. 1914 he began to write the history of the oil industry in Slovakia. Over the past 100 years have been in our country were discovered gas field with a total capacity of more than 25 billion. m3 of natural gas, 3.7 million. tons of oil and and almost 0.4 million. tons of gasoline.

Gas field are concentrated mainly in Záhorská nížina, mainly around the towns Malacky and Gbely and in the Východoslovenská nížina (1997, Naftaa.s.).While the share of mining oil and natural gas from domestic sources gradually declined after the conversion of the former deposits in underground storage Slovakia has made Special achievements in the field of natural gas storage, Whose history began 40 years ago, and today the company Nafta , has a major role in this branch (2009, Parlamentný kuriér). The current extraction of oil and gasoline the Slovak Republic is around 10 to 13,000 tons per year and natural gas extraction is at 90 to 95 million. m3, with the trend of gradual decline, the company says Nafta .

In area being mined the aim is to maximize the potential of our exploratory exploration areas with the help of the most modern methods, but also use the mining potential has opened undeground storages. Using sophisticated technologies can be extended durability of the undeground storages of 8-10 years.

1 Overhead and underground storage of natural gas

In practice, most desirably 1.2 tons (2,700 l) and 2.1 tons (4,850 l) aboveground undeground storages. They satisfy the delivery of family houses and also for business activities (in the case of industrial delivery issued is recommended to install a larger container).

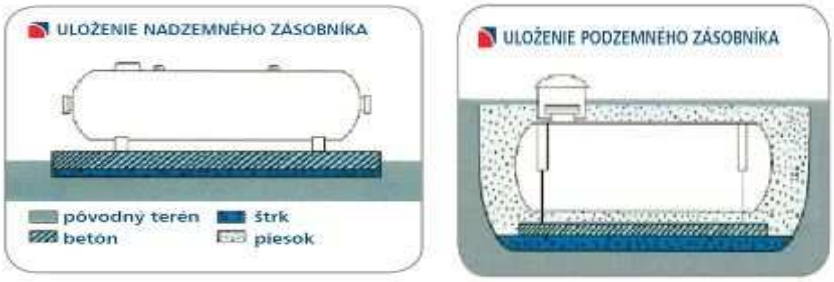
They are painted white reflective coat of paint. In the case of the container will be placed in the garden of the house or in areas with parks, you can choose a green coat.

The advantage of underground storage is space saving, because they require less protective zones have better conditions of evaporation (especially in colder climates) and last but not least, do not interfere appearance of the area, which is an advantage especially for homeowners, and hotel and restaurant facilities.

In the grass is the location of underground storage scarcely noticeable.

So modified gas storage should surface treatment providing long-term protection of corrosion and cathodic protection.

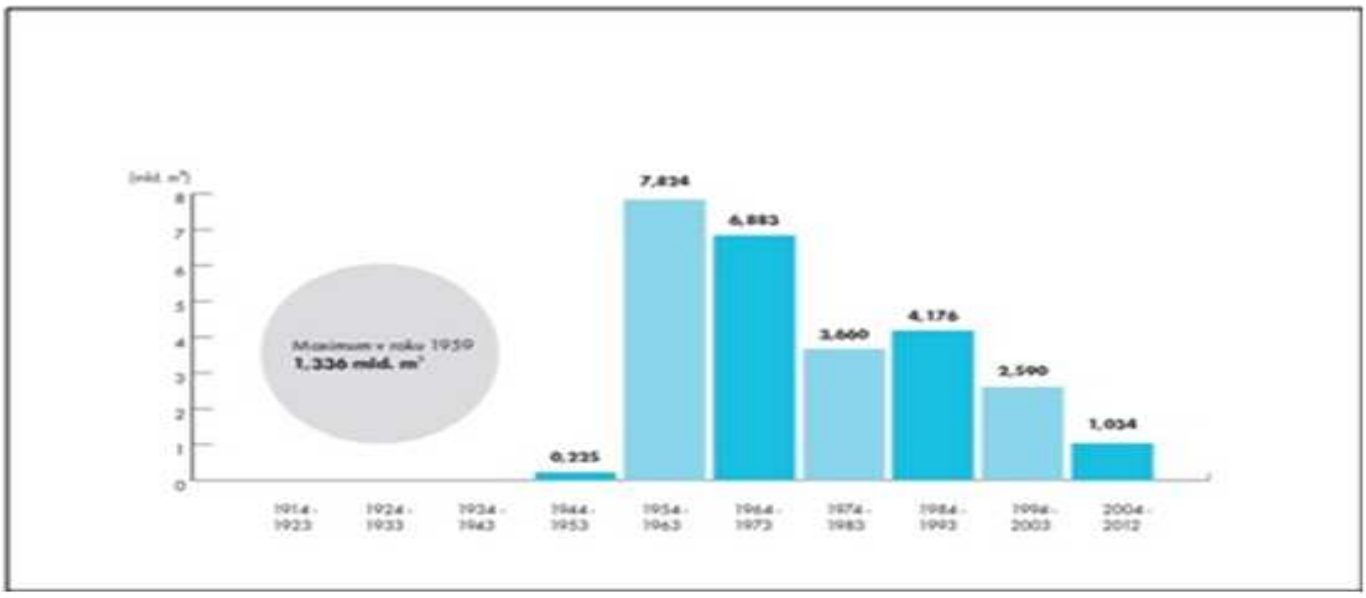
Picture 1: Storage of naturak gas



Source: http://www.probugas.sk/stranka/54_types of gas storage, (2014-09-28)

The advantage of underground storage is space saving, because they require less protective zones have better conditions of evaporation (especially in colder climates) and last but not least, do not interfere appearance of the area, which is an advantage especially for homeowners, and hotel and restaurant facilities.In the grass is the location of underground storage scarcely noticeable. So modified gas storage should surface treatment providing long-term protection of corrosion and cathodic protection. Company Nafta, a.s. ((hereinafter referred NAFTA) deals with the storage of natural gas in the Slovak Republic, which is not provided through State resources, but through the private sector. Company Nafta, a.s. carries out activities in the exploration and production of hydrocarbons.

Graph 1 Extraction of natural gas 1914 - 2012 (26,392 billion m3)



Source: http://www.nafta.sk, (2014-09-28)

In European energy legislation is still no unified, binding definition of security of supply (security of supply) and energy security. Nevertheless, there are different definitions, which confirm that energy security is a multidimensional phenomenon and that different people understand her different things. Definition which integrates diverse views in my opinion definition prof. Catrinus Jepmu and prof. Nebojsa Nakicenovica (2006, Jepma, C., Nakicenovic, N.) which defines energy security as the availability of energy in any form, in sufficient quantity, reasonable, respectively. equitable price or with assurances that the supply is not at risk. According to (Discussion Paper, February 2013), is in Europe natural gas used for heating and cooking in households and commercial sector (40%) in the industry (30%), in the production of electricity (25%) and in the chemical industry (5%), published by company Nafta in January 13, 2014 Natural gas consumption is not constant during the calendar year.

The main task of the underground storage is to fill the gap between the supply of natural gas and its real need. When the need is higher than supply, the difference is offset by extraction from underground storage facilities. On the other hand, natural gas is impressed in the storages when supplies are higher than consumption. Reasons for storage of natural gas in the states of the European Union are(2008, European Gas Market):

- balancing seasonal fluctuations in consumption,
- cover delivery in peak,
- security of gas supply in case of disturbances in the extraction, transportation or supply,
- increase the price of gas transport efficiency,
- reduction in natural gas extraction in the EU,
- increasing demand for natural gas in the EU,
- longer transport routes.

Underground natural gas geest rock in which the empty space suitable for gas storage. Most often it is a rock that was in the past bearing gas or oil, and after extraction them, in that places was created the space, which is possible tu usee for the gas storage. Properties of rocks, which must be met in order to serve as an underground storage:

- Must contain sufficient openings (pores). In simple terms you can imagine such a rock like a sponge, fixed part of the consists, for example, paved the grains of sand and openings are filled with gas, it may be, for example sandstone.
- The pores must be connected to each other channels of sufficient size to be permeable. Gas flows from one hole to another channel and continues to core bores and which can gets to the surface.
- Rock, selected for the tray must be sufficiently closed on the surface and the sides, so the gas not received out of designated underground. Most often this will impermeable clay, water, or fractures in the rock.
- The fixed part of the rock must be sufficiently linked, ie it is not possible amalgamation of rock particles with gas.

A gas reservoir is placed below ground in the depth, which may be several hundred and several thousands of meters. Its area is generally counted at several tens to hundreds of square kilometers. The surface of the ground above the reservoir does not differ from normal country there are only aboveground facilities required for the extraction and processing of natural gas.

Underground storage can be divided according to their use into two groups (2006, Solich, M., Prokeš, O):

- seasonal storages - a storage facility to be filled during the summer and from which in winter is supplied the gas network. gas reservoir is placed below ground in the depth, which may be several hundred and several thousands of meters. Its area is generally counted at several tens to hundreds of square kilometers. The surface of the ground above the reservoir does not differ from normal country there are only aboveground facilities required for the extraction and processing of natural gas.

- peak storage facility - used to cover the supply of natural gas in the short term peaks of consumption, which is required in the network to deliver a large amount of gas in the short term. Unlike the seasonal storage can these reservoirs during winter again fill up to its maximum capacity. In the world these tanks set up mostly in salt caverns (the cavities) which arise by adjusting the saline bearing of water, less often for this purpose use other underground cavities such as an abandoned coal mines or artificially created cavern. The capacity of the installed equipment and overhead absorbency abilitty of bearing are the main parameters affecting the speed of the available impress (ie impressed power). Impressed power reaches a maximum value when storage is empty. With the gradual implementation the pressure is increased in the storage and than is decreasing function of impressed. The gas from the bearing gets on to the probe (These are the same probes that were used for its its impact) and the network of pipes is transported to the above-ground facility. Extraction of natural gas requires complex process of modifying gas, because the gas could be minined the water or even liquid

hydrocarbons from the bearing. To separate liquid from the gas separation method is used. The required flow rate and pressure are set by regulators. The goal of all processes is adjusted gas to a quality that it can be easily used to end users in the home or in industry. The gas is conveyed via pipelines from the reservoir to the distribution or transmission network. Available speed extraction (mining output) is influenced by the capacity of overhead equipment bearing capability, as well as pressures in the gas networks with which the tray connected. Mining exercise of gradually decreases with a decrease in pressure (ie emptying) of the container. Gas distribution may be either low-pressure (gas pressure satisfies the conditions of operation of gas appliances and may be further adapted) or medium pressure. According to the Association Gas Storage Europe, which represents 28 operators underground storage facilities in 17 countries of the European Union, the European gas market is ready to absorb the additional 60 billion. m3 commercial the storage of space in the new underground gas storage (UGS continue), which could be built in the EU-27 by the end of 2015.

This would almost doubled the current storage capacity in the European Union (65 bn. m3). (2003, „Life cykle of UGS“).UGS consists of six phases: planning, survey, construction, commissioning, operation, and decommissioning.

2 Unerground tanks after the economic liberalization of energy

Slovakia has sufficient capacity and thanks to its position on the borders of three countries is linked to their gas systems. Trading in with storage capacities of gas has undergone after the liberalization and onset spot markets many changes. The importance of gas storage in underground storage is very important in terms of ensuring security of supply for consumers, which is the main function of the underground storage(2009, Kováčik, M.). It also serves to balance the seasonal differences in gas consumption - during the summer and winter. Classic mode operates so that in summer the gas in underground storage pushes and in winter, when the consumption is greater, the gas is mined. This is a physical need. Of course the storage also has business dimension. It is associated naturally with the basic rules of supply and demand. Therefore, there is an advantage that the summer months are cheaper gas is compressed and in winter it adds to the company network, the price is the highest. Differences in prices between the summer and winter exits, but there are also differences in prices in the monthly and daily bases. Storage serves to promote trade in this commodity. As today, thanks to modern technology can impres or mine gas in any time during the year, with gas customers can dispose of according to the market situation. It is associated naturally with the basic rules of supply and demand.(2011, Baumann, F. - Simmerl, G.). Therefore, there is an advantage that the summer months are cheaper gas is compressed and in winter it adds to the company network. Differences in prices between the summer and winter exits, but there are also differences in the monthly and daily bases. Storage and therefore serves to promote trade in this commodity. As today, thanks to modern technology can impres benefit or mine any time during the year, with gas clients may do their bussiness gas according to the market situation. Then have the option either to sell gas on spot markets or to supply it to the network to their end customers. Gas storage the Slovak Republic goes mainly under the Energy Act č.251 / 2012 Coll and Act on Regulation of Network Industries 250/2012 Coll .. In Slovakia operate two operators of underground storage of natural gas Nafta,.s. and Pozagas, a.s. These two companies provide storage service for Slovakia, along with storage Bojanovice, located in the Czech Republic, but is related to the Slovak gas network. Slovakia has so for themselves basically have three tanks. The company itself Nafta is greater competition, which cooperates with containers of other companies that are close to the Slovak border and within the borders of Austria and the Czech Republic.

In Europe, there are two approaches to the use of containers.(1999, Underground Gas Storage in Europe and Central Asia). One is that we have a fully controlled access to the storage tank and the other is a little more liberal. We can say that the type of container is selected this corresponding state can allocate for this purpose and some capacity. Thus it is solved, for example, in Hungary, where they have a national storage _ with a national gas, which should ensure security of supply. It shall be for each country to implement the system that best suits its terms. The situation is different in Bulgaria another in the Netherlands and the UK, where it is necessary, for example, can be obtained directly from the source of production. In advanced gas Europe works usually model the operation of commercial storage. This system has several advantages, especially does not burden the state and the state budget, which is currently very important. Slovakia has sufficient storage capacity. This means that all bodies who of the Act must comply with the conditions of ensuring security of supply, are guaranteed access to storage. The role of the operator of undeground storage compliance transparent non-discriminatory access to storage. This is in Slovakia but also in neighboring countries legislatively established. The storages serve as support the sale of natural gas, which, for example, in the SR mainly supplied through a transmission

system company Eustream. There are long-term and short-term contracts. For long-term contracts are guaranteed prices for many years. Since 2005, on the Western classical markets was developed model of stock exchanges trading in natural gas, in which responds to stimuli stock exchanges. When on the stock price is low, gas is purchased and impressed into storage. When the price of gas increases, the gas is advantageously supplied by to the stock market. Spot markets are currently the most advanced trading tools. Trading in with gas today is very fast and therefore storage must respond quickly to market conditions. The storages are not sereve only as tool in support of trade, but also in support liquidity so. "Hubs" - gas trading nodes.

Future of products will therefore gradually depend on from physical fulfillment earlier in the financial sphere. From this perspective, Slovakia's contact with the world and in some cases even overtaking him. In 2013, from among European operators Slovak storage storages were the first to offerd a new product _, study called "Optional" product. The client received the right to purchase gas capacity already in 2014 _and for the right to pay a fee corresponding to the risk.

Since 2011 the operational reverse flow direction from Slovakia on the Baumgartenwhile company Nafta also supplies gas to Baumgarten physically. This is the specificity of Nafta in underground storage.

Due to its location on the borders of three countries have a unique connection to all gas systems.(2009, Klepáč, J). It is through the transmission network of Eustream We can continue link to the Czech Republic and Austrian Baumgarten. The Austrian gas network, we connect directly, through POZAGAS, as which offers its clients today as a delivery point directly to the Austrian market. Since 2011, the company Nafta, a.s. running a new business dispatching. In storages of Nafta stored all the traditional players operating in Slovakia, but the company also has a relatively significant number of international clients who use its storage to delivery gas to Baumgarten or on the markets in Germany, France, Italy and Switzerland.

In terms of capacity utilization storage of all operators in Slovakia can be said that the capacity determinated to the Slovak market are sufficient. It is interesting that about half of the storage capacity in operation of Nafta is exported. For Slovakia, which is dependent on imports of most energy resources, so storage capacity is also one of the few of products in the the field of energy that can be exported.

In 2011 Nafta opened new storage _ Gajary-Baden. After its the completion, the company will increase the storage capacity of half a billion metrov3. The storage is part of the complex Lab storage and upon completion in 2014, there is an increase in the storage capacity of 500 million. m3. The total storage capacity of Nafta will reach about 2.5 billion. m3. Significantly enhances the security, reliability of gas supply for the whole Slovak Republic, but also for the Central region.

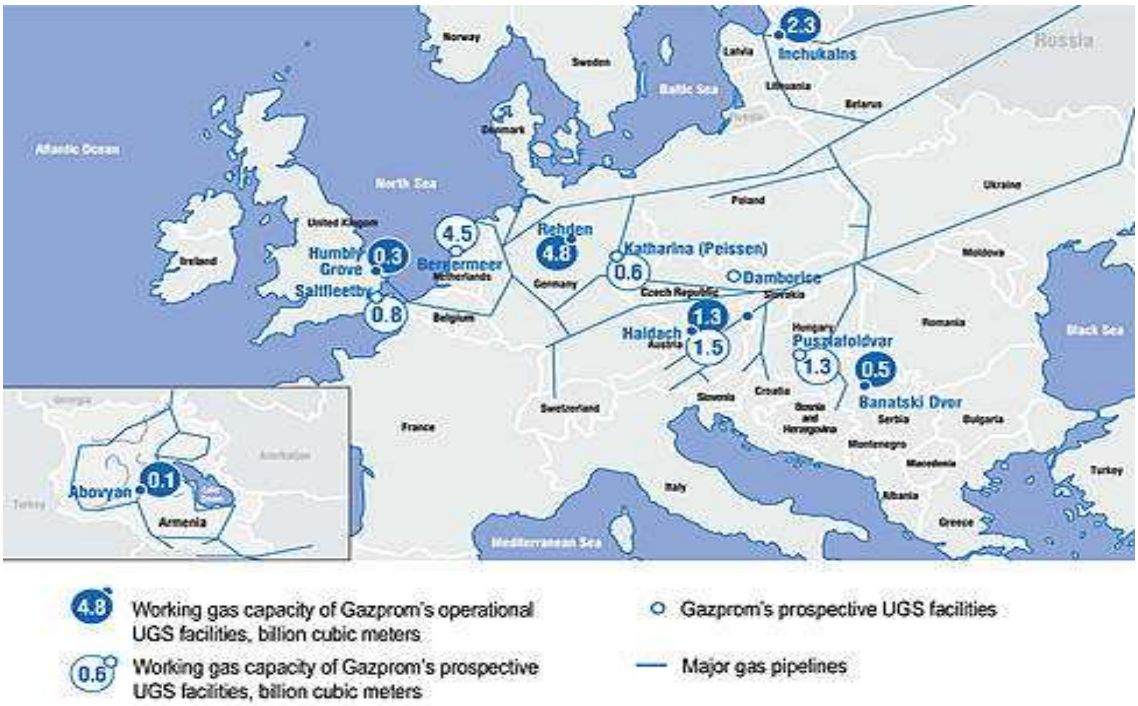
Picture 1:Undeground storages in SR

Source: http://www.nafta.sk, (2014-09-28)

3 Natural gas storages in the EU

At the time of the peak of demand for natural gas company Gazprom Export of its storages in Europe has mined more than 38 million cubic meters of gas per day. In one of the storages - Haida located in Austria - after the recent completion of the second phase to a doubling of capacity. In Germany, Gazprom relies on storages Rehden _and Katharina, who started to use the last season. During the winter of 2013, Gazprom made available to the stocks in the Serbian facilities Banatski Dvor, where he reached a designed production capacity of more than 4 million cubic meters per day.

Map 1: Map of underground gas storage facilities in Europe



Source: http//www.gazprom.ru, (2014-09-28)

In an effort to guarantee security of supply of Russian gas to Europe, Gazprom plans to increase by the end of 2015 the capacity of underground storage facilities on the about 5 billion cubic meters. Company Strategy aims to create a network of of warehouses near the end consumers places and a major export routes, which appeared to be "efficient and intelligent" approach. According to the European Commission must be ensured to the provisions on of EU legislation, in particular regarding third party access to storage capacities. So called "standard supply" in the regulations to ensure the security of gas supply provides the suppliers obligation to be able to provide gas to vulnerable customers for at least 30-day period in the the event of a gas in all EU countries, it is the obligation of the supplier of last resort. The Institute supplier of last resort in Slovakia was introduced after the implementation of the 3-rd liberalization package, the Law 251/2012 on Energy, no specified therein but how exactly to this obligation should provide gas company, or from underground storage facilities, LNG terminals or other devices.

Conclusion

Gas crisis in January 2009 not only underlined the importance of underground gas storage (UGS), but also raised the profile of their existence in the eyes of the Slovak public (2009, Informácia o stave zásob zemného plynu v podzemných zásobníkoch v období od 11. do 20. 1. 2009). It was a situation, the first ever, complete stop gas supplies from Russia(2009, Duleba, A.). After this experience, no one doubts that the underground storage facilities are an important tool for improving the security of supply of gas. (2009, Baláž, P. - Zábojník, S.). The European energy legislation is still no unified, binding definition of security of supply (security of supply) and energy security(2009,Copsey**,** N).

The advantage of Slovak transport network is that it is directly connected to the European gas transport network, we operate entry-exit points to and from the Slovak transport network . In addition to these storages can be used and Slovakia storage Bojanovice in the Czech Republic owned by SPP Bohemia, a.s..

In Europe for several years so applied. storage paradox: high price of gas encourages investment in building new storage capacity(2008, Belyi, A**.** V.). Investment in the construction of new underground storage facilities need predictable regulatory framework, without demanding and uncertain permitting procedures. This is particularly large projects. Construction of new underground storage facilities is capital intensive process, but the final decision depends on the particular market situation. In the EU, but in general, the demand for additional storage capacity grows as declining domestic production of natural gas _and country becomes more dependent on imports.

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THE APPLICATION OF COACHING SKILLS BY MIDDLE AND TOP MANAGEMENT MANAGERS

Radka VANÍČKOVÁ, Robert ZEMAN

Abstract

Coaching is a set of tools, methods and coaching techniques which man can use to manage his life, to set goals and ways to achieve and to fulfil his own life-philosophy in terms of approach to himself and others. A coach is a partner, not authority or expert, who purposefully and effectively asks a considerable amount of questions people, who are being coached, to find an optimal solution or a way to solve the optimization problems in order to attain the objectives. Companies acting in the service sector put a great emphasis on the access of its employees to customers, for this reason it is necessary to maintain a positive atmosphere in the workplace. The aim of this paper is to apply development training program for employees of middle and top management in the working process aimed at the area of successful development of the key coaching skills in professional and personal career.

Keywords

Coach, coaching, coaching skills, professional and personal career.

JEL classification: J21, J24, M54

Introduction

Motto: Leadership, or the art of leading people, is possible to learn.
When you know how to learn it,
you are on the good way to success. (Owen)

A coach is a partner, not authority or expert, who purposefully and effectively asks a considerable amount of questions people, who are being coached, to find an optimal solution or a way to solve the optimization problems in order to attain the objectives.

Coaching is a set of tools, methods and coaching techniques which can man use to manage his life, to set goals and ways to achieve and fulfil his own life-philosophy in terms of approach to himself and others.

In each company it is common to use leadership in practice. The access of superior to his subordinate is a major factor, which is reflected in the work of the subordinate. This fact is enunciated in publications written by Northaus and Stýblo (2013).

Companies acting in the service sector put a great emphasis on the access of its employees to customers, for this reason it is necessary to maintain a positive atmosphere in the workplace. Assuming that the superior chose such opposing approach to his subordinate, it could lead to demotivation the subordinate and subsequent resistance to the work performed, or eventually to loss of employment. It is appropriate and desirable managers to be adequately trained not only in their field of expertise, but also in coaching.

Coaching in our country is still used the most in the corporate sector in management positions or at the very businessmen or traders. Bohoňková (2010) states that bosses are learning how to coach their subordinates, so that they can be better motivated or get better results, etc. Currently, coaching gradually expands into specific areas of professional and personal focus on performance and career coaching, team coaching, as well as interpersonal coaching.

Materials and methods

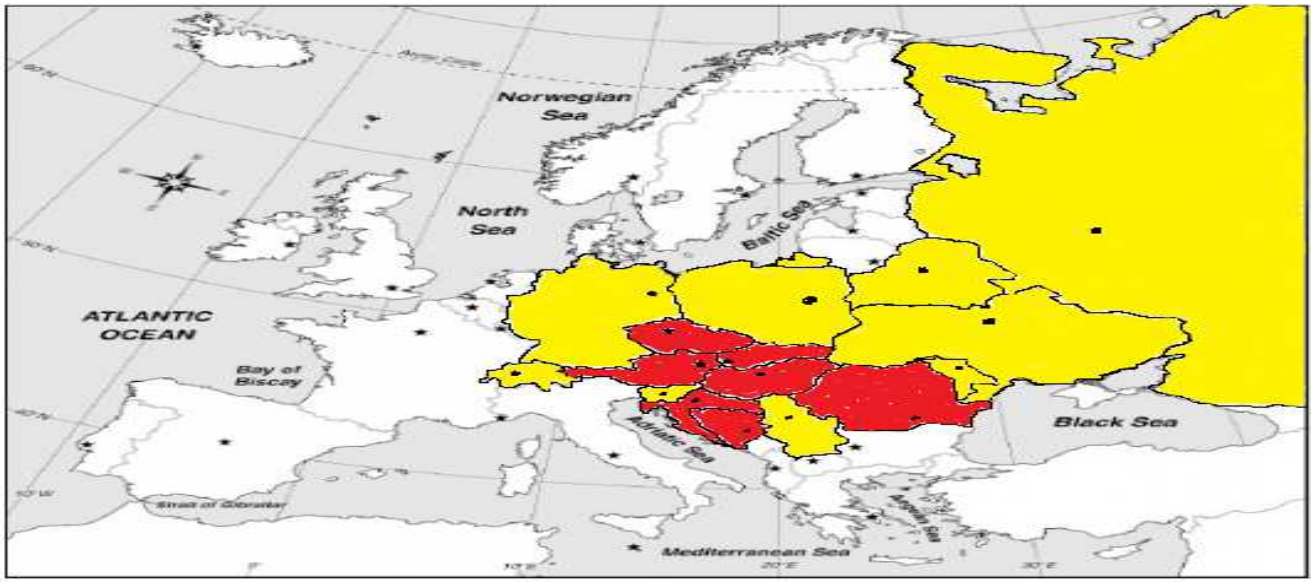
The basic methods are studying scientific and recommended literature, periodicals, the available press, statistical data and interpretation by statistical surveys in coaching.

In the practical part is into the labour process applied developing and training program for employees of middle and top management in the company KIKA Furniture Ltd. This program is aimed at the area of successful development of key coaching skills in professional and personal career.

Results and discussion

The company KIKA Furniture Ltd. is a family business and one of the leading furniture retailers in Europe. The company is expanding into Central and East European countries.

Figure 1 Map of countries which are expanded by KIKA Furniture Ltd.



Note: Red colour - expanded countries; yellow colour - potential expansion
By: http://pomocucitelum.cz,(2014-02-24)

The company KIKA Furniture Ltd. owns 32 stores in Austria, 7 in Hungary, 7 in the Czech Republic, 4 in the Slovak Republic, 4 in Croatia, 1 in Romania, 1 in Serbia and other stores are planned. Among other things, company also works as a franchisor.

The factor of success is all above a satisfaction of customers, which ensure particularly its employees who have the opportunity to develop themselves and career growth or other specific development programs.

The company KIKA Furniture Ltd. in the years 2010 - 2011 was approached by NeuroLeadership Group Ltd. relating to the implementation of a training program called "An implementation of change by themselves and by the others through consistent and approachable application of coaching skills", the study on the impact of the program was carried out six months after its completion.

The company NeuroLeadership Group Ltd. has prepared appropriate learning and supporting materials and tools for the participants of the educational program. The first point was a targeted set of key skills in determining the three sub-objectives:

1. mastering communication skills with the help of techniques shorter and more effective conversations about any situation, regardless of the topic or specification
2. to support capabilities influence the desired results through everyday conversations
3. to develop key skills through building positive relationships in the workplace and to strengthen the trust of colleagues

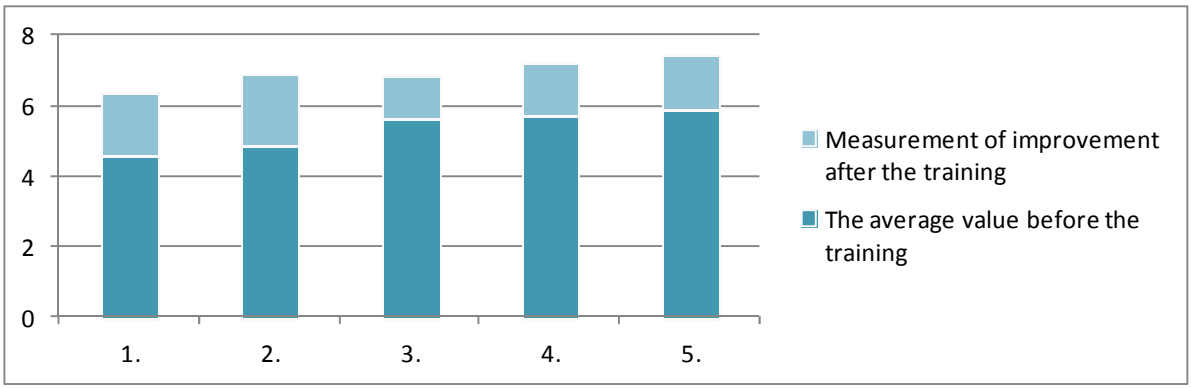
Opening of the training program was held in the spring of 2010 and was completed in mid-2011, when was the target group consisted by middle and top management managers in the contacted company.

The targeted evaluation and any proposed changes to the behaviour and actions of middle and top management managers used the following questions:

1. "Do you work with your subordinates on solving problems, but you don't advise them what should they do?"
2. "Do you communicate with your subordinates to support them in thought and initiate new ideas"?
3. "Do you motivate their subordinates through the interview?"
4. "Are you able to elicit greater interest in their subordinates succeeding in realizing the goals?"
5. "Do you provide your subordinate feedback and do you control the assignments or specific targets effectively?"

The measurement results given in Figure 2 showed that middle and top management managers achieve noticeable positive changes after the training program.

Figure 2 The mean behavioural changes of the middle and top management managers



By: NeuroLeadership

The other point of NeuroLeadership Group Ltd. solving, which was important for the company KIKA Furniture Ltd. was the use of coaching skills of middle and top management managers - see Figure 3 according to the six coaching questions like:

"Do you apply:

Coaching skills in daily contact with colleagues?"

Coaching skills to help finding appropriate ways of solving the problems?"

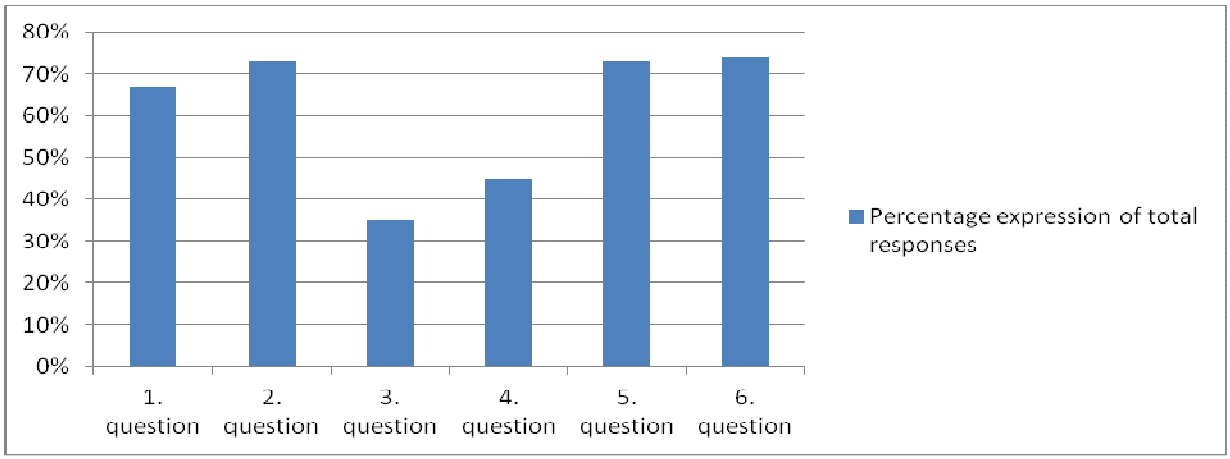
Coaching skills in evaluation interviews?"

Coaching skills for team meetings?"

Coaching skills in setting team goals?"

Coaching skills in controlling the objectives?"

Figure 3 Application of coaching skills of managers, middle and top management in the company KIKA furniture Ltd.



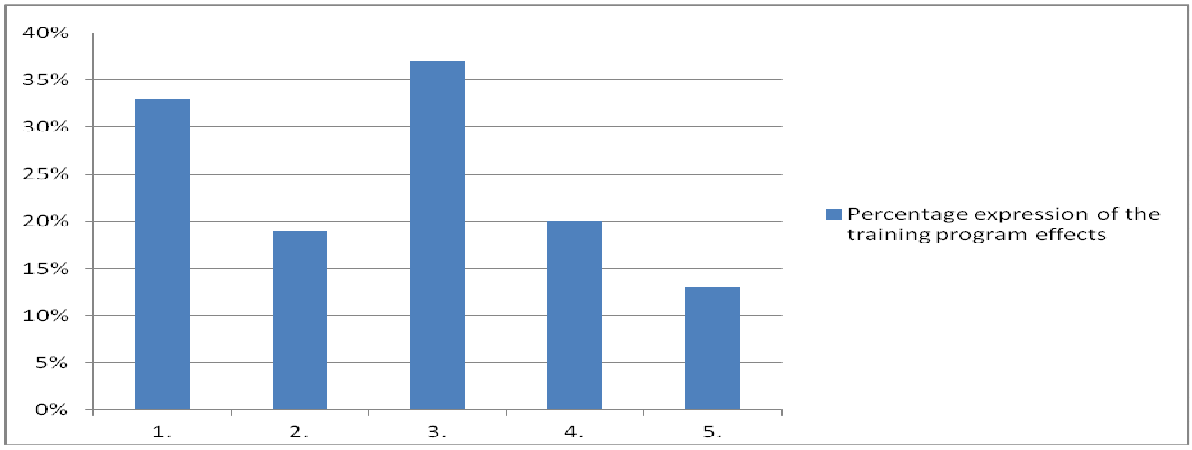
By: Neuroleadership

Another important step in the case of exploration company, NeuroLeadership Group Ltd. evaluated the impact of the training program for middle and top management managers.

Company KIKA Furniture Ltd., which was asked to evaluate the percentage of newly, acquired knowledge, while the evaluation points were as follows:

1. Leadership: improving key skills and their application in the work process
2. Engagement: closer involvement in teamwork
3. Potential: better use of the potential subordinates
4. Labour productivity: increasing od an own productivity
5. The quality of relationships: improving labour relations.

Figure 4 Effects of a training program evaluated by middle and top management managers KIKA Furniture Ltd.



By: Neuroleadership

Conclusion

Asking yourself but also the others the right questions in the right moment, consist in the professional skills of a successful coach. Coaching requires a positive approach to supporting people with a positive mind set. Acquiring coaching techniques and their application in practice, the training of practical skills applied in professional and personal life in the process of positive change in career development, employee performance, team work and the development of personal relationships and life.

The measurability of success in applied coaching was demonstrated after completion of a training course for middle and top management managers as a positive contribution of coaching skills in the work process during team meetings, evaluation interviews, finding appropriate ways of solving or control the fulfilment of the objectives. The effect of completed education program is mainly reflected in a better use of the potential of subordinates in the workplace, in the application of coaching skills in everyday practice in contact with subordinates, increasing efficiency, Labour productivity or improving relationships at a workplace.

Galileo Galilei said: "Nobody can be taught anything, you can only help him to get to know himself."

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MEASUREMENT AND EVALUATION OF REGIONAL DISPARITIES

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Abstract

The article analyzes regional disparities in Slovakia in economic and social fields. The analysis is realized on regional level LAU 1, therefore at district level. The first and second parts are defined terms and concepts. We realized the identification and decomposition of regional disparities. The third and fourth parts we successively realized the analysis of regional disparities in social and economic fields. The multivariate statistical methods were used (Correlation analysis, Principal components method, Cluster analysis). Finally, it has been designed simple and weighted integrated index and compared by regions. Regional disparity is inequality of characters, events or processes that have unique spatial location (can be allocated in a defined territorial structure) and occur in at least two territorial entities of the structure. Measurement of regional characteristics at the international level is a long term subject of portal OECD and statistics system EUROSTAT.

Key words

Regional disparities, social and economic indicators, multivariate statistical methods

JEL Classification: C34, C52, R23.

Introduction

Regional disparities (RD) are currently busy term. The disparity is difference or inequality of characters, events or processes whose identification and comparison has some rational sense (cognitive, psychological, social, economic, political, etc.). Regional disparity is inequality of characters, events or processes that have unique spatial location (can be allocated in a defined territorial structure) and occur in at least two territorial entities of the structure (Kutcherauer, 2010). The term RD understands measurable differences in the development of bounded regions. The differences are characterized by a set of indicators gathered over a long period of observation. We recognize the economic, social and environmental RD (Habánik, Koišová, 2011).

When we evaluated RD, we see a number of problems that occur and can result in incorrect reproducibility and interpretation of results. One of them is incorrect regionalization, therefore inappropriate definition of observational units. Definition of regions within the NUTS III classification is not recommended because these regions aren´t allocated in accordance with regionalization criteria (Sloboda, 2006). Functional urban regions (Bezák, 2000), micro-regions (Nightingale et al. 2005) and statistical territorial division at the local level (LAU 1) are rather recommended for comparison of the development of regions and their characteristics

1. Definition of identification and decomposition RD

The analysis of the publications resolving RD problems shows that there is no uniform view on which standards are used to define and evaluate RD and which indicators describe them. Measurement of regional characteristics at the international level is a long term subject of portal OECD and statistics system EUROSTAT. The Statistical Office of the Slovak Republic (SO SR) is an essential resource tracking RD data for Slovakia.

Kutcheraruer (2010) has realized the decomposition of monitoring and evaluation of RD according to the relevant criteria for classification in the following sequence:

Tab. 1 Decomposition RD

Sphere	Problematic unit	Descriptor
Economic	Economic potential	Performance of the economy, Productivity, External Relations
	Economic structure	Branch structure, Structure by entities
	Development potential	Science and research, Foreign capital investment
	Human potential	Active Population, Employment, Unemployment, Mobility
Social	Population	Age structure, Health, Education, Standard of living, Migration
	Social infrastructure	Health, Education, Social Services, Culture, Sports, Housing
	Social Pathology	Risk of poverty, Crime, Accident rate
Environmental	Structure of the region	Proportion of urban population size, Population density, Altitude, Topography, Built-up area of agricultural land, Proportion of forest land per capita, Proportion of forests per capita, Climatic conditions
	Transport infrastructure	Roads, Transport service, Railways, Air transport
	Traffic	Integrated transport system
	Technical Infrastructure	Water Utilities, Electricity, Gas supply
	Environment	Air, Waste
	Features of Nature	Nature and Biodiversity

Source: Kutcherauer, A. a kol. (2010). Regionální disparity, p.89

2. Selection of indicators

An important task of measuring and identifying of RD is the right choice of indicators. The most commonly used indicators are socio-economic indicators. The right selection depends on definition of RD, the pursued objective, territorial scales, indicators of reliability, possibility of evaluation ... (Michalek, 2013). However, the selection is significantly affected by availability of statistical data on examined regional level.

It doesn't exist the only opinion by which events and indicators the RD should be defined, analyzed and evaluated. RD represents the theme of interdisciplinary research, but there is no systematically developed theoretical basis and there are not sufficiently developed indicators for the identification and measurement of RD and their classification.

There are several methodological approaches to the concept of indicator. The indicator is a special subset of statistical results. Indicators are statistical variables that transform data into relevant information. Each indicator should capture or express the level of disparities and can clearly explain it. Selected indicators must be measurable and regularly published in the available objective statistical literature. The choice of indicators must be dynamic to be updated regularly. Indicators can be divided into simple and integrated. Integrated indicators provide a more comprehensive view of reality.

2.1 Integrated indicator

For a right analysis and evaluation of RD we cannot use all available indicators, as it loses its clarity and perceptibility in necessary context. There is a need of a more comprehensive evaluation and so construction of integrated indicator. Integrated indicator should be sufficiently reproducible for interregional comparisons. It should have the ability to describe complexly the terms as sustainability, prosperity, achievement of the internal European market, quality of life, etc.

Integrated indicators are composed of several primary or secondary indicators, entering into them with a fixed weight.

2.2 Construction of integrated indicator

Generally, it can be characterized as indicator derived from the set of variables that arose as summary of individual indicators into a single indicator based on the chosen model.

The process of its construction has three phases:

1. The choice of indicators
2. Select Model
3. Determination of weights for each indicator and creation of summary indicator SI.

Advantages and disadvantages associated with the formation of indicators can be divided into non-mathematical (subjective) and mathematical

(objective). The disadvantages may include the possibility of misinterpretation which can result in incorrect conclusions. The integrated indicators never describe reality as a whole and the information is affected by methods by which the data were analyzed.

Methods of construction of integrated indicator are divided into:

- Statistical-analytical (descriptive statistics, correlation analysis, cluster analysis, principal component analysis),
- Statistical-descriptive (aggregation method, the method of determination of weights, methods of data visualization).

2.3 Selection of key indicators RD

Regional disparities are made up of many phenomena and processes in which we can identify, analyze and evaluate the differences. For the selection of indicators at the regional level, the regionally oriented database RegDat has been used. Processing of model during the identification of key indicators can be described in four phases:

1. Selection of indicators based on available data and their penetration with the indicators recommended by professional publications.
2. Exploratory data analysis.
3. Correlation analysis.
4. Principal components analysis (PCA).

The initial selection we selected all indicators that are recorded by SO SR in the analyzed regions, so districts. For variables that were differentiated in terms of gender, the indicators were considered separately for women and men. Indicator together was not included in the analysis. We selected only those variables whose entry was already in 2013. In this table we divided the indicators of socioeconomic area, which provides from database RegDat.

Tab. 2 Indicators of socioeconomic areas

Economic sphere	**Social sphere**
Registered unemployment rate - men	Population density km^2
Registered unemployment rate - women	Proportion of mid-year pop. 0-14
Number of job applicants - men	Proportion of mid-year pop. 15-65
Number of job applicants - women	Proportion of mid-year pop. 65 and more
Number of job applicants – health disabled	Mean age
Number of job applicants - school-leavers	Ageing index
Number of job applicants - adolescents	Natural increase
Number of registered job applicants in the long term	Crude divorce rate
Enterprises by the number of employees 0-19	Net migration
Enterprises by the number of employees 20-49	Proportion of average percentage of sickness insurance
Enterprises by the number of employees 50-249	Average percentage of sickness absence
Enterprises by the number of employees 250-	Proportion of expenditure on pensions
Natural persons – entrepreneurs (Persons)	Proportion of social institutions
Self-employed persons	
Economically active population - men	
Economically active population - wumen	

Source: SO SR. (2014)

3. Summary indicator of social SI_s

3.1 Exploratory Data Analysis

The purpose of the analysis is to detect the presence of particularities between the data and verify the assumptions for further statistical processing. For this purpose, were calculated descriptive statistics (position, variability, and asymmetry). By graphical methods we have identified the presence of outliers, data independence (ACF), homogeneity (Box Plot) and normality (KS, NE, Lilliefor´s test). The picture is one of the outputs of the analysis of variable *Average age*. The summary table below shows only some descriptive statistics.

The value of the coefficient of variation was used in subsequent analyzes as a decision criterion for the selection of appropriate indicators. The exploratory analysis shows that the data meet the required minimum prerequisites for further analysis.

Fig. 1 Exploratory data analysis

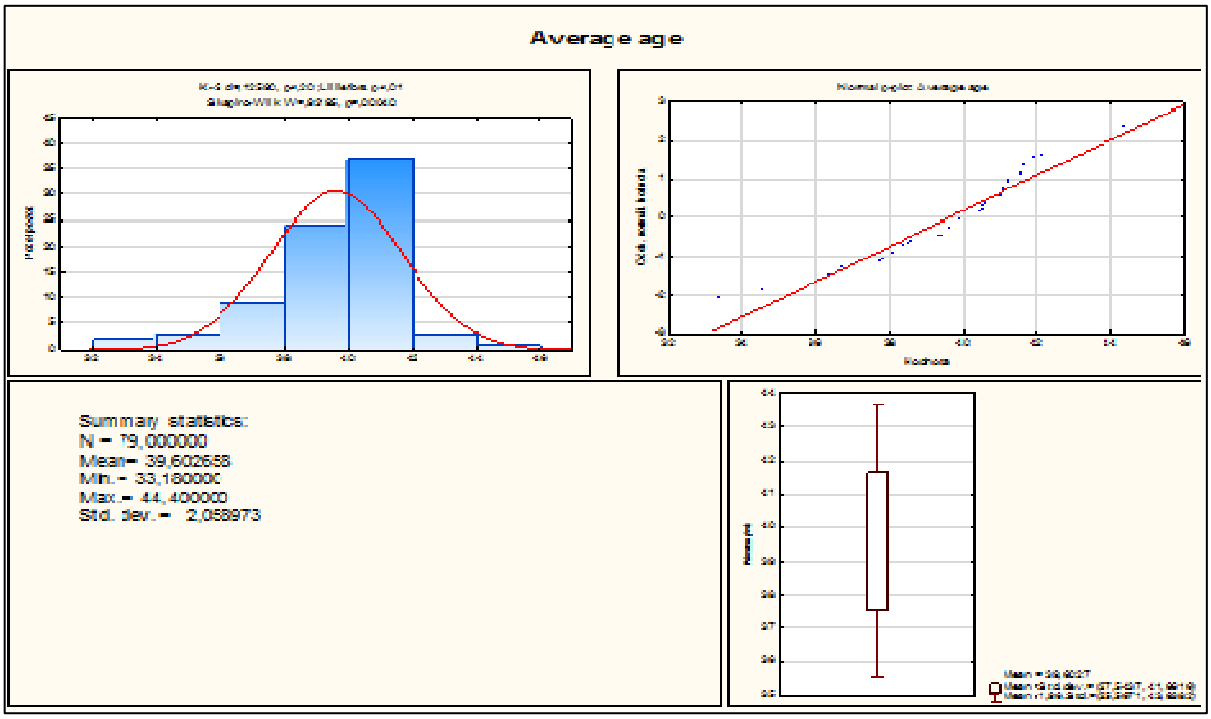


Fig. 2 Descriptive statistics

VARIABLE	Descriptive statistics					
	Mean	Median	Std. dev.	Coeff. of	Skewnes	Kurtosis
Population density (km^2)	158,6905	94,4500	255,7822	161,183	4,70397	24,24640
Proportion of mid-year pop. 0-14	0,1555	0,1455	0,0256	16,481	1,37299	1,46467
Proportion of mid-year pop. 15-65	0,7132	0,7152	0,0159	2,236	0,45380	4,36708
Proportion of mid-year pop. 66 and more	0,1323	0,1345	0,0191	14,470	-0,64711	0,80132
Mean age	39,4338	39,8550	1,9862	5,037	-1,19674	1,36212
Ageing index	90,6108	94,8150	23,1416	25,540	-0,39330	-0,51433
Natural increase	25,5270	-30,0000	209,5800	821,012	0,57588	2,07898
Crude divorce rate	0,0020	0,0021	0,0004	22,964	-0,18968	0,21770
Net migration	19,2297	-52,0000	302,1505	1571,267	3,97869	21,97911
Proportion of average percentage of sickness insurance	0,4259	0,4271	0,1187	27,867	2,61522	17,21968
Average percentage of sickness absence	3,7706	3,6060	1,0796	28,631	0,57778	-0,28290
Proportion of of expenditure on pensions	1,0155	1,0252	0,1527	15,035	-0,03978	1,44016
Proportion of social institucions	0,0003	0,0002	0,0001	52,307	2,90129	11,53785

3.2 Reduction of variables by Correlation Analysis

After one-dimensional analysis of variables we performed the correlation analysis. For the strong correlation between the indicators we considered while the correlation coefficient applied $|r| > 0,9$. These values have been diagnosed by the inverse correlation matrix and subsequent VIF-factor. If $|VIF| > 10$, multicollinearity is high.

Fig. 3 Results of the Correlation analysis

Correlation matrix

r>= -1 -0.80 -0,60 -0.40 -0,20 0 0,20 0,40 0,60 0,80 1

VARIABLE	Population density (km²)	Proportion of mid-year pop. 0-14	Proportion of mid-year pop. 15-65	Prop. of mid-year pop. 66 and more	Mean age	Ageing index	Natural increase	Crude divorce rate	Net migration	Proportion of average percentage of sickness insurance	Average percentage of sickness absence	Proportion of of expenditure on pensions	Proportion of social institucions
Population density (km²)	1,00												
Proportion of mid-year pop. 0-14	-0,11	1,00											
Proportion of mid-year pop. 15-65	0,37	-0,66	1,00										
Proportion of mid-year pop. 66 and more	-0,18	-0,78	0,05	1,00									
Mean age	0,08	-0,97	0,50	0,88	1,00								
Ageing index	-0,06	-0,91	0,33	0,95	0,96	1,00							
Natural increase	0,06	0,75	-0,41	-0,69	-0,78	-0,75	1,00						
Crude divorce rate	0,09	-0,61	0,35	0,48	0,60	0,54	-0,38	1,00					
Net migration	-0,08	-0,03	-0,11	0,04	0,01	-0,03	0,16	0,37	1,00				
Proportion of average percentage of sickness insurance	-0,11	-0,35	0,15	0,31	0,31	0,34	-0,16	0,46	0,32	1,00			
Average percentage of sickness absence	-0,20	0,44	-0,28	-0,31	-0,46	-0,36	0,30	-0,59	-0,28	-0,25	1,00		
Proportion of of expenditure on pensions	-0,03	-0,73	0,33	0,70	0,74	0,75	-0,53	0,51	-0,02	0,53	-0,38	1,00	
Proportion of social institucions	-0,18	-0,18	-0,14	0,36	0,26	0,27	-0,22	-0,01	0,05	-0,03	-0,18	0,18	1,00

For further analysis we considered as a key indicator one who had the greatest variability (coefficient of variation) and seemed to be more appropriate for the description of interregional disparities.

High correlation was between pairs *Mean age* and *Proportion of population (0-14)* and *Aging index* and *Proportion of population (0-14).* We have removed a variable *Proportion of population (0-14)* from the analysis.

3.3 Principal Components Analysis

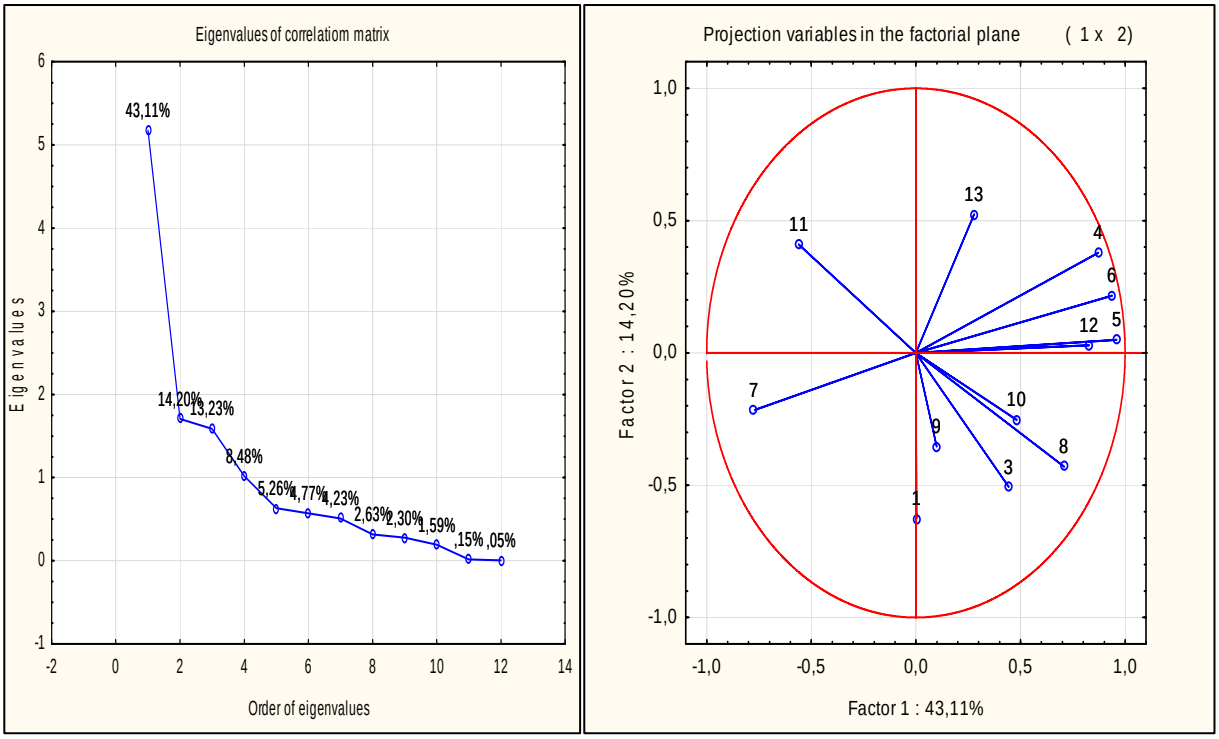
At this stage, the values of the twelve indicators of social field were analyzed by PCA. Its aim was to identify the key indicators and transform the original data to create latent variables. The suitability of selected indicators was statistically assessed (Kaiser-Meyer-Olkin´s criterion and Barlett´s test). The result of the analysis is shown in several different output tables and graphs.

For further analysis we recommend to retain only those components that have their own number greater than 1. For further analysis we selected the first three components, labeled *PC1, PC2, PC3,* and explaining *70.54%* of the total variance. Proper selection of components can be assessed according to the Cattell index chart (Scree Plot).

Fig. 4 Table of Eigenvalues

The order of eigenvalues	Eigenvalues of the correlation matrix			
	Eigenvalue	% of total variance rozptylu	Cummulative eigenvalue vl. číslo	Cummulative %
1	5,1730	43,1083	5,17299	43,1083
2	1,7045	14,2042	6,87749	57,3124
3	1,5871	13,2261	8,46463	70,5386
4	1,0174	8,4785	9,48205	79,0171
5	0,6316	5,2630	10,11361	84,2801
6	0,5722	4,7680	10,68576	89,0480
7	0,5080	4,2337	11,19381	93,2817
8	0,3157	2,6311	11,50954	95,9128
9	0,2761	2,3009	11,78564	98,2137
10	0,1913	1,5939	11,97691	99,8076
11	0,0177	0,1472	11,99457	99,9547
12	0,0054	0,0453	12,00000	100,0000

Fig. 5 Scree Plot and plot Components Weight



The foot of the break between vertical and horizontal bottom wall. We choose k-number of components according to some authors as to explain 70-90% of the variability indicators. The results of PCA should be illustrated by graphs of component weights (Plot Components Weights) between selected pairs of three main components and projections of variables to factor planes. These graphs provide information on the correlation between the original indicators (marked with numbers) and the main components. The graph compares the distance between the indicators. Variables with a high degree of variability between regions (significant disparity) are close to the unit circle (4,5,6). But th indicators with little variability and so don´t identify disparities lie near the beginning (9).

Based on the correlation of the three main components of the individual indicators can make further reduction indicators.

Fig. 6 Correlation components and indicators

Indicators	Correlation components and indicators		
	PC1	PC2	PC3
Population density (km^2)	0,0022	-0,6267	0,4720
Proportion of mid-year pop. 15-65	0,4428	-0,5064	0,5160
Proportion of mid-year pop. 66 and more	0,8714	0,3784	-0,0741
Mean age	0,9593	0,0489	0,1724
Ageing index	0,9372	0,2161	0,0950
Natural increase	-0,7750	-0,2163	-0,3035
Crude divorce rate	0,7083	-0,4295	-0,2697
Net migration	0,0993	-0,3535	-0,7750
Proportion of average percentage of sickness insurance	0,4810	-0,2532	-0,4712
Average percentage of sickness absence	-0,5605	0,4092	0,1845
Proportion of of expenditure on pensions	0,8271	0,0288	-0,0081
Proportion of social institucions	0,2778	0,5238	-0,1793

The assessment is based on the rule that the size of the correlation coefficient is greater, the more important indicator is. The limit of ± 0.5 is considered sufficiently significant. Blue color indicates positive correlation and red negative (negative correlation coefficient). The first component (explaining 43.11% of the variability of the original input indicators) most positively correlates with variable *Mean age.* Negative significant correlation could be observed in two examples. For *PC2* we can observe two negative correlations. In terms of reduction of indicators of regional disparities in the social field we will further analyze those variables that have a correlation coefficient value greater than ± 0.7. Summary indicator will be evaluated in further analysis from the six indicators: *Proportion of mid-year pop. 66 and more, Mean age, Ageing index, Natural increase, Crude divorce rate, Proportion of expenditure on pensions*

3.4 Cluster analysis

Cluster analysis is the method by which we examine the similarity of multidimensional objects and their classification into clusters. A prerequisite for utilization of the analysis is the smallest mutual no correlation of indicators. For the analysis we used Ward's method and Euclidean distance measure. In agglomeration methods, each object begins as a cluster and in the next step two closest clusters are combined into one. Such a procedure is one of the growth methods. Graphic is Dendogram.

Dendogram of indicators indicate six to seven clusters of similar objects (districts). In the literature (Meloun, Militký, Hill, 2012) we can find that there is no objective way of determination of termination criteria. There are some auxiliary criteria and one of them is based on examination of degree of similarity between clusters at each step, when the degree of similarity exceeds a certain threshold or step changes. Therefore, the selection of an appropriate number of clusters should be based on the overall concept of the role and take into account all external factors.

The spatial distribution of districts into clusters is clearly illustrated in the following cartogram (Fig. 7).

Using the non-hierarchical clustering method k-means ($k = 6$), is classification into clusters following:

1. Cluster: Skalica, Ilava, Púchov, Nitra, B. Bystrica, Stropkov, Svidník, Trebišov

2. Cluster: Hlohovec, Senica, Bánovce n. B., Myjava, Považská Bystrica, Trenčín, Šaľa, Bytča, Kysucké N. M., Liptovský M, Martin, Ružomberok, Zvolen, Banská Štiavnica, Detva, Krupina, Revúca, Humenné, Michalovce, Rožňava, Sobrance

3. Cluster: Malacky, Pezinok, Trnava, Tvrdošín, Žilina, D. Kubín, Rimavská Sobota, Bardejov, Levoča, Poprad, Gelnica, Košice II., Košice III.

4. Cluster: Dunajská S., Galanta Piešťany Nové M. n. V., Partizánske, Prievidza, Topoľčany, Zlaté Moravce, Čadca , Turčianske T., Veľký Krtíš, Žarnovica, Žiar nad H., Brezno, Lučenec, Poltár, Medzilaborce, Snina, Košice I., Košice IV.

5. Cluster: Komárno, Levice, N. Zámky

6. Cluster: Senec, Námestovo, St. Ľubovňa, Vranov n. T., Kežmarok, Prešov, Sabinov, Spišská N. V., Košice – okolie.

Fig. 7 Cartogram of clusters

3.5 Construction of summary indicator SI_s

When comparing any objects on the basis of several indicators we can use multi-criteria evaluation methods. When analyzing regional disparities we will use statistical and descriptive methods which calculate the overall index characterizing disparities in social sphere SI_s. For its calculation scoring aggregate method was chosen. This calculation is based on the difference of the actual value of the indicator for the district from its minimum or maximum value (all districts), taking account of the scope of the direction indicator. The point value for each indicator for each district is obtained by dividing by variance margin. The sum of these point values is the point value of each district.

$$SI_s = \frac{\sum_{i=1}^{n} b_{ij}}{\frac{\sum_i^n \sum_j^m b_{ij}}{m}}$$

Where:

b_{ij} – Point value i-th key indicator of PCA analysis $(i = 1, \dots, n)$, $n = 8$, a j-th district $(j = 1, \dots, m)$, $m = 74$, the positive scope $b_{ij} = \frac{x_{ij} - x_{min}}{x_{max} - x_{min}}$, the negative scope $b_{ij} = \frac{x_{max} - x_{ij}}{x_{max} - x_{min}}$. x_{ij} - Initial value of the i-th indicator for the j-th district, x_{max}, x_{min} – maximum (minimum) value of the i-th indicator.

The weight in the context of developing of summary indicator can be defined as a value that reflects its relative importance comparing to others. For quantification of weights we used the method, which was based on the results of PCA. The calculation of weights was based on the following equation:

$$v_{PCA} = |r_{js}| . var_s,$$

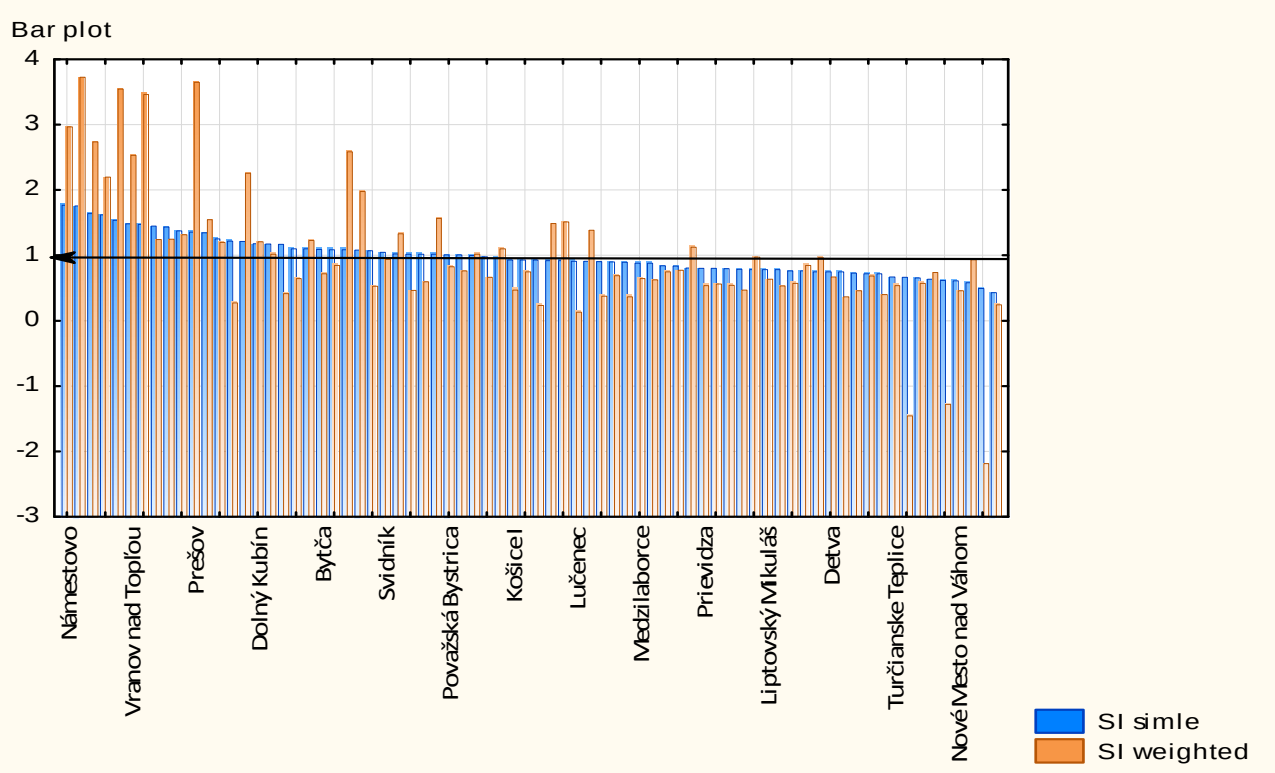
where: v - j-th weight indicator, r_{js} - the correlation coefficient of the j-th indicator of the s-component, var_s - proportion of variability explained by s-th component.

Tab. 3 Weight of indicators

Number of indicator	1	2	3	4	5	6
Weight	0,3747	0,4125	0,403	0,3333	0,3046	0,3308

The calculated integrated indices were used in two ways. The first method aimed to fixation of disparities at the level of individual districts, where the actual value of the indicator was compared to the average. Principle of aggregation methods, the average value is always equal 1. If the value of the summary index of j-th district is $SI_j > 1$, district can be evaluated as above average. Otherwise as below average. The following table (Tab. 4) and chart (Fig. 8), districts are ordered as descending by index SI_{simple} while there are only some of the best and worst rated districts. The district is present with a weighting summary indicator.

Fig. 8 Chart ranked districts



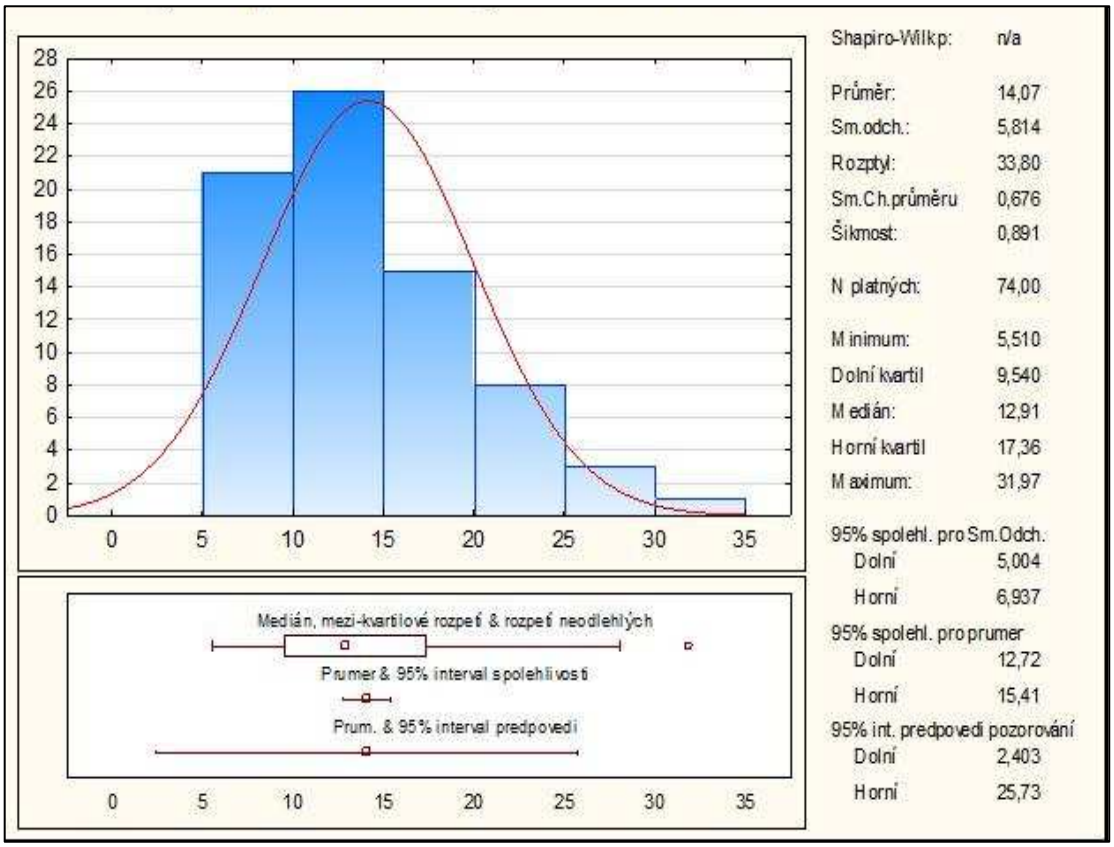
Tab. 4 The summary indicators

Rank SI_{sample}	District	SI_{sample}	SI_{weight}	Rank SI_{weight}	Rank SI_{sample}	District	SI_{sample}	SI_{weight}	Rank SI_{weight}
1	Námestovo	**1,78**	**2,98**	5	65	Z. Moravce	**0,72**	**0,41**	64
2	Kežmarok	**1,77**	**3,74**	1	66	T. Teplice	**0,68**	**0,55**	55
3	Sabinov	**1,65**	**2,75**	6	67	Levice	**0,67**	**-1,45**	73
4	St. Ľubovňa	**1,63**	**2,21**	10	68	Piešťany	**0,67**	**0,58**	51
5	Spišs. N. V.	**1,55**	**3,56**	3	69	Hlohovec	**0,64**	**0,75**	39
6	Vranov n.T.	**1,49**	**2,54**	8	70	Komárno	**0,63**	**-1,27**	72
7	Košice–okol.	**1,48**	**3,47**	4	71	No. Mesto	**0,62**	**0,46**	62
8	Tvrdošín	**1,46**	**1,25**	20	72	Myjava	**0,59**	**0,94**	31
9	Levoča	**1,44**	**1,26**	20	73	N. Zámky	**0,50**	**-2,18**	74
10	Košice III	**1,39**	**1,32**	18	74	Košice IV	**0,44**	**0,25**	69

4. Summary indicator of social SI_s

The economy of the region is a key attribute for evaluation. It is one of the main aspects of comparing the various regions and the subsequent evaluation of regional disparities.

Fig. 9 EDA



4.1 Exploratory Data Analysis

As at the beginning of the previous section, we performed the examiner data analysis. The picture as output of analysis for variable *Registered unemployment rate – men.*

Fig. 10 Results of the Correlation analysis

Korelačná matica (Ekonomické disparity_Extrapolačná a korelačná analýza)

r>= -1 | -0,80 | -0,60 | -0,40 | -0,20 | 0 | 0,20 | 0,40 | 0,60 | 0,80 | 1

Ukazovateľ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1,00															
2	0,95	1,00														
3	0,99	0,95	1,00													
4	0,94	0,98	0,96	1,00												
5	0,52	0,57	0,56	0,57	1,00											
6	0,58	0,64	0,60	0,57	0,65	1,00										
7	0,72	0,67	0,68	0,67	0,30	0,21	1,00									
8	0,97	0,96	0,98	0,97	0,53	0,53	0,70	1,00								
9	-0,52	-0,55	-0,54	-0,54	-0,40	-0,46	-0,35	-0,52	1,00							
10	-0,63	-0,66	-0,65	-0,65	-0,42	-0,49	-0,33	-0,64	0,73	1,00						
11	-0,62	-0,68	-0,63	-0,67	-0,37	-0,44	-0,40	-0,64	0,69	0,80	1,00					
12	-0,55	-0,61	-0,56	-0,59	-0,31	-0,50	-0,29	-0,55	0,51	0,64	0,65	1,00				
13	-0,46	-0,42	-0,48	-0,42	-0,10	0,10	-0,30	-0,52	0,26	0,32	0,39	0,16	1,00			
14	-0,46	-0,42	-0,48	-0,43	-0,09	0,11	-0,31	-0,52	0,22	0,29	0,37	0,15	1,00	1,00		
15	0,21	0,18	0,25	0,19	0,42	0,38	-0,15	0,20	-0,37	-0,49	-0,25	-0,24	-0,03	-0,02	1,00	
16	-0,25	-0,30	-0,21	-0,14	-0,21	-0,47	-0,14	-0,18	0,15	0,16	0,16	0,20	0,13	0,12	-0,05	1,00

Due to the considerable variability of data, we performed in the next step to standardize the data according to the equation:

$$x_{ij}^{*} = \frac{x_{ij}}{\max_{i}|x_{ij}|}$$

Where $\max_i|x_{ij}|$ is the maximum value of j-th indicator across all districts.

4.2 Reduction of variables by Correlation Analysis

Based on the results of the correlation analysis, we removed three indicators (2, 3, 8). Input database that was used in the next PCA analysis was made up of 13 indicators.

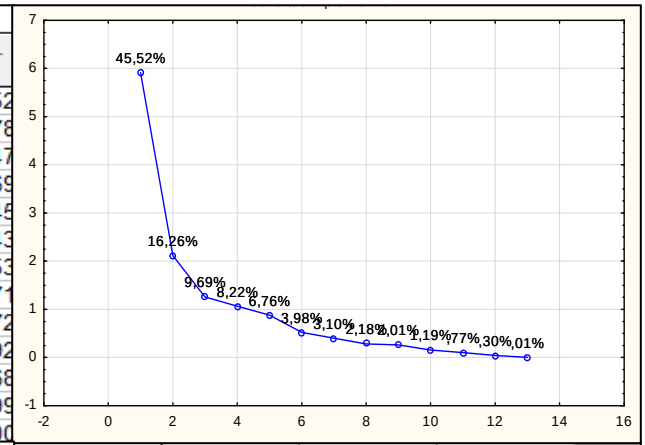
4.3 Principal Components Analysis

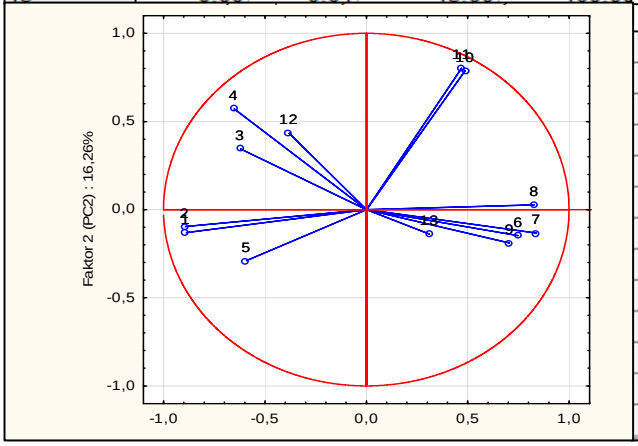
In this section, the values of thirteen indicators of economic area were subjected to principal component analysis. The result of the analysis is in Fig. 11.

For further analysis we selected the three components that explain 71,47 % of the total variance of selected indicators. The results of PCA are illustrated by the graphs of component weights. Indicators generate about three to four clusters in which correlate characters.

Fig. 11 PCA

Poradie vl.č	vl. číslo	% celk. rozptylu	Kumulativ. vl. číslo	Kumulativ. %
1	5,92	45,52	5,92	45,52
2	2,11	16,26	8,03	61,78
3	1,26	9,69	9,29	71,47
4	1,07	8,22	10,36	79,69
5	0,88	6,76	11,24	86,45
6	0,52	3,98	11,76	90,43
7	0,40	3,10	12,16	93,53
8	0,28	2,18	12,44	95,71
9	0,26	2,01	12,70	97,72
10	0,15	1,19	12,86	98,92
11	0,10	0,77	12,96	99,68
12	0,04	0,30	13,00	99,99
13	0,00	0,01	13,00	100,00





	PC1	PC2	PC3
1	-0,89	-0,13	0,27
2	-0,90	-0,10	0,22
3	-0,62	0,35	0,12
4	-0,66	0,58	0,24
5	-0,59	-0,29	0,54
6	0,75	-0,15	0,26
7	0,84	-0,13	0,33
8	0,83	0,03	0,19
9	0,70	-0,19	0,05
10	0,49	0,79	0,22
11	0,47	0,80	0,20
12	-0,38	0,44	-0,59
13	0,31	-0,14	-0,36

Based on the correlation of the three main components of the individual indicators we can make further reduction indicators. In terms of reduction of regional disparities indicators of economics will be further analyzed those variables that have correlation coefficient greater than $\pm$ 0,7. Summary indicator will be evaluated by further analysis of the eight indicators:

1 - Registered unemployment rate – men

2 - Number of job applicants – women

3 - Enterprises by the number of employees 0-19

4 - Enterprises by the number of employees 20-49

5 - Enterprises by the number of employees 50-249

6 - Enterprises by the number of employees 250-

7 - Natural persons – entrepreneurs (Persons)

8 - Self-employed persons.

4.4 Cluster analysis

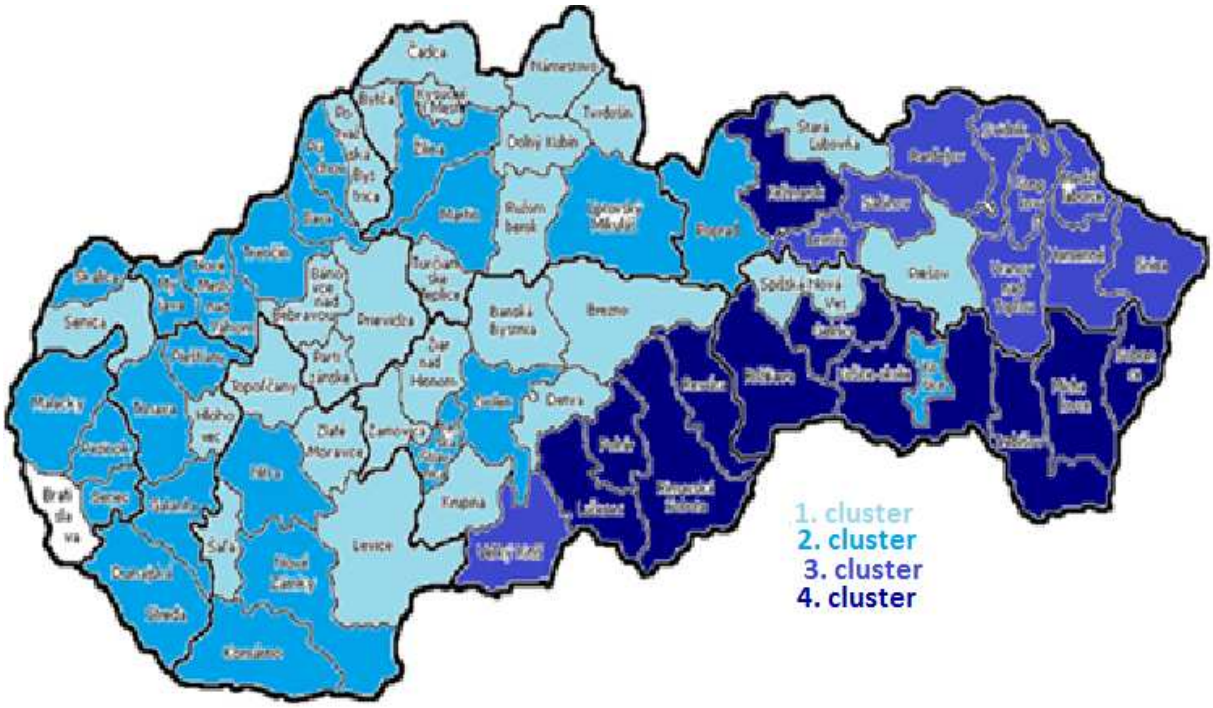
By using cluster analysis we identified four clusters. (Tab. 5)

The spatial distribution of districts into clusters is clearly illustrated in the following cartogram.

Tab. 5 Classification of districts into clusters

Hlohovec	Malacky	Veľký Krtíš	Lučenec
Senica	Pezinok	Stropkov	Poltár
Bánovce n/B.	Senec	Svidník	Revúca
Partizánske	D. Streda	Vranov n/T.	R. Sobota
Považská B.	Galanta	Bardejov	Kežmarok
Prievidza	Piešťany	Humenné	Trebišov
Levice	Skalica	Levoča	Gelnica
Saľa	Trnava	Medzilaborce	Košice – ok.
Topoľčany	Ilava	Sabinov	Michalovce
Zlaté Moravce	Myjava	Snina	Rožňava
Tvrdošín	N. Mesto n/V.		Sobrance
Bytča	Púchov		
Cadca	Trenčín		
Dolný Kubín	Komárno		
Kysucké N. M.	Nitra		
Námestovo	Nové Zámky		
Ružomberok	Zilina		
Turč. Teplice	L.Mikuláš		
Žarnovica	Martin		
Žiar n/H.	Zvolen		
B. Stiavnica	B. Bystrica		
Brezno	Poprad		
Detva	Košice I		
Krupina	Košice II		
St. Ľubovňa	Košice IV		
Prešov			
Sp. Nová Ves			
Košice III			

Fig. 12 Cartogram of clusters



4.5 Construction of summary indicator SI_e

Summary inicator (simple and weighted) was constructed by a similar way as SI_s. The calculated weights are given in the table below.

Tab. 6 Weight of indicators

Number of indicator	1	2	3	4	5	6	7	8
Weight	0,401	0,405	0,338	0,378	0,374	0,315	0,126	0,128

With calculated summary indexes was created the ranking of districts.

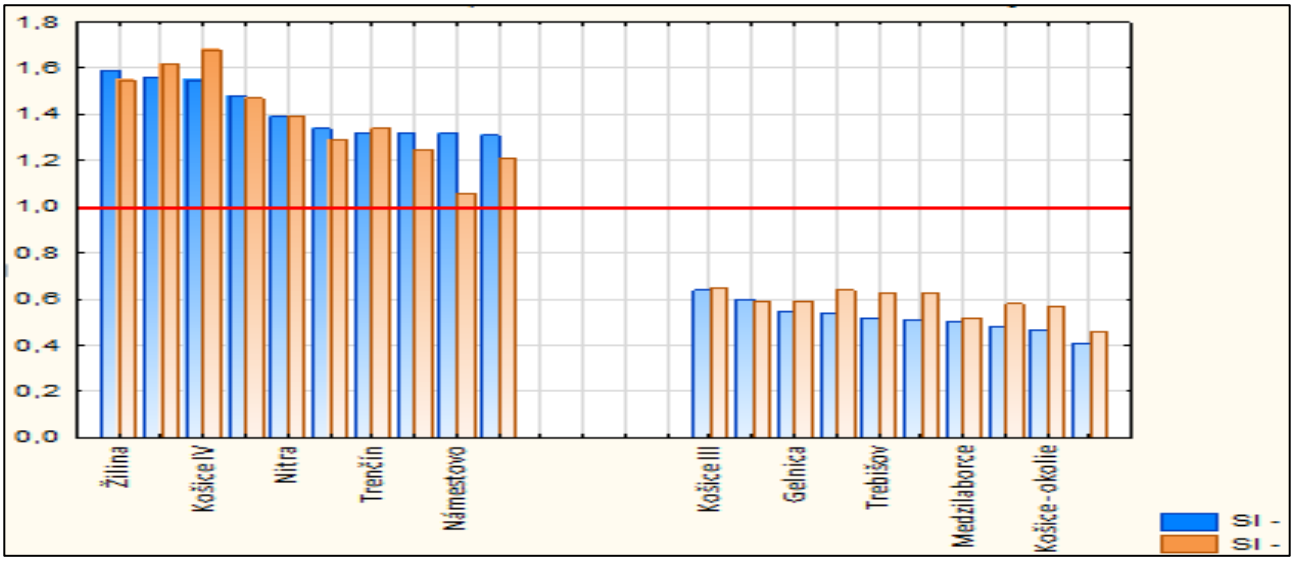
Tab. 7 The summary indicators

Rank SI_{sample}	**District**	SI_{sample}	SI_{weight}	**Rank** SI_{weight}	**Rank** SI_{sample}	**District**	SI_{sample}	SI_{weight}	**Rank** SI_{weight}
1	Žilina	**1,59**	**1,55**	3	65	Košice III	**0,64**	**0,65**	65
2	Košice I	**1,56**	**1,62**	2	66	Levoča	**0,60**	**0,59**	69
3	Košice IV	**1,55**	**1,68**	1	67	Gelnica	**0,55**	**0,59**	70
4	B. Bystrica	**1,48**	**1,47**	4	68	R. Sobota	**0,54**	**0,64**	66
5	Nitra	**1,39**	**1,39**	5	69	Trebišov	**0,52**	**0,63**	68
6	D. Streda	**1,34**	**1,29**	9	70	Revúca	**0,51**	**0,63**	67
7	Trenčín	**1,32**	**1,34**	6	71	Medzilaborce	**0,50**	**0,52**	73
8	Malacky	**1,32**	**1,25**	11	72	Sobrance	**0,48**	**0,58**	71
9	Námestovo	**1,32**	**1,06**	27	73	Košice - okolie	**0,47**	**0,57**	72
10	Pezinok	**1,31**	**1,21**	19	74	Poltár	**0,41**	**0,46**	74
11	Ilava	**1,30**	**1,33**	7					
15	Nov. M.n/V.	**1,25**	**1,30**	8					
17	Piešťany	**1,23**	**1,26**	10					

According to the summary index SI_{sample}, economically the best selection was district Žilina and worst Poltár. According to SI_{weight} , the best assessed was Košice IV. district.

Visualization of the comparison of districts by the summary indexes is evident from Fig. 13.

Fig. 13 Comparison districts

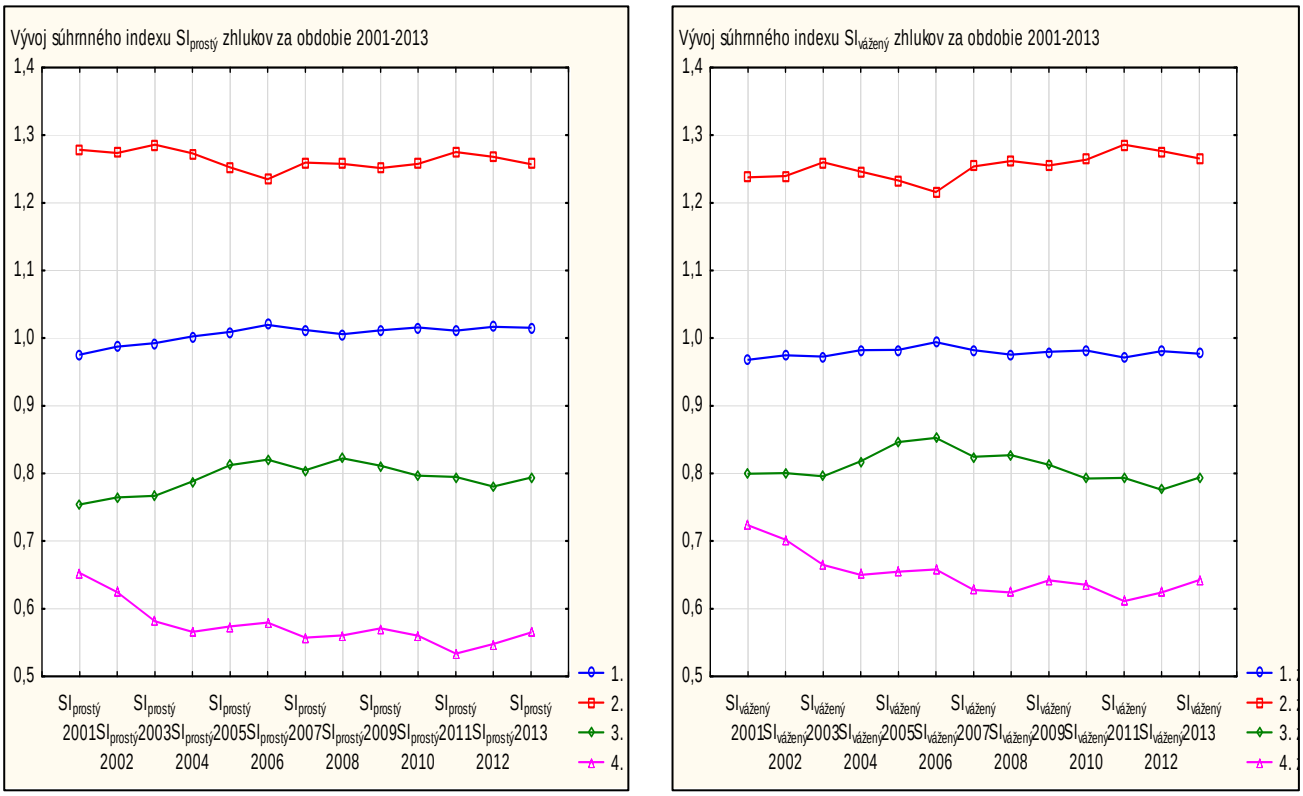


5. Development of aggregated indicies in the economic field

The assessment of convergence or divergence of regional disparities we examined four clusters. Clusters consisted of 74 facilities in the period 2001 - 2013.

Under the convergence process we can imagine, reduction of the gap in time between clusters up to the level where the difference becomes negligible. The difference is marginally closer to 0.

Fig. 14 Development of regional disparities in Slovakia



The convergence process was studied on the basis of values of summary indices. The figure shows the evolution of observed summary indexes for each of four clusters. As the chart shows, the eventual convergence of regional disparities is not identifiable, perhaps even we can argue about divergence.

Conclusion

Regional disparities in Slovakia have been formed over time and have several causes. There are several approaches for examining the characteristics of regional disparities. Differences between regions largely reflect differences between communities of inhabitants. The size of disparities is naturally linked to different levels of concentration of economic activities. Inter-regional differences were assessed by using a model created by applying multivariate statistical techniques. It was further determined the summary indicator of the economic and social fields. For the best observational comparative statistical units the districts are recommended. However, there may be a problem of lack of socio-economic indicators that are registered at this level. Therefore there is possibility of some distorted reproducibility of the results.

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FOREIGN DIRECT INVESTMENT IN SLOVAK REGIONS

Jana SOCHUĽÁKOVÁ

Abstract

Foreign direct investment represents a powerful factor in regional development. They bring with them a number of benefits - new markets, modern technologies, new corporate culture and others. Significant foreign investment flow represents a healthy economic environment in the country. FDI is a key source of economic growth, innovation and growth performance of SR. Increased performance of the Slovak economy in recent years is directly related to the increased inflow of foreign direct investment. FDI is an important accelerator of economic growth and regional development, but at the same time as the bearer of regional differences. Since the time FDI entered the Slovak economy it has not been allocated equally. The paper discusses FDI allocation in different Slovak regions and its impact on economic growth in regions. FDI indicators are now among the main economic indicators for national economies.

Key words

Foreign Direct Investment. To Invest. Foreign developer, investor. Multinational Company. Political stability. Economic Stability.

JEL classification: F35, F21, D24

Introduction

Foreign Direct Investment acquired an important role in the international economy after the Second World War. According to the definition by the International Monetary Fund the FDI is a „category of international investment reflecting the objectives of a subject placed in a national economy (direct developer, investor) to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise (company of a direct investment). The lasting interest implies the existence of a long-term relation between a direct developer, investor and a business of a direct investment and also a substantial extent of investor's developer's impact on managing a business is implied. The relation between a developer and a company is categorized as FDI if the direct developer acquires at least ten per cent of regular shares or the right to vote in a foreign company. "

The FDI definition by OECD says: "it is a category of foreign investment done by a subject operating in a national economy (direct foreign developer/investor) aiming at creating a permanent interest in a business operating in an economy other than that of the investor. The lasting interest is represented by the existence of a good relation between a direct developer, investor and a business in which the investment flew and a substantial impact of the direct investor, developer on managing a business in which the developer invested the funds. The direct investment involves an initial transaction between these two subjects and also all capital transactions following between them and between developers', investor's subsidiaries belonging or not belonging to the same corporation."

The part of statistical data processed by the National Bank of Slovakia defines the FDI as „a category of international investment representing the aim of an economic subject residing in an economy /direct investor, developer), to acquire a permanent share in a company operating in other economy (business for a direct investment). The lasting share implies the existence of a long-term relation between a direct investor, developer and a business for the direct investment and impact on managing the business. Defining the existing share of a direct investment international standards and their criterion of a ten per cent share in the basic capital and rights to vote in the business are applied.." (Šáková, 1998)

Foreign direct investment on the one hand bring jobs and stimulate economic growth, on the other hand, however, represent a cost to the State in the form of investment incentives - the most common tax breaks. For a small and open economy like Slovakia, foreign direct investment is an important source for the acquisition of new technologies and knowledge, to create new jobs, access to international markets and improving the economic situation in the country. FDI indicators are now among the main economic indicators for national economies. The Government has set in their national development strategies of competitiveness among them the priority to promote the creation of jobs with high added value and support

education in the labor market. Regarding foreign direct investment, priority should be given FDI especially in the regions with high unemployment and low economic activity.

In Slovakia we can talk about the inflow of FDI after 1989 in connection with the beginning of economic transformation from centrally planned to market-oriented. Slovakia is a full member of the European Union, NATO, OECD and the Schengen area. Slovakia adopted the euro on 1 January 2009 and thus became 16.členským euro area countries since fulfilled all the Maastricht criteria required. Slovakia is enjoying positive ratings from international rating companies and obtain the best position among the CEE countries from the World Bank's Doing Business Report 2008, 2009 and 2010

The paper aims at assessing the flow of FDI into Slovakia and the regional allocation of the investment. At the same time the paper points out the strengths and weaknesses in regions and analyses the impact of FDI on the economic development of regions. The input data for our analysis are the data published by the Slovak Statistics Office, the National Bank of Slovakia and by the Agency SARIO. The data were gathered between the years 2004 and 2013.

1 Regional determinants of FDI

Foreign direct investment is concentrated in the most developed parts of the country. The inflow of foreign investment has to consider the interests and requirements of different regions. Husar (2004) says: "Regional policy for improving regional competitiveness and to promote innovation should implement measures to promote research and development of innovative projects, business advice, training, technology transfer, development of innovation networks in the region, the development of clusters and the like. In problematic regions should also be a selective localization support new enterprises for the development and diversification of cross-sectoral linkages in the region. " Currently, foreign direct investment is an important factor of economic growth and development of the region.

Theory of regional FDI division assumes that:

- assets of national and foreign businesses differ in regions;
- foreign investors/developers are interested not only in general local benefits but in specific regional benefits as well. They are more attractive and challenging for foreign investors.

Basic criteria for making decisions in location at different local levels such as country, region, city, land are defined by Maier and Todtling (1977).

Tab. 1: Criteria applied when the location is selected by developers/investors

Location	Criterion
Country	Taxes, political and economic stability, trade unions existence, inflation rate, growth, government subsidies for regions
Region	Work force, wages, existence of trade unions, market access and market dynamics, economic structure, suppliers, services, regional subsidies and promotion
City, town	Existence of technical infrastructure, transport corridors access, quality and quantity of workforce, social infrastructure and services, local economic policy, subsidies, owners of assets and land, standard of living.
Land	Infrastructural connection, area and prices, assets´ owners, quality of environment.

Source: Maier a Todtling, 1997

The decision making of investors can be conditioned by two types of incentives:

- Possible gaining a market share and strategic location in a region.
- Lower production costs due to better costs-price oriented competitiveness.

It can be generally concluded that foreign investment utilizes regional stimuli and incentives offered by the hosting country and the regions meeting specialised requirements are selected for FDI flow (production costs, transportation costs, political and economic stability, labour productivity, profit, market growth etc.).

FDI positive impact on the region is as it follows:

- In many cases foreign investment needs government’s permission issued by the hosting country, the policy is based on regional policy of development;
- Foreign investors/developers try to build image of good citizens and selection of the location helps build a good fame of the company;
- International corporations react very intensively to factors signalling prices;
- In some regions foreign developers are the only one local employer opening positions for people;

- Foreign investors, developers entering the market for the first time are not familiar with some traditional duties in relation to regions and authorities, institutions. They are more independent than the businesses that have already started their activities;
- Foreign investors, developers focus on the industries and businesses that are relatively independent and can be placed in selected regions;
- Cooperation between large businesses and national industry, i.e. SME, multiplication effects.

Regional development is conditioned also by FDI regulation by the government. Some countries differentiate the tax policy and by means of low taxes or a tax break they attempt to attract foreign investors, developers. Foreign investors take into account the infrastructure, road network in regions. FDI may result in deepening the regional disparities, as not developed regions have nothing to offer the investors. The conditions can be improved if modern telecommunication is developed, if roads and motorways are interconnected, if the railroad, air and river transport are connected to international transit systems.

Of particular importance for regional development is the entry of large foreign investment, which in many cases triggers further investment by national businesses in the host country. This effect is called multiplication effect having impact on regional development. It is obvious that large foreign investment needs large businesses and not small and medium enterprises. Large foreign investment represented by large foreign companies always has strategic goals and the companies are placed in locations enabling them to run the business for a long time and effectively. For large FDI it is important that legislation and fiscal regulations are of a long-term validity, so that calculations and prospects of FDI can be evaluated from a long –term point of view.

2 Regional allocation of FDI in SR

Level of regional development in Slovakia is assessed by means of the quality of the road infrastructure (especially quality of motorways and roads for motor traffic), by FDI flow and by means of wages range and unemployment rate and varies from region to region substantially. In general the regions in the western Slovakia (Bratislava, Trnava) are more developed that the ones lying in the middle of Slovakia (Banská Bystrica Region) and the eastern regions such as Presov, Kosice. The regions in western Slovak are preferred by foreign investors due to their infrastructure (motorways, roads,) due to the vicinity of Tran European transport network and places of customers. In the regions Zilina, Trnava and Bratislava some automotive clusters are designed and formed such as KIA in Zilina, PSA (Peugeot) in Trnava and Volkswagen in Bratislava, whereas in the regions Trnava and Nitra an electronic cluster with the company Samsung – seated in Galanta, Voderady and the cluster Sonny in Nitra are formed. Steel production keeps on its tradition in the Kosice region with the company U.S. Steel Kosice. Chemical businesses are seated in Humenne in the Presov Region and in Puchov in the Trencin Region. The wood-processing industry is located in the middle of Slovakia – in the Banska Bystrica Region.

FDI flow up to the year 2000 did not seem to be satisfactory. The year 2000 is a turning point in FDI flow when Slovakia attracted 2 billion USD of investment, what represents the total amount of FDI between the years 1993 – 1998.

The form of selling businesses to foreign investors/developers directly started to be preferred. The structure of foreign investment changes, the share of trade decreases in favour of industries and financial institutions. A significant part of FDI flowed into the Slovak automotive industry dominated by investors who run the business of assembling automotive components. In 2009 the FDI flow slows down rapidly what might be caused by the crisis and by the Slovak Euro zone accession. National subsidiaries of foreign mother companies, that controlled the liquidity in Slovakia before the Euro was adopted, shifted a part of these operations to foreign countries, where it is controlled at a mutual European level. In the same year the unemployment rate in Slovakia was reported to increase. The year 2011 is a successful year from the point of view of FDI flow. Within last three years Slovakia successfully attracted most foreign investors. The amount of FDI increases by four times if compared to the previous year.

SARIO cumulative analysis 2002-2012 shows, that number of finished investment projects is balanced in all Slovak regions. Current investment trends in Slovakia also show an increasing interest of foreign investors in regions of middle and east Slovakia, as well as shift in structure of investment into high added value investment, especially in western Slovakia.

Regional differences are more visible in amount of expected new jobs. While most of 68548 expected new jobs have been created in Western Slovakia, number of new jobs is very likely to increase in Middle and Eastern Slovakia due to high accessibility and qualification of labour force in these regions.

Tab. 2 : FDI, unemployment rate and regional GDP in Bratislava region

Bratislava Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	13524248	1595842	68,0	697	8,2	11379
2005	14496772	887729	66,5	770	5,2	13416
2006	18386928	2964940	65,8	825	4,3	14387
2007	19979994	1471338	67,6	876	4,2	16393
2008	23879092	3161242	62,4	943	3,6	17516
2009	24169988	-158190	62,7	969	4,7	17621
2010	25182386	952081	61,9	1160	4,6	18297
2011	27319164	1845057	68,0	1124	5,41	19020
2012	29589943	-21034	69,9	1159	5,72	-
2013	-	487664	-	1182	6,17	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The first position in FDI flow in Slovakia has been taken by the Bratislava Region. Its convenient geographical location was a key factor in the Bratislava region becoming the most economically developed region in Slovakia. This region has kept its sixty per cent share in the total amount of FDI in Slovakia since 2001. The regional GDP is more than doubled if compared to the other regions. During the period analysed the region keeps the lowest unemployment rate although in 2009 a slight increase was reported again. The Bratislava Region keeps the highest average monthly salary that was much higher than the highest average salary in other Slovak regions, where it hardly amounted 700 Euros in 2009, in the Bratislava Region it was higher than 900 Euros. Also differences and disparities in investment quality are unveiled. In last two years the Bratislava Region becomes attractive and challenging city also for finance that flows into the research and services. In this region there are four industrial parks and among the largest investors there are Volkswagen, Slovnaft, Henkel, Rajo, Eurotel, Orange, ISS Facility Services and others. Main strengths of the region are: growth of economic and export activity of car industry, concentration of foreign capital, high productive potential of agrarian land, crossing of multimodal transport corridors of railway and road transportation, personal naval and cargo port on the river Danube and international airport, concentration of educational, social and scientific-research base, concentration of high educated population, high level of economic activity of population, low level of unemployment, high level of business activity and average monthly wage. The main sectors include the chemical, automotive, engineering, electrotechnical and food-processing industries. Bratislava is the first region in Slovakia where trade and services have overtaken industrial production.

The Kosice Region takes the second place in FDI flow chart. It is the second most important region after the Bratislava Region due to its power and efficiency in exporting goods and GDP production per capita. In producing GDP this region takes and keeps the third place after Bratislava and Nitra Regions. The unemployment rate takes the third position and in 2009 a slight increase was reported. In the years 2002 – 2009 due to FDI flow 8,030 new positions that are 13 per cent of all jobs created in Slovakia were opened in the Kosice Region. Within the regional industrial structure the most important sectors are metallurgical, chemical and electro technical industries. Important investment - EE Sensing Slovakia s.r.o. (IEE S.A.) - from Luxemburg went into the electro technical industry in 2009. Metallurgical industry forms 60 per cent of industrial production and 50 per cent of export. In this branch the largest company in the region "U.S. Steel" Kosice is responsible for a high FDI increase in the region in 2000. The companies with a foreign capital such as "BSH Drivers" and "Pumps and Siemens Automotive" located in the town of Michalovce run their businesses in the electro technical industry. Another important large investors are companies "Embraco", "Panasonic AVC Networks Slovakia" and "Yazaki Wiring Technologies".

Tab. 3 : FDI, unemployment rate and regional GDP in Košice region

Košice Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	1996065	533748	8,7	512	25,2	5693
2005	2224649	177793	8,6	556	24,7	5955
2006	2760900	347752	9,9	595	20,3	6644
2007	2951992	251272	8,8	626	15,9	7242
2008	2632893	-124655	8,9	671	13,5	7896
2009	2262255	-280926	8,7	684	15,5	7007
2010	2500399	142340	8,8	792	16,78	7513
2011	2585688	155265	6,4	848	18,76	7838
2012	2659671	43059	6,3	851	19,58	-
2013	-	44791	-	855	17,23	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

Main strengths of the region are: industrial character of region including all sectors, utilization of natural resources, sufficiency of building capacities for industrial, sufficiency of qualified work force with college education, big natural complexes together with cultural heritage represent potential for tourism, international airport Košice, terminals of combined transport and wide track provide non-transshipment transport to eastern Europe. Košice is the center of education, science, research and culture.

Another Slovak region with a strong economy is the most industrial region after Bratislava and it is the Trenčín Region. The most important industrial sectors are automotive, machinery, electrotechnic and electronics industry, rubber industry, building industry. Main strong points of the region are: fuel-energetic base, brown coal mining of national importance, favourable age and educational structure of population, diversified industrial base with dominance of industry, efficient production capacities, free premises, company´s reserves. Although in the years 2002-2009 in this region 12,273 new positions were opened, unemployment rate in this region increased by 2.5 per cent in 2009. In this year also regional GDP decreased. The Trenčín Region takes the fifth rank in FDI flow in Slovakia. The share of FDI in Slovak foreign investment forms five per cent. Among the most important investors/ developers in this region are Continental Matador Rubber, EMERSON, Leoni Autokabel Slowakia, YURA Corporation Slovakia, Hella Slovakia Signal-Lighting, and Delta Electronics.

The Prešov region is, in terms of its economy, the least developed region in Slovakia, with rural characteristics dominating. Industry in the region is not sufficiently developed because of the low internal investment potential. Strong points of the region are? Favourable demographic progress, main transport corridors provide connection with whole Slovak transport system, strong potential of wood industry, free production capacities for new production (area, human resources, international airport Poprad, qualified work force, good position for crossborder cooperation with Poland.

Tab.4 : FDI, unemployment rate and regional GDP in Trenčín Region

Trenčín Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	956128	178760	4,4	461	8,6	4676
2005	141431	131627	5,0	501	8,1	4856
2006	1217314	206468	3,9	543	7,1	5724
2007	1562993	254053	4,6	582	5,7	6302
2008	1628475	131537	4,8	630	4,7	6730
2009	1734913	53294	4,7	634	7,3	6154
2010	1803931	58140	4,9	732	9,51	6439
2011	2082082	145654	5,2	774	9,95	6693
2012	1886736	-17735	4,5	797	10,89	-
2013	-	-2579	-	809	10,74	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The Prešov Region has been ranked in the last eights position in FDI flow for a long time. Its percentage share in total FDI flow in Slovakia is under 2 per cent for a long time, within last three years this percentage dropped to less than 1%. In the years 2002-2009 foreign investors/developers opened 3,654 positions in this region, it is the least number the least percentage within Slovakia. The regional GDP is at the lowest level and it represents one third of the Bratislava regional GDP. Unemployment rate in this region increased by more than 3 % in 2009 and together with the Region Banska Bystrica has the highest numbers, values. Also the average monthly salary in the Presov Region is the lowest one and amounts less than 600 Euros which is the lowest in Slovakia. The most important investors/developers in this region are Lear Corporation Seating Slovakia, CEMM THOME SK, Nexis, etc.

Tab. 5 : FDI, unemployment rate and regional GDP in Prešov Region

Prešov Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	296840	42390	1,8	416	22,9	3996
2005	298949	21666	1,8	437	21,5	4295
2006	282361	14099	1,1	467	18,1	4464
2007	249094	-90102	0,8	497	13,8	5014
2008	363904	13973	0,8	545	13,0	5836
2009	425039	10750	0,8	573	16,2	5359
2010	415900	29445	0,7	659	17,75	5549
2011	474080	27074	1,2	697	18,95	6085
2012	490961	3840	1,2	715	20,66	-
2013	-	-5723	-	721	19,35	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The Banská Bystrica region is the largest and the least densely populated region of Slovakia. Strong points of the region are: affluence of work force, high educational level in regional centres, big base o of raw materials for many sectors, affluence of available brownfields and greenfields suitable for building of industrial parks and zones, potential for bonds foreign investor-subcontractor from region. FDI inflow to the Banská Bystrica region is growing rapidly. A significant inflow was recorded in the period 2007-2010, when the amount of FDI in the region reached in average 878 mil. EUR. Banská Bystrica region retains about 2.5% of FDI in Slovakia. At the same time rose again the gross domestic product in 2013 was a decrease in the unemployment rate. Unemployment in the region is among the highest in Slovakia.

Tab. 6 : FDI, unemployment rate and regional GDP in Banská Bystrica Region

Banská Bystrica Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	503617	96063	2,7	441	26,6	4552
2005	512454	31754	2,7	482	23,8	4318
2006	596410	126908	2,2	519	21,1	4947
2007	843552	223107	1,9	559	20,0	5534
2008	876524	148851	2,6	600	18,2	6101
2009	891499	-51445	2,7	605	18,8	5505
2010	816171	-23212	2,8	702	18,86	5879
2011	1105908	153911	2,8	756	19,83	5914
2012	1126316	-1806	2,7	783	20,81	-
2013	-	-11767	-	779	18,26	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The Nitra region is oriented on both industry and agriculture. Some the major strengths of this region are: existence of strong potential of industrial and agricultural capital goods, sufficient and qualified work force, universities and a research center in Nitra, sufficient space for potential development, good geographical position in Europe and in Slovakia on important transport hauls. FDI inflow to the Nitra region is growing rapidly. A significant inflow was recorded in period 2006 -2010, when FDI inflow to the region reached average 1 425mil. EUR, accounting for 4,5% of the total FDI for Slovakia. The unemployment rate has been steadily decreasing in the last few years, with some growth in 2009 and 2010 due to the effects of the financial crisis. It reached 11,76% in 2010. Besides the unemployed, there is the possibility of the economically active population in the region commuting to other regions or to neighbouring countries.

Tab. 7 : FDI, unemployment rate and regional GDP in Nitra Region

Nitra Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	614979	71916	3,3	439	20,3	5261
2005	675297	71595	3,3	473	17,8	5759
2006	1176425	200883	3,4	511	13,2	6197
2007	1299717	145862	3,1	551	10,7	6720
2008	1399116	77956	3,9	606	8,8	7413
2009	1467286	64478	4,3	624	13,0	7009
2010	1552909	-206873	4,5	707	11,76	7070
2011	1627601	58865	4,1	753	13,27	7888
2012	1612450	42939	3,8	783	14,08	-
2012	-	26235	-	782	12,52	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The Trnava region is one of the smallest regions of Slovakia in terms of both area and population. Main strengths of this region are: growing rate of foreign capital especially in industry, the highest level of utilization of agricultural land in SR, presence of major foreign investment, qualified work force, potential for building industrial zones, good transport position, concentration of institutions with interregional importance, existence of 3 universities. The region´s main sectors are automotive, electrotechnics, metallurgy, chemistry and the glass industry. This situation may be improved by the shift towards higher added value production, especially in engineering and electronics, which has been noticeable recently due to the activities of several foreign investors. A significant inflow of FDI in the Trnava region was recorded in 2009 then came a decrease again. The share of FDI to Slovakia Trnava region is 5,7%. The unemployment rate is maintained below 10%.

Tab. 8: FDI, unemployment rate and regional GDP in Trnava Region

Trnava Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	1861529	593532	6,0	487	12,5	4892
2005	4445116	859895	5,9	534	10,4	5480
2006	3218428	441656	7,6	584	8,8	6892
2007	3302559	122414	6,9	635	6,5	7601
2008	3251024	-84455	9,9	676	6,2	7932
2009	3439328	618184	9,8	689	8,37	7246
2010	3109697	109824	9,9	787	8,17	7641
2011	2277266	-199409	5,7	815	8,88	7927
2012	2415088	14033	5,7	831	9,43	-
2013	-	110984	-	841	9,16	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The Žilina region can be considered as indusial and with a high potential for development, primarily because of two facts: its location near the industrial areas of the neighbouring Czech Republic and Poland and its lack of fertile soil. Industry represents 72% of the region´s annual turnover. This includes all the sectors and is equally distributed. The most productive companies in the region are focused on the production of automotive, metallurgy, machinery, wood. Cellulose, paper and the products made from them.

Tab. 9 : FDI, unemployment rate and regional GDP in Žilina Region

Žilina Region						
	FDI stock (in thousands EUR)	Inflow FDI (in thousands EUR)	% share of FDI in Slovakia	Average salary a month in Slovak economy(EUR)	Unemployment rate in %	Regional GDP (mil. EUR)
2004	939190	132558	5,1	462	17,5	4713
2005	1292007	318463	6,2	503	15,2	5235
2006	1645264	323175	6,1	545	11,8	5747
2007	2221821	557210	6,1	558	10,1	6643
2008	2195419	-1172	6,7	646	7,7	7508
2009	2078715	-260521	6,3	656	10,6	6995
2010	2283702	-244234	6,5	759	10,86	7505
2011	2701659	325057	6,7	801	11,91	7605
2012	2522840	-2965	6,0	830	12,79	-
2013	-	20408	-	820	12,51	-

Source: Slovak Statistics Office, NBS, SARIO, (2014)

The Žilina region is also an important international junction linking the transportation networks of threes states – Slovakia, Czech Republic and Poland. The Žilina Region maintains a 6,5% share of FDI in Slovakia. FDI inflow to the Žilina region has a growing tendency. A significant inflow was recorded in 2007. Unemployment had before the financial crisis downward trend. The lowest was in 2008. Since 2009, the unemployment rate is increasing again.

Tab.10: Significant investor in Slovak regions

	Company (country of origin, number of employees)
Bratislava Region	Volkswagen Slovakia, a.s. (Germany, 7000), TESCO STORES,a.a. (Great Britain,9158), Slovenské elektrárne, a.s. (Italy, 5219), kaufland SR, v.o.s. (Germany, 4500), BILLA, s.r.o. (Austria, 3732), Slovak Telecom, a.s. (Germany, 3500), Slovnaft, a.s. (Hungary, 3350), JJOHNSON CONTROLS INTERNATIONAL, spol. s.r.o. (USA, 3023), ISS Facility Services, s.r.o. (Denmark, 3000),DELL, a.s. (USA/Netherlands, 1850), Hawlett-Packard Slovakia, a.s. (USA, 1800), Wirlpool Slovakia, s.r.o. (USA, 1200)
Trnava Region	INA SKALICA s.r.o. (Gemany, 4150), PCA Slovakia (France, 3000), SAMSUNG Electronics Slovakia s.r.o. (Hungary, 2760), Bekaert Hlohovec, a.s. (Belgium, 1500), ZF SACHS Slovakia (Germany, 1450), Zentiva, a.s. (Netherland, 1238),Swedspan Slovakia s.r.o. (Sweden, 1072), Johns Manville Slovakia, a.s. (USA, 980), Protherm/Vaillant (Germany, 1071)
Trenčín Region	YURA Corporation Slovakia, s.r.o. (Korea, 3000), Continental Matador Rubber, s.r.o. (Germany/Netherland, 2250), FORTISCHEM a.s. (Czech Republic, 1500), Gabor spol. s r.o. (Germany, 1470), Leoni Slovakia, spol. s r.o. (Germany, 1434), RIALTO s r.o. (Italy, 1420), EMERSON akciová spoločnosť (USA, 1396), Hella Slovakia Signal-Lighting s.r.o. (Germany, 1300), VACUUMSCHMELZE, s.r.o. (Germany, 800)
Nitra Region	SEWS Slovakia, s.r.o. (UK, 2251), RIEKER OBUV s.r.o. (Switzerland , 2134), KROMBERG & Schubert s.r.o. (Austria, 2027), Duslo, a.s. (Czech republic, 1907), SE Bordnetze -Slovakia s.r.o. (Germany, 1600), FOXCONN Slovakia (Japan, 1200), OSRAM Slovakia, a.s. (Germany, 1500), Danfoss Compressors, spol. s r.o. (Denmark, 1200), Heineken Slovensko, a.s. (Austria, 765)
Žilina Region	INA Kysuce (Germany, 3808), KIA Motors Slovakia, s.r.o. (South Korea, 3900), Mondi SCP a.s. (Austria, 1455), Mobis Slovakia s.r.o. (South Korea, 1609), Panasonic Industrial Devices Slovakia s.r.o. (Japan, 1340), ECCO Slovakia, a.s. (Denmark, 1202), TRIM LEADER, a.s. (Japan, 1069)

Banská Bystrica Region	Yura Eltec Corporation Slovakia, s.r.o. (South Korea, 1700), Continental Automotive Systems Slovakia, s.r.o. (Germany, 600), Nemak Slovakia s.r.o. (Germany, 540), Slovalco, a.s. (UK/Norway, 470)
Prešov Region	Lear Corporation Seating Slovakia, s.r.o. (Luxemburg, 1000), MECOM GROUP s.r.o. (Cyprus, 826), Pivovary Topvar, a.s. (Switzerland, 675), CEMM THOME SK, spol. s r.o. (France, 550), GGP Slovakia, s.r.o. (Italy, 502), Tytex Slovakia s.r.o. (Denmark, 423)
Košice Region	U.S.Steel Košice (USA, 12860), Yazaki Wiring Tehnologies (Japan, 3400), T-Systems Slovakia (Germany, 2592), Embraco Slovakia (Brazil, 2000), SCA Hygiene Products (Sweden, 700), U-Shin Slovakia s.r.o. (Holland/Germany, 1268), Getrag Ford Transmissions (Germany, 870), Unomedical (Denmark, 607), Panasonic AVC Networks (Japan, 697)

Source: SARIO, (2014)

Conclusions

At present the Slovak economy is at the stage of stabilizing the existing FDI that has created its link to the national industry in a form of supplier-purchaser, client relations. Further development needs to be directed inevitably to intensive diversification of FDI placed in different branches and businesses. Especially the FDI needs to be placed in branches and businesses with higher added value. The effectiveness of the Slovak economy has grown lately and is in a direct correlation with an intensive flow of FDI.

The year 2000 is a turning point in the investment flow as the total FDI flow in Slovakia amounted the total value of all capital inputs invested by foreign investors in the Slovak economy within previous nine years. During the given period direct sales to foreign investors are preferred. After a drop in investment in 2009 due to crisis, there is some progress made again in 2011 when the amount of investment is four times larger than the one in the previous year.

From the allocation point of view the Bratislava Region with its sixty-per cent-share out of total FDI has taken its first position in Slovakia. At the same time the unemployment rate in this region is the lowest, the regional GDP is the largest and the average salary is the highest in this region. The worst situation in FDI flow and in other indicators is reported in the Presov Region.

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EDUCATION AND UNEMPLOYMENT OF YOUNG PEOPLE IN THE V-4 COUNTRIES

Ľubica HARAKAĽOVÁ

Abstract

The current financial and economic crisis has reflected in the high unemployment rate in most of the countries of the European Union. In particular, youth unemployment has reached all-time highs. One of the highest rates of youth unemployment is in the V-4 countries. The difference between labour market needs and skills of job seekers is one of the reasons. The aim of this paper is to compare education systems in V-4 countries in the various levels of education. One of the indicators of the quality of schools is their evaluation. In this paper, we analyzed how the different education systems are evaluated. We also analyzed what instruments are used in the selection of a profession which labour market requires. The paper analyzes the measures of the European Union which should reduce youth unemployment and their impact on education.

Key words

youth unemployment, education systems, secondary education, tertiary education, labour market

JEL Classification: I 25, J 60, J 61

Introduction

Europe is currently confronted with the consequences of the economic crisis, what one remembers from the beginning of the last century. The most serious consequence of the crisis is alarming unemployment of active population. The crisis was reflected not only in the increase of the number of unemployed people, but also in the decrease of the number of job vacancies, where a new workforce is searched for. This reduced the chances for the unemployed to find an optimal job. It also diminished the chances to find a job for recent graduates. An increasing number of young people (between 15-24 years of age) who are neither studying nor working is becoming the biggest problem.

Social policy of the European Union is not one of the common policies, but it is so-called coordinated EU policy. According to Lipková (2011) unified social policy does not exist *de iure*. Among other things, the problem lies in the diversity of conceptual and legislative definition. One part of the social policy is to ensure a high level of employment. Solving the employment issues was important for the EU Member States already in the 70's years of the 20th century. Currently, the unemployment rate of the EU population becomes a serious problem when dealing with the competitiveness of the EU economy. Despite the absence of a common EU social policy, coordinated joint measures have been adopted since the Community was formed.

The European Union in the Strategy Europe 2020 set out five main objectives. Individual objectives are interrelated and complementary. Improving the education helps the employment and poverty reduction, a larger share of research and development and innovation in the economy combined with efficient use of resources contributes to greater competitiveness and job creation, investment in more ecological technologies help to fight climate changes and create new business and employment opportunities. Under the objective Employment, there is an objective of increasing the employment rate of the EU population aged between 20th to 60th year of life to 75%. Under the objective Education there is a reduction of early school leaving to below 10% and achieve at least 40% share of the population aged 30 - 34 years who have completed higher education. (European Commission, 2014)

Tackle the employment issue remains in the competence of individual Member States. Member States applied Europe 2020 objectives on their different conditions and recommendations of the European Commission and the Council in their National Reform Programmes. Solving the unemployment issues is becoming a priority in all government measures of EU member states. The unemployment, in particular youth unemployment and especially the unemployment of graduates of different types of schools got in foreground of the solutions. In the context of solving this issue comes to the fore an evaluation of the quality, content and scope of education relevant to the economies of the Member States of the European Union as one of the possible consequences of youth unemployment.

1. Education and Unemployment

After the onset of the economic and financial crisis, its impact started to show in unemployment rate, which impact individual economies cannot deal with by the usual tools of their employment policies. It also showed the need for a broader analysis of whether the critical state of the labour market was caused only by crisis or causes are associated with other parameters affecting unemployment respectively employment.

The most serious parameter influencing the unemployment is the lack of necessary knowledge, skills, abilities and experience of persons seeking work to individual jobs, especially young people. The crisis therefore highlighted the weaknesses of education systems; it accelerated the necessary reform of education in those Member States where youth unemployment has reached critical level.

Representatives of EU Member States agreed on a comprehensive approach to solve youth unemployment. It introduces a set of specific measures to help young Europeans return into employment or education. On the meeting of European Council held on 27th - 28th June 2013 there were taken measures called the Youth Guarantee to tackle youth unemployment in the form of comprehensive measures aimed at initiative to promote youth employment. The measures should be applied to support young people in the regions in which their unemployment rate is more than 25%. In the context of this form of action is the provision of certain guarantees for young people. The role of the measures is to ensure that all young people under the age of 25 years received an offer of employment, further education or training until four months after the end of education or job loss. The Council urges that the process be engaged all stakeholders and EU funds should be used, especially the European Social Fund (ESF) in the context of the Youth Employment Initiative.

Under this initiative, the Member States will have to use together with the national ESF resources to improve the quality of education, strengthen the capacity of their structures and to raise awareness on labour market. In parallel, the Commission has established other instruments at EU level to assist the Member States, such as the European Alliance for Apprenticeships, the Quality Framework for Traineeships, EURES and the 'Your first EURES job' initiative, which help firms to obtain young people. All these measures should be undertaken in close cooperation with the social partners on the EU Member States level. Greater mobility of young people is expected in conjunction with initiatives by the social partners.

An Employment Comitee (EMCO) is another body which is in cooperation with national institutions (labour offices) involved in the Youth Guarantee initiative.

2. Youth Unemployment in V-4 Countries

Europe 2020 is a comprehensive strategy of the European Union, but it do not specifically solves the issue. In the objective Education, stated objective - the prevention of early school leaving - Slovakia, Czech Republic and Poland fulfil this objective in the long term, Hungary this rate slightly exceeds (11.8% in 2013). This objective can be considered to have been directly related to the solution of the issue of youth unemployment. Part of this objective is to achieve 40 % proportion of university educated population aged between 30 - 34 years of age outside the target group – the young people in the age group 15 - 24 years.

Currently, the unemployment rate of the EU population reaches all-time highs. While in 2008, before the onset of the economic crisis, the national unemployment rate in the European Union was 7.0%, in 2013 it was 10.8% (10.1% in September 2014) (Eurostat, 2014). Unemployment affected the most certain groups of population, especially young people aged 18 - 24 years and generation of people over 50 years.

The youth unemployment rate in the European Union accounted for in September 2014 21.6%. The youth unemployment rate is more than double than the overall rate of unemployed adults and shows considerable differences between EU Member States. The largest differences in unemployment rates among young people are in Germany (7.6%) and Spain (53.7%), the difference is almost 50%. In September 2014, a total number of unemployed in the EU was 4,988,000 young people, compared to September 2013 the number of unemployed young people decreased about the 595,000. (Eurostat, 2014)

It is also necessary to point out, that in the age category of young people (15 - 24 years), according to the methodology of the mentioned statistics, the young people who are studying are also included. This means that the absolute number of unemployed is lower than the above percentage. Since this methodology is used in obtaining all the data across the EU, such data are relevant for comparing. Eurostat for the analysis of total unemployment and youth unemployment also examines the difference between unemployment in the EU-28 and the euro area. For example, the biggest difference was recorded in the second half of 2013 in favour of the euro area.

V-4 countries (Slovakia, Czech Republic, Hungary and Poland) are members of the European

Union since 1st June 2004. Given that these countries were part of the so-called Eastern Block, the political-economic development until the 90‘s of 20th century showed the same features. The most striking feature of the system was planned economy, which included social and educational policy. An accompanying feature of the new economic conditions related to the transition to market economy was an unknown phenomenon - unemployment. Individual economies tackled this negative phenomenon, connected with new economic conditions by standard instruments of social policy.

Table 1 Youth Unemployment (15 -24) in V-4 Countries

	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**9/2014**
EU - 28	18.9	17.5	15.7	15.8	20.1	21.2	21.4	23.0	23.4	21.6
Slovakia	30.4	27.0	20.6	19.3	27.6	33.9	33.7	34.0	33.7	28.5
Czech Rep.	19.3	17.5	10.7	9.9	16.6	18.3	18.1	19.5	18.9	15.1
Hungary	19.4	19.1	18.1	19.9	26.5	26.6	26.1	28.1	27.3	21.0
Poland	36.9	36.9	29.8	21.6	17.2	20.6	25.8	26.8	27.3	22.6

Source: Eurostat, (2014)

When analyzing the rate of unemployed young people in the V–4 countries, we can see that in the period indicated is the highest youth unemployment in Slovakia, almost 10% higher than the average of EU-28. The lowest youth unemployment is in the Czech Republic, even lower than the EU-28 average. What is interesting is the labour market situation of young people compared to Poland and Hungary - long-term high unemployment in Poland with the onset of the crisis is gradually coped with Hungary (since 2011), but is still above the average rate in the EU – 28.

Based on the statements and feedback from employers environment is stated that one of the causes of youth unemployment is their education. As O. Világi noted (Chairman of the Board of Slovnaft): "There will not be good secondary schools, because there are not teachers, there is not knowledge." Graduates are lacking: first - the required knowledge and skills, and secondly - the ability and experience. The first group of deficiencies is identified as possible deficit of education and a second group of deficiencies can be corrected or removed by training and practice. Both of the required properties of graduates should provide by education systems of the Member States.

2.1 Education systems of V-4 Countries

Private and church schools were added to the state education system in the V-4 countries after 1990. Completion of monopolization of the education, new financing rules (also dependent on the number of students), decreasing demographic curve and unregulated competition between educational institutions – these were manifestations of creation of new educational systems in post-communist countries, including the V-4 countries.

Systems of education in V-4 countries were based on the foundations of education systems before 90‘s of the 20th century and given the close correlation (especially political) they are institutionally the same. Also based on the fact, that the effects of any changes in the education system can be observed after some period of time, which is measured by the length of education at different levels of the education system.

A comparison of education systems in the V-4 countries shows a very similar horizontal layout of the primary, secondary and tertiary education. Within primary education, primary schools are internally divided into 1st and 2nd grade. For evaluation in terms of quality of education for the needs of the labour market, any analysis is irrelevant. The primary step should prepare pupils for the future job choice and help them assess the real ability of the pupil and his ideas about future occupations (e.g. a framework curriculum for primary schools in the Czech Republic contains the subject “Man and the world of work“).

Secondary education in V-4 countries implements the various types of secondary schools, grammar schools, vocational secondary schools, vocational apprentice schools and secondary schools with an artistic focus (conservatories) while not apparent in each country subdivision in schools with large range of practical vocational subjects (i.e. vocational, respectively apprentice schools). Vocational secondary schools were included before 2000 in the network of secondary schools in Slovakia and the Czech Republic. Currently in Slovakia there is no single vocational secondary school. The vocations focused on practice are within the system of traditional vocational schools. This curriculum is derived from the length and nature of the training program and not the type of school. A similar system

of secondary education is in the Czech Republic. Secondary apprentice schools became a part of larger vocational schools within the optimization of the network of the secondary schools. The same system of secondary schools is in Hungary. The secondary schools in Poland are sophisticated in terms of formal arrangements - there are grammar schools, lyceums, so-called technicals, lower and higher vocational schools.

Education systems at secondary level are almost identical. The difference in the form of education at the secondary level is evident by name of secondary school education system in the particular country. The name and type of school can identify an expected type and content of education (lyceum, technicals). In Slovakia, the unified system of vocational schools became disarranged for the candidates, according to the name of school it is not possible to identify the content of the courses.

In terms of awareness and timeliness of the web pages of ministries of education and the availability of government documents relating to the education systems and their evaluation, the level of Poland and Slovakia is at higher level than the Czech Republic and Hungary. Some materials published are on the websites of ministries of Czech Republic and Hungary are outdated and old more than 5 years. That situation comes from the fact that secondary schools in the V-4 countries are established and managed from the regional level and the ministries Czech Republic and Hungary in this manner do not enter into competence of regions, respectively counties.

Tertiary level is due to the adoption of the Bologna process on the harmonization of higher education in terms of formal arrangement the same in all V-4 countries. In the Czech Republic and Poland, there are vocational colleges included in non-higher education at tertiary level.

2.2 School Quality Evaluation in the V-4 Countries

A transformation from a planned economy to a market economy created an option to voluntary chooses education and mission. It was assumed that also in case of educational schools "the market solves everything", i.e., the students would be interested to study mostly at good schools. Relevant evaluation of the quality of schools by level of education in different V-4 countries which would also allow candidates to choose the school, was missing. There was a situation when the balance between labour supply and demand was disrupted. Responsibility for the freedom of choice of the future occupation by the student perceived as an advantage, proved to be a weakness of the system and supersaturation of the labour market in certain occupations and labour shortages in other job positions.

Objective evaluation is in tertiary education - at national level by a system of complex accreditation of universities through the authority of government - the Accreditation Commission. In Slovakia, Poland and Hungary they annually evaluate universities – by rankings, which are implemented by independent non-governmental agencies. Evaluation of Czech universities does not cover any government or non-governmental institution. The global evaluation of universities according to Academic Ranking of World Universities ranked the best placed Czech university and - in the third hundred universities (Charles University, Prague). In the first five hundred ranked universities, there are 9 more universities from the V-4 countries, none of them was Slovak. Sources which the so-called „Shanghai rating“ draws from are granted by national ranking agencies (Poland, Slovakia).

The employment of graduates (Slovakia) and reputation from employers (Poland) is also a part of national school evaluation. The employment as one of the criteria of national evaluation of Hungarian universities was not mentioned.

In Poland, higher vocational schools are evaluated annually and they are a part of the ranking evaluation of schools at tertiary level as separate rankings.

Slovak Ministry of Education, Science, Research and Sport was publishing until 2012 a list of universities and their faculties with the share of their unemployed graduates. These data are not currently published. The interest in studying different programs is in disequilibrium with data on unemployment of graduates of such programs. Paradoxically, faculties with the highest unemployment rate and poor evaluation showed an increase of interest of the students. Candidates for the study still do not decide according to the possibilities of the labour market nor by quality of the universities.

In the context of tertiary education, the achievement of the objectives of Europe 2020 - 40% proportion of university educated population aged 30-34 years in Slovakia appears to be a very ambitious goal. Number of university graduates should consider social situation in the country and requirements of the labour market. Massification of the higher education study may lead to a further reduction of the quality of Slovak universities.

Transferring of management responsibilities in the issue of secondary and primary schools at the regional level complicates the analysis of the quality of secondary schools. Considering this, for the

purpose of paper we analyze the situation in Slovakia and the Czech Republic.

OECD with its partners from 31 countries deals with the assessment of knowledge of 15-16 elementary school pupils in the program PISA (Programme for International Student Assessment). Evaluation in 2012 covered 28 million students from 65 countries, representing 80% of the world population at this age. In evaluating knowledge in mathematics, reading comprehension and science, Slovak pupils placed at the 35th place, just behind Poland (14th), Czech Republic (24th) and ahead of Hungary (39th). The national evaluation of schools in Slovakia provides so-called "Monitoring" of the primary school pupils in 9th year through a written test. The results are published on the district level without specifying the place and schools.

Attempts to create a ranking of secondary schools was narrowed to measure the success in entrance exams to universities, eventually an evaluating the results of graduation exams. While reducing the number of applicants for study at Slovak universities, this parameter cannot be considered as relevant. As an objective indicator to the needs of the work can be considered data from Office of Labour, Social Affairs and Family, which regularly publishes the number of unemployed graduates in different studying programs. This publicly available information is linked to the websites of ministries, facilitating awareness of all the candidates.

In the Czech Republic there is available Info absolvent portal that provides a comprehensive information on graduate unemployment primary and secondary schools, the unemployment rate not only by programs, but also information about graduates unemployment from a particular high school.

2.3 Employment and Content of the Education

According to the European Commission there is currently a total of 7.5 million young people in the EU who are neither employed nor do not participate in education or training process. Unemployed among young people is 5.5 million. The EU currently has about 216.8 million jobs, the labour market despite the crisis in the EU offers 2 millions job vacancies. The aim of the EU is to return young people back into education or extend their learning. It is necessary to eliminate the passivity of young job seekers at the first failures in finding the first job. One option is to further increase the qualification.

The structure of the vacancies is different than the structure of the unemployed. The structure of vacancies is also different than before the crisis. Requirement for highly-skilled workers increased, it is also assumed that some professions will disappear completely and new professions will be created thanks to technological progress or there will be restored some almost extinct professions.

Another consequence of the economic crisis is that employers are forced to use staff more efficiently, and therefore there is a demand for greater versatility of qualifications.

In the technical professions is reflected an aging workforce as a result of the increased number of graduates in social and economic fields at the expense of technical fields. The requirement of employers in terms of educational attainment prefers completion of the secondary education with certificate. They expect that this educated graduate will be willing to learn new theoretical knowledge and apply these in practice and at the same time should be flexible. Practical skills and competencies are taken for granted.

Also in administrative occupations required level of education shifts towards achieving the first level of higher education - bachelor's degree. Higher education is required in engineering job positions according to the technological developments and related claims of employers. Completion of higher education has the potential job retention in the long term.

In the future, it is necessary to inform graduates of all levels of the education acquainted with the actual situation on the labour market. Graduates should objectively evaluate their strengths and weaknesses, they should realistically assess their own presentation options, the operation of a new workforce and environment. Reach such skills can be through practical exercises and verification of theoretical knowledge in practice during their studies to their transition to the labour market was as smooth as possible, and especially to eliminate the potential long-term unemployment early in their career.

The changes in the labour market will include changes in the occupational structure of vacancies, it is expected that it will be necessary to replace retiring employees with sufficient seniority and also create new jobs with a high level of required skills and high qualifications. Highly skilled people have the best chance of obtaining a job, especially in technical fields. Graduates of secondary education have almost the same application potential. People with low or no qualifications in times of crisis have a very small chance of getting a job. In this context, it is necessary to eliminate the greatest possible extent of young people leaving the education system.

A separate issue of employment, respectively youth unemployment, constitutes so-called overqualification of employees. This phenomenon means that the applicant for a working position has higher education than is necessary. In the case of

absence of career prospects could be discouraging for him. The role of the employer is thus to exploit the potential of such an educated person.

Actions of the Council and the Commission mean for the Member States with high youth unemployment rate an opportunity to establish functional partnerships between education systems, employers, public institutions and students, respectively prospective job seekers. An Within each EU projects there are sufficient financial resources to restructure these bonds.

In Slovakia, the most important change is the introduction of a dual system of education according to the model of Austria and Germany. Companies, for which students are educated, will actively participate in the creation of curricula, while future employers contribute to the cost of study. The main change is the increased proportion of practical training. Dual education system was established in Slovakia during socialism era, but the new socio-economic conditions of the links between educational institutions and practices were cancelled and never resumed.

Other changes as less burden for employers to pay contributions long-term unemployed, prepared a financial benefit companies that employ graduates and students involved in the production of study. One of the changes is lower fund contributions burden for employers who employ long-term unemployed, forthcoming financial benefit for companies, which are employing graduates and involve students in the production during the study

Conclusion

Within the Italian Presidency - (2nd half 2014) a strategic document called Europe - fresh start was made. The basic framework of this material is to recover from the economic and financial crisis, create jobs, strengthen the fundamental rights and help the Europeans to keep up strongly in a changing world. More than 26 million unemployed – the creativity in their jobs is crucial to regaining the support of citizens for the integration of Europe.

In accordance with the first frame material called A job-friendly Europe - for economic growth. The material is focused on the mobility, social dialogue, job creation, structural reforms of labour markets and investment in human capital. The biggest challenge will be to respond to the high rate of youth unemployment. The Presidency will seek the progress in educational programs of the Europe 2020 Strategy with a focus on the integration of education and training with links to the labour market (such as apprenticeships, internships, etc.).

Education Agenda will focus on youth employment, lifelong learning, the acquisition of skills and abilities. In this framework, the labour market opportunities for creating employment opportunities in the development of European trading companies, in companies doing business with new technologies in online digital communications technologies, energy security, (i.e. Green jobs). Culture and tourism are other key areas of development of EU growth with opportunities for new jobs.

As a priority objective remains that the least young people leave the educational system. Attention remains focused on the public employer institutions which should provide information on effective consensus between supply and demand in the labour market.

General measures formulated by the Council and the Commission is needed in all EU countries to restructure education systems so as to better cooperation with future employers, to promote interest in the study programs with a greater proportion of practice for which a student could receive a reward. It is necessary to increase the share of GDP on education in individual member countries and provide government subsidies by employers who employ graduates. Conditions defined like this also require action by employers, creating the conditions for the realization of practical training. Public institutions must continuously provide information on the situation on the labour market. The most serious part of the partnership remain the main actors of the educational system - students who must take personal responsibility for choosing their future profession.

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COMPETITIVE ADVANTAGE MAXIMIZATION THROUGH RELATION BETWEEN TRUST AND REPUTATION

Valentinas NAVICKAS, Aida NAVIKAITE

Abstract

Today's competitive business environment challenges companies, therefore, it is important to discern the competitive edge of business entities in alternative ways. Investigations of released academic papers regarding the maximization of competitive advantage via two factors: trust and reputation have revealed that this field is highly unexplored. Hence, the current article is initiated on the analysis of competitive edge maximization though trust and reputation. There are three-fold objectives: 1) to analyze the competitive advantage through the academic perspective, 2) to investigate trust and its relation with competitive advantage from the theoretical point of view, 3) to examine reputation and its relation with competitive advantage from the academic perspective. Additionally, this study paper brings in a new approach regarding a great variety of collected understandings of competitive advantage and its connections with trust and reputation by taking into consideration the graphic models.

Key words

competitive advantage, competitiveness, trust, reputation, customer satisfaction, methodology.

JEL Classification: O15, M14, M51

Introduction

Investigations of released academic papers regarding the maximization of competitive advantage via two factors: trust and reputation have revealed that this field is highly unexplored. With this in mind, the current paper aims to prove the fact that paying more attention to such intangible assets as trust and reputation and adapting them into market strategy would serve as a help to save the financial resources and attain new and retain old customer base. It is obvious that today clients are more demanding than competitors, so the suggested alternatives to incorporate trust and reputation in order to maximize competitive advantage is an innovative solution.

The object of this particular study is: competitive advantage.

The aim of the study is: to investigate the competitive advantage maximization via trust and reputation.

The objectives of the study are:

1) to analyze the competitive advantage through the academic perspective.
2) to investigate trust and its relation with competitive advantage from the theoretical point of view.
3) to examine reputation and its relation with competitive advantage from the academic perspective.

The methods of the study are:

- Logical and comparative analysis of literature;
- Synthesis and deduction;
- Graphics

The novelty of the study: this study paper brings in a new approach regarding a great variety of collected understandings of competitive advantage and its connections with trust and reputation by taking into consideration the graphic models. Moreover, it puts an important foundation for future theory and practice investigations for proposing new ways to maximize the competitive advantage through trust and reputation.

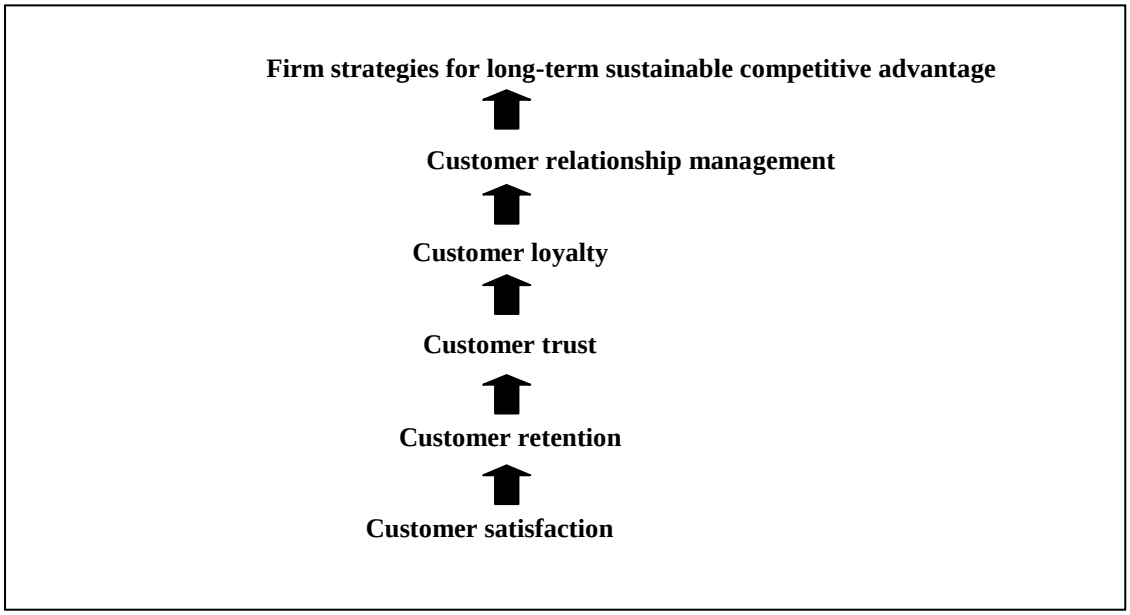
1. The concept of competitive advantage

Originally, the word "competitiveness" stemmed from a Latin term "competer". Interestingly, many researchers relate competitiveness as a synonymous with a word "success" and that means achievement of firm's objectives. And nowadays it is profoundly used in business language which means the involvement in business rivalry for the bigger market share or customer base. In this particular case, Rahimic & Ustovic (2012, p.91) state: "For building and preservation of long-term competitive advantages, it is not enough that companies are just better and faster than their competitors. Competitor orientation strategy, without aim for customers' satisfaction may lead company to "Cul-de-sac". For instance, D'Cruz and Rugman (1992) consider competitiveness as an ability to provide higher quality service or products in comparison with other companies in the market. While, Singh (2012) also agrees and states that

competitive advantage is not only a mere outperforming process especially in financial side, but also providing a superior value for the customers and in the same time attaining the dominant position. According to Zonooz, Farzam, Bakhshi and Satarifar (2011) who stress the importance of competitive advantage of small and medium enterprises note that this particular field has attained the attention from the researchers quite recently. Regarding the small firms, an interesting position is taken by Metzler (2006) who recommends recognizing the best qualities and strengthening them in order to discern themselves in the harsh market. While Storey (1994), Peterson (1989) offer that competitive advantage can be reached via managerial skills of the entrepreneur or owner-manager. In addition to this, Navikaite and Navickas (2014) state that competitive advantage is recommended to be reached via customer satisfaction policies.

There is also a number of empirical researches, which include customer satisfaction into the creation of competitive advantage. For instance, the importance of customer satisfaction in competitive advantage creation is stressed by Mahapatra, Kumar & Chauhan, 2010. And Singh, Sandhu, Metri and Kaur (2010) add that organizations strive to achieve competitiveness through satisfying customers by quick response, cooperation and etc. Moreover, the same authors conduct a research which conceptualizes and identifies four primary competitive advantage constructs which include: customer satisfaction, inventory management, profitability, customer base identification. In addition to this, Rahimic & Ustovic (2012) came to a conclusion after their empirical research that customer satisfaction is a fundamental determinant for creating and assuring competitive advantages. The same authors note that there is a growing number of international companies which consider customer satisfaction as the most important aspect in the process of differentiation. Another study was done by Chena, Chenband and Lee (2011) in tourism sector and based upon this empirical investigation the relationship among customer satisfaction, service performance and destination competitiveness was explored. Moreover, Singh (2012) claims that the provision of differentiating edge lies in the the possibility to serve customers better and in the same time the incorporation of this method turns the company more profitable. Taking into consideration the higher quality of clientele service which leads to competitive advantage Sunder (2009) offers a framework (Figure 1) named "Customer satisfaction leading to long-term sustainable competitive advantage". The conceptual framework reveals that customer satisfaction is fundamental for attaining sustainable competitive advantage. Moreover, it represents that customer trust is also a significant element for reaching the competitiveness.

Picture 1 Customer satisfaction leading to long-term sustainable competitive advantage



Source: V. K. Sunder (2009). Outsourcing and customer satisfaction. p.30

Concluding this concept, it is worth noting the idea of Singh (2012, p. 19): "A competitive advantage essentially has to be one that not only merely represents better performance than that of its competitors, but also delivers genuine value to the customer, thus ensuring a dominant position in the market". Moreover, competitive advantage is the position in the harsh business landscape which also delivers high returns and justifies higher prices by generating superior quality.

2. Theoretical investigation of trust

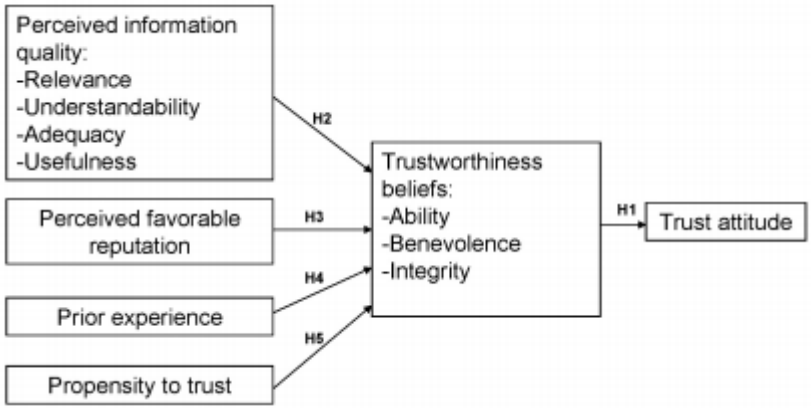
A number of authors have highly investigated on the concept of trust proposing a wide spectrum of definitions. And as Salver (2005) warns that nowadays customers are very suspicious, so trust is getting on the center stage. According to Zahedi and Song (2008, p. 228): "Trust is considered an important determinant for a stable relationship, the essence of an individual behavior, thoroughly influential in interpersonal relationships and a critical component of economic transaction". Garbarino & Johnson (1999) note that generally trust is seen as a guarantee in the process of exchange and relationships between the members. In other cases it is defined as a willingness to rely (Moorman, Deshpandé, & Zaltman, 1993). For instance, Dwyer, Schurr, & Oh (1987) compare trust with faith that the counterpart will not take advantage. While, Anderson and Weitz (1989) add that it is a belief that the colleague will realize the promised needs. But Cahill (2007) generalizes that these expressions depict the behavioral intentions of the human beings. An interesting idea is given by Molm, Takahashi and Peterson (2000) who state that risk is a significant element for trust. Meanwhile, Morgan & Hunt (1994) convince that the prerequisite of trust is confidence. With this in mind, Nooteboom (2002) adds that trust could be regarded as the rational evaluation of the counterpart's credibility.

A lot of authors such as Morgan & Hunt (1994), Schaffer, Agusti & Earle (2009) point out that trust is an ultimate element for building long-run relationships with customers. Considering this, Ackerman (2007) says that in today's business it is vital important to generate win-win relationships among all members in order to create long-term trust. Moreover, there is no doubt that relationships evolve over time, so does the concept of trust, so Buttle (2004) compares trust financial assets by saying that that evolution of trust is like an invested financial asset which yields with interests over a long time period.

The authors Haris and Dibben (1999) proposed three stages of trust: calculus-based trust, knowledge-based trust and identification based trust. The calculus-based trust is mainly based on calculation comparing both: benefits and costs. The second stage knowledge-based trust occurs when the counterpart has gathered enough information and has the ability to forecast the other party's behavior. According to Robbins, Judge, Odendaal and Roodt (2009) a big number of organizational relationships are based exactly on this particular stage of trust. While the highest level of trust is identification-based trust. And here, Thompson (2008) puts emphasis on the mutual value system shared interests, values and behavior. Moreover, parties can highly rely on one another and no additional monitoring is needed (Deutsch, Coleman & Marcus, 2006).

After a profound examination of academic literature it was found out that there are plethora of authors who offered the lists with the qualities that are closely associated with trust. And one example is given by Peelen (2005). So, the author suggests the elements that could be highly associated with the concept of trust and these are: honesty, fairness, responsibility, helpfulness and involvement. Another list is generated by Ebert (2009) with these features: belief, trustworthiness, attitude, motivation and confidence. And the dichotomous approach of trust distinguishing two items is presented by Doney & Cannon (1997). They offer credibility, which is the purchaser's belief that the vendor has enough expertise and competence to realize the needs in a reliable manner; and benevolence, which bears on the buyer's belief that the vendor acts so that the beneficial intentions are towards the buyer. However, Buttle (2004) leads to the tri-dimensional perspective: benevolence, competence and honesty. A very interesting perspective is given by Zahedi and Song (2008) who also proposed the model of trust presenting the relationships with trust and it's antecedents (Figure 2). The antecedents were chosen these: perceived information quality, perceived favorable reputation, prior experience and propensity to trust. According to the authors, trust is interpreted by synthesizing: economics, social behavior and personal perspectives of consumer's actions. The empirical study showed that trust evolves and changes over time and information quality is the single most significant factor in building trust.

Picture 2 Comparative static model of Trust



Source: Zahedi and Song (2008). Dynamics of Trust Revision: Using Health Infomediaries, p. 235

An interesting observation is given by Woodside, Golfetto and Gibbert (2008). The authors state that if the client has more than one offer he or she will not tend to develop trust. And Remenyi (2007) recommends taking strategic activities in order to gain trust. Moreover, through nurturing customer trust a firm can build a background for value creation (Schneider, 2011). Actually, it could be gained even more – competitiveness because according to strategic advisor Bregman (2009) trust is the pioneering method for gaining competitive advantage.

Concluding this construct it could be assumed that a body of literature examined this domain in a multi-faceted perspective. And after a profound analysis of this concept one thing is clear, that building trust requires time. But consequently, invested time pays off in increased confidence in products and services, customer satisfaction, engaging customers and generally, delivering competitiveness.

But Thompson (2008) provides the idea that reputation is also an important element for trust. The author provides the explanation basing with the fact that partners operate in the specific community in which they already have built their reputation and are eager to maintain it. So, the next paragraph is dedicated for the elaboration on reputation.

3. The academic perception of reputation

Taking into consideration the term of reputation it is worthwhile to mention the authors Fombrun and van Riel (1997) who deliver the understanding that:"… reputation is a collective representation of a firm's past actions and results that describe the firm's ability to deliver valued outcomes to multiple stakeholders. It gauges a firm's relative standing both internally with employees and externally with its stakeholders, in both its competitive and institutional environments" (p.10). Quite the same perception comes from Hannington (2003) who provides the point of view that reputation is the sum of stakeholder's perceptions that provide the general understanding about the company. While looking from the accountants' perspective, reputation is considered to be am intangible asset (Roberts and Dowling 2002, Shamsie 2003, Carmeli and Tishler 2004). What is interesting, communication specialists see reputation as a solution for bridging the gap between company and market members, for instance, customers (Fombrun, Gardberg and Sever, 2000).

Moreover, these authors: Boyd, Bergh & Ketchen (2010), Ferris, Blass, Douglas, Kolodinsky & Treadway (2003) convince that reputation also delivers competitive advantage. And this could be explained by the fact that reputation is a broad term with its features that include: price, service quality, innovativeness or other. Hence, there is also a multi-dimensional approach which also stems from Walsh and Beatty (2007) who state that reputation constitutes of a great variety of customers' attitudes regarding products, services, communication and overall interaction with a company regarding employees, other customers. Shamma and Hassan agree on this point by noting that reputation is a "collective impression" (2009, p.326). While Roberts (2009, p.8) says that it is a "perceptual concept". Moreover, it is concluded that mainly reputation is the generalization of overall assessment of prior experience (Fombrun and Rindova, 1996).

While, Dozier (1993) hypothesizes that reputation may be related with the direct experience. And Schwaiger (2004) concludes that reputation strengthens the reliability in products and services, and in the same time, enhances buying intentions. Additionally, Groenland (2002) admits that reputation

is positively associated with the trust. So, more pleasurable experience delivers higher reputation and of course more competitive advantage.

Considering competitiveness and reputation it is worthwhile to mention the understanding of Witt and Rode (2005) who suggest being more attentive to the integration of reputation into the market strategy especially for small and medium enterprises due to the fact that it highly influences the competitiveness.

Finally, it could surely be assumed that Wartick (2002) is right admitting that there is no consensus on definition of reputation, and many dim concepts make it even more complicated. Yet, this particular so called "intangible asset" in the accountants' term should be on the centre in the eyes of businessmen due to its practical and academic evidence to stimulate competitive advantage.

Conclusions

In overall, it could be stated that competitive advantage is the position in the harsh business landscape which delivers high returns and justifies higher prices by generating superior quality. Therefore, competitive advantage should not be the construct that only presents a better performance but should be the element that delivers superior value to the customers and in the same time ensures the dominant position in the market.

A profound theoretical investigation of trust proved that authors examined this particular construct in a multi-faceted perspective. Moreover, the analysis of this concept delivered the understanding, that building trust requires time. But consequently, invested time pays off in increased competitive advantage. What is interesting, authors agree that trust is the pioneering way to reach differentiation. This could be explained by the fact that trust enlarges confidence in products and services, customer satisfaction, also engages customers. So, generally, it delivers competitiveness.

The academic analysis of the reputation construct showed that this factor is perceived as collective representation of company's past actions and results. Some authors interpret it as the sum of impressions regarding the business venture. While others note that it is a perceptual concept or collective impression. Since there is no consensus on general explanation of reputation but one thing is clear that authors agree on the fact that it stimulates competitive advantage.

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PAYMENT OF BENEFITS IN THE FORM OF VOUCHERS IN THE CZECH REPUBLIC

Romana PÍCHOVÁ, Radka VANÍČKOVÁ

Abstract

What we define as: „material shortage". Who is entitled to do of material shortage? Material shortage is a condition where a person does not have sufficient income households to own secured basic living conditions of its own existence. Entitlements to benefits in material shortage are then those individuals or groups of individuals who are in the situation below the subsistence minimum. The reason is inadequate household incomes for social and material conditions limiting the satisfaction of basic needs at the level of living of the individual accepted society.Socially recognized level of the income of the citizen, when the state material shortage, it is called Subsistence minimum level. The basic subsistence minimum for individuals in the period from 1. 1. 2012 with likely by the end of 2014, i.e. until 31. 12. 2014 in the amount of 3410 CZK pursuant to law no. 110/2006 Coll. subsistence and existence minimum. The subsistence minimum of the family depends on the number of family members, i. e. have to be including all members living in the same household. After a review of the life situation of the applicant benefits of material shortage the following criteria are important i. e. the way and the possibility of payment of these benefits in cash or in kind (physical/material) form, or both options.

Key words

benefits extraordinary immediate assistance, vouchers for benefits of material shortage, living allowance and subsistence minimum.

JEL Classification: J33, M31, M21.

Introduction

Recipients of material need in the 21st century now very happy and often become accustomed to receiving approved dose of material poverty especially in the cash value. In most cases, the material need benefits paid by bank transfer to the private accounts of beneficiaries or postal money order in the absence of own account. In exceptional cases, the material need benefits paid in cash - benefits in material need is possible (unlike other social benefits) paid directly in cash at the box offices of individual work. Recipients of material need benefits to this method of payment in cash used for any purpose according to its consideration of a free will, without feedback control office work.

As beneficiaries of material poverty often use revenue from levies misappropriated, i.e. Buying especially tobacco and alcoholic products, the government of the Czech Republic in recent years, 2014 has decided that the material need benefits will be paid in vouchers that can be used for example only to buy food or clothes.

Payment of benefits in material need money order

Labor offices in the Czech Republic began in September of this year, more intensive use of the possibility of payment of assistance in material need in the form of vouchers, which through the asylum material need benefits paid part of the living allowance and benefits of the special, one-time immediate assistance. Method of payment of benefits in the form of material poverty housing payments will remain unchanged when the method of payment will be implemented in the form of money according to the Law no. 111/2006 Sb., Part Four: Common provisions on benefits, specifically § 42 and § 43, which states:

§ 42 - Forms of provision of benefits

(1) The living allowance is granted in cash or in kind, or in both of these forms - that it depends on the situation in which the applicant is

(2) At the material form of the living allowance granted if it is clear that the recipient did not use the dose to the purpose for which it is intended. If in the course of providing cash benefits will form the dose used for any purpose other than was provided, proceed by analogy, and it is using the Institute's special recipient.

(3) Housing Supplement is provided in the form of money. Housing supplement may be used without the consent of the recipient to direct payment of rent or housing-related services, so that the payer supplement it highlights the landlord or service provider.

(4) Extraordinary immediate assistance shall be provided in cash or in kind, or in both these forms - again it depends on the situation in which the applicant is

§ 43 - Payment of Benefits

(4) The benefit is paid in Czech currency transfer payment to an account designated by an authorized person, the beneficiary or any other beneficiary of special benefits, in cash, postal order, through vouchers for material assistance in facilities providing social services through vouchers entitling the purchase of goods specified in value or vouchers for direct consumption of goods within a specified value or direct payment amounts for the payment of the beneficiary or the person jointly assessed in material need committed.

(5) Payment of benefits and payer determines that takes into account the capabilities and possibilities of persons in material need to benefit in material need to manage and use the dose to the purpose for which it is intended method of payment

a) Living allowance can identify the payer benefits so that at least 35 % and not more than 65 % of the benefit granted will be paid using vouchers entitling the purchase of goods within the specified value

b) Extraordinary immediate assistance granted for the reason stated in § 2. 3 can identify the payer benefits so that at least 35% and not more than 65 % of the benefit granted will be granted the use of vouchers entitling the purchase of goods within the specified value (Source: Law no. 111 / 2006 Sb., on assistance in material need).

The bills

Vouchers used to collect food, basic hygiene products, children's and pharmacy products, school supplies, clothing and footwear. These are goods that provide benefits to the applicant on poverty basic living conditions. The vouchers are purpose defined in accordance satisfy the basic needs of every citizen, and therefore cannot use it to buy alcohol or tobacco products or bartering. Recipients of material need will always be fully informed about the place of issue specified goods, i.e. instead of a chain store.

This government measures should help especially where the dose could be or is already used for another purpose than was provided, i.e. to meet the basic necessities of life. Another benefit is to help a beneficiary who spends received cash immediately at the beginning of the month and during the month called. "Languish" (Píchová, Vaníčková, 2014).

According to the website of the Ministry of Labor and Social Affairs of the Czech Government intends to prevent the abuse of the material in the form of emergency cash funds spent on unnecessary purchases such as alcohol, cigarettes or stakes poker and slot machines. (https://portal.mpsv.cz/upcr/media/tz/2014/08/2014_08_29_tz_intenzivnejsi_vyuziti_poukazek.pdf).

The introduction of a voucher system for people in material need is not new as it might seem at first. This system has functioned for some time, for examples in 2008, when in that system were involved in about 40 municipalities in the country. Now as one of the first to address a payment in vouchers Authority personnel work in Rokycany. Part of the benefits in material need bills paid since August this year the practice is simple; clients receive a certain amount of money and the remaining funds in the form of vouchers. At the same time they receive a list of stores where these coupons may apply.

(http://romove.radio.cz/cz/clanek/21837#6; http://rokycansky.denik.cz/zpravy_region/rokycansti-voli-poukazky-na-jidlo-20140906.html)

In South Bohemia, at a levy of material need in the form of bills passed in October to Currently the Labor Office in Czech Budejovice selects the appropriate clients for the payment of benefits in the form of vouchers. The manner of payment of benefits is always decided by the payer, i.e. competent labor office in the Czech Republic (permanent employee separation poverty). Oftentimes, according to the experience of the authors contribution happens that the applicant is not the payment of benefits in the form of bills of material need to agree, but it must accept, if interest has support in the form of benefits to obtain or may reject it. In the event that material need benefits already derived, may apply to the competent department of material poverty of the withdrawal benefit.

1. Methodology and objective

The basic method is the study of electronic resources; interview with a worker at the employment office; use the experience gained to position of a non-insurance social welfare work in the Office of the Czech Republic and comparison of the advantages and disadvantages of the use of vouchers for payment of benefits, from which it is easy to see positive approach to pay benefits bills. In the practical part refers to the generally recommended procedure, how the labor office staff when deciding on the method of payment to that client's progress, in which the value of the vouchers are issued and what information the Office staff work to provide applicants and clients about the benefits of material need.

The aim of this paper is to acquaint the general public with the opportunity and the principle of payment of benefits in material need in the Czech Republic in the form of vouchers. Our aim is to highlight and one of the ways to try to prevent abuse

of paid benefits in material need clients and applicants, who in most cases do not benefit from the revenue accruing from material poverty efficiently, but vice versa abuse.

2. Results and discussion

The procedure for deciding payment of benefits in material need vouchers

Each permanent employee of the department of material poverty is responsible for the result of the use of special-purpose decision in the matter of payment of benefits in the form of vouchers. The basic cause is a reasonable concern that the dose of material need not be used for purposes for which it was provided. Evidence of ineffectiveness use of material need benefits, employees labor offices in the Czech Republic to find out random checks of social inquiry, which must regularly conduct quarterly, further investigation of the social body of social-legal protection of children - OSPOD or police records relevant police authority.

The reasons and evidence for the payment vouchers can be:

- Records of social investigation on non-school age children,
- reports and records from police on misdemeanors, the use of alcohol, drugs or other addictive drugs and dependence on machines, etc..,
- records of child protection agencies for failing to ensure basic food or meals for children,
- evidence of mismanagement, i.e. fact that the client often and repeatedly seeking benefits extraordinary immediate assistance.

All such written evidence of improper use of material need benefits the worker must LO relevant departments in the Czech Republic accumulate in the file is recorded with each client individually so that it is clear for what purpose the benefit in material need and why paid in the form of vouchers. A good complement to written records in filing documents of social surveys is supplemented by photo documentation, to which the staff of the department concerned labor offices in the Czech Republic claim a right in a written minutes of social inquiry as documentary evidence.

Payment of benefits in the form of vouchers in particular concerning the subsistence allowance, where the payout ratio is set at 65 % of the dose in the form of bills and 35 % payment in cash. Percentage of allocation of benefits is determined by Act no. 111/2006 Sb., On assistance in material need - Payment of benefits § 43, pare 5 point provided that the payment of benefits in the form of vouchers should not exceed 65 % of the amount stipulated by law. In consideration and evaluation of the individual case, the applicant for benefits is the responsibility of tribal employee benefits department to decide on the payment of bills in the form of lower value than the 65 % dose level provided that the lower limit of the payment, i.e. Min values above 35 % of the dose.

In the case of benefits extraordinary immediate assistance employees will pay labor offices in the Czech Republic continue to benefit in cash rather than in kind (material) form due to the disbursement of funds for low values? Most often it is the amount of benefits in the amount of CZK 100 to 1000 CZK. Feedback for the payment of benefits to provide immediate assistance to serve a copy of proof of payment. In the absence of documentary evidence or to prove the purpose of the payment recipient is the responsibility of the official emergency department of physical labor offices in the Czech Republic quantify the excess levy. User benefits of immediate emergency assistance must be received by money return back to where it is registered.

Values bills, their security and use

Vouchers are issued in denominations of: 30 CZK 50 CZK 100, CZK 200 and CZK 500 CZK. Every job in the Czech Republic can order for any amount of vouchers in nominal value of the above. The most commonly used value of the vouchers throughout the Czech Republic in terms of practicality and a one-time use of CZK 50. The payment of bills at a higher value, i.e. 200 CZK or 500 CZK, the user benefits to buy non-essential goods, which would most likely not used to meet the vital human needs. Another reason why pay bills on lower cash values is leak unused funds for the purchase of goods in vouchers back. According to the practical experience of the authors contribution to the labor office in the Czech Budejovice also decided to pay particular bills in the amount of CZK 50, when the voucher has to be presented in CZK voucher value and purpose of the purchase, which in most cases will be written as follows: voucher used to pay for purchases food, basic toiletries, clothing, shoes, children's goods, school supplies, pharmacy goods and range of ophthalmic optician. It is possible to extend the text of bills of this text, such: used exclusively for the purchase of school supplies. Specific text on the voucher will ensure their specification usage.

The appearance and format of bills:

1. A voucher for the acquisition of an approved type goods

2. A voucher for the acquisition of specific goods

Vouchers will distribute company Ticket service. Vouchers are the safety features intentionally misuse or falsification. Front bills contain eight security features:

1. EAN code - appears when you load the cash values received vouchers.
2. Barcode - must be despite its smallness readable.
3. Special micro line Eden red.
4. Nominal value - verbally and numerically expressed value vouchers in CZK.
5. Thermo point - allowing quick check of the authenticity of bills, notes: just for example. Attach a finger, warm and point disappears.
6. CZ - print metallic paint.
7. Validity voucher - valid until that date.
8. Text explaining the purpose and use of vouchers Ticket service, i.e. Text: Vouchers Ticket Service used to cover the purchase of food, basic toiletries, clothing, shoes, children's goods, school supplies, and pharmacy products range optician.

The reverse side contains two security features:

1. CZ - fluorescent print that changes color after copying
2. Watermark - Eden red logo (it is visible against the light)

Users vouchers Ticket Service may visit only those outlets that accept vouchers. List of establishment's purchaser will receive vouchers at the time of payment of the contribution. Stores that accept the vouchers, vouchers are marked with the logo "red ball", as shown.

Source: http://www.edenred.cz/rizeni-verejnych-vydaju/ticket-service.aspx,(2014-09-18)

List of stores that labor offices in the Czech Republic receives, and that in the unchanged offer clients is very wide. Each district town in the region in the Czech Republic a list of stores (see below) that accept vouchers. The list includes:

- City, i.e. Name of the city where the store is located.
- Sector, i.e. Categories such as retail: food, market, meat-sausage-poultry, bakery, pharmacy, drugstore, clothing, food, school supplies, stationery and various.
- Symbols, i.e. Name stores.
- Clarification, i.e. Complete the information for easier orientation retail locations or retail (supermarket in the building Globus / Object turntable MHD); size stores (supermarket / hypermarket).
- Street, i.e. Name of the street in which the store is located.
- Business center, i.e. Name of the shopping center in which the store is located.

List of residents in the district of Czech Budejovice, which includes 19 cities and municipalities, includes 115 partner establishments, of which 80 are directly located in the Czech Budejovice. Most on the list represented Unity, consumer cooperative and Penny Market - included in the general merchandise sector, i.e. Market; The company also TETA drugstore - included in the drugstore sector; Dr. Max Pharmacy - included in the pharmacy sector; ALBERT and flip flops - included in the food sector; bakery foam - situated bakery sector; Butcher Dědouch Ltd. and Butchery – butcher shop RABBIT - assigned to the sector-sausage-meat and poultry sector as a representative of school supplies company KOH-I-NOOR HARDTMUTH. For the clothing sector is included in only one company, namely Hook & Hook. Users can take advantage of vouchers and clothing sector in the context of shopping in each store included in the market sector

or in different sectors. The list of different stores is listed as a representative of all for 39 - including offers of clothing. List of partner establishments will in the future continue to expand and update the increased demand supply chain for services. Tabula no. 1: List of partner establishments Ticket Service, District Eden red CZ Czech Budejovice documents clarity supply contractors (Seznam partnerských provozoven Ticket Service, České Budějovice).

Tab. 1: List of partner establishments Ticket Service, District Czech Budejovice, CZ Edenred

Town	Sector	Brand	Specification	Street	Business center
Adamov	Market	Jednota, spotřební družstvo České Budějovice	TREFA	Adamovská 65	
České Budějovice	Grocery	ALBERT	Potraviny	M. Horákové 1498	Čtyři Dvory
Lišov	Bakery	Bakery PENAM		třída 5. května 137	
Trhové Sviny	Stationery	PROPOKAN		Husova 1190	
Týn nad Vltavou	Drogstore	DROGERIE TETA		náměstní Míru 85	

Advantages and disadvantages of using vouchers

Advantages of voucher systems from the perspective of the labor office in the Czech Republic:

- Motivation clients - clients are often ashamed to go to the shops with vouchers; Payment of bills supports greater incentive to seek employment.
- Preventing the misuse of benefits in the form of bills against payment in cash form.
- Reducing the number of claimants, i.e. Reduction in the number of paid benefits (cost savings on benefits paid).
- Purposefulness use vouchers - you cannot buy goods other than those stated on the label.
- Provide education to merchants - ban the sale of alcohol, cigarette funds and other substances.
- Wide network of partner establishments contractors - the future expansion of distribution channels and updates.
- Sale of vouchers to third parties, even below the nominal value prices vouchers is prohibited. In case of bills of sale to third parties is a way of dealing with the payment of benefits, the. Specific recipient.

Disadvantages voucher systems from the perspective of the labor office in the Czech Republic:

- Possible problems with the implementation of projects on individual labor offices in the Czech Republic.
- Payment of benefits more per month than before (several times a week) - increased administrative burden and complexity collar workers labor offices in the Czech Republic.
- Fears of a backlash and aggressive behavior claimants.

Advantages of voucher systems for holders of vouchers

Decent and equal assistance

> Vouchers are very well perceived by the people in need because of its relationship with the mass used food stamps, which at first glance look the same. Due to confidentiality orders can respect the dignity of the individual, who can choose goods from the groups according to their needs and preferences in selected partner establishments.

Provision of funds for the purchase of daily food and basic toiletries

> In problematic families where e.g. one parent is addicted to alcohol, cigarettes, drugs or gaming machines, etc. Bills will not be able to use to purchase goods of this type in order to ensure the livelihood of the family

Effective professional help from social workers union

> Voucher system allows workers to the social welfare department to spend more time working with professional clients and thereby promote the improvement of their social situation

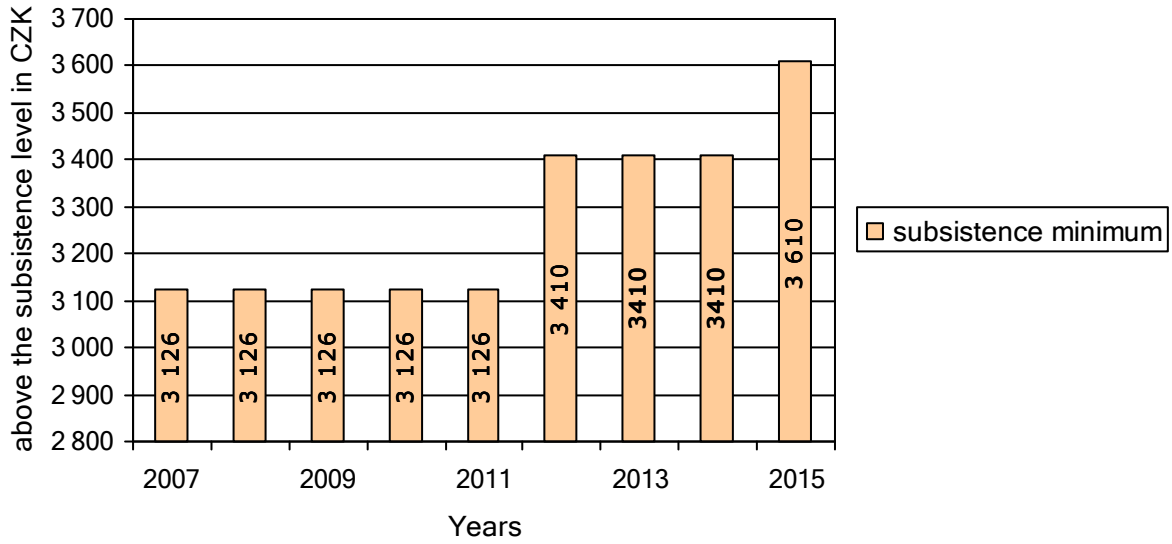
Wide network of partner establishments - the quality and range of services

Vouchers can be used according to their specialization in a wide network of partner businesses, which is designed according to the requirements of public institutions. The labor offices in the Czech Republic will be regularly sent lists of establishments accepting new partner. The network can include both specialized stores and distribution chains. Eden red CZ ensures acceptance bills in partner stores (http://www.edenred.cz/rizeni-verejnych-vydaju/ticket-service.aspx).

The increase in the subsistence

The subsistence minimum, as mentioned above, is used to assess entitlement to benefits in material need. This year, the Ministry of Labor and Social Affairs decided that from 1. 1. 2015 could increase the value of the subsistence of the current value of CZK 3,410 to CZK 3,610, i.e. 200 CZK. Since the time of the subsistence level, i.e. 1. 1. 2007, which has given rise to new laws, i.e. Especially in the tear Act no. 110/2006 Coll., On the Subsistence Minimum and his follow-up to Act no. 111 / 2006 Coll., on assistance in material need, the amount of the subsistence changed only twice. First there was an increase over the five years since the establishment of this Act, i.e. 1. 1. 2012 and the second time now, after three years i.e. 1. 1. 2015 As you can see from the following chart: Development of the subsistence of the individual in the Czech Republic, the rise above the subsistence level is very low. Since the time of the Act on Subsistence Minimum total amount of the subsistence minimum for eight years has increased by only 484 CZK.

Figure 1: The development of the above subsistence level individuals in the Czech Republic



The Czech Government has concerns about abuse of the material benefits of an emergency, is dissatisfied with the growing number of applicants for benefits in material need. From the second perspective, the growth of prices of the Ministry of labor and Social Affairs of the Czech Republic is considering raising minimum subsistence benefits, since those benefits depends on a number of other social benefits (e.g. contribution to the livelihood and the care supplement for housing, etc.). From multiples of the subsistence level is determined by the boundaries of a citizen's income, which is to allocate some of the decisive determinant of social contributions. Increase of the subsistence minimum support in particular families with children, not the individual. For the applicant – the individual is not bounds of subsistence increases have a significant effect, as most of the applicants has zero income and, therefore, they have to rely only on the payment of benefits. Even though the number of applicants-individuals each year is increasing. (http://ekonomika.idnes.cz/zivotni-minimum-by-se-mohlo-od-ledna-zvysit-o-200-korun-pdj-/ekonomika.aspx?c=A140822_113745_ekonomika_zt), (www.parlamentnilisty.cz/arena/monitor/Zivotni-minimum-by-mohlo-stoupnout-Marksova-odhaduje-o-200-korun-331743).

Conclusion

The number of applicants for benefits in material need, especially on the type of benefit allowance for living, constantly increasing every year because of the

growing number of unemployed persons in the labor market and the increase in the number of single parents, who often do not receive child support from the other parent to the children, which has resulted in the reduction of income people at subsistence level. Another reason is the state increase the prices of products and services based on reducing the purchasing power of the population of the Czech Republic in terms of reducing the value of income. These citizens seek help and support with state authorities on the form of application for assistance benefits. Convenience applicants for benefits in material need or increase an individual or family income method called Brigade. "Black" is another source of revenue for Czech citizens.

Tab. 2: Development of the average monthly number of benefits paid is captured batch system during 2012 and 2013, when the evolution of the average number of monthly benefits paid was about 74.76%, i.e. does of about 55,800 more than during 2012.

Tab. 2: Development of the average monthly number of benefits paid

Batch system		Average monthly number of paid benefits (in thus.)	
		year 2012	year 2013
Benefits assistance in material need		165,3	221,1
from that:	contribution to the living	116,4	150,4
	supplement to the housing	43,2	65,1
	special immediate assistance	5,7	6,6

Source: http://denik.obce.cz/clanek.asp?id=6641425, (2014-09-18)

The introduction of a voucher system to ensure the reduction of interest on the utilization of social support to applicants in advance determined to exploit financial support. The majority of recipients to whom the contribution was paid in the form of vouchers, citizens are now living on the border or below the subsistence level dependent on social benefits, not displaying own interest to change their life situation. Payment in the form of non-monetary support is an effective tool for motivating the people called. Active behavior, i.e. finding employment in the labor market or participation in retraining programs and others supports activities.

It offers the question: Will the measures of material need to pay benefits in the form of vouchers, against the abuse of satisfactory? They will not be beneficiaries of material need these vouchers exchanged for cash in order to buy alcohol and tobacco products? This prevents the system in the form of benefit payment vouchers to increase the number of applicants for benefits in material need? Prediction of successful forms of purpose and the use of material need benefits determines subsequent time horizon evolution of the average monthly number of applicants paid benefits.

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