Univerzita Hradec Králové
Fakulta informatiky a managementu

The International Conference

Hradec Economic Days 2011

Economic Development and Management of Regions

Hradec Králové, February 1st and 2nd, 2011

Peer-Reviewed Conference Proceedings
Part II.

Hradec Králové Gaudeamus
2011

Edited by Pavel Jedlička.

The publication is under no linguistic supervision.

ISBN 978-80-7435-101-3

CONTENT

PREFICE

The 9th International Conference **Hradec Economic Days 2011 - Economic Development and Management of Regions** was held at the Faculty of Informatics and Management, University of Hradec Kralove from February 1st to February 2nd, 2011. There were presented research results in the fields of economy, business economics, and management, mainly focused on regional problems.

Papers are published in two volumes of reviewed proceedings. These volumes include 59 articles in English, and 76 articles in Czech. More than half of participants came from abroad. Conference presentations and discussions were divided into 7 sections. In comparison with previous years, the number of papers increased in the section Macroeconomic Aspects of Regional Development and moreover, further sections were established - namely Mathematic Models in Economics and Economics of Tourism.

I am profoundly grateful to my colleagues and reviewers participating on the conference organization and proceedings publication. My acknowledgements go to the editor, Ing. Pavel Jedlička, CSc., and also to Ing. Veronika Jašíková. You are welcome to the 10th conference in 2012.

Hradec Králové, January 21st, 2011

prof. Ing. Ladislav Hájek, CSc.
Head of Economics Department
Faculty of Informatics and Management
University of Hradec Králové

ON THE LOCATION OF THE RETAIL UNITS IN URBAN AREAS

Younes Alazoozey, Vladimír Gazda, Marek Gróf, Peter Mihók
The Technical University of Košice
Peter.Mihok@tuke.sk

Key words:
location – retail unit – graph theory model
Abstract:
In this article we analyze the location of retail units in urban areas using a graph theory model. Transforming the map of the urban area into a graph we choose an optimal location of the retail units in the given area.

Introduction

For a retailer to select the location of the store is a key subject often determining the success of the retail unit, see [1]. In this contribution we consider this problem using a graph theory model. We transform first the map of the given urban area into a graph with every household represented by a vertex. Then we give a model for location of two retail units following given assumptions. We represent the problem as a game on the graph where both players will maximize their payoff functions.

Assumptions

For the purpose of our analysis we define the following assumptions:

- consumers minimize their purchase cost comprising of the purchase price and search costs, if the purchase cost is higher than acceptable, the consumers leave the area
- each urban area contains two retailers
- the market contains only one type of good and each consumer buys one unit of the given good at a price of 1
- each household represents one consumer
- each household can become a retailer
- distances between households are equidistant and equal to 1

Definitions

Let $V = \{1; 2; \dots; n\}$ be a set of customers, $\binom{V}{2} = \{\{i; j\} | i; j \in V\}$ be a set of all pairs of customers and $E = \{\{i; j\} | i \text{ is the neighbour of } j\}$ be a set of all pairs of neighboring customers, then $G = (V; E)$ is a map of the urban area. Let $P(z; k)$ be an altering sequence of incident non-recurring vertices and edges, with the starting vertex z and the end vertex k. We shall call $P(z; k)$ a path between z and k. Let $\boldsymbol{\Pi}(z; k) = \{P(z; k) | P(z; k) \subset G\}$ be a set of all paths between z and k. Then we shall call

$$d(z;k) = \min_{P \in \Pi_{(z;k)}} \left| E\left(P(z;k)\right) \right| \qquad (1)$$

the geodesic distance between z and k.

Let $H = \{1;2\}$ be the set of players who place their retail unit into one of the households. Then, the set V represents their strategy space, with $[i;j] \in V \times V$ being the pair of strategies of the two players and $y^h: V \times V \to N; h \in H$ the payoff function.

$$y^1_{(i;j)} = \left|V_{(i;j)}\right| + \frac{|V^{=}(i;j)|}{2} \qquad (2)$$

is the payoff function of player 1 and

$$y^2_{(i;j)} = \left|V_{(i;j)}\right| - y^1_{(i;j)} \qquad (3)$$

is the payoff function of player 2, where

$$V_{(i;j)} = \left\{i;j \in V \mid d_{(i;k)} < d_{(j;k)}; \forall k \in V\right\} \qquad (4)$$

and

$$V^{=}_{(i;j)} = \left\{i;j \in V \mid d_{(i;k)} = d_{(j;k)}; \forall k \in V\right\}. \qquad (5)$$

Both players will be maximizing their payoff functions, $\max_{i \in V} y^1_{(i;j)}$ for player 1 and $\max_{j \in V} y^2_{(i;j)}$ for player 2, respectively.

Let $(i^*;j^*)$ be the Nash equilibrium pair of strategies, for which

$$y^1_{(i^*;j^*)} \geq y^1_{(i;j^*)};\ \forall i \in V \qquad (6)$$

and

$$y^2_{(i^*;j^*)} \geq y^2_{(i^*;j)};\ \forall j \in V \qquad (7)$$

holds.

Conclusion

After definition of the model we will investigate appropriate strategies which will be evaluated and compared with concrete situations in selected villages. The related problem of the location of one retail unit is studied in [2].

References:

[1] KRANTON, R. E., MINEHART, D. F. A Theory of Buyer Seller Networks, *Amer. Econ. Rev.* 91 (3) (2001), 485-508

[2] ALAZOOZEY, Y., GAZDA, V., GRÓF, M., KUBÁK, M., MIHÓK, P., ONDREJČOVÁ, Z. *On a location of the retail units in small urban areas*, Proceedings of the conference National and Regional Economy VIII, 2010, Košice

The paper was supported by the grant VEGA No 1/0788/10

THE STANDARDIZATION VERSUS ADAPTATION ISSUE FOR THE INTERNATIONAL SMALL AND MEDIUM-SIZED ENTERPRISES

Apetrei Andreea
Univeristy Alexandru Ioan Cuza, Iaşi
Andreea.apetrei.aa@gmail.com

Keys words:
SME – culture – standardization – adaptation

Abstract:
This article aims to analyze the process of the standardization or adaptation of the international SMEs (Small and medium-sized enterprises). The internationalization of the SME is a reality and a desideratum for many entrepreneurs. Giving the disparity of the business environment, SMEs are dealing with the same national specificities as the multinational companies. The decision to standardize or adapt business operations is very important because it will actually affect the fundamental business strategy of the company. However, interviews with foreign entrepreneurs who achieved success in Romania are very revealing, showing that are many differences between the ways a SME and a multinational company cope with the influence of the host-country's culture.

1. The clash of cultures

The national traits of any country can build very important and powerful barriers for those who want to expand their affaires. The national culture, the economic, legal or tax systems characterize a country; the extent to which the entrepreneur will adjust to the new market can determine the degree of his business' success. As Hostfede [4] states the national cultures have implications for both organizational and management processes. This problem is even challenging when analysing the small and medium-sized enterprises (SMEs). They have to compete with the multinational companies, they have to reach the success with scarce resources and they also have to deal with the effects of the different cultural values.

Culture is important in any discussion of entrepreneurship because it determines the attitudes of the individuals towards the beginning of a SME [6]. Intercultural researches showed that management processes are not universal and can not be applied in each country or culture [4]. The relevant literature contains many definitions of culture and it seems that everyone has an own definition. Therefore, there is always challenging to study culture and its elements. It is undeniable the role of culture in our behaviour, in everything we do as well, as Muhlbacher [7] highlights that any behaviour occurs due to a culture. Culture is described as the glue that binds groups together, and provides boundaries for individuals and organizations to operate within and it is made up of many different components, such as language, religion, education, values and standards.

2. The standardization – adaptation debate

The influence of culture on international trade has led theorists and practitioners to develop some strategies for international businesses to cope with the cultural specificities. But over time, a dispute was born in the global economic reality: practitioners try to minimize the costs building a standardized strategy for any market, and the theorists highlight that the cultural specificities can create barriers for the company's success. Supporters of company's adaptation to the new business environment believe that cultural differences between countries are very important [9]. Researchers argue that national differences in tastes, customs, regulations and technical requirements are major obstacles against standardization. Furthermore, adaptation supporters also contend that the company's main goal should be the long-term profitability through higher sales, that can be achieved through a better understanding of different people needs, and not the cost savings achieved through standardization [10]. The most important argument of the customization of the activities can increase company profits by meeting their specific requirements [3].

Many studies concluded that the decision whether to standardize or adapt (S-A) the marketing strategy will largely depend on the set of circumstances that a firm is confronted by within a particular foreign market at a specific period of time. There is evidence that different "hybrid" strategies can be pursued simultaneously and successfully, although at a greater managerial complexity and cost Researchers contend that standardization and adaptation appear to differ only in nuances, in a certain "degree" and less on substance.

3. The practical analysis of the standardization-adaptation issue

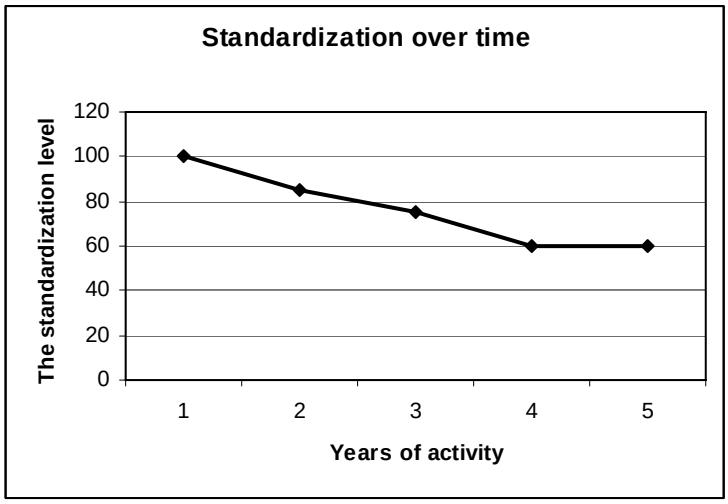
An entrepreneur brings his own unique set of personal values, motivation to interact with a specific host society and business environment [6]. For the multinational companies is easier to respond to the S-A issue, thanks to a greater experience in the international trade, to a large budget allocated for this. But with the internationalization of the SMEs, rise a new question for future research "*How does a small enterprise adapt to the host-culture?*". The first step of a bigger research upon S-A debate for the international SMEs was the pre-testing. In order to validate the logical reasoning I realized a number of four open interviews with foreign entrepreneurs who came in Romania for starting a small enterprise (for details see table 1).

TAB.1: Characteristics of the entrepreneurs' SMEs

Company	Industry	Years of activity	Entrepreneur's Nationality
1	Consulting	5	Belgian
2	Out-sourcing	3	English
3	Clothing	7	Italian
4	Restaurants	6	Turkish

The results of the discussions are very interesting because they highlight many differences between the Romanian entrepreneurs and the foreign ones. The foreign entrepreneurs used the same approach when coming in Romania and starting their business. At first, they have implemented a standardized system very poorly adapted to local culture. One of the respondents called this strategy "the embassy". The small enterprise was considered as a little embassy of the entrepreneur's home-country and in this way the employees had to adapt themselves to the culture of their manager and not vice-versa. This approach was supported by the fact the international manager considered the Romanian mentality a problem which could be easily solved by changing it right from the beginning of their work together.

FIG.1. Standardization over time



The adaptation process

In the most of the cases, the adaptation process to the local culture started after several years of business. The first elements of culture that were the subject of adaptation were the traditional holidays. The international entrepreneurs consider these elements very important for their employs, thinking that respecting a person means showing respect at their holiday too. There is no doubt that the religion is the basis of cultural similarities in those countries that share the same beliefs and behaviours [1], deepening this vision it can be said that differences between religions are becoming differences between cultures [11].

The language of one nation was described as the mirror of culture [11] for reflecting the values of a culture. In global business language is a crucial tool in communicating and negotiations with customers, distributors or employees. Words and concepts may not have the same equivalence even in a similar context [5] Language, as one of culture's components, is an issue for all the international entrepreneurs. The respondents found it as an important barrier. After more that five or six years of businesses in this country most of the foreign managers still did not learn the Romanian language. Meanwhile, the characteristics of the Romania

language make this element to be one of the reasons for which most of the entrepreneurs came in Romania. First, being a francophone country, Romania becomes very attractive for the French or Belgian business people and secondly, being a bit Latin, it is very easy for the Italians or Spanish managers to start a business in this region.

A contingency perspective allows different degrees of standardization that are subject to organizational internal characteristics (resources and international experience) and external environmental forces such as market demand, the nature of the specific industry, competitive pressures and government regulations [6]. Regarding the customs of doing business in Romania, corruption is a bad habit that can not be omitted. In the case of Romania, corruption has different explanations. First of all, there is the poverty, the low wages and numerous taxes that can explain the high level of corruption in the area. Secondly, there is the cultural dimension named Power distance; there is a strong connection between power distance index and corruption [3]. However for the country analyzed, the corruption seams to be more a bad habit than anything else, an element incorporated in the minds of the Romanians. According to Transparency International annual report, for 2010, Romania got 3.7, a high public sector corruption level. The local entrepreneurs consider corruption as a very big threat for their businesses. Meanwhile, all the foreign entrepreneurs have no problem regarding this matter. They argued that they keep their accounting very clean, transparent and in order therefore this bad habit do not affect their activity in any sense. This difference of viewing corruption between the local and the foreign entrepreneurs shows that the Romanians like to complain, to seek culprits, instead of looking for solutions (fact that was strongly approved by the respondents).

4. Conclusions

For multinational companies to be successful they should incorporate elements of both approaches – standardization and adaptation [2]. The results of the interviews showed that for an international SME this is not required, therefore it can be successful even with a total extreme standardization of the business. The investigation shows that the foreign entrepreneurs start their activity trying to cancel the cultural specificity of the local, building the international SME as "embassies" of their home country and trying to change the way of thinking of the locals. For most of the foreign entrepreneurs in Romania this strategy seems a successful one.

Acknowledgement: This work was supported by the European Social Fund in Romania, under the responsibility of the Managing Authority for the Sectoral Operational Programme for Human Resources Development 2007-2013 [grant POSDRU/88/1.5/S/47646]

References:

[1] CZINKOTA, M., RONKAINEN, I. *International Marketing,* 7th Edition, Thomson South-Western Publisher, 2010, England, ISBN-10: 0324190468

[2] DIMITROVA, B., ROSEBLOOM, B. Standardization Versus Adaptation in Global Markets: Is Channel Strategy Different?, *Journal of Marketing Channels*, vol. 17, n. 2, p. 157-176, 2010, *ISSN* 1046-669X

[3] DÖMEOVÁ, L., HOUŠKA, M., BERÁNKOVÁ, M., Multiple-criteria approach for strategy adaptation in SME's, *Agricultural Economics - Czech,* vol. 52, n. 4, 2006, p.155–159, ISSN 0139-570X

[4] HOFSTEDE, GEERT, *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*, Sage Publications, California, 2001, ISBN 0-8039-7323-3

[5] GIBB, A. Small and medium enterprise development: Borrowing from elsewhere? A research and development agenda, *Journal of Small Business and Enterprise Development,* 2000, vol. 7, n 3, *ISSN* 1462-6004

[6] MORRISON, A. „Entrepreneurship, what triggers it?", *International Journal Entrepreneurial Behaviour & Research,* vol. 6, no. 2, p.59-72, 2000, ISSN 1335-2554

[7] MUHLBACHER, H., HELMUTH, L., DAHRINGER, L. *International Marketing – a Global Perspective,* Thomson Learning Publisher, London, 2006, ISBN-10 1844801322

[8] ONKVISIT, S., SHAW, J. Standardized international advertising: some research issues and implications, *Journal of Advertising Research*, vol. 39, n. 6, p. 19-24, 1999, ISSN: 0021-8499

[9] VRONTIS, D., The Creation of the AdaptStand Process in International Marketing, *Innovative Marketing*, vol. 1, n. 2, 2005, ISSN 1814-2427

[10] THEODOSIU, L. Standardization versus adaptation of international marketing strategy: an integrative assessment of the empirical research, *International Business Review,* 12 (20), 2003, p. 141-171, ISSN 0969-5931

[11] ZAIȚ, D., *Management Intercultural*, Economica Publisher, Bucharest, 2006, ISBN: 9735905108

FINANCIAL INTEGRATION OF EUROPEAN MONEY MARKET: FROM EMU TO THE GLOBAL CRISIS AND BEYOND

Andrea Avadanei, Cristina Puiu
Univeristy Alexandru Ioan Cuza, Iaşi
andreea_avadanei@yahoo.com, puiu.cristina@yahoo.com

Key words:
money market – financial turmoil – European integration – common currency

Abstract:
The scope of this article is to illustrate the general issues relevant for understanding the implications of the global crisis on European money market integration. We structured our paper on chapters that present the evolution of the considered market from the launch of euro until the financial turmoil, its main features in the actual context, and the central banks response to the rising tensions on the money market. The assessment of the state of financial integration for the last period is made very difficult by the effects of the financial dislocations on rates and spreads across the different instruments and maturities of this segment. However, the integration and standardization of the money market are not yet complete, and further evolution can be expected.

1. Introduction

The elimination of multiple currencies, represented by the creation of the European Monetary Union (EMU), marks the fall of an important barrier against financial integration. Money and bond market integration was an immediate consequence of EMU. The introduction of the euro and the intercept of the single monetary policy on January 1, 1999, accelerated the pace of change. Monitoring the integration of euro area money markets is important for a *number of reasons*. First, this market is central to the implementation of the single monetary policy of the euro area, since it constitutes the first step in the transmission mechanism of the monetary policy. The monetary market is regularly used by the Eurosystem to distribute liquidity to the market. For example, repo transactions are one of the main instruments used for the Eurosystem's regular refinancing operations. The integration of these markets is therefore essential to allow a smooth flow of liquidity between markets and across country borders so that liquidity is distributed evenly within the money market. Beyond these considerations, money market integration is important for the efficient allocation of resources in the euro area and for promoting a more efficient pricing of short-term debt in the euro area.

The article is structured to answer two main research questions:

- Which was the evolution of the euro-money market integration under EMU and how it was affected by the financial turmoil?
- How did the central banks respond to the rising tensions on the market and what are the perspectives for the future?

2. Dynamics and achievements of the European money market integration before the global crisis

The most immediate and extensive impact of EMU has been felt on the euro-area money markets for *unsecured money and derivatives*. Almost from the outset of EMU, interest rate on inter-bank deposits and derivative contracts across euro area converged fully to on the benchmark EURIBOR and EONIA rates. This rapid convergence reflected early acceptance of the single monetary policy among market participants and was facilitated by the availability of interconnected systems for real-time settlement of large- value payments in the form of TARGET, which was recently been replaced with a more integrated platform, TARGET2. The successful integration of these unsecured markets was crucial to establishing ECB credibility in the very early period of EMU and has provided the basis for a smooth-functioning single monetary policy thereafter.

In this context, the *unsecured market* became highly liquid and deep, with very big deal sizes, tight bid-ask spreads and equal interest rates at different locations, with the exception of minimal differences, normally well within the bid-ask spreads.

The growth of the unsecured segment of the market was concentrated at the shorter maturities, indeed in overnight transactions, which represented by far the largest share of unsecured operations. Between 1999 and 2007, the unsecured market was highly integrated, with the creation of the euro area lending to a near-complete convergence in key indicators, such as the overnight lending rate (EONIA).

Integration has been less complete in *secured money markets* within the euro area, such as the market for T-bills, commercial paper and certificates of deposit, as well as the private repo market. The creation of EUREPO index (the benchmark for secured money market transactions in the euro area) by the European Repo Council and the European Banking Federation in March 2002 was an important initiative for promoting the repo market's integration. As far as the integration of these markets is still hindered by the differences in national legal and tax frameworks and by the persistent fragmentation in national clearing and settlement infrastructures that make difficult the cross-border movement of the collateral [1, 73]. However, the implementation of the Financial Collateral Directive (FCD) has reduced the national legal differences and has contributed to the grater usage of cross-border collateral. Although a source of inefficiency, segmentation in these markets was not considered to be a major opportunity cost for the euro area economy so long as the inter-bank market functioned smoothly.

Unlike the unsecured and secured segments, *the market for short-term securities* has shown only limited signs of integration since the introduction of the common currency, mainly because of differences in market practice and standards. Since June 2006, the STEP initiative aims at fostering the integration of this segment by promoting convergence of market standards. In 2007, more than half of the outstanding euro-denominated commercial paper has been assigned the STEP label and its share substantially expanded, even in a period of contraction of the entire market [2, 88]. The segment has therefore the potential to become a truly integrated euro area market, of a dimension comparable to that of the US market.

Meanwhile, the markets for *euro-denominated derivatives* have expanded significantly beyond the size implied by legacy currencies, partly reflecting an explosive growth trend in such instruments on a global level, but also the absence of liquidity in underlying cash securities.

Like the unsecured lending market, *the euro area interest rate swap* rapidly became highly integrated following the introduction of the euro in 1999. Price-based measures of integration in the euro area interest rate swap market confirm that this segment indeed already enjoyed a very high degree of integration shortly after the euro's introduction. On the whole, all evidence suggests that the euro area interest rate swap market is not only extremely large and liquid, but also one of the most integrated in the euro area financial landscape [3, 44]. The integration of *swaps and future markets* is significantly higher than the *cash-based markets*, reflecting the greater concentration in the derivatives markets among larger, more sophisticated institutions.

However, the *short-term securities markets* are the least integrated component of the money markets: a basic obstacle to a unified short-term securities market has been the diversity in norms and definitions in the design of short-term securities contracts.

The European money market *has been particularly hit by the turmoil*. In our view, asymmetric information on credit risk played a crucial role in the transmission of the US sub-prime mortgage market credit shock to this market. Transactions volumes, especially for longer maturities, have declined, and unsecured rates have been characterized by unusually high elevated spreads. Analyzing the evolution of the repo spreads for the crisis period we see that spreads fluctuated widely, but never returned to their pre-crisis levels (table 1).

TAB.1: Descriptive statistics of repo spreads

	Pre-crisis			**Crisis**		
	EURO	**UK**	**US**	**EURO**	**UK**	**US**
Mean	0.07	0.15	1.18	0.63	0.69	0.88
Std.	0.02	0.01	0.04	0.13	0.19	0.21
Min.	0.02	0.10	0.03	0.16	0.24	0.46
Max.	0.15	0.23	0.37	0.89	1.12	1.54
Obs.	1418			287		

Notes: The pre-crisis period refers to the sub-sample March 4, 2002-august 8, 2007 and the crisis period to august 9, 2007-september 14, 2008. Euro, UK and US represent the corresponding spreads. Std. denotes the standard deviation and Obs. the number of observation. The unit of measurement is % p.a.

In all three regions, the repo spreads of the crisis period were on average more than 50 basis points above those in tranquil times. It is remarkable that during the turmoil, the spreads reached maximum values of 89, 112 and 154 basis points, respectively [4, 7]. In other words, market participants at times were only able to borrow funds on the unsecured money market at a price that exceeded secured money market rates by more than 100 basic points. This dramatic divergence between unsecured and secured money market rates reflects the banks' reluctance to lend to each other. Furthermore, the spreads' standard deviations are more than five times larger during the crisis than during the tranquil period involving the uncertainty of market participants in the crisis.

The 2007/2008 turmoil has led to increased segmentation in the euro area money market [5, 12]. Asymmetric information problems have been a central feature of the malfunctioning of the money markets. This has led to a two-tier market structure, with the larger banks possessing the highest credit standing active in the cross-border money markets whereas smaller banks are confined to trading with domestic counter-parties.

3. Monetary policies of EU central banks in response to the tensions of the money market

Central banks in the EU did respond decisively to the rising tensions on the money markets after the collapse of Lehman Brothers. The ECB lowered its borrowing costs by 50 basis points to 3.75 percent in early October 2008, in a coordinated move with the bank of England, the Sveriges Riskbank and various non-EU central banks [6, 56].

More interest rate reduction followed from October 2008 until the summer of 2009, leading to a reduction of the ECB benchmark policy rate by 325 basis points to 100 basis points. Besides the lowering of borrowing costs, central banks stepped in as central providers of liquidity, thereby ensuring the allocation of short term bank funding on dysfunctional money markets. Moreover, the list of collateral eligible for refinancing was expanded, which facilitated banks' access to central bank money. With the objective of supporting banks' funding beyond very short term horizons, the ECB also raised the volume allotted in its three-month refinancing operations and introduced six-month and twelve-month refinancing operations.

The effectiveness of the extensive monetary policy action in Europe and elsewhere should be judged not only in terms of its traditional transmission channels, but also in terms of its success in avoiding a financial meltdown and thus preparing the ground for a return to normal functioning financial markets.

4. Conclusion

The recent performance of money market integration indicators-at least for the euro area-seems to be linked more to a temporary domestic entrenchment than to a stable reduced level of integration.

Price-based indicators of money markets reveal that, notwithstanding the still evident effect of the crisis on the overall dispersion of funding rates across countries, a convergence of cross-border funding costs has taken place recently, supported by the Eurosystem-wide provision of liquidity.

Quantity-based indicators, by contrast, suggest the opposite, as they show an increase in the domestic component for turnover in the unsecured and repo money markets.

A full assessment of the impact of the crisis on financial integration will only be possible after some time. However, the latest evidence from the indicators of financial integration suggests a gradual return to a normal functioning of the market.

References:

[1] DE HAAN, J., OOSTERLOO, S., SCHOENMAKER, D. European Financial Markets and Institutions, *Cambridge University Press,* 2009, p. 73, ISBN: 978-0-521-70952-1

[2] FERGUSON, R.W., HARTMANN, P., PANETTA, F., PORTES, R. International Financial Stability, *Geneva Reports on the World Economy9, ICMB and CEPR*, 2007, p. 88, ISBN: 987-1-898128-97-7

[3] BANK OF INTERNATIONAL SETTLEMENTS, International banking and financial market developments, *BIS Quarterly Review*, 2010, p. 44, ISSN: 1683-0121

[4] ABBASSI, P., SCHNABEL, I. Contagion among inter-bank money markets during the subprime crisis, *University of Mainz, CEPR and MPI Bonn*, 2009, p. 7

[5] CASSOLA, N., HOLTHAUSEN, C., LO DUCA, M. The 2007/2008 turmoil: a challenge for the integration of the euro area money market, *Conference on Liquidity: Concepts and Risks, CESifo Conference Centre, Munich,* 2008, p.12

[6] EUROPEAN COMMISSION. Economic Crisis in Europe: Causes, Consequences and Responses, *European Economy, Brussels*, 2009, p.56

EVALUATING AND MANAGING SYSTEMIC RISK IN THE EUROPEAN UNION

Avadanei Anamaria, Ghiba Nicolae
Univeristy Alexandru Ioan Cuza, Iaşi
anamaria_avadanei86@yahoo.com, ghiba.nicolae@yahoo.com

Key words:
systemic risk – financial crisis – European Union

Abstract:
The financial crisis has exposed the weaknesses in national and international economies, the disruption of the financial systems all over the world. The aim of this paper is to point out the importance of systemic risk management in the European Union (EU). Structured on two parts, the study presents the evaluation methods of the systemic risk in the mentioned area and the main proposals for the financial stability reconstruction. To conclude, deep reforms are needed: an adequate financial regulation and supervision, the evaluation of the performance over time, new rules for improving capital and liquidity and a better communication between institutions in order to prevent and neutralize possible distress.

1. Introduction

In the last few years, the financial system has become more complex; the connections between its components are the results of financial innovation and deregulation. An intense activity, an important amount of transactions and the speed of change reveal the consequences of the overexposure to risks. The loss of confidence, an increased uncertainty, the state of concern arising over the financial system produce serious effects in the real economy. According to European Central Bank (2010), the systemic risk is defined in terms of financial stability- the capacity of reducing and eliminating shocks, imbalances and disruption in order to allocate money to profitable investment opportunities. Direct and indirect linkages between financial institutions have conducted to rapid transmission of shocks. More than that, the failure of one institution generated negative effects in the financial system. Another definition place the systemic risk as the risk of ”widespread failures of financial institutions or freezing up of capital markets that can substantially reduce the supply of such intermediated capital to the real economy” [1, 4].

The current financial crisis shows that systemic episodes can arise both from solvency and liquidity concerns. The systemic events appear as a result of three forces: an increase in real estate prices, the fall of interest rates, an accelerated efficiency and availability of the refinancing opportunities. One of the main sources of instability is provided by the risk management policy.

The reconstruction of a solid financial system demands a correct evaluation of the systemic risk and implies finding healthy solutions for countering the negative effects.

2. The evaluation methods of the systemic risk in European Union

The large dimension of the systemic risk makes it imperative to find a method of evaluation. Even though there have been many attempts to choose just one measure to monitor the risk at European level, none of them proved to be reliable. So, there are at least three approaches that can be used to detect systemic risk.

First approach is taking into consideration a range of measures that can be used to discern when events become systemic, named financial soundness indicators (FSIs). These indicators are used to monitor the soundness of the financial system and to assess systemic risk. FSIs aggregate micro-prudential indicators are used by supervisors to assess soundness of a financial institution. This way they can detect risk to the financial system as a whole that might be missed by micro-prudential indicators.

The second approach refers to the inter linkages between financial institutions, both domestically and internationally. To identify the linkages between financial firms there can be used four directions [5, 2]:

- *the network approach*, which tracks the transmission of financial stress across the banking system via linkages in the interbank market;

- *the co-risk model*, which uses market data on credit default swaps to assess how the default risk of an institution is affected by the default risk of another institution;

- *the distress dependence matrix*, which allows analysts to study a group of financial institutions and to assess the probability of distress for a pair of institutions, taking into account a set of other institutions;

- *the default intensity model,* which captures the likelihood of default of a large fraction of financial institutions through linkages.

TAB. 1: Macroprudential Indicators of Financial System Soundness

Aggregated micro prudential indicators	Macroeconomic indicators
I. Capital adequacy	Economic growth
II. Asset quality	Balance of payments
II.1. Lending institution	Inflation
Borrowing entity	Interest and exchange rate
Management soundness	Lending and asset price booms
Earning and profitability	Contagion effects
Liquidity	Other factors
Sensitivity to market risk	
Market-based indicators	

Source: *Evans, O., Leone, A., Gill, M., Hilbers, P. – Macro-prudential Indicators of Financial System Soundness, IMF Occasional Papers, Washington DC, 2000, p. 9*

The final approach takes into consideration data from individual financial institutions in order to identify what entities are most likely to experience pressures. A recent study conducted by IMF shows that while information from individual financial institutions can help guard against systemic risk, not all such information is useful. Also, data collection problems, both in terms of the number of institutions covered and in terms of the timeliness of the data, are likely to be important. The number of systemically important institutions is far smaller than the total number of institutions, and data availability is less likely to be a problem in the case of large institutions.

3. The main directions for limiting systemic risk in the European Union

European Union states are characterized by diversity of the architecture and structure of financial systems. These circumstances make more difficult finding solution against systemic risk, because each country has different approaches regarding oversight and regulation of its own financial system.

The crisis highlighted the new needs of European Union on supervision of financial services. The European Parliament, the most important legislative institution of EU sets three principles regarding European financial system:

- a closer regulation and supervision of alternative investment funds (hedge and equity funds);
- supplementary capital requirements for European banks and a new approach about the bonuses that these financial institutions pay out;
- the supervision of the financial sector – at micro and macro level [3,1].

One of the proposed directives has the main objective to ensure that all alternative investment funds will be over sighted and regulated without exemptions. Every fund will have an European passport and the possibility of developing financial activities in EU. Non-EU funds will be authorized by Member States. Also, the managers of such funds should inform the national supervisors of the leverage limit. Excessive compensation of this managers encouraged excessive risk taking. The G20 Pittsburgh Summit set principles regarding financial system stability, including a compensation based on a long-term value creation. Financial activities based on derivates become extremely important today because of their potential risk in triggering systemic problems. The European financial institutions must work with derivates in certain limits of risk-taking. Derivates should retrieve their most important role: reducing a specific risk and correcting an anomaly from a financial market.

In order to ensure the stability of banking system, a vital component of the system, the European Parliament sets *Capital Requirements Directives III* [4,1]. Through this directive, the European Commission wants to revise EU rules on capital requirements: impose higher capital requirements for re-securitizations, limiting securitization exposures and restrictiveness about risk-taking. Regarding executives bonuses, the directive set maximum cash bonuses of 30%, at least 40% differed for

at least three to five years, at least 50% will be remunerated in shares and the discretionary pension benefits should also be in shares.

These new directions for European financial institutions should reduce the systemic risk and make them more powerful facing the crisis. We consider that expanding stress-tests on a large base of financial institutions may discover weakness in system. Also, the role of central banks should be extended over the procedures of commercial banks regarding customer creditworthiness. Even the negative effect of re-securitizations may be reduced is the basement is solid with clients who can return their credits.

Monitoring and assessing the potential risks and threats during the crisis were weak and incapable to diminish the negative effects manifested in European financial system. This is the reason for creating the European Systemic Risk Board, a new authority with responsibilities in detecting irregularities manifested in the countries' financial systems.

European Systemic Risk Board will have to issue warnings regarding all the potential risks and make recommendations to a country or group of countries for the good functioning of the whole financial system. A potential warning may be made public, depending of effects that can appear in case of publicity.

The new authority will include all central banks governors from the 27 Member States, as well as the countries which haven't adopted the euro yet. Assuring a global supervision implies the presence of other authorities like European Supervisory Authorities and national supervisors.

The existing European supervisory committees will be replaced by a European Banking Authority (EBA), European Insurance and Occupational Pensions Authority (EIOPA) and a European Securities and Markets Authority (ESMA). They will be a part of a network of financial supervisors and will aim a closer supervision of European financial system components. The future of supervision in European Union includes cooperation between these three institutions, ESRB and the national supervisory authorities.

The main advantage of European Systemic Risk Board should be the multinational power in regulating and supervising different institutions from all the financial system. Theoretical issues may look encouraging, but the differences between financial system architecture may be a problem in implementing directions of action in European countries. There are many arguments regarding the existence of such institution. An appropriate regulation and setting clear responsibilities for each supervisor in every country and for each segment of financial system is a necessary measure which can guarantee the success.

4. Conclusion

The recent financial crisis highlighted once again the importance of risk management policies. The systemic events appear as a result of individual actions of financial institutions even though they are highly interconnected. Taking into consideration the fact that financial stability is defined as the absence of the

systemic risk, it is very important to identify the possible sources of it. Policy makers tried to apply different measuring methods and concluded that there are at least three approaches: financial soundness indicators, the linkages between financial institutions and the individual evaluation of firms. Designing an appropriate framework for the systemic risk must be followed by efficient proposals and action in order to improve financial stability. Risk management should focus on regulation and the quality of supervision. New directives have the role to ensure an optimal level of capital, liquidity and solvency. Macro-financial surveillance and macro-prudential supervision are vital and that makes credible the need for a multinational power - European Systemic Risk Board - an institution capable to assure a global supervision.

References:

[1] EIJFFINGER, S.C.W., Defining and Measuring Systemic Risk, *European Parliament, Brussels,* 2009, p. 4

[2] EVANS, O., LEONE, A., GILL, M., HILBERS, P. Macro prudential Indicators of Financial System Soundness*, IMF Occasional Papers, Washington DC,* 2000, p. 9

[3] EUROPEAN PARLIAMENT, Economic reform and stability for a new economy: The European Parliament's work, 2010, p.1

[4] FRESHFIELD BRUCKHAUS DERINGER, The Capital Requirements Directive and Bankers' Bonuses: Some Questions and Answers, 2010, p.1

[5] INTERNATIONAL MONETARY FUND, Assessing the Systemic Implications of Financial Linkages, *Global Financial Stability Report*, *Washington DC,* 2009, p. 2, ISBN: 978-1-58906-809-4

STATE AID IN ENVIRONMENT PROTECTION IN SCANDINAVIAN COUNTRIES

Bartosz Bartniczak
Wrocław University of Economics
bbartniczak@ae.jgora.pl

Key words:
state aid – environment protection – Scandinavian countries
Abstract:
State aid policy is an important part of European Union competition policy. It's very important to control granting state aid by European Commission because Member States have different traditions of state intervention and different levels of financial resources. Environmental protection is an important objective of the European Union. To promote high level of environment protection it's very important to support this process by public sources. This article presents analysis of granted state aid in environment protection in Scandinavian countries. The article also presents main aid schemes by which this type of support is granted.

1. The concept of state aid

It's very hard to give one definition of term "state aid". At first it's very important to understand that this term is wider than subsidy. Subsidy can be defined as a payment in cash made in support of any undertaking other than the payment by the purchaser or the consumer for the goods or services which it produces. A state aid is very similar concept, which however places emphasis on its purpose and seems especially devised for a particular objective which cannot normally be made without outside help. The concept of state aid is nevertheless than that of a subsidy because it embraces not only positive benefits, such as subsidies themselves, but also interventions which, in various form, mitigate the charges which are normally included in the budget of the undertaking and which, without therefore being subsidies in the strict sense of the word are similar in character and same the same effect [8, 5].

State aid policy is an important part of European Union competition policy. State aid control comes from the need to maintain a level playing field for all undertakings active in the Single European Market, no matter in which Member State they are established, and to avoid Member States getting locked into a contest where they try to outbid each other to attract investment. Preserving competitive markets is the best way for European citizens to get the products they want, at low prices and to foster innovation and growth in the European Union [4].

2. Admissibility of state aid for environmental protection

Issues related to state aid in the field of environmental protection are regulated in Community guidelines on state aid for environmental protection [2]. These Guidelines are an important part of the package to provide the right incentives for Member States and for industry to increase their efforts for the environment.

Environmental protection is an important objective of the European Union. The level of environmental protection is not considered to be sufficiently high and there is a need to do more. This is due notably to the fact that companies do not fully account for the costs of pollution for societies. To address this market failure and promote a higher level of environmental protection, governments may use regulation to ensure that companies pay for their pollution (e.g. through taxes or emission trading systems) or meet certain environmental standards. In some cases, state aid may also be justified to give private firms an incentive to invest more in environmental protection or to relieve some firms from a relatively high financial burden in order to enforce a stricter environmental policy overall. At the same time, the guidelines serve as a safeguard that it will not be possible to grant badly targeted or excessive state aid which not only distorts competition but also frustrates the very objective of meeting environmental targets [7].

The guidelines set out rules on the conditions Member States must respect when granting state aid. Thus, an enterprise should contact the authority in its own Member State responsible for granting environmental aid if it wants to improve the level of environmental protection and needs aid to do so.

3. General characteristics of state aid which was granted in Scandinavian countries in years 2006-2008

In years 2006-2008 value of given state aid in Scandinavian countries was over 18.6 billion euro. Nearly 8.3 billion euro was granted in year 2008. At such high value support influence mainly state aid granted in Sweden. In studied period in this country 8.9 billion euro was given. The most often used indicator to analyze the value of state aid is its share in GDP. In studied period its share in GDP in every country was under 1%.

TAB. 1:. State aid[a] in million euro and as a percentage of GDP

Memeber State	2006	2007	2008	2006	2007	2008
	in million euro[b]			as a percentage of GDP		
Denmark	1476,0	1603,4	4507,5	0,6	0,7	0,7
Finland	644,7	634,6	814,9	0,4	0,3	0,4
Sweden	2973,7	2902,0	3072,3	0,9	0,8	0,8
Total	5094,4	5140,0	8394,7	-	-	-

a state aid less agriculture, fisheries and transport

b all data are provided in million Euro at constant 2000 prices but have been re-referenced on the year 2008

Support in environment protection is just as research and development aid, training aid, aid to employment, small and medium-sized enterprises aid treated as horizontal aid. This kind of aid should be promoted in granting state aid, because possibility of receiving support doesn't depend on the sector in which entrepreneurs operates (as is in the case of sector aid) or the area where it operates (as is in the case of regional aid).

TAB. 2: State aid[a] in particular objective

Member State	2006			2007			2008		
	Particular sectors	Horizontal objective	Environ-ment	Particular sectors	Horizontal objective	Environ-ment	Particu-lar sectors	Hori-zontal objec-tive	Environ-ment
Denmark	38,7	1437,3	366,0	99,8	1503,6	388,3	2954,0	1553,5	257,6
Finland	20,8	623,9	246,5	28,3	606,3	249,1	14,4	800,5	310,5
Sweden	17,7	2956,0	2590,9	16,0	2886,0	2531,1	375,8	2696,5	2324,9
Total	77,2	5017,2	3203,4	144,1	4995,9	3168,5	3344,2	5050,5	2893

[a] state aid less agriculture, fisheries and transport

The most popular directions in giving state in environment protections were: renewable energy, energy-saving, waste management, rehabilitation of polluted industrial, sites and improvement of production processes.

In area of energy savings Sweden introduced a scheme to stimulate owners of public premises to carry out investments in energy efficiency, energy savings measures and conversion into renewable energy sources [7]. The investments will contribute to the fulfillment of targets in the energy and climate policies and could constitute a positive example for other parts of the construction and property sector. For the energy saving measures, support can be provided by 30 % of the eligible costs for measures such as connection to district cooling, installation of electricity efficient lighting, ventilation, motors and heating systems and, under certain conditions, other energy saving measures such as climate shell or heat recycling of buildings. Support is given for labor costs and material for investments in land, buildings and equipment, but will not cover the development and manufacturing of machines and transports. The expected total budget is approximately 210 million euro for the 4 year period of the scheme.

State can be given also as a relief from environmental taxes. To consider this type of aid we can use an example of Denmark. In Denmark an electricity tax was introduced in 1977, an electricity distribution charge was implemented in 1999 and

a CO_2 tax was introduced in 1992. All VAT registered companies in Denmark (except liberal professions) can benefit from exemptions from the electricity tax and the electricity distribution charge. In addition, energy-intensive business (with or without voluntary agreements) is partly relieved from the CO_2 tax [4]. The tax levels are well above the European Community minimum tax levels. For example, in 2004 the total amount of these taxes for electricity was some 24 times higher than the minimum levels. When the measure was notified in 2004, the total amount for the refunds from the concerned taxes was approximately 268 million euro. The European Commission considered the tax measures to constitute state aid under Article 87 (1), as the companies who receive the relief have an advantage compared to other undertakings. The European Commission approved the relief since it was in line with the rules on operating aid in the form of tax reductions or tax exemptions in Environmental aid guidelines as well as with the Energy Taxation Directive [2]. According to the guidelines, non-digressive tax exemptions covering a 10-year period from environmental taxes can in certain cases be justified when the tax levels in a Member State exceeds that laid down by Community legislation. An assessment of the Danish case showed that:

- the taxes have an appreciable positive impact on environmental protection,
- the derogations had been decided when the tax was adopted,
- the taxes resulted in beneficiaries paying an amount higher than the Community minimum tax level,
- the Danish authorities committed themselves to re-notifying the scheme if it were to exceed 10 years.

The tax relief could therefore be approved on the basis of Article 87(3)(c). Energy-intensive companies that enter into voluntary agreements pay a lower rate of the CO_2 tax. Companies with heavy processes, such as melting, concentration and dying related to cement production, condensed milk and sugar, can sign agreements with the Ministry of Energy to implement energy-saving investments in order to benefit from further reduction of the CO_2 tax. The obligations are considered to replace the steering effect of the energy tax on electricity used in the production processes of the undertakings. The fact that energy costs constitute an important part of these companies' total costs is an additional incentive for the companies to implement energy-saving measures. The scheme and modifications thereof has been notified many times to the European Commission, each time with a budget relating only to the modification in question.

Very similar solutions were introduced in Finland [6]. The measure consists of a lower electricity tax rate of manufacturing industry. The approved rate is decreased from 0.0044/kWh EUR to 0.0022/kWh EUR. This type of aid is given in years 2007-2011. The annual aid amount 220 mln EUR is foregone revenue. The overall aid amount is 1100 mln EUR in foregone revenue.

4. Summary

State aid is not free. Every country has defined and limited financial resources. Granting support for one purpose, makes reduces the resources that can be used to support other purpose. So it's very important to define appropriate priorities of state aid. Environment protection is one of the purposes of state aid, which should be promoted. Granted support will return in the future as cleaner environment. It's contributed to better quality of life European Union inhabitants.

References:

[1] Community guidelines on state aid for environmental protection, *Official Journal of the European Union C82/2008*

[2] Council Directive 2003/96/EC of 27 October 2003

[3] *State aid action plan – frequently asked questions*, http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/05/195&format=HTML&aged=1&language=EN&guiLanguage=en,

[4] State aid case NN 75/2004– *Denmark "Reliefs from the taxes on electricity and CO2"*, Bruxelles, den 20.VII.2005 C(2005)2703 final

[5] State aid N 312/2006 – *Sweden Prolongation of investment aid scheme for energy efficiency and conversion into renewable energy sources in public premises (N 524/2004)*, Brussels, 26.VI.2006 K(2006)3020

[6] State aid N 892/2006 – Finland Amendment to Differentiated Energy Taxes Scheme, C (2007) 754

[7] State aid: guidelines on state aid for the environment –frequently asked question, Brussels 23 January 2008, MEMO08/31

[8] WISHLADE, F. *Regional state aid and Competition Policy in the European Union*, Kluwer Law International, Hague 2003, ISBN 90-411-1975-2

STUDY REGARDING THE CORRELATION BETWEEN ECONOMIC GROWTH AND ENERGY CONSUMPTION OF A COUNTRY IN A FINANCIAL CRISIS PERIOD

Eugen Bradean, Georgeta Vintilă
Academy of Economic Studies ,Bucharest
eugen_bradean@yahoo.com, vintilageorgeta@yahoo.fr

Keywords:
economic growth – energy consumption – gross domestic product (GDP) – energy sector – strategie

Abstract:
This study provides an overview of the relationship between economic growth and energy consumption enhanced in a linear regression model analyzing data collected from USA, Russia, Romania, U.K and others, exposing a linear regression model. This learning illustrates that there is a positive correlation between the economic growth and the energy consumed by the respective country's population. The study shows that 35.52% of the total variance in the regressed variable (energy consumed) is "explained" by the linear regression model. In our opinion, this model will provide useful and auxiliary judgment in projections the economic strategies, including energy segment, especially in the utilities sector for the future.

JEL Classification: C5
REL Classification: 10C

Survey methodology

In order to determine the impact of energy consumption on economic growth we have assigned a linear regression model. The model provides estimation through technical fitting-quantitative approximation of the relationship between energy consumption expressed in kWh (average power per capita) and economic growth, interpreted as real GDP growth rate in percentage.

Economic growth of a country was appreciated by the real GDP growth, where GDP (Gross Domestic Product) is a dimension of economic activity, defined as the total of goods and services produced within the respective economy, less the value of goods used in the creation. Generally, the computation of annual growth rate of GDP size is designed to allow comparisons of the dynamics of economic development, both in time and between countries of different sizes, therefore not a peer to peer comparison. To specifically measure the GDP rate of growth in terms of volume, GDP in current prices is valued in the prices of the previous year, achieving a chain series which is influenced by price movement. Changes in the population and birth rate/mortality are not taken into account. Eurostat, The statistical Office

of the European Communities provided the data used for the real GDP growth rate, the reference year being 2009.

(source: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/)

TAB 1: The real GDP growth rate in 2009

Country	US	UK	Russia	Greece	Swiss	Czech Rep.
Real GDP Growth %	-2.6	-5.0	-7.75	-2.3	-1.9	-4.1

Country	Bulg.	Au.	HU	Germany	Neth.	France	Spain	RO
Real GDP Growth %	-4.9	-3.9	-6.7	-4.7	-3.9	-2.6	-3.7	-7.1

This range of data stands (table no.1) for the dependent variable of the econometric model presented in this study.

In order to determine the correlation between economic growth and energy consumption, we took into account the report provided by the CIA World Factbook 2009 (https://www.cia.gov/library/) regarding the production, consumption, exports and imports of energy compared to population of each country, which includes more than 200 countries. However we have chosen the most representative ones as well as from our region in order to correctly assess the model. Finally using the fact and figures above mentioned we have obtained the following results to be used in our model.

TAB. 2: Energy consumption per capita in 2009 on average

Country	US	UK	Russia	Greece	Swiss	Czech Rep.	Bulgaria
Average Power per capita in kWh	12338	5506	6787	5241	8549	5731	3676
Country	Austria	Hungary	Germa-ny	Nether-lands	France	Spain	Romania
Average Power per capita in kWh	7932	3519	6288	7233	7023	8297	2163

This set of data (table no.2) depicted above stands for the independent variable of the econometric model presented below.

The degree of correlation between economic growth and energy consumption- a linear regression model

Using the technique of fitting-approximation, we processed the experimental data obtained to estimate the quantitative relationship between:

Real GDP growth rate as a measure of economic growth (dependent variable Y)

Energy consumption (explanatory variable X)

The association between the two variables might be predicted by a linear function that takes a form of Y= a + b x X

Computing the data set out and using Excel software we end up with the following figures:

Y = -0.0789 + 0.0429 x X

Consequently, the two variables are positively correlated: an increased level of energy consumed leads to a augment in the real GDP growth. (Hondroyiannis,G., Lolos,S., and Papapetrou,E. 2002. „Energy consumption and economic growth: assessing the evidence from Greece. Energy Economics", pp. 319-336)

Regression statistics

TAB. 3: Statistical indicators

a	*b*	*Multiple R*	*R Square*	*Std. Error*	*Obs.*
-0.078	*0.0429*	*0.596*	*0.3552*	*0.2226*	*14*

The general regression statistics confirm the quality of the model and regression estimates. Multiple R=0.596 confirms that the correlation exists and it's positive and might be evaluated as an average intensity. Thus, 35.52% of the variation of the real GDP growth rate is explained by the variation of energy consumed in a country, in an economy. Despite of the fact that this result could be seen as a significant result, there are other factors which can influence economic growth: rate of unemployment, utilization of other natural resources, labor productivity, and foreign investors indirectly, other socio-demographic factors but also the degree of industrialization of the country.

In conclusion, by analyzing the series of data we could establish that the volume of energy consumed in an economy will negatively influence the economic growth of the respective country, measured as real GDP growth rate. Between the two variables there is a negative correlation of an average intensity, where 35.52% of the variation might be explained by the variation of energy consumed in a country.

We believe that the result is correct and might be impacted by the fact that most of the countries taken in our example are significant countries in what regards this exercise but are also industrialized countries reported at the number of population of that country. For example, even Romania has more than doubled population compared to Czech Republic, the latter one shows a consumption of energy by 30%

greater than Romania. Of course, this is the result of many factors but among them we certain meet: the fact that Czech Republic has an industry which means more energy consumed but at less population compared to Romania that is quite poor in this regards. In addition, the mixed reflected by Czech Republic in terms of sources of producing energy which are integrated: nuclear, hydro, thermo again, compared to Romania that shows a mono-color system to finally lead to less energy consumed due to a higher price than in a mixed system as in Czech Republic. (source: www.minind.ro)

Thus, a mono-color system in terms of producing energy shows several weaknesses and the most important one is that your country is very vulnerable and exposed to any price variations-production costs and also to climate (for example less rain in a year), this having significant negatively consequences at the social level, especially related to mining sector by production limitation in the overall thermo sector.

Thus, in order to verify our hypothesis, namely that the industrialized countries might influence the analysis and our model presented above in this report, we propose ourselves to "isolate" those countries which have not present a degree relatively balanced between the number of population living in that country, the degree of industrialization of the country but also the energy consumed in that environment. (Vincenzo B., Oronzio M. and Sergio N. (2008). „Electricity consumption forecasting in Italy using linear regression model", paperwork for Seconda Università degli Studi di Napoli Seconda Università degli Studi di Napoli)

Therefore, please find below in table no. 4 only those countries that really present a balanced degree of the above mentioned aspects.

TAB. 4: Energy consumption per capita in 2008 after "isolation"

No	Country	Average of consumption per capita in kWh
1	Great Britain	5506
2	Russia	6787
3	Hungary	3519
4	Germany	6288
5	Netherlands	7233
6	Spain	8297

Therefore, analyzing tha above data as well as the statistics indicators, we computed again another linear function using an Excel software and have expressed a linear model of a simple regresion having the form of:

Y= a + b x X, where Y = -0.832 + 0.0555 x X and complete statistics indicators are:

a= -0.0832

b=0.0555

Multiple R = 0.0394

R square = 0.0016

Observations = 6 (6 countries)

In consequence, we noticed that after "isolation" of the countries which artificially impacted the precedent model, we clearly obtain a positive correlation between the two variables, indicated by multiple R which has a positive value of 0.0394, which means that the degree of energy consumed in a country lead to an accentuated increase of GDP measured by the economic growth in that country In essence more energy consumed in a country goes simply to higher economic growth of the country. Still, one of the conditions for a careful and correct strategy in the utilities sector to be implemented by a Government is to take into account a balanced development degree of the production capacities of energy reported to the number of country's population.

All in all, we appreciate that this study corroborated with other impact researches might be useful for drawing the strategy for the utilities sector, in a country as well as for the drafting the projections of energy strategy for the forthcoming period.

References:

[1] HONDROYIANNIS, G., LOLOS, S., PAPAPETROU, E. 2002. Energy consumption and economic growth: assessing the evidence from Greece. Energy Economics 24:319-336

[2] KITTEL AND KROEMER (1980). *Thermal Physics*. New York: W. H. Freeman.

[3] SMITH, C. (1998). *The Science of Energy - a Cultural History of Energy Physics in Victorian Britain*. The University of Chicago Press.

[4] VINCENZO, B., ORONZIO, M. SERGIO, N. (2008). Electricity consumption forecasting in Italy using linear regression model, paperwork for Seconda Università degli Studi di Napoli Seconda Università degli Studi di Napoli

[5] The world factbook. CIA 2008, www.cia.gov/library/publications

[6] UN Energy Statistics Database. -2008- Data for all power sources

[7] https://www.cia.gov/library/publications/the-world-factbook/

[8] http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/

[9] www.minind.ro

EXPORT DIVERSIFICATION: A COMPARATIVE ANALYSIS BETWEEN TURKEY AND FOUR TRANSITION ECONOMIES 1993–2009

Abdüllatif Çeviker, Murat Mutlu, İsmail Taş
University of Gaziantep
ceviker@gantep.edu.tr, mutlu@gantep.edu.tr, tas@gantep.edu.tr

Key words:
export diversification – transition economies – Turkey

Abstract:
This study aims to investigate Turkey and Transition Economies' export diversification to world and between each others. To determine diversification level of Czech Republic, Hungary, Poland and Slovakia as transition economies, Gini Hircshman Coefficent is computed with using related data set. Main purpose of this work is to analyze how countries diversify their exports to Turkey and how Turkey diversifies its exports to transition economies between the years 1993-2009. According to the obtained findings, diversification coefficient (GH) of the countries' total exports in the range of 10-20 whereas this figure rises to the range of 20-40 when it comes to trade between Turkey and these transition countries.

1. Introduction

The collapse of the Soviet political and economic system before 1990s, concluded a dramatic economic slowdown experienced by the iron curtain countries. In fact the transition process from central planning to a market economy has been a challenging one. The policymakers in the former Soviet bloc focused on macroeconomic stabilization and microeconomic restructuring in order to compose transition strategies, in concordance with institutional and political reforms. The main determinants of Transition countries' economic performance in the 1990s were a mixture of initial conditions, including the stage of development, geographical location, the proper institutions and human capital, and government policies, although the relative weight of these factors varied widely across countries (Svejnar and Uvalic, 2009). In this study we firstly examine country's trade performance.

TAB. 1: Countries Trade 2009

	To World (bil. $)		To Turkey (mil. $)	
	Export	Import	Export	Import
Czech Rep.	112.88	104.85	1027.99	489.00
Hungary	82.57	77.27	987.09	445.72
Poland	171.86*	210.479*	1817.16	1321.04
Slovakia	70.189*	72.612*	813.37	217.41
Turkey	102.139	140.869	-	-

Source: United Nations Commodity Trade Statistics Database *2008

One of the most successful cases of transition economies in Central and Eastern Europe, as stated in the study of Svejnar and Uvalic (2009), has been Czech Republic. Czech's trade volume surged between the years 1993-2009, as a result of increase in export, country reached 112 billion $ in 2009 and 8 billion $ foreign trade surplus. Hungary had 20 billion $ trade volume in 1993 and it reached to 160 billion $ in 2009 which provided the equilibrium between export and import. Poland showed incredible increase in 2008, trade value reached to 400 billion $ which is almost double of Hungary and three times of Slovakia. Slovakia's trade potential was smaller than other countries, its trade volume was just 140 billion $ in 2008. It is quite sure that all countries showed good performance after transition. Primary purpose of the study is to analyze level of diversification of the trade between Turkey and four transition economies, namely, Czech Republic, Slovakia, Hungary and Poland. Following this objective, the questions tried to be answered are as follows: (1) What is the diversification level of mentioned countries' total exports and of trade between Turkey and them, and also, how does this level evolve within time? (2) What are the differences between diversification level of the countries' total exports and of their trade with Turkey?

1.1 Literature of export diversification

This study is focused on commodity diversification. The term "diversification" is usually associated with a change in the characteristics of the country's commodity line and/or market (Ansoff, 1957). Exports diversification is to increase the number of commodities in export basket and avoid being dependent on exports of basic goods. Exports diversification reduces economic and political risks. One of the most important economic risks is instable foreign exchange income. As result of this, a country can be affected by negative macroeconomic figures such as unemployment, unsustainable growth, and inflation. Political risks include worsened governance and risk of civil war in fragile states (Somen, 2010). One of the first studies in this field belongs to Michealy, included 44 countries by using the Gini Coefficient (1958). The major purpose of this study was to examine the commodity concentration of exports and imports of as many countries as possible. As a result of his work, countries, which diversified their exports more, developed per capita national income more. Wilhelms (1967) emphasized two important effects of export diversification. First one is increased stability in export earnings and therefore less risk of excessive fluctuations in income and economic activity; secondly, increased export earnings and therefore an assured economic growth. Macbean and Nguyen (1980) found that the index of instability in export revenues is much higher in developing countries that have narrow export basket than developed countries have larger export basket. Many works that investigated export diversification after 2000 found positive relationship between export diversification and economic growth and GDP per capita (Al-Mahhubi, 2000) (Klinger and Lederman, 2004) (Agosin, 2007) (Lederman and Maloney, 2007).

2. Method

2.1 Data

In this part, we describe dataset and values that we used in analyses to explain export diversification. All dataset is taken from the United Nations Commodity Trade Statistics Database and The World Bank. In analyses for commodity classification we used Standard International Trade Classification, (SITC), Revision 2 and 3 figures for the years 1993-2009. Export values are calculated on FOB (Free on Board); import values are calculated on CIF (Cost, insurance & freight). All values are in Current American Dollars.

2.2 Measurement of export diversification

In literature, there are many ways to measure export diversification such as Herfindal index, Theil's Entropy Index, Gini Hircshman Coefficient, Gini Coefficient. In this study, for measuring export diversification we used Gini-Hirschman coefficient which commonly used in literature. Gini-Hirschman coefficient (GH) calculated as below;

$$GH = 100\sqrt{\sum_{j=1}^{n}\left(\frac{X_{jt}}{X_t}\right)^2}$$

Where Xjt = export earnings from commodity j in year t; Xt = total export earnings in year t in; n = number of commodities. The highest possible value of GH is 100. This happens if the country exports only one commodity. The lowest possible value is 100 / n, which happens when the export receipts are evenly distributed among 'n' different commodities (Tarıq and Najeeb, 1995).

3. Results

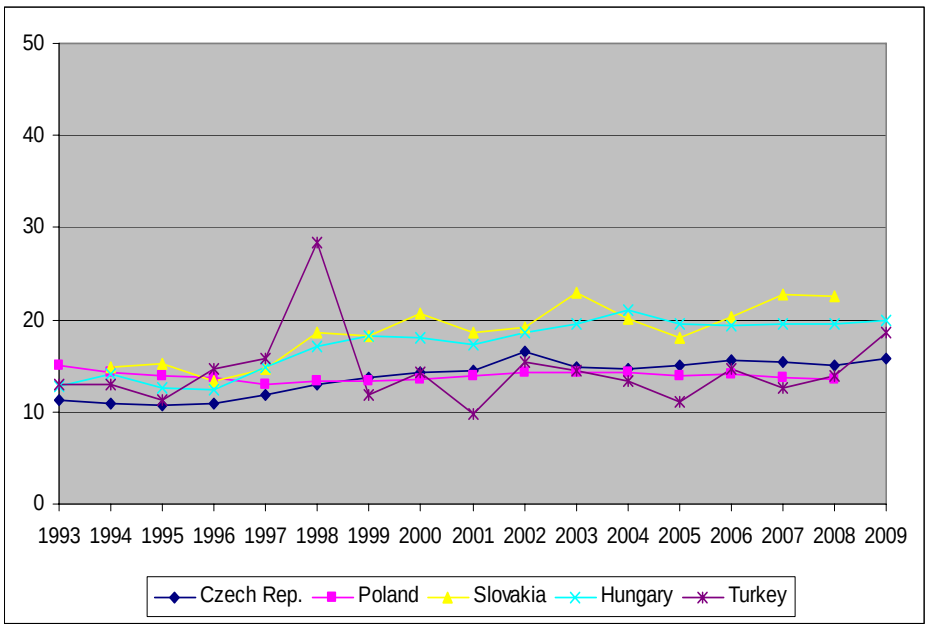
3.1 The level of total export diversification in Turkey and transition countries

Table 2 shows diversification levels of total export amounts of the related five countries to entire world. Having a look on diversification levels of total exports of the five countries, Turkey and Slovakia have relatively sharp changes and their GH coefficients are between 10 and 20. Between 1993 and 2009, GH coefficients of all countries except Poland increased, in other words, their levels of diversification decreased. Diversification level of Poland has increased in a relatively sustainable manner.

TAB. 2: Export Diversification level to World (GH)

	CZ	PL	SLO	HUN	TUR
1993	11,34	14,97	-	12,87	12,95
1994	10,91	14,29	14,93	14,03	12,93
1995	10,70	13,91	15,20	12,51	11,36
1996	10,94	13,71	13,34	12,48	14,58
1997	11,84	13,06	14,73	14,82	15,73
1998	12,96	13,26	18,65	17,14	28,45
1999	13,75	13,36	18,31	18,26	11,86
2000	14,20	13,47	20,63	17,98	14,28
2001	14,53	13,96	18,63	17,29	9,69
2002	16,60	14,33	19,23	18,60	15,35
2003	14,76	14,28	22,91	19,52	14,53
2004	14,73	14,26	20,07	21,08	13,28
2005	15,02	14,00	18,02	19,53	11,12
2006	15,65	14,05	20,35	19,31	14,65
2007	15,39	13,75	22,77	19,58	12,58
2008	14,96	13,55	22,51	19,49	13,88
2009	15,80	-	-	19,92	18,70
Mean	13,77	13,89	18,68	17,32	14,47
Std.D.	1,93	0,49	3,03	2,86	4,16
Chg %	39,38	-9,49	50,72	54,78	44,35

Graph 1 Export Diversification level to World



It is seen that four transition countries have high diversification levels (GH: 10.7-15.2) between 1993 and 996. However, according to the previous period, GH coefficients of Hungary and Slovakia increased to 15-23 level after 1997 and the level of differentiation decreased whereas the level of diversification did not change in Czech Republic and Poland as their GH coefficients remained in the range of 11-16. Excluding 1998, diversification level of Turkey remained in the range of 9.7-18.7 but it performed fluctuation over time. In general, scrutinized analyzed in respect to these diversification levels after 1997, it is observed that Turkey, Poland and Czech Republic in one side and Slovakia and Hungary on the other side show similarities within the group.

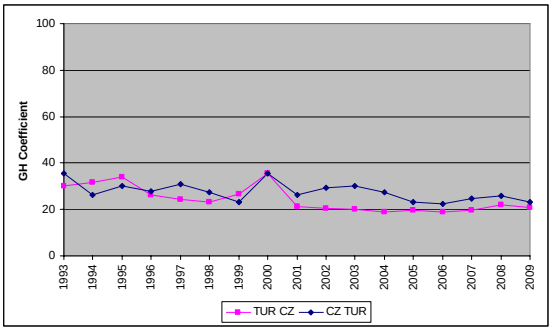
3.2 The Level of Diversification Turkey's Trade with Four Transition Countries

GH coefficients regarding trades between Turkey and four transition countries are shown in Table 3. Observing the course of coefficients between 1993 and 2009, it is seen that there is a difference between the diversification levels in total exports for each country and the level obtained for trade of these four countries with Turkey. According to the table 2, although diversification level of the total export is approximately between 10 and 20, this coefficient for mutual exportation fluctuates approximately between 20-40.

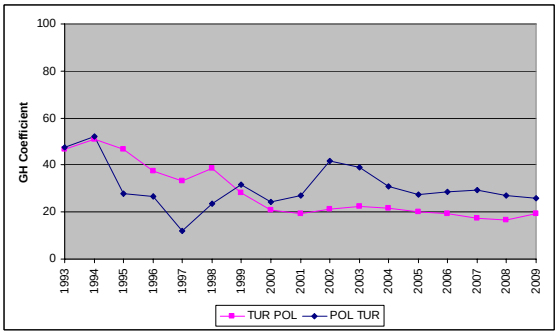
TAB. 3: Export Diversification Turkey and Four Transition Economies

	TUR→CZ	CZ→TUR	TUR→HUN	HUN→TUR	TUR→POL	POL→TUR	TUR→SLO	SLO→TUR
1993	30,12	35,53	28,39	24,45	46,65	47,33	38,46	35,87
1994	31,80	26,37	24,69	23,95	50,80	52,20	34,69	37,72
1995	34,09	30,20	40,39	26,52	46,59	27,92	34,47	37,69
1996	26,26	27,93	27,74	38,28	37,57	26,50	24,03	41,80
1997	24,41	30,80	31,31	26,01	33,03	11,84	38,55	41,83
1998	23,06	27,37	28,83	28,83	38,56	23,69	29,29	40,52
1999	26,50	23,11	21,37	23,16	28,17	31,82	26,23	49,62
2000	35,49	35,40	20,22	38,43	20,94	24,18	26,43	36,23
2001	21,33	26,24	26,97	31,36	19,42	27,08	26,35	38,39
2002	20,32	29,38	25,28	32,52	21,05	41,71	23,36	50,04
2003	20,04	30,17	24,51	25,17	22,35	38,82	25,11	45,67
2004	19,05	27,39	21,14	44,42	21,58	30,87	31,81	32,19
2005	19,67	23,16	20,53	36,05	19,98	27,44	24,05	34,05
2006	18,93	22,21	23,21	37,70	19,30	28,46	26,95	30,71
2007	19,73	24,54	23,58	37,15	17,26	29,28	25,67	31,52
2008	22,08	25,88	19,17	36,86	16,64	26,97	24,36	31,45
2009	20,94	23,23	18,96	39,56	19,45	25,70	19,95	35,32
Mean	24,34	27,58	25,08	32,38	28,20	30,70	28,22	38,27
Std.Dev.	5,47	3,99	5,37	6,67	11,57	9,58	5,46	6,00
Change %	-30,48	-34,63	-33,20	61,82	-58,31	-45,70	-48,14	-1,54

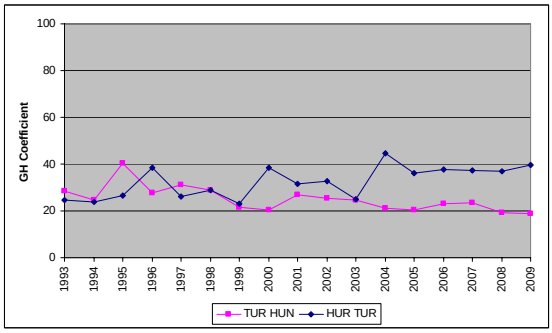
Considering averages of the diversification levels recorded between 1993-2009 for mutual trades between transition economies and Turkey, it is seen that GH coefficient' averages regarding exports of Turkey to each country are lower than the averages of the partner countries. This refers that Turkey outperforms in mutual trades in terms of product diversification. Considering percentage alteration from the initial year to the end year, it is seen that between Turkey – Czech Republic and Turkey – Poland,the level of product-based diversification of bilateral trades, while moderately fluctuating, increased. Regarding changes between Turkey and Hungary, diversification levels of Turkey increases whereas that of Hungary decreases. Turkey shows a higher diversification performance compared to its partner relating to the trade between Turkey and Slovakia.



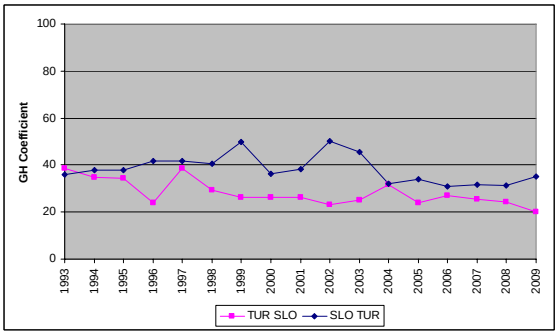
Graph 2 Change of diversification level between TUR and CZ



Graph 3 Change of diversification level between TUR and PL



Graph 4 Change of diversification level between TUR and HUN



Graph 5 Change of diversification level between TUR and SLO

4. Conclusion

This study is focused on diversification which is one of the elements providing increase and sustainability in export incomes promoting economical growth. In this context, total exports of Turkey with four transition countries and these countries' trade with Turkey are analyzed with respect to level of diversification by years. As stated in the results, diversification coefficient (GH) of the total export is in the range of 10-20 whereas this figure rises to the range of 20-40 when it comes to mutual exports. In other words, diversification performance seen in total export is not met in mutual exportation. However, it can be argued that total exportation

made to entire world to be relatively higher in terms of diversification level. The important indication in this respect is the direction of diversification levels' change within time. Taking the issue in this point, negative changes amounting 40-50% in total exports of the countries, except Poland, is observed whereas there is a positive change of 30-40% in diversification levels of these transition countries' export to Turkey, except Hungary. A difference in diversification changes between transition countries and Turkey implies that their trade outperforms with Turkey compared to their trade with the World.

On the other hand, amount of target market demands is effective on diversification levels and therefore, this constraint should be taken into consideration while interpreting the results. For example, it can be argued that levels of diversification should be higher towards a populated country with high GDP, as an export market, compared to a relatively small country. It is seen that averages of GH coefficients regarding exports from Turkey to regional countries are lower than that of the averages of GH coefficients averages for trade towards Turkey. In other words, considering relatively small size of the markets compared to Turkish markets, Turkey outperformed compared to its partners in terms of diversifications. Results obtained in the study should be analyzed within the frame of data and methodology employed. It is needed for further studies to examine factors that may affect change of diversification levels by using different diversification types and measurement methods.

References:

[1] SVEJNAR, J., UVALIC, M. *The Czech Transition the Importance of Microeconomic Fundamentals*, World Institution for Development Economic Research, 2009

[2] BENÁČEK, V. *History of Czech Economic and Political Alignments Viewed As a Transition Small Countries in a Global Economy.* Palgrave/Macmillan, New York, Chapter 4, p. 133–154, 2001

[3] SAMEN, S. *Export Development, Diversification, And Competitiveness: How Some Developing Countries Got It Right*, Growth And Crisis Unit World Bank Institute, p.1–28, 2010

[4] MICHAELY, M. Concentration of Exports and Imports: An International Comparison. *The Economic Journal*, Vol. 68 / 272, p. 722–736, 1958

[5] WILHELMS, C. Export Diversification in Latin America, *Intereconomics*, Vol. 2/2, p. 46–48, 1967

[6] MACBEAN, I, A., NGUYEN, D. T. Commodity Concentration and Export Earnings Instability: A Mathematical Analysis, *The Economic Journal*, Vol. 90 / 358, p. 354–362, 1980

[7] AL-MARHUBI, F. Export Diversification and Growth: An Empirical Investigation. *Applied Economics Letters*, no 7, p. 559–62, 2000

[8] KLINGER, B., LEDERMAN, D. Discovery and Development: An Empirical Exploration of 'New' Products, *World Bank Policy Research Working Paper No. 3450,* p.1–48, 2004

[9] AGOSIN, M. R., BRAVO-ORTEGA, C. The Emergence of New Successful Export Activities in Chile. *Latin American Research Network*, Inter-American Development Bank, Washington, 2007

[10] TARIQ, A., NAJEEB, Q. Export Earnings Instability in Pakistan, *The Pakistan Development Review 34*: 4 Part III (Winter 1995) pp. 1181—1189

[11] United Nations Commodity Trade Statistics Database http://comtrade.un.org/db/)

[12] ANSOFF, I. Strategies for Diversification, *Harvard Business Review*, Vol. 35 Issue 5, pp.113-124, 1957

ICT INVESTMENTS IN SMALL AND MEDIUM ENTERPRISES THAT OPERATE IN A LOCAL CONTEXT

Domenico Consoli
University of Urbino
domenico.consoli@uniurb.it

***Key words*:**
information communication technology – small medium enterprises – application software – web technology – software as a service

Abstract:
The aim of the paper is both to analyse investments in ICT infrastructure of a selected sample of manufacturing Small Medium Enterprises (SMEs) that operate in a local context and to understand if manager-owners consider ICT as a driver of innovation and as strategic tools to acquire competitive advantages. To reduce enterprise's costs it is important that managers implement, inside the organization, advanced services such as Cloud Computing and Software as a Service (SaaS). To improve product/service and increase customer satisfaction, the web 2.0 technology is a strategic solution.

Introduction

In this paper we analyse ICT investments of a sample of SMEs in a local context to compare with the state of art in the country. Literature shows that companies' owners invest in ICT infrastructure but without any planning. In fact, owner generally not spends time on aligning ICT to business strategy and management teams have little experience and skill in exploiting ICT potentiality. However managers understood that to acquire competitive advantages it is important to innovate in new technologies; the enterprise innovation is reflected also on the growth of the country.

The main criteria adopted, on selection of the sample, was the presence or not, inside organizations, of the Chief Information Officer (CIO) and the dimension of enterprises.

The structure of the paper is the following: in next section we show ICT investments in SMEs. Then we describe a research methodology and illustrate the findings. At the end, analysing the results, some conclusion is drawn.

ICT investments in SMEs

The share of SMEs (until to 249 employees and turnover until to 50 million) is high in all European countries with peaks of 99.9% in Spain and in Italy [1, 150]. SMEs in Italy use the 78.1% of employed in manufacturing, while in France and Germany the percentage is around 50%.

In recent years, in Italy more than other countries, the IT market has been a decrease of 8.1% [2, 214] for the lacking of a technological managerial culture, the difficult on access to credit and lower propensity to innovation and internationalization of SMEs.

The basic computerization of enterprises is high. Internet and PC are present in almost all large enterprise. In the case of enterprises with less than 10 employees, the presence of PC was only the 61%; in 2009 the percentage rose to 96.2% [3, 318]. The heterogeneity is reflected on the presence of the corporate web site: 56.4% in small enterprises (10-49 employees) and 88, 9% in large enterprise. In 2009, the 93.3% of small and the 98.6% of medium enterprises had an Internet connection. The power of Internet are not fully exploited by SMEs that use the web only for basic functions (e.g. e-mail and browsing) and ignore the strategies for collaboration and communication inside and outside the enterprise.

Micro and small businesses seldom use online sales. There is a resistance to adopt tools of e-commerce: 5.5% of enterprises, with at least 10 employees (in 2008 the percentage were about 3%). In the rest of Europe the percentage rises to 13%. Enterprises of North Italy are still using more Internet as an alternative channel to traditional sales.

There has been a greater openness of SMEs in Supply Chain Management solutions but only the 12% of SMEs uses basic tools [1, 211]; the percentage decreases in Business Intelligence applications.

Regarding access to data in a mobility context [2, 215] only 18.3% of small enterprises use connections by cell phone (GSM, UMTS) and the 39.4% of medium enterprises use with the latest phones generation.

Inside organizations, the solutions most used are ERP, Product Lifecycle Management and Computer Aided technologies (CAD/CAM/CAE).

Investments in ERP and CRM grow according the number of employees. SMEs invest more in ERP than CRM because ERP allows them to standardize administrative processes and the management of production cycle. The presence of CRM systems is limited especially in small companies that are more focused on product rather than on customer relationship.

The diffusion of web 2.0 tools in SMEs is reduced. The Observatory Tedis [4, 2] on a sample of 1.003 SMEs showed that projects that use web 2.0 tools are still pioneering. These tools are used from 1 to 2% of SMEs. Only few cases, driven by the entrepreneur or marketing manager, build virtual communities around the brand [5, 403].

Generally entrepreneurs/managers of SMEs think to ICT as a lever for reducing costs and improving product quality but in times of crisis they should think to an ideal lever to build, in a context of global market, a technological infrastructure to support innovation, quality and new product development. ICT is as a commodity, an energy that supports, in all sectors, innovation, change and competitiveness. ICT supports business intelligence, adaptive networks of business, collaborative relationship, co-operation and customer demand.

Virtualization, Cloud Computing, Web 2.0, Unified Communication & Collaboration, Business Intelligence, Mobility technologies are the top technology priorities expressed, in the world, by 1500-1600 Chief Information Officers (CIO) in the Gartner EXP survey [6, 4].

Research methodology

In this paper we considered preliminary interviews to four selected SMEs. The aim of preliminary interviews, based on a semi-structured questionnaire, was to gather owner-managers opinions on recent technological investments. Furthermore preliminary interviews allow to us to better define the questionnaire to send to whole sample in the next quantitative research; at the moment we have conducted just a qualitative research. In order to select companies for the preliminary interviews we have chosen the criteria of CIO and the enterprise‘s dimension. Two companies have an internal Information Unit, one company has the availability of an external ICT consultant and other one nothing. Two companies are small and the other two are medium-sized enterprises.

Research findings

In enterprises with internal Chief Information Officer (CIO), there is more coordination in the management of information flow across the various business functions and in the knowledge management. These enterprises make technological investments planned. Companies with an external consultant or without CIO not considered important the chief of IT unit but now they understand that this figure, inside company, is essential.

All interviewed companies have an ERP so personalized that it’s difficult to replace it with other systems. As manufacturing companies, use many CAD/CAM/CAE solutions. Since the design of mechanical/electronic parts is their core business someone is thinking to change the software with higher-level packages.

In terms of Business Intelligence, only companies with CIOs, have independent applications linked to ERP and other ones use internal reports of management software. All firms don’t use CRM but only phone/e-mail or direct contact with customers.

As internal/external communications they use analogue telephone in fixed/mobile modality and they don’t use Unified Communications with Voice Over Internet Protocol (VOIP) that integrate voice-data-images.

All companies interviewed want to invest in digital archiving for the de-materialization. Currently they do scanning and indexing of outgoing faxes. Electronic Data Interchange (EDI), is used for principal and structured customers and for public administration like financial practices and payments of taxes. With other customers, at present, companies exchange orders and invoices in PDF format. All enterprises have specialized servers (printer/plotter, e-mail, faxes and

documents). Someone has introduced the Virtualization but nobody uses Cloud Computing or Software as a Service (SaaS).

No company use Web 2.0 tools (blogs, chat rooms, forums, wikis) or belong to a social networking (Facebook, YouTube, Flickr, Twitter, ..) [7, 3], [8, 23] In the future, someone wants make available, by web, parts of information system such as orders management and tracking and queries for product's availability. The manager/entrepreneur wants to invest only in useful projects that meet certain requirements and where there is an immediate Return on Investment (ROI). All manager-owners ask a more facility on access to credit.

Concluding remarks and discussion

The structural reasons of minor investment in ICT (-8.1%), in Italy and also in all countries, is due both to great weight, percentage of SMEs which tend to be conservative and to small demand in innovation and internalization.

The ICT is a driver of innovation. ICT means more productivity, more innovation, more ability to stimulate the development, more capability to react to crisis, more capacity to meet the challenge of global competition. ICT is useful to improve innovation and quality, to launch new products or to devise a new way to negotiate in the market.

ICT is a strategic lever that must be managed at the top management level and therefore it requires certain sensitivity from senior management. It is important that the manager have a technological culture. So for competitivity, the main problem is not the amplitude of ICT investment buts the culture of the entrepreneur/manager.

Entrepreneurs must see technological investments as a strategic asset for business goals and they must know all possible developments and opportunities of new technology. Nowadays instead entrepreneurs and managers of a small/medium enterprise see ICT as simply tools to reduce costs in certain areas and not to support the strategic business in the middle-long term. For them it is important just calculate the ROI of investments in the short term.

Instead SMEs and mainly small enterprises could obtain competitive advantages from new and advanced services. For example in cloud modality, is through a simple browser from anywhere places and also with a smartphone cell, it is possible to use application and services of information system. In the future, the number of mobiles will surpass the number of PC and therefore the implementation of a wireless multimedia platform for enterprise goals will become a reality.

It is important to exploit external services of Cloud Computing and SaaS, especially for small firms that don't have internal CIO. This will cut down the initial cost concerning hardware/software, installation, maintenance and technical specialists. All these applications are provided as payment services. The cost, such as electricity or water, will be proportional to consumption. It is expected that in 2012, with virtualization and cloud computing, the 20% of enterprises, including SMEs, will do outsourcing of IT assets. It is important also to invest in social networking even

for BtoB companies that don't work directly with end customers. Social networking and web 2.0 give greater weight to the voice of customer [9, 2310] [10, 2] and initially the investment is not expensive because it is possible to use open source tools. Customers use interactive channels for discussing with other consumers to acquire information about features, quality and price of product/service and for expressing reviews and opinions on products/services. Customer opinions, enterprise reputation and word of mouth on the web are useful for purchasing decisions, for improving products/services and can determine the success or failure of a company.

References:

[1] Assinform (2009), *Assinform Report*, 40th edition, Milan, 2009.

[2] Assinform (2010), *Assinform Report*, 41th edition, Milan, 2010.

[3] Assinform (2008), *Assinform Report*, 39th edition, Milan, 2008.

[4] Tedis, Venice International University. *Web e Social Media: le terre di mezzo della comunicazione di impresa*, 2009.

[5] DEROSE, P., SHEN, W., CHEN. F., DOAN, A., RAMAKRISHNAN, R. (2007). *Building structured web community portals: a top-down, compositional and incremental approach*. In Proc. of 33th ICVLDB (Vienna, September 23 – 27), pp. 399-410.

[6] GARTNER (2010). *Gartner EXP Worldwide Survey*. Stamford, Conn., January 19, 2010

[7] O'REILLY, T (2005). *What is Web 2.0. Design Patterns and Business Models for the Next Generation of Software*. 2005, September, 30, O'Reilly Media Inc. Available online: http://oreilly.com/web2/archive/what-is-web-20.html.

[8] McAFEE, A. (2006). *Enterprise 2.0: The Dawn of Emergent Collaboration*. In Sloan Management Review, Spring , Vol. 47, n. 3, pp. 21-28

[9] CHO, Y., IM, I., HILTZ, R., FJERMESTAD, J. (2002). *An analysis of online customer complaints: implications for web complaint management*. In Proceedings of the 35th Hawaii International Conference on System Sciences, IEEE, pp. 2308–2317.

[10] PARK, D., KIM, S.(2008). *The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews*. Electron. Commer. Rec.

Appl., (7), 4, 399-410.

INFLUENCE OF THE CRISIS ON THE TAX POLICY IN THE EU COUNTRIES

Ryta I. Dziemianowicz
University of Bialystok
r.dziemianowicz@uwb.edu.pl

***Keywords*:**
tax policy – tax structures – tax revenues

Abstract:
Taxes are important instrument of the economic policy; therefore most EU countries are not interested in resignation from the country's sovereignty within this scope. Proper constitution of taxes makes it possible to gain comparative advantage in comparison with other countries. It is important especially during the crisis. The article analyzes the premises of shaping the present tax policy in EU countries, with particular attention paid to years 2009-2010.

1. Introduction

The goal of the tax policy, apart from ensuring the appropriate incomes that allow funding the country's activity, is to guarantee the possibility to realize various social-economic goals. The solutions used when constructing tax system undoubtedly decide about the condition of the public finances, fiscal stringency level or functioning of the particular economy. Therefore, the modern "creators" of tax policy face many problems. On one hand they have to fund constantly growing needs of their citizens within the scope of goods and public services provided by the country, and hence increase the fiscal capacity due to the individual tax titles, on the other hand they have to use such system solutions which would allow for stable development of particular economies. The global crisis turned out to be additional challenge, its negative effects, according to many theorists but also practitioners may be mitigated by the properly realized tax policy. Similar problems are also faced by the European Union which, as integration grouping, admittedly requires coordination within the framework of taxes "harmonization", however, the scope of this coordination in relation to particular fiscal burdens is very diverse, which consequently leads to realization of diversified tax policies by the member countries. The aim of the study is to analyze the premises of shaping the present tax policy and to present the actions taken within this scope in the EU member countries during 2009-2010.

2. Factors affecting the modern tax policy in the EU

The actions of the European Union concerning the tax policy are based on two basic principles: subsidiarity (in other words helpfulness) and proportionality. In accordance with the subsidiarity principle, only those decisions are taken on the EU

level, which, when transferred to the EU level, guarantee higher effectiveness and efficiency. Therefore, EU institutions have no right to independently create and levy taxes, they are only the coordinator within the scope of compliance of tax policy with the EU goals. The tax policy of particular members of the union lies within their competence, is sovereign, of national nature and can be individually modelled depending on the needs and the level of development of the particular economy. This is particularly important, for example during a global crisis, when it may be used to mitigate its effects. The proportionality principle means that the actions necessary on the essential minimum level which will make it possible to achieve goals assumed by the union should be taken on the EU level. Common tax policy includes [2, 34-36]:

- harmonization of the level of tax rates and elimination of differences in the structure of indirect taxes which could negatively influence the competition within the frameworks of common market (it mainly concerns the value-added tax and excise taxes);
- regulations concerning the prevention of double taxation due to the direct taxes and evading from them (e.g. selected aspects of taxation of companies);
- regulations concerning the prevention of destructive effects of tax competition.

3. Level and the structure of tax burdens in EU

The present EU tax system consists of 27 national tax systems of member countries. Their main pillars are direct taxes: income (CIT and PIT) and indirect taxes including: VAT and excise tax (Table 1). Total fiscal burden in EU together with the National Insurance Contributions is relatively high. The total fiscal burden in relation to the GDP averaged 39.3% in 2008 and was more than one-third higher than in USA and Japan and 4.5 percentage point higher than the arithmetic average of the OECD. At the same time there are clear differences between the particular member countries of EU, both within the scope of taxation level and the income structure due to particular titles, particularly high diversity is between old and new EU members. In 2008, EU fiscal burdens in relation to GDP shaped in the range from 28.0% in Romania to 48.2% in Denmark. Direct taxes dominate in the structure of tax incomes in the countries of the so-called old union (EU-15), however the indirect taxes [3, 292-312] dominate in case of the new adopted members. It should be emphasized that the burdens in relation to GDP do not always reflect the actual amount of fiscal burdens in particular country. Some countries included many concessions and releases in the acts which lead to the reduction of burdens; however, it is not reflected in the aforementioned statistics.

TAB. 1: Level and the structure of fiscal burdens together with social contributions in EU-27 during 2000-2008 (as % of GDP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total taxes	40.6	39.7	39.2	39.1	38.9	39.2	39.8	39.7	39.3
Direct taxes	13.9	13.5	13.0	12.7	12.7	12.9	13.4	13.5	13.5
Indirect taxes	14.0	13.6	13.6	13.6	13.6	13.7	13.9	13.8	13.4
Social contributions	12.7	12.6	12.6	12.8	12.6	12.6	12.5	12.4	12.4

Source: Prepared by the author on the basis of [3, 202-312].

4. Directions of changes in the tax policy in EU during 2009-2010

The global crisis caused the essential decrease of public incomes and made governments of many EU countries face the difficult choice: to introduce the solutions leading to increase of current tax incomes or to introduce a number of changes in the structures of particular taxes which would aim at motivating the tax payers to be active and therefore also stimulating the economies as well as increasing the public incomes in the future. Therefore, in 2009, many EU member countries decided to change the previously realized tax policy. However, those were neither harmonized actions, nor unidirectional ones, they tended to be more bipolar. Some of the EU countries, remembering that the improperly conducted tax policy may lead to limitation and inhibition of the development of the companies and consequently to the destruction of tax sources and decrease of income from that, decided to adopt the solution leading mainly to the inhibition of decrease of economic growth and at the same time to decrease the economic situation. Other countries, facing the necessity to increase incomes of the budget and decrease the deficit, introduced changes which aimed primarily to increase current tax income by increasing tax rates or tightening the tax system. The new regulations concerned mainly the income taxes (CIP and PIT) as well as VAT.

TAB. 2: Changes in the tax policy of EU countries during 2009-2010

	CIT	
	Base or special regimes	**Rates**
Increase	2009	
	Ireland, Greece (2009-2013), Italy, Lithuania (2009-2011)	Lithuania
	2010	
	Belgium, Bulgaria, Hungary	Hungary
Decrease	2009	
	Austria, Germany, Netherlands, Portugal, Romania, Poland, Spain (2009-2011), UK (2009-2011)	Czech Republic, Luxembourg, Slovenia, Sweden

Decrease	2010	
	Austria, Belgium, (2010-2011), Germany, Lithuania, Netherlands, Romania, Slovakia	Czech Republic, Hungary, Lithuania, Greece (2010-2013), Slovenia
PIT		
	Base or special regimes	**Rates**
Increase	2009	
	Greece, Ireland, Lithuania	Greece, Ireland
	2010	
	Denmark, Estonia, Greece, Hungary, Latvia, Portugal, Spain	France, Greece, Latvia, Portugal, Slovenia, UK
Decrease	2009	
	Austria, Belgium, Bulgaria, Finland, Denmark, Hungary, Ireland, Italy, Latvia, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Estonia, Sweden	Austria, France, Finland, Germany, Hungary, Latvia, Lithuania, Romania
	2010	
	Bulgaria, Denmark, Finland, Germany, Hungary, Italy, Romania, Slovakia, Slovenia, Sweden	Denmark, Finland, Germany, Hungary
VAT		
	Base or special regimes	**Rates**
Increase	2009	
	Estonia, Latvia, Lithuania	Estonia, Hungary, Latvia, Lithuania
	2010	
		Czech Republic, Finland, Greece, Spain
Decrease	2009	
	Belgium, Cyprus, France, Malta, Romania	Finland, UK (12.2008-2009)
	2010	
	Belgium, Cyprus, Germany, Finland, Hungary, Lithuania, Netherlands, Slovenia	Denmark, Spain, Sweden

Source: [3, 28-29].

Domination of changes leading to the improvement of economic situation can be noted in most EU countries, often at the expense of the current public incomes. During 2009-2010, many countries decided to decrease the taxes on labour and capital. The rates of the tax burdening the incomes of the companies (CIT) were decreased in four countries in 2009, in five countries in 2010. Respectively, the rates of the tax burdening the personal incomes (PIT) were decreased in eight and four member countries. First of all, however, a series of actions leading to a reduction in the tax base were taken. Within the frameworks of those actions, among others, the Catalogue of Releases was expanded, the tax thresholds were increased, the higher limits of deductions were introduced and in the case of companies – the depreciation rates were increased, the period for loss settlement was lengthened, the changes in the Catalogue of Expenses qualified as the tax deductible expenses were introduced, the possibility of deferment of tax was introduced in order to maintain the company's activity (e.g. in Germany). Some EU countries took opposed actions, their goal was mainly the growth of current budget incomes, therefore they decided to increase the tax rates and expand tax base. For example, in 2010 in Greece the progressiveness of PIT was increased, nine tax thresholds were introduced instead of previous four, and the incomes amounting to more that EUR 100.00 were charged with 45% rate (in 2009 the highest rate amounted to 40% and was charged on the incomes amounting to more than EUR 75.000), the tax releases were also resigned from. The only EU member country which decided to increase the CIT rate in 2010 - from 16% to 19%– was Hungary. To a lesser extent the changes related to VAT tax, however, the actions taken in this area were also not uniform. In 2010, some of the EU member countries decided to increase the basic VAT rates, other decided to increase them temporarily. For example, in Spain the base rate was increased from 16% to 18% and the decreased rate from 7% to 8% from 1st of July 2010. Several new solutions leading to an increase in the base of this tax, or inversely to its narrowing, were introduced.

5. Summary

The assessment of effectiveness of changes in tax policy in the particular EU countries during the crisis in 2009-2010 is determined by the macroeconomic effects and therefore it is not possible to be made in such short period of time. Taxes are important instrument of economic policy, therefore most EU countries are not interested in resignation from the country's sovereignty within this scope. Proper constitution of taxes makes it possible to gain comparative advantage in comparison with other countries. Therefore, it may be concluded that the tax policy should be relative, determined by the needs and the condition of the particular economy, and the country's task is to introduce such legal-tax solutions which are not only effective but also positively affect the economy. This is of particular importance in conditions of economic crisis, when policy-makers, keeping in mind that the amount of taxes is not indifferent for the economy and affects its competitiveness, must demonstrate not only knowledge of the theory, but also some kind of "visionarity". There is always the danger of crossing the limit of taxation

and fiscal possibilities of the country, which may consequently influence both economic growth as well as the amount of public incomes.

References:

[1] NORREGAARD, J., KHAN, T. S. *Tax Policy: Recent Trends and Coming Challenges*. IMF 2007, Working Paper WP/07/274, 61 s.

[2] ORĘZIAK, L. *Konkurencja podatkowa i harmonizacja podatków w ramach Unii Europejskiej. Implikacje dla Polski.* Oficyna Wydawnicza Wyższej Szkoły Handlu i Prawa, Warszawa 2007, s. 34-36. ISBN 9788360694046

[3] *Taxation trends in the European Union*, European Commission Taxation and Customs Union, Luxembourg 2010, 430 s.

EMPLOYMENT IN ENTITIES WITH FOREIGN CAPITAL - THE EXPERIENCE OF THE EASTERN POLAND MACROREGION

Agnieszka Ertman
University of Bialystok
agnieszka.ertman@gmail.com

Key words:
entities with foreign capital – the Eastern Poland Macroregion – employment

Abstract:
The Eastern Poland Macroregion covers 5 voivodships (provinces): Warminsko-Mazurskie, Podlaskie, Lubelskie, Podkarpackie, and Swietokrzyskie. All these regions belong to the group of voivodships that show the lowest level of economic development in Poland. Despite of its peripheral character, the Eastern Poland Macroregion participates in the international capital flow in the FDI form as its net importer. As a result, companies with foreign capital are present in the voivodships of Eastern Poland. The article presents an analysis of employment tendencies as regards foreign capital entities in Eastern Poland as compared to the trends noted in the entire Poland. Moreover, the article attempts to answer the question whether the presence of foreign capital in Eastern Poland enhances improvement of the local labour market.

The Labour Market in Eastern Poland – selected issues

The term 'Eastern Poland' appeared along with the financial perspective of 2007-2013, when a special operational programme was presented for the least developed Polish regions. The programme was called the Operational Programme Development of Eastern Poland (OP DEP). The Eastern Poland Macroregion covers five voivodships that are distinguished not only in geographical terms, but also differ from other regions of Poland with other features, especially economic development. These voivodships include the following: Warminsko-Mazurskie, Podlaskie, Lubelskie, Podkarpackie, and Swietokrzyskie.

The measurement of labour market efficiency and flexibility of its workforce is the unemployment rate [1, p. 17]. As regards this measurement, the labour market of Podlaskie Voivodship seems to be the closest to the overall national labour market. In 2008 both the registered and long-term unemployment rates did not differ from the country's average by more than 0.2 of a percentage point. This positive result, however, is related to the structure of Podlasie's economy. It is dominated by the agricultural sector, which accommodates the surplus of the unemployed and creates hidden unemployment, thus contributing to incomplete use of work resources in rural areas. As regards the remaining four voivodships the unemployment rate was considerably higher than the country's average which amounts to 9.5% in 2008. A

particularly difficult situation was registered in Warminsko-Mazurskie Voivodship. The unemployment rate is the highest there due to the history of state-owned farms as well as due to poor professional qualifications of the inhabitants.

TAB. 1: Rates describing the labour market in Eastern Poland by voivodship as compared to Poland in general – 2008

	Registered unemployment rate (in %)	Long-term unemployment rate (in %)	U/V Ratio
Poland	9.5	4.8	49
Lubelskie	11.2	6.4	178
Podkarpackie	13.0	7.2	176
Podlaskie	9.7	4.9	168
Swiętokrzyskie	13.7	8.1	178
Warmińsko-Mazurskie	16.8	8.5	327

Source: own work based on : Statistical Yearbook of Voivodships 2009, Central Statistical Office (GUS), Warsaw 2009, pp. 281 and 290.

What is characteristic about the labour market in the Eastern Poland Macroregion is a relatively high proportion of the number of unemployed to job vacancies, i.e. the so-called unemployment-vacancy ratio (U/V ratio). On average in Poland there are 49 unemployed persons per one job offer, whereas in the voivodships of Eastern Poland there are almost four times more. Even in Podlaskie Voivodship, where the unemployment rate does not differ significantly from the country's average, the U/V ratio is 168 unemployed per one job offer. However, the most difficult situation is encountered in Warminsko-Mazurskie Voivodship with its U/V ratio amounting to 327 in 2008. Such values of the U/V measurement indicate unquestionably a relatively low number of job offers and vacancies created in the region. [2, p. 56-57].

The eastern part of Poland is less advanced in the structural changes in the economy and labour market. Therefore all the voivodships of the Macroregion are still facing challenges of fundamental character. These will primarily result from the significance of agriculture in the Macroregion's economy, poorer than in other parts of Poland development of market services, a large number of families highly depending on social benefits and long-term unemployment.[3, p.29] From the perspective of the labour market the weaknesses seem to include a low level of urbanization and disadvantageous place network with respect to the size, density and economic and infrastructural potential. Lack of urban development leaders does not help to improve employment there. Moreover, permanent improvements in the Macroregion's labour market are not possible without modernization of the economy of Eastern Poland.[3, p.29 and 60].

Employment in Entities with Foreign Capital in Eastern Poland

Pursuing the aim of the foregoing paper which comprises in an analysis of the employment tendencies in entities with foreign capital located in Eastern Poland, the stress is placed on the analysis of the changes in the number of entities with foreign capital and their employees in the Eastern Poland in the years 2005-2008 as compared to the whole country. It also focuses on the analysis of the average employment in entities with foreign capital and the share of the entities with foreign capital in overall employment in the region. The analyses involve a division of entities into categories depending on the number of employees[1].

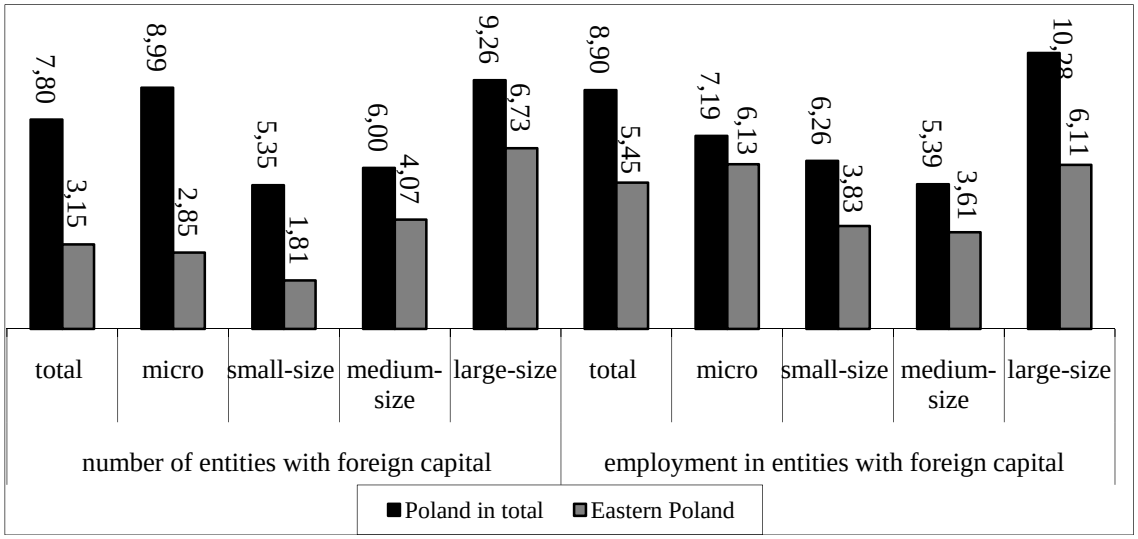
Of all the statistical data available on direct investments in Poland the data of the Central Statistical Office (GUS) was used. This institution examines companies with foreign capital and provides information on the number and structure of entities with foreign capital, employment, and their financial results.[2]

According to the Central Statistical Office, by the end of 2008 there were 1228 entities with foreign capital registered in the voivodships of Eastern Poland. This made only 5.8% of the total number of these entities in Poland. In the years 2005-2008 the number of entities with foreign capital in Eastern Poland showed a lower growth rate than their total number in Poland – by 3.15% annually on average as compared to 7.80% in the whole country. This means that investors were more inclined to choose regions other than Eastern Poland to register their offices.

[1] The following division was used: 1). Entities employing up to 9 persons (included) – microenterprise; 2). Entities employing from 10 to 49(included) – small-size enterprise; 3). Entities employing from 50 to 249 persons – medium-size enterprise ; 4). Entities employing over 250 persons and more – large-size enterprise.

[2] Another leading statistics providers on direct foreign investment are: the National Bank of Poland and the Polish Information and Foreign Investment Agency.

Diagram 1 **Average annual growth rate in the number of entities with foreign capital and number of their employees in Eastern Poland in the years 2005-2008 as compared to the country's total (in %)**



Source: own work based on: Economic Activity of Entities with Foreign Capital 2006-2008, the Central Statistical Office (GUS)

Employment in entities with foreign capital is a function of the number of existing entities with such capital. Thus, the tendencies in shaping the number of these entities have a direct influence on employment processes. In 2008 the entities with foreign capital in Eastern Poland employed a total of 109141 persons. This number increased by over 16 thousand from 2005, when there were 93085 people employed in entities with foreign capital. This, in turn, generated an increase in the employment in the entities with foreign capital in Eastern Poland by almost 5.5% annually on average. This increase, however, was lower than in Poland in general by over 3 percentage points. The employment in Easter Poland showed a lower growth rate in comparison to other parts of Poland, regardless of the size of an entity with foreign capital. In the voivodships of Eastern Poland the employment growth rate was highest in micro- and large-size enterprises.

In 2008 Podkarpackie Voivodship had almost 41% of the overall employment in entities with foreign capital in Eastern Poland. The advantage of Podkarpackie Voivodship over the other regions results mostly from its higher number of large enterprises. Influential foreign investors that have a great potential to create work places are attracted by the aviation industry and the so called Aviation Valley that exists there. The next to make the structure of voivodships as regards employment in entities with foreign capital were the following: Lubelskie (19.8%), Swietokrzyskie (16%), Warminsko-Mazurskie (13.9), and Podlaskie (9.3%).

TAB. 2: Average employment in entities with foreign capital in Eastern Poland as compared to the country's total in the years 2005-2008

	Eastern Poland				Poland in total			
	2005	2006	2007	2008	2005	2006	2007	2008
Total entities	83	86	90	89	70	73	79	73
Micro enterprises	2	2	2	3	3	3	3	3
Small-size enterprises	23	24	24	24	23	23	23	23
Medium- size enterprises	125	119	123	123	116	115	115	114
Large- size enterprises	749	669	743	736	906	917	945	931

Source: own work based on: Economic Activity of Entities with Foreign Capital 2006-2008, the Central Statistical Office

Average employment in entities with foreign capital is higher in Eastern Poland than in the whole country, but this indicator in case of micro enterprises and small-size enterprises appears to reach a level similar to that in the whole Poland. Differences, however, are noticeable in medium and large-size enterprises. Large-size enterprises located in Eastern Poland employ almost 200 employees less than enterprises of the same category in Poland in general. This means that the largest investments create fewer work places than in other parts of Poland. Opposite tendencies can be seen in medium-size enterprises. In this category it is Eastern Poland that achieves average employment higher than other regions.

Based on the proportion of the employed in entities with foreign capital to the total number of the employed it can be stated that entities with foreign capital do not belong to the leading employers in the Macroregion. In 2008 these entities employed almost 4% of the total number of employees working in Eastern Poland, whereas the country's average amounted to over 11%. The highest rate was registered in Podkarpackie Voivodship (6.5%), the lowest in Lubelskie and Podlaskie Voivodships 2.8% and 2.4% respectively. Such shaping of the number of the employed in entities with foreign capital in relation to the total number of employed indicates an insignificant role of foreign capital in solving the problems of local labour market yet, and in fighting unemployment in particular.

Summary

The volume of employment in companies with foreign capital and their share in total employment in Eastern Poland appears to be relatively small. This mostly results from hardy any presence of large investors in Eastern Poland. If such investors do appear, they create fewer jobs than in other regions of the country. In

Eastern Poland small investors dominate and their potential to create jobs is limited. A relatively small number of entities with foreign capital in Eastern Poland combined with their lower rate of job creation than in case of other regions of Poland make the influence of foreign capital on the regional labour market still inconsiderable

References:

[1] BRONISZ, U. Ekonomiczne aspekty konkurencyjności wschodnich regionów Polski, [w:] B. Plawgo (red.), *Polska Wschodnia – zarządzanie rozwojem*, Wyższa Szkoła Administracji Publicznej im. Stanisława Staszica w Białymstoku, Białystok 2008, p. 17, ISBN 978-83-60772-08-9

[2] KRYŃSKA, E. (red.), KWIATKOWSKI, E., KUCHARSKI, L. *Prognoza podaży i popytu na pracę w województwie podlaskim,* Wyższa Szkoła Ekonomiczna w Białymstoku, Instytut Pracy i spraw Socjalnych w Warszawie, Białystok – Warszawa 2010, pp. 56-57, ISBN 978-83-61247-17-3

[3] Expertise conducted for the Ministry of Regional Development for the purposes of developing 'The Strategy of Social and Economic Development of Eastern Poland till 2020" T. 1, the Ministry of Regional Development, Warsaw 2007, pp. 29-60, ISBN 978-83-60916-50-6

[4] Statistical Yearbook of Voivodships 2009, GUS, Warsaw 2009, pp. 281 and 290, ISSN 1230-5820

[5] Economic Activity of Entities with Foreign Capital in 2006, GUS, Warsaw 2007, p. 28, ISSN 1896 – 9844

[6] Economic Activity of Entities with Foreign Capital in 2007, GUS, Warsaw 2008, ISSN 1896 – 9844

[7] Economic Activity of Entities with Foreign Capital in 2008, GUS, Warsaw 2009, ISSN 1896 - 9844

PRIORITIES ECONOMY MODERNIZATION IN THE REGION OF PODKARPACIA

Roman Fedan, Marek Smoleń
University of Rzeszów
m_smolen@poczta.onet.pl

Key words
region – modernization – strategy – priorities – development

Abstract:
For the region, especially important are EU resources funding development of entrepreneurship, and stimulating development of businesses. Realization of projects financed from EU resources was in 2009 an important factor of the positive economic growth in the region of Podkarpacie. Dynamism of own market development and increasing of the sales level of products manufactured by enterprises and of services are possible thanks to reaching domestic and foreign customers through the effect of activity diversification and introduction of innovative products on the market.

Introduction

The integration process of Poland with the countries of the European Union, liberalization of trade, and intensifying globalization processes enforce necessity of fast adaptation of Polish enterprises to changed conditions of the surrounding, where they have already started to perform. Adaptation of native businesses runs in many fields and it should aim at enhancing their competitiveness, growth of export and use of domestic and EU capital for development acceleration of the sector of small and medium enterprises. The changes occurring in enterprises are influenced by various local contexts – co-operation of local governments with small and medium enterprises should aim at shaping the most reasonable management model for such businesses in economies of regions. Mutual co-operation also concerns marketing, and especially promotion of firms and regions [3, 177].

Regional policy favouring development of small and medium enterprises facilitates access to local external effects. External effects are material and immaterial goods received by an entity from its surrounding without incurring by it any costs of their generation [7, 36]. Regional and local policies play an important role in supporting development of entrepreneurship in conditions of decentralization in the state. Administrative authorities and local governments of that level have an influence upon entrepreneurship of inhabitants and establishment of new businesses, attraction of capital from outside by creation of the proper investment climate, support for development of existing businesses through investments and innovations. Agencies of public administration are responsible for decisions concerning allocation of investments creating indispensable technical and

organizational infrastructure, concerning amounts of local rates, or concerning disposal of public assistance means. Such decisions play an important role in activation of small and medium enterprises [6, 174], [5, 198].

Areas of economy modernization in the region of Podkarpacie

Development planning of the Podkarpacki Region in the budget perspective of the European Union for 2007-2013 is based on the following objectives and priorities:

- ✓ creation of conditions for growth of the economy competitiveness through development of entrepreneurship, increasing of its innovativeness and enhancement of investment attractiveness of the region,
- ✓ improvement of communication accessibility and technical infrastructure of the province; it is planned to realize the following priorities: support for communication investments, support for investments related to water supply and sewage disposal, ensuring power-supply security in the region, improvement of efficiency in operation of the regional system of telecommunication services,
- ✓ multifunctional development of rural areas favouring establishment of profitable farms and creation of income sources outside agriculture,
- ✓ improvement of environmental quality, and preservation and protection of natural resources and landscape merits,
- ✓ universal development of social capital enabling full use of the potential and possibilities of personal development of inhabitants of the region,
- ✓ supporting economic development of the region, use of tourist potential and cultural heritage, and protection of natural and landscape merits.

The Regional Operational Programme of the Podkarpackie Province for the years 2007-2013, as the main objective includes an increase in the national and international competitiveness of the economy and improvement in spatial accessibility of Podkarpacie, but also enhancement of the national and international competitiveness of the economy in the region through growth of its innovativeness, and at the same time effectiveness that creates conditions for an increase in employment and growth of incomes and life level of the population.

TAB. 1: Planned outlays on realization of the strategy in years 2007-2013.

STRATEGIC AREA	Total amount (in millions of zlotys) 2007-2013	Share %	FINANCING SOURCES in millions of zlotys					Share of EU funds in %
			Own resources	State budget	Credits and loans	EU resources	Other sources	
ECONOMY OF REGION	1370.81	9.0	279.72	360.63	6.20	649.42	74.83	47.4
RURAL AREAS AND AGRICULTURE (infrastructure in rural areas)	2549.97	16.8	520.45	209.61	192.61	1516.18	111.12	59.5
ENVIRONMENTAL PROTECTION	3324.43	22.0	478.14	317.72	215.11	1950.02	363.44	58.7
SOCIAL CAPITAL	2330.89	15.4	307.76	1002.46	85.37	925.44	9.87	39.7
TECHNICAL INFRASTRUCTURE	4374.95	28.9	883.64	402.96	223.69	2616.25	248.42	59.8
INTERNATIONAL CO-OPERATION	162.02	1.0	18.51	28.49	0.20	63.97	50.85	39.4
HEALTH CARE	662.27	4.4	125.64	164.02	33.39	324.11	15.11	48.9
SOCIAL ASSISTANCE	383.87	2.5	134.62	117.66	5.09	118.35	8.16	30.8
IN TOTAL	15159.22	100.0	2748.47	2603.55	761.67	8163.74	881.79	53.9

Source: Own study.

The strategic objective establishes creation of conditions for growth of the economy competitiveness based on knowledge and entrepreneurship ensuring growth of employment and an increase in the level of social, economic, and spatial cohesiveness. The objective is also consistent with the objective specified for regions in the Council's Directive establishing general regulations concerning the European Regional Development Fund (ERDF), the European Social Fund, and the Cohesiveness Fund. It is also consistent with basic documents specifying space for the EU cohesiveness policy in the years 2007–2013, including the EU Strategic Directives. The level of outlays for realization of the tasks is presented in Table 1.

Within the objective of the national and international competitiveness growth of the economy, and improvement of spatial accessibility of Podkarpacie, the following detailed objectives are realized:

1. Creation of conditions for development of entrepreneurship and knowledge-based economy,
2. Improvement of accessibility and investment attractiveness of the region through realization of undertakings in relation to communication, information and energy-related networks,

3. Prevention of environmental degradation, and natural and technological threats, but also effective natural resource management,
4. Creation of conditions for development of social capital through investments in education, health care and social assistance, sport, tourism and culture,
5. Reduction of developmental differences occurring within the province.

Within the objective ”technical infrastructure”, the following detailed objectives are realized: improvement of accessibility and investment attractiveness of the region through realization of undertakings in the fields of communication, information and energy, improvement of communication links and the system of public communication in the province, support for development of information community, improvement of condition and effectiveness of use of energy-related infrastructure.

Within the objective ”environmental protection and threat prevention”, the following detailed objectives are realized:

1. limitation of pollution amount, including wastes getting into the environment, but also improvement of water supply,
2. improvement of flood control and rational water resource management,
3. limitation of environmental degradation and protection of biological diversity resources,
4. improvement of security level in the region in relation to natural and technological threats.

Within the objective ”social infrastructure there is a creation of conditions for development of social capital through investments in education, health care and social assistance, sport, tourism and culture through realization of the following detailed objectives: improvement of accessibility and quality enhancement of the regional system of education, improvement of health security of the population and development of social assistance infrastructure, enhancement of accessibility to sport and recreation facilities for the inhabitants, improvement of tourist competitiveness of the region, but also protection of cultural heritage and improvement of quality and accessibility of culture infrastructure.

Within the objective ”intraregional cohesiveness”, it is necessary to reduce developmental differences within the province through realization of detailed objectives: strengthening of municipal centres, socio-economic animation of degraded areas, enhancement of investment attractiveness of economically underdeveloped areas.

Within the objective ”technical assistance”, it is necessary to realize effectively the Regional Operational Programme for the Podkarpackie Province through detailed objectives:

1. enabling of the efficient operation of the programme realization system and ensuring continuity of programming process,

2. popularization of information about the available support from the ERDF and assistance in preparation and realization of high quality projects, but also promotion of the programme effects.

The strategy of sustainable and balanced development is an agreed programme aiming at achieving the highest life level of the population with reverence for natural resources. The essential feature of the strategy is integrating the community and their involvement in the process of planning and co-responsibility for implementation effects, as well as share in modern management of local government units. It results from experiences that the strategy effects exceed the initial expectations of local governments. Moreover, the development strategy gives opportunities for applying for financial resources from European support programmes. A relatively good situation of Podkarpacie in building grounds for development of entrepreneurship is an effect of the fact that both entrepreneurs and representatives of scientific institutions, and local governments are aware of opportunities and perspectives of the region for a change of Podkarpacie's standing in national and European economic rankings through activeness and effective construction of areas identified with creation of economy based on innovations and knowledge, development of education and entrepreneurship, creation of regional systems of innovativeness and an innovational infrastructure [1, 89].

In integrating Europe, an increasingly important role in development of regional systems is played by local governments related to them. The basic task and direction of their activity must be care of systematic enhancement of the competitive position of a specific spatial system and its attractiveness for animation of internal factors and attraction of external factors of the socio-economic and cultural growth. Thus, West-European regions of developed countries have different conditions than regions of the eastern borderlands [2, 182].

It is a fact that polarizations of regional development, as well as similar phenomena within regions, bring both positive and negative effects. On the one hand, a weakly developed and less dynamic part of the region is activated thanks to impulses coming from the growth pole (through the increased demand of the pole for products manufactured in the region, investment in supplementary activities run in the hinterland, and creation of new jobs for the population from the hinterland). On the other hand, however, the economically weaker part of the region loses in competition for sales markets with better organized and more efficient industry, concentrated in a better developed region. Another negative effect of polarization is an outflow of the best qualified workforce and capital resources from the region to the growth centre. It is believed that negative effects are felt the most painfully in the first phase of the pole growth process; on a longer run, positive effects are prevailing. That is why a conviction that the rule of equity of opportunities and conditions of management should be of regional character (assumptions underlying the EU regional policy), turns out to be not quite justified. Such levelling is neither possible nor required. As an example may serve the European Union that invested billions of euros in the regions of Italy, Greece and Portugal, and their competitive standing and attractiveness have not changed much [4, 2].

Summing-up

Now in the economy the problem of diversification of incomes is increasingly visible. The market standing of strong enterprises as participants of the market allows for increasing incomes, whereas smaller entities have fluctuations that are more frequent at the level of profits. Enterprises from Podkarpacie, despite the breaking economy, successfully win competition on foreign markets, which is evidenced by the level of the ratio of the export share in sales incomes that is higher than the national average. The export level has an important influence on the pace of the economic development in the region.

References:

[1] KASZUBA, K. Innowacje i wiedza - źródła rozwoju i finansowego sukcesu podkarpackich firm. *Innowacyjność sektora MŚP - Małopolska i Podkarpacie*. Wydawnictwo Wyższej Szkoły Zarządzania w Rzeszowie, Kraków-Rzeszów 2005 p. 89.

[2] KUDELKO, J. Położenie centrów wzrostu społeczno-gospodarczego wschodniego pogranicza jako wyraz kształtującego się ładu przestrzennego. *Biuletyn KPZK PAN*, Issue 205 Warszawa 2003 p. 182.

[3] PAWLINA, I. Marketing w rozwoju gospodarczym regionu. *Małe i średnie przedsiębiorstwa w gospodarce regionu*, PWE, Warszawa, 2004, p. 177.

[4] PIETA-KANURSKA, M. Ekonomiczno-społeczne determinanty polaryzacji procesu rozwoju regionalnego w Polsce. *Przekształcenia regionalnych struktur funkcjonalno-przestrzennych* VII. Współczesne procesy transformacji w układach lokalnych i regionalnych w Polsce, UW, Wrocław 2002, pp. 2

[5] SMOLEN, M. Procesy zmian rozwojowych w gospodarce regionu Podkarpacia. *DIFIN* Warszawa 2009, p. 198

[6] SOBCZYK, G. Strategie konkurencji małych i średnich przedsiębiorstw. *UMCS*, Lublin 2006, pp. 174

[7] WYPYCH, M. Strategia lokalna a rozwój przedsiębiorczości, *Przegląd Organizacji* ,No. 2/1993, p.36.

MODERN METHODS OF FINANCING SMALL AND MEDIUM ENTERPRISES

Paulina Filip
University of Rzeszów
paola@univ.rzeszow.pl

Key words:
small and medium enterprise – alternative ways of financing – external capital

Abstract:
The main problem identified by small and medium enterprises, due to their attributes, relies on the lack of sufficient financial means as well as their gaining and proper allocation both for current activity and investment undertakings. Great significance for financial management of these enterprises is based on institutions, instruments and actions, which provides capital and a differentiated range of financing sources. Alternative ways of financing are important and additional sources of financing enterprises.

Introduction

Small and medium enterprises constitute an important element for development of the Polish market, however, their operating and investment activity requires gaining own and foreign capital [4,157].At the beginning, they mostly base on their own funds which turn out to be insufficient with time; consequently they seek opportunities for development from the outside. Last years, time of crisis - made it difficult to access various sources of financing, however, on the other hand, they forced the sector of small and medium enterprises to take a risk and use less known forms of gaining capital. Unquestionably, the European Union makes it easier, not only by pecuniary means but also by specialist consultancy and entrepreneurs, in many cases basing on experiences of other member states.

Forms of financing enterprises due to accessibility

Financing of enterprises is based on various sources, whose choice depends on many internal factors i.e. legal form, size or financial condition of an enterprise as well as external factors i.e. accessibility to a given source in the market. Differentiation of each of the sources requires defining the financial needs of a company both in the presence and future. Considering sources of capital, we differentiate internal financing - obtained from transferring material goods into financial means and external, obtained from the environment of the enterprise. This division of capital is connected with it gaining and is referred to as the theory of hierarchy that assumes the hierarchical selection of financing sources acknowledging that [1,107].

- enterprises prefer internal sources of financing such as generated profits, depreciation write-offs, revenues on selling unnecessary fixed assets;
- companies avoid rapid changes in the amounts of dividends

- if financing sources are not sufficient, then a company uses credits, loans and after its depletion, the company increases their own equity by means of gaining external incomes.

Accessibility of financing sources to small and medium enterprises is differentiated, some are easily obtained others are assigned mostly for big companies [3,53-55]. Due to accessibility to the small and medium enterprises sector, we may observe a division in sources of financing:

- Easily accessible - own resources, deliverer's credits, credit collateral, EU resources, non-banking sector loans, budgetary subsidies, loans
- Medium accessible - short-term bank credits, leasing, recipient's credits, factoring, non-public issuing
- Difficult accessible - bond issuing, public issuing, long-term bank credits, venture capital funds, franchising.

The table below presents the ways of financing undertaken by the SME sector in Poland in comparison to EU data.

TAB. 1: Financing sources used by small and medium enterprises in Poland (%)

Description	EU average	Sole traders	Micro	Small	Medium
Medium and long-term bank credits	45	8	16	21	31
Leasing	51	6	11	29	47
Bank credit line	49	4	10	16	25
EU funds, subsidies other sources	11	2	4	9	18
Preferential credits	7	1	2	8	8
Consumption credits	3	4	2	4	2
Loans from relatives, family	2	3	3	1	0
None	9	44	27	22	12
I don't know/Hard to say	6	4	6	5	5

Source: own study based on SME Access to finance in The New Member States, European Commission, 2009.

The table presents that none of sources are used by more than 40% of sole traders and one third of micro enterprises. The most common are own capital, bank credits and an untypical form which is leasing and, consequently, these sources are mostly used by small and medium enterprises. These companies have a limited knowledge of financing sources; the majority of them do not see any opportunity of development. They use conservative methods and do not seek other solutions, even at the time of crisis. Knowledge of potential financing sources is greater in medium companies than other enterprises from the SME sector. The SME sector does not see any opportunities of fast and permanent development in external capital, from the viewpoint of subsequent threats. It is connected with ignorance of these

instruments as well as incapability of assessing their financial risk. That is why state institutions as well as financial institutions shall care for education of small and medium enterprises, shaping their ability of planning and using such sources of financing.

This article also constitutes an attempt to focus on alternative, new forms of financing, which are accessible to the SME sector in broadly understood national and European market.

Modern forms of financing

Using particular sources of financing depends on the contact of companies with environment, it shall be thoroughly thought over, and that is why entrepreneurs must be familiar with all opportunities and analyse the present condition of an enterprise. Due to depletion of traditional, inaccessible or unattractive possibilities of gaining sources, alternative ways of financing are being applied. Polish companies more and more often take an opportunity, which relies on unconventional forms of financing, which are more attractive than the ways of increasing capital by means of traditional methods. The alternative method against the traditional methods of gaining capital is a non-public market of private equity which invests in the companies that are not listed. One of such alternatives relies on venture capital funds which may be used by enterprises that do not have any chances to gain own capital from natural persons and cannot use capital market instruments. Private equity is medium and long term capital invested in securities of a share/owner (and/or quasi-share) character of the enterprises not listed on stock exchange listings intended for further reselling in order to withdraw the invested capital and realising profit as its basic source relies on an increase in enterprise's goodwill. Such investments may encompass various stages of development of an enterprise. Venture capital is a kind of capital that is invested in undertakings at preliminary and further stages of development. Venture capital funds seek investments among the small and medium enterprises sector, which have interesting conceptions. They support financing innovations, knowledge transfer as well as development of small and medium enterprises having a profound potential of development or influence on economy by means of their products, technologies, business concepts and services [2,350]. These are national and foreign funds. Foreign venture capital funds acting in the Polish market are more diverted to investments in medium enterprises, as a result, more important Polish funds for small and medium enterprises, are less known. One of the greatest venture capital investors in Poland is Enterprise Investors which finances expansion of small and medium companies acting both in technological branch as well as in traditional sectors of economy. Investment funds accept high risk and as a result, they have an opportunity of limited support for entrepreneurs, as capital gap which is experienced by such companies, may be decreased by financial contribution of private investors so called "business angels". Business angels are individual investors contributing capital to the company at its first stage of development or a company that requires financing in order to implement the strategy of expansion. These investors prefer investments in enterprises that are

located within several kilometres from their place of residence due to their willingness to exercise constant supervision over the implemented projects. Networks of business angels as non-profit organisations, deal with the preliminary assessment of introduced proposals, organising trainings and seminars for investors, moderating meetings of enterprises and investors, or preparing templates of standard contracts. They also act as intermediary institutions in contacts with analysts, consultants, lawyers and other entities offering services for the benefit of investors [5, 340-349].The phenomenon of investments performed by natural persons has existed in our country for not so long. There has been a change in the structure of business angles market since the entry of Poland into the European Union, which has improved the innovative image of Polish economy. Since 2005, business angels, which are included in the Polish Association of Business Angels PolBAN, have provided capital support to many enterprises from various branches and the year 2009 was record-breaking as far as investment offers are concerned. Only 20% out of a hundred incoming offers turn out to be interesting, that is why it is important that the projects presented by entrepreneurs regard not only innovative undertakings but also the fact that newly established enterprises should be able to analyse their projects in detail and take a risk along with the angels. The greatest network of Business Angels in Poland is Lewiatan Business Angels at the Polish Confederation of Private Employers Lewiatan. High risk capital, which stimulates activity of small and medium enterprises by providing financial resources as well as knowledge and contacts, divides the market into formal and informal Business angels are treated as informal investors and venture capital funds are regarded as formal investors. Differences between them rely on the fact that venture capital funds as formal capital providers, invest foreign resources in various projects. They act contrary to networks of business angels which function as informal investors, investing their capital mostly in the branch that is already familiar to them. Both forms of financing invest in risky and very risky projects. Both institutions count on huge profits, however, business angels become a part of a company which has been financed and, consequently, they focus on maximising profit and other development aims of an enterprise. The process of reinvesting takes place similarly in both forms. After reaching a given stage of development of a company, the funds resell their share or introduce an enterprise to public listings and, as a result, they realise profits. Average period of investment of venture capital amounts to five years, however, for business angels it is decidedly longer. The greatest advantages of financing by the networks of business angels encompass lower formal requirements i.e. simplified contracts and less reporting obligations as well as immediate vicinity of performed activity. Undoubtedly, the market of business angels focuses attention of Polish entrepreneurs, constituting the complementing element of capital for small and medium enterprises. This market may play a vital role in Polish economy due to a faster and cheaper way of providing capital than other institutions.

Conclusion

Opportunities of financing the small and medium enterprises sector are wide and they depend on the specificity of the activity conducted by given enterprises or their current economic and financial situation. The companies from this sector as the priority in Poland and the European Union - have pecuniary resources and other forms of support to be used, both from financial institutions, state authorities as well as private organisations or companies. Despite various external sources of gaining capital, small and medium enterprises are constantly being convinced and are rather sceptical, especially in the area of investments performed by natural persons and private institutions (private equity), which is mostly connected with the lack of knowledge in the scope of particular forms. That is why, the sector of small and medium enterprises should be provided with greater opportunities so as to fully use the offer of external sources of financed prepared for it. Unquestionably, the entry of Poland into the European Union provides such opportunities and brings about promising forecast for the future.

References:

[1] DULINIEC, A. Struktura i koszt kapitału w przedsiębiorstwie [The Capital structure and cost in an enterprise], PWN, Warszawa 2001 ,p.170-180, ISBN 83-01-12422-9

[2] FILIP, P. Instruments for financing development of enterprises with national and EU means [in]:Regional transborder co-operation in countries of central and eastern Europe-balance of achievements, PAN,t.14, Warsaw, 2006, p.345-355,ISSN 1429-009X

[3] FILIP, P. Finansowanie MSP ze źródeł zewnętrznych-ujecie regionalne [External sources of funding in sector-SME],Mikrofirma 2010, Scientific Papers of the University of Szczecin,no 588, Szczecin 2010, p.53-61,ISSN 1640-6818,ISSN 1896-382X

[4] GRZEBYK, M. Mikroprzedsiębiorstwa w gospodarce polskiej [Micro enterprises in Polish economy],Scientific Papers of the University of Szczecin no 427 ,Szczecin 2006, p.157-164,ISBN 83-7241-543-9 and ISBN 978-83-7241-543-1

[5] WĘCŁAWSKI, J. Struktury organizacyjne nieformalnych inwestorów venture capital [Organisational structures of informal venture capital investors],Scientific Papers of the University of Wrocław no 1042, Wrocław 2004, p. 340-349, ISSN 0324-844.

FOREIGN DIRECT INVESTMENTS AS STIMULANTS AND DETERMINANTS OF SUSTAINABLE DEVELOPMENT OF MALOPOLSKA PROVINCE

Krzysztof Adam Firlej
Cracow University of Economics
chriskrk2@yahoo.pl

Key words:
foreign direct investments – regional development

Abstract:
The presented paper shows the relationship between regional development Malopolska province, and the influx on its territory of foreign capital in the form of foreign direct investment. The studies undertaken focused on the most important implications arising from the location of foreign investment in the region. The study demonstrated a stimulating effect of FDI on employment growth in the Malopolska province, and also point to their pivotal role in diversifying the regional economy. The relationship between FDI and the diversification level of economic development in different parts of the region was pointed out.

Introduction

The processes of globalization and international integration have played a crucial role in shaping the nature and specificity of the global economy of the late twentieth century [8, 19-20]. Boosting global processes of capital flows become apparent in the second half of the twentieth century, especially in the last decade [7, 88-89]. Intensifying international circulation of capital, with particular emphasis on foreign direct investment, has its origin in the economic development disparities between countries and regions. Impact of FDI on the Polish economy passing phase of modernization is of great importance for its development [9, 93]. Especially important is the capital supporting the structural transformation, which exceeds the scale of its national resources. Enterprises based on foreign capital resulting from direct investments are usually characterized by a stronger competitive strength rather than local companies. Direct investment actually bring the influx of modern technology, the transfer takes place usually in the form of material support [10, 92]. An interesting aspect arising from foreign direct investment in Poland is the implementation of modern models of governance and organization of work. Foreign direct investment is also affected by the Polish labour market, although the jobs are created by investors in a very cost effective manner.

The most common theory that explains the issue of foreign direct investment is an eclectic theorem of foreign direct investment [6, 105]. According to this concept, the functioning of international business is inextricably linked to the transfer of production factors. Multinational companies are characterized by several features

conducive to their foreign operations: exclusive right for, for example, modern technology use within the corporation, or internalisation, that is selling assets overseas as subsidiaries for own business, without a market mechanism [11, 19-27]. According to the theory of Dunning, who analysed the relationship between the level of GDP per capita in the country, and foreign investments on the basis of the figures relating to dozens of countries around the world, it shows that in the medium-developed countries, foreign investments are key factor of economic growth [1, 223-224]. These countries have in many cases the appropriate measures required for intensified international expansion in the form of both direct investment and portfolio inflows. Inflow of FDI to the host country affects the local development of its regions by influencing the level of wages in the region, the diffusion of knowledge and skills and the size of regional exports of local firms.

Aim, methodology and area of study

In this study, the main aim was to present the most important determinants of stimulant and sustainable development of the Małopolska province resulting from the inflow to the area of foreign direct investment. They are understood as projects related to the activities of foreign investors aimed at achieving sustainable income through effective impact on the business enterprise located in the host country investment.

In discussing the impact on sustainable development of voivodship, the impact of foreign direct investment uses a report from the analytical studies conducted in the Province in 2009. The report indicated the volume of foreign direct investment delivered in the province of Malopolska, and in particular, their dynamics and structure. Range of analytical tests covered the years 1989-2008 with a thorough analysis of investor's activity in 2008.

The empirical part is compilations of foreign direct investment, taking into account their size and structure in the Malopolska province, and its investment attractiveness. The study indicated that the geographical locations of foreign investments by districts, as well as the problems of employment in enterprises with foreign capital were also important. The study ends with an attempt to indicate the effects of foreign direct investment in the Malopolska province. Discussed aspects such as diversification of the regional economy and the impact of the diversity level of economic development in different parts of the province were also presented.

Investment attractiveness of the Małopolska province

The survey of investment attractiveness of Polish voivodships and subregions takes place annually in Institute for Market Economics (MERI) [5, 107]. The following three criteria are taken into account: attractiveness for industrial activity, the attractiveness of the service activities and the attractiveness of high-tech industry. In 2008 Malopolska took fifth place in the ranking of investment attractiveness of regions. Malopolska stands out in the following aspects: resources and labour costs (2^{nd} position), the level of social infrastructure (2^{nd} position), the size of a market

(4th position). As the weaknesses of the region's ranking indicates: the region's attractiveness to investors (11th position), crime (9th position), availability of communication (8th position).

The size and structure of foreign direct investment in Malopolska province

In the period 1989-2008 on the territory of Małopolska province in the form of foreign direct investments totalling over U.S.D 12 billion were sent, which represents 8% of capital invested during this time across Poland [5, 9]. Number of companies with foreign capital in Malopolska at the end of 2008 was 3 394, or 5.3% of the total number of entities operating in Poland. In Malopolska a number of branches of multinational companies are also located, whose central headquarters are located in other parts of the country, mostly in Warsaw. Multinational companies are considered to be the main source of capital for Malopolska, which has a significant influence on its position in the network of international economic cooperation. In the territory, as much as 41% of current foreign capital comes from the 10 largest investors. Number of international corporations that have made expenditures for investments in Malopolska for the sum of not less than $ 10 million is 150 subjects, i.e. about 89% of the total budget of foreign direct investment in Malopolska province.

The spatial distribution of foreign direct investment in the Malopolska province by districts

In Malopolska, we can distinguish four types of areas in which the focus of foreign direct investment: 1 **Krakow Metropolitan Area** (KMA), 2 **industrialized western part of the region** comprising the districts of Oświęcim, Chrzanów and Olkusz), 3 located near the national road number 4 **Brest district**, 4 **Nowy Sącz and Tarnów, together with the surrounding counties** [5, 45]. Over the years 1989-2008 in the Krakow Metropolitan Area, foreign investors invested U.S.D 9.7 billion of which up to U.S.D 7.8 billion in the heart of Krakow. The western part of the region was at that time a place of concentration of 880 million U.S.D of foreign capital, while in the Nowy Sącz and Tarnów, together with the surrounding counties - 667 million USD. The smallest value of the invested funds was recorded in the district of Brest, and it was U.S.D 526 million. It is worth noting that foreign direct investment in these regions represent 98.3% of the total FDI inflow to Malopolska province.

The role of foreign direct investment in the growth of employment in companies in 2008 in Malopolska province

According to statistics, at the end of 2008, in enterprises with foreign capital in the Malopolska region were employed 96.2 thousand workers, and so 10.6% of all employees in the province with the exception of agriculture [3, 181-182]. Number of people employed in different sectors varied, most of them were: industry and construction (42.4 thousand employees), trade (15.2 thousand), professional,

scientific and technical (11.9 thousand), finance and insurance (8.5 thousand). The largest increase in employment (33.6%) occurred in the activities of professional, scientific and technical cooperation which was a consequence of the dynamic development of dedicated service centres in Krakow (business process outsourcing), as well as shared services of research and development. Among the largest foreign employers in the Malopolska province in 2008 were the following entities: Arcellor Mittal Poland SA with its seat in Dąbrowa (7 000 employees in Krakow) and Valeo Poland Ltd. with its seat in Warsaw (branches in Skawina Chrzanów and Zielonki), Capgemini Ltd. located in Krakow, Philip Morris SA, based in Krakow, Carrefour Ltd. with its seat in Warsaw (including shops in Krakow, Olkusz, Tarnow) and Tesco Ltd. located in Krakow (including shops in Krakow and Bielsko-Biala), Bank Pekao SA in Warsaw and IBM Poland Ltd. with its seat in Warsaw (a branch in Krakow) (each one employing over 1 500 employees). The biggest employer with minor foreign participation is Comarch SA in Krakow.

Impact of FDI on the degree of diversification of economic development in different parts of the region

Currently, the spread of investments from Krakow to the surrounding metropolitan area is observed [4, 77]. So-called edge centres as Niepołomice and Zabierzów develop. Economic core of Krakow has a positive effect on neighbouring territories. In the case of sub-regional centres in the Malopolska province, namely: Nowy Sącz and Tarnów, there is a concentration of *greenfield* investments in the territory of the city centres. In the adjacent districts and counties investments are negligible. When the sample forecasts for the next years were considered, we can say that it is rather a case of Tarnów that will spread due to foreign investments in the surrounding territories, which is and effect of the improved accessibility of the city.

Summary

Małopolskie, among Polish regions is characterized by a high level of FDI value coming into the area. Over the years 1989-2008, the territory of Małopolska province has attracted foreign investments amounting to U.S.D 12 billion. In 2008 alone, foreign investment closed in the amount of $ 2 billion, which was the best result in history, seen through the prism of the incoming funds. Thanks to the activities of foreign investors in the Malopolska province at the end of 2008 it was 95.6 thousand of employed people, and so 5.1% more than last year. Beyond this, large disparities in the value of foreign direct investment in particular parts of the province are observed, where the dominant position is Krakow, positively affecting the neighbouring territories. Among the incentives determining foreign direct investment use in Malopolska province were identified: resources, labour costs, levels of social infrastructure, as well as the size of market. As factors that inhibit the inflow of investment to the province of Malopolska are considered: the low level of attractiveness of investment (in the assessment of investors), crime and poor

transport access. Foreign Direct Investments in Malopolska province significantly affect the diversification of its economy, making it less vulnerable to periodic fluctuations of individual sectors and industries.

References:

[1] BUDZOWSKI, K. *Ekonomiczne problemy handlu zagranicznego,* Wydawnictwo Krakowskiej Szkoły Wyższej, Kraków 2008, s. 223-224, ISBN: 978-83-89823-94-6

[2] CIEŚLIK, A. *Geografia inwestycji zagranicznych. Przyczyny i skutki lokalizacji spółek z udziałem kapitału zagranicznego w Polsce*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2005, s. 234.

[3] DOBRZAŃSKA, J. (red.) *Województwo Małopolskie 2008*, Urząd Marszałkowski Województwa Małopolskiego, Kraków 2009, s. 181-182. ISBN: 8323501513

[4] DOMAŃSKI, B., DZIAŁEK, J., GÓRECKI, J., GWOSDZ, K., JANAS, K., JARCZEWSKI, W., KOCAJ, A., MICEK, G., PADŁO, T. *Inwestycje zagraniczne w Małopolsce 2007*, Urząd Marszałkowski Województwa Małopolskiego, Kraków 2008, s. 76-77.

[5] DOMAŃSKI, B., DEJ, M., DZIAŁEK, J., GÓRECKI, J., GUZIK, R., GWOSDZ, K., KOCAJ, A., MICEK, G. *Inwestycje zagraniczne w Małopolsce 2008*, Urząd Marszałkowski Województwa Małopolskiego, Kraków 2009, s. 9, 45, 107.

[6] DUNNING, J. *International Production and the Multinational Enterprise*, London 1981, s. 105 i n., ISBN 004330320X

[7] KARASZEWSKI, W. *Bezpośrednie inwestycje zagraniczne. Polska na tle świata*, Dom Organizatora, Toruń 2004, s. 88-89, ISBN 83-7285-170-0

[8] KUZEL, M. *Rola bezpośrednich inwestycji zagranicznych w dyfuzji wiedzy i umiejętności*, Wydawnictwo Dom Organizatora, Toruń 2007, s. 19-20, ISBN 978-83-7285-299-1

[9] MĄCZYŃSKA, E. *Bezpośrednie inwestycje zagraniczne. Światowe i lokalne czynniki dynamizujące*, Ekonomista 1999, nr 1-2, s. 93.

[10] STAWICKA, M. *Atrakcyjność inwestycyjna Polski*, Wydawnictwa Fachowe CeDeWu, Warszawa 2007, s. 92, ISBN 978-83-60089-40-8

[11] SZELĄG-EASTICK, L. *Amerykańskie inwestycje zagraniczne*, Kraków 1993, maszynopis, s. 19-27.

IMPACT OF GLOBALIZATION ON THE OPERATION OF ENTERPRISES OF WIG – FOOD INDEX

Krzysztof Firlej
Cracow University of Economics
firlejk@uek.krakow.pl

Key words:
globalization – business – food industry

Abstract:
Macroeconomic factors and micro-current operation is always limited and companies have had a significant impact on their development. These conditions can be treated as a source of competitive advantages in the food industry enterprises, the identification and consideration of the current operations of the companies that belong to the WIG – Food Index. The present study demonstrated that in building a comprehensive instrumentation for the management of companies should take into account many aspects resulting from these factors. It was found that a wide range of instruments used to raise the competitiveness of companies in the food industry helps their positioning in the huge EU market and may diminish the negative influences of both a macro and micro economic levels.

Synopsis:
The article presents the functioning of the food industry in terms of micro- and macroeconomic factors, which limit their current functioning and have a significant impact on its development. In market economy these conditions can be treated as a source of competitive advantages of the food industry enterprises, as illustrated by the example of companies belonging to the WIG index - Food.

Introduction

Functioning in a global economy undergoing a continuous process of globalization should be considered as a major challenge to polish food industry enterprises. Position of the company depends on its competitiveness - that is whether it is capable of operating in an industry, in a market economy, the possibility of overcoming setbacks and use of emerging opportunities. Competitive advantage of companies being developed by the appropriate management is crucial in the market positioning of companies in a global environment. One of the main sources of competitive advantage is dynamic variability of the environment in which businesses operate today. Managing change and adaptation to existing conditions creates the possibility of continued use of the available opportunities. Polish accession to the European Union made it possible to actively participate in international economic exchange and allow companies to compete in the huge European market. In the last two decades, the transformation was amplified by the processes of globalization, which influenced the transformation of privatization,

modernization and restructuring. The result of these phenomena has been pro-market behaviour of enterprises and a high positioning of our economy to the international arena. In previous years the Polish economy recorded growth, which also indicates the high position of enterprises. By defining the process of globalization we mean the increasing interdependence and integration of the countries, societies, economies and cultures, resulting in the formation of „one world" as a global society [5, 241]. In the pre-accession period particularly in the Polish countryside was widespread perception that the processes of globalization can be interpreted in accordance with the definition of globalization presented by A. Giddens, that is - that this is the disappearance of the nation-state categories, and shrinking social space for the growth rate of interaction through the use of information technology [3, 74-75] and the increasing importance of international organizations and over, especially transnational corporations. The J. Penc believes that the best is today such an organization, which changes according to market needs and the needs of these create a certain degree of a coherent strategy taking into account constraints of the environment [9, 12].

1. Macroeconomic and microeconomic determinants as a source of competitive advantages in the enterprise

Defining issue of the competitiveness of enterprises it should be borne in mind that there is no a universally accepted definition, and in the past there were only attempts to construct it. According to P. Krugman, competitiveness is a way of increasing productivity through growth rate in one company relative to other [6, 42]. According to the definition used by the New York Stock Exchange „being competitive" means to sell products at a profit – „at home and abroad" [13, 24]. Interestingly, competitiveness was introduced by E. Cyrson, who considers it to be a process in which market participants in pursuing their interests are trying to provide more favourable than the other bid prices, quality or other characteristics that may influence the transaction [1, 35]. For many economists, this is an extremely important feature of the economy in the world, which creates a sort of battle between companies in the supply of goods of a suitable standard and a specified price. In a market economy companies themselves are not able to affect the price level - since it depends on market forces of supply and demand, and can only improve the competitiveness of their products - which creates a sum of producer and consumer surplus [11, 425-451]. In our country the main challenges related to competitiveness are: cost reduction, innovation of products and services, increase productivity, improve product quality, modernization of management processes and improve customer relations[1]. The competitiveness may be affected by of all economic operators that have cooperative relations with the enterprise and are competitive [7, 114]. Considering the issue of competitiveness of enterprises in the sector one should look at the five forces of competition proposed by M. Porter.

[1] *Konkurencyjność polskich przedsiębiorstw w Unii Europejskiej*, Krajowa Izba Gospodarcza, Biuro do spraw Unii Europejskiej, http://www.kig.pl/, [dostęp 16.02.2008 r.].

Entry, the threat of substitution, bargaining power of customers, bargaining power of suppliers and rivalry existing competitors - are the forces that illustrate the thesis that competition in the sector goes well beyond the standard market participants [10, 23]. Competitors in the sector companies are customers, suppliers, substitutes and newly forming businesses, competition in such a system is defined as an extended rivalry. Many economists believe that the process of competition and competitiveness is a certain condition - two different and closely related to basic concepts. Competition concerns the struggle between the companies to acquire comparative advantage in resources that can achieve a competitive market advantage and ultimately a better financial position. M. Gorynia [4, 4-8] says that competitiveness of a company is called the ability to achieve its competitive ability [8, 101-108]. But it's hard not to agree with the opinion that competition and competitiveness should be combined, and for the competing firm can be regarded as such a business in the long run lead to an increase in market value [12, 10].

The competitiveness of Polish enterprises in market economy conditions is affected by the macroeconomic and microeconomic, which form the source of competitive advantage. The most important macroeconomic factors conducive to the competitiveness of Polish food industry enterprises are:

1. efficient economic policies stimulating innovation of the Polish economy and to adapt it to the world standards;
2. interest in the Polish market as a result of integration with the European Union;
3. pro-growth tax policy and monetary policy associated with the world financial markets;
4. stimulate the development of foreign trade by the spheres of government;
5. suitable solutions and regulations;
6. development of capital market

However, the second important group is the microeconomic factors which are of minor importance for overall competitiveness, but position the company in the sector and industry. Among the most important can be discerned:

1. solution of an operational nature, including improved logistics and operations to improve customer service;
2. resources (human, financial, physical, technological, legal, information), skills (relevant to business, relationships, organizational knowledge), and core competencies (distinctive and extraordinary technological relationships, knowledge and reputation of the company) Polish enterprises, which can be considered as stimulants to gain and maintain a competitive advantage;
3. perceived product quality as a source of competitiveness.

Taking into account the factors of a micro level it should be noted that the Polish food industry enterprises are not highly advanced in technological terms, and their core competitive forces are low manufacturing costs and resulting lower prices, which are used to economies of scale in the area of sales volume. It is therefore

noteworthy to highlight the importance of logistic capabilities of companies that still need to seek new solutions that build competitive advantage in this regard. Unfortunately the resources of Polish firms are much smaller than that held by companies of developed countries in Western Europe. This is due to low expenditure on renewal of current production, which connects to the incurring of additional costs and the allocation of the profits made on the activities of a research - development.

2. Purpose, methodology and results

To examine the competitiveness of enterprises in terms of microeconomic studies were conducted on the internal factors affecting the administration of the food industry in a market economy. Among them you can find the action of many factors that have a positive impact on their competitiveness. To accomplish the research objectives of management analysis of selected companies belonging to the WIG index Food, including by the „Best Practices" mandatory put by the board of the Stock Exchange in Warsaw. Transparency in the field of action, required to submit periodic financial reports and corporate governance of entities listed on the stock market as leading them to recommend their business on the basis of the calculated and the action plan.

Companies with Food WIG rarely reveal their concepts of strategic development, and in fact this information is very brief and vague. Tests were conducted on the basis of information published by the company, reports and financial results. Analyzed companies belong to the food sector the Warsaw Stock Exchange, which includes 18 companies out of the food industry[2]. The sample was deliberately chosen, because most companies in the WIG index - Food operate in the international market, which derived from the continued internationalization of, having to penetrate new markets. The study was conducted using a retrospective analysis. Test period consisted of an initial phase of the full membership of the European Union, as the most conducive to the development of food economy in recent years.

Studies carried out in enterprises showed that in building a comprehensive instrumentation for management should consider the following aspects, which are the result of external factors:

- It is necessary to recognize the use of information technology in the current performance of companies that help in an organized way to use its skills and develop the existing skills and resources;

[2] WIG – Food Index for 1.03.2010 included: Ambra S.A. in Warszawa, Astarta Holding NV from Amsterdam, Elstar Oils S.A. in Elbląg, Graal S.A. in Wejherowo, Indykpol S.A. in Olsztyn, Kernel Holding S.A. from Luxemburg, Kofola S.A. in Warszawa, MAKARONY POLSKIE S.A. in Rzeszów, Mispol S.A. in Suwałki, Pamapol S.A. in Rusiec, Polski Koncern Mięsny Duda in Warszawa, Przedsiębiorstwo Cukiernicze JUTRZENKA SA in Bydgoszcz, Przedsiębiorstwo Przemysłu Spożywczego PEPEES SA in Łomża, SEKO S.A. in Chojnice, Wawel S.A. in Kraków, Belvedere S.A. in Beaune (France), Wilbo S.A. in Władysławowo and Zakłady Przemysłu Cukierniczego MIESZKO SA in Warszawa.

- intellectual capital of the companies shaping the current value of the company is positioning it to not only domestically but internationally as well as affect the its competitiveness;
- corporate governance provides the firm support of the board, helps monitor and control the current activities and results achieved in the future;
- effectively adapt to companies WIG - Food for the modern requirements, which require global standards for the management of organizational culture and climate building their competitiveness international market;
- employee shares or directed to the board members are supporting the effective management of the company, to build on its strengths and emerging market opportunities;
- a high social responsibility of the organization's role is increasingly important in the operations of companies, although interest in business ethics is on average level.

3. Conclusions

A wide range of instruments used to raise the competitiveness of companies in the food industry helps their positioning in the huge EU market. Companies use this information to assist agents in their management, care about intellectual capital, corporate governance and management of organizational culture and climate. It seems necessary to use methods of scenario is still underestimated in the management of food industry enterprises, which will significantly improve their competitiveness [2, 75-100]. The use of scenario methods could save many companies before the crisis of 2007, or significantly reduce it. There is a noticeable positive change to be carried out in companies, which portends hope for the development of technological transformation and broad-based human capital. The surveyed companies grow corporate social responsibility and are already at a moderate level are taken into account the ethical aspects of business. Increased activity in the development and competitiveness of food companies will certainly help to strengthen their market position and consequently the vast expansion of global markets. Managers surveyed spontaneously recognize that to achieve a sustainable competitive advantage for their companies should regularly improve their management systems and consistently orient their actions to modernize the governance processes.

To increase the competitiveness of enterprises was launched SOP Improvement of Competitiveness of Enterprises under the European Regional Development Fund, whose aim was to improve the competitive position of companies operating on Polish territory in the Single European Market, the increase in the competitiveness of regional businesses by increasing and improving their quality of employment. These objectives can be achieved by increasing the economic potential of enterprises, strengthening the regional innovation system, strengthening the links between science and economy, the development of institutional, financial and business service support mechanisms, preparation of investment areas, and promoting environmentally-friendly economy.

References:

[1] CYRSON, E. (2000) *Kompendium wiedzy o gospodarce*, Wydawnictwo Naukowe PWN Warszawa – Poznań, ISDN 83-01-13342-2.

[2] FIRLEJ, K. (2007) *Wpływ otoczenia zewnętrznego na konkurencyjność sektora przedsiębiorstw przemysłu spożywczego – wyniki analizy scenariuszowej*, IERiGŻ, ISBN 978-83-60798-79-9.

[3] GIDDENS, A. (2004) *Socjologia*. Państwowe Wydawnictwo Naukowe, Warszawa, ISBN: 83-01-14225-1.

[4] [GORYNIA, M. (2001): *Międzynarodowa konkurencyjność polskich przedsiębiorstw –wyniki badań empirycznych*, VII Kongres Ekonomistów Polskich, Sesja IV ,,Przedsiębiorczość i Konkurencyjność", z. 8, Warszawa ISBN 83-11-09358-X.

[5] KEMPNY, M. (1998) *Globalizacja*.[w:] *Encyklopedia socjologii.* Oficyna Naukowa, Warszawa, ISBN 83-85505-71-7.

[6] *Konkurencyjność polskich przedsiębiorstw w Unii Europejskiej*, Krajowa Izba Gospodarcza, Biuro do spraw Unii Europejskiej, http://www.kig.pl/, [dostęp 16.02.2008 r.].

[7] KRUGMAN, P. (1994) *Competitivness: A Dangerous Obsession*, Foreign Affairs 73, (42).

[8] KRUPSKI, R. [pod red], (2003) *Zarządzanie strategiczne, Koncepcje – metody*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław, ISBN 83-89857-12-X.

[9] KULISA, B. (2003) *Niektóre aspekty międzynarodowej konkurencyjności*, [w:] BOROWIECKI, R., JAKI, A. [pod red.] *Globalizacja i integracja gospodarcza a procesy restrukturyzacji i rozwoju przedsiębiorstw*, KEiOP, Akademia Ekonomiczna w Krakowie, Warszawa-Kraków, ISBN 83-9070470202.

[10] PENC, J. (2003) *Zarządzanie w warunkach globalizacji*. Difin, Warszawa, ISBN: 83-7251-380-5.

[11] PORTER, M.E. (2006) *Strategia konkurencji, metody analizy sektorów i konkurentów*, PWE Warszawa, ISBN: 83-88970-87-9.

[12] SAMUELSON W.F., MARKS, S.G. (1998) *Ekonomia menedżerska*, PWE Warszawa, ISBN: 83-208-1088.

[13] STARCZEWSKA – KRZYSZTOSZEK, M., (2006) *Konkurencyjność małych i średnich przedsiębiorstw 2006*, Raport z badań: „*Monitoring kondycji sektora MSP 2006*", PKPP Lewiatan.

[14] US International Competitiveness: Perceptron and Reality, (1984) [za:] BIEŃKOWSKI W.: *Reaganomika i jej wpływ na konkurencyjność gospodarki amerykańskiej* (1995): Wydawnictwo Naukowe PWN Warszawa, ISBN: 83-01-11739-7.

THE REGIONAL DEVELOPMENT OF ECONOMIC AGGLOMERATIONS IN TRANSITION ECONOMIES

Alexander V. Gladkey
Taras Shevchenko National University of Kiev
gladkey_alex@mail.univ.kiev.ua

Keywords:
economic agglomeration – regional development – territorial organization – sustainable development – transition economy

Abstract:
The substance and theoretical fundamentals of development of economic agglomerations are considered. The general laws, principles and methodology of sustainable development of economic agglomerations in a transition economy are investigated.

Introduction

The Eastern European countries, so-called transition economies, are now undergoing painful transformation of their functional structure and development of market economy. In many cases, their spatial evolution and economic growth depend on the level of development of urban territorial structures such as large cities and agglomerations. These produce more than 40-50% of a country's GNP and contain more than 60% of the total population (except Moldova). The rational territorial organization and sustainable development of agglomerations are now urgent for the countries of Eastern Europe. Nevertheless, most of them have irrational branch and territorial structure as a legacy of the Soviet regime. They encounter problems in settlement and transport networks; suffer from environmental pollution and depletion of resources as well as from predominance of heavy industries and a low level of development of the social sphere.

Ukraine has faced similar problems with development of large cities and agglomerations. Thus, large agglomerations are developed without any scientifically justified spatial concept, which worsens their economic parameters and human living conditions. To solve the problems mentioned above and to create the necessary prerequisites for social and economic growth, Ukrainian geographers have proposed the concept of economic agglomeration, which includes not only the urban settlement system, but also the complex of various human activities that also agglomerate with each other in a limited urban area. The investigation of the substance and general principles of economic agglomeration as well as of the methodology of their rational territorial organization would assist to stabilize the national economy of Ukraine and to give potential for further growth.

Theoretical fundamentals

Nowadays, agglomerations appear to be the key form of territorial organization of human activities in transition economies. Indeed, they are not only the forms of human settlement. The majority of labor forces, enterprises and services are concentrated in relatively small parts of urbanized territory having definite benefits of their location. Most of advanced, progressive and internationally-oriented branches of economy are developing in agglomerations more intensely. Therefore, this form of territorial organization in transition economy gains a lot of social and economic advantages of location and development of various kinds of human activities in highly communicative and comprehensively integrated environment.

According to the above-mentioned assertions, the agglomeration is a complex form of territorial development that includes not only the urban settlement system, but also industrial enterprises and social institutions. So, the previous viewpoints on agglomerations seem to be imperfect. Most of the features of this territorial formation are described by the term "economic agglomeration", proposed by Alexander Gladkey (2008). Economic agglomeration, in contrast to "urban agglomeration" or "industrial agglomeration", includes all components of economic complex and infrastructure with labor forces and land/natural resources.

The economic agglomeration is known to be compact functional and territorial, technological and economic as well as social integration of enterprises and institutions for various kinds of human activities based on a concentrated urban settlement system, intensive communication and a number of relations (industrial, social, ecological and administrative). The economic agglomeration is characterized by integrated interdependent development and produces an additional socio-economic effect.

So, economic agglomerations integrate various industrial and agricultural enterprises, social institutions (general communal services, trade, cultural, educational, scientific and recreational and tourist spheres) as well as the infrastructure based on a united system of settlement, transportation and communication. An economic agglomeration includes the territory with a maximum concentration of the above-mentioned relations, developed around a large city or cities.

It is worth noting that development of economic agglomerations in a transition economy is based mainly on the functioning of industrial complex in large cities and their satellite towns. They are characterized by common use of the territory, natural resources, industrial infrastructure and scientific basis as well as by close relations of industrial cooperation and combination. The key branches of industry gain a lot of additional advantages in economic agglomeration due to concentration and specialization processes. The auxiliary and attendant industrial branches, which are related to the main production cycle, are also developing fast. Their integration, interrelation, innovativeness (innovative character) and modularity are rising rapidly. Moreover, the development of the social sphere, especially in the non-profit sector, is hampered due to historical factors, economic reasons and lack

of administrative resources. So, most of agglomerations in the Eastern Europe face economic and social problems described in the introduction. Their sustainable development should be based on the concept of "economic agglomeration" that includes all components of human activities in a highly urbanized territory.

Economic agglomerations determine the location of the main part of productive forces in transition economies. Their development has a key impact on the national economic complex, settlement system and population growth as well as on the scientific, cultural and intellectual potential. Therefore, investigation of rational territorial organization and sustainable development of economic agglomerations is becoming more urgent.

General laws and principles

The development of economic agglomerations in transition economies is based on objective laws and principles. According to Fujita M., Krugman P. R. (1999) and Fujita M., Thisse J.-F. (2004) we can define 11 general laws determining the economic efficiency development of agglomerations: 1) The law of economic activities' territorial concentration nears the main core and main transport lines; 2) The law of increasing diversification and specialization of enterprises; 3) The law of commercial enterprise's regional competitiveness growth in situation of oligopoly; 4) The law of labor forces usage increasing in the central core of agglomeration as well as the basic assets usage increasing on the periphery; 5) The law of descending economic efficiency of commercial enterprises from the centre to periphery of agglomeration; 6) The law of polybranch economic efficiency growth approaching the central core of agglomeration; 7) The law of industrial production modularity growth approaching the central core of agglomeration; 8) The law of branch diversity growth approaching the central core of agglomeration; 9) The law of communicability and cooperativeness growth approaching a central core of agglomeration; 10) The law of reduction of low-innovative enterprises and development of modern high technology branches in the central core of agglomeration; 11) The law of territorial complexity and proportionality economic development of agglomeration based on market mechanisms.

So, we formulate the following main characteristics of industrial agglomerations: 1) compactness of the territory and development of belt-sector structure; 2) concentration of urban settlements and economic enterprises near the central core; 3) high urbanization and population densities influencing the way of human life and processes of economic growth; 4) multi-structural economic activity and concentration of different functions and human activities in a small territory; 5) development of small highly-specialized closely related enterprises (so-called modularity); 6) comprehensive integration of population and economic activities with a united purpose and social co-ordination; 7) high dynamism of development, communicativeness and intense communications development; 8) growth of environmental problems.

These features produce a great socio-economic effect in economic agglomerations. This effect consists in creation of highly-integrated and communicative environment of economic agglomeration, which is called “agglomeration synergy”. However, agglomerations in transition economies have the unbalanced structure and insufficient resources for their economic growth. For a long period of time they were developing according to the rules of the command-administrative system rather than to the rules of the market economy. Therefore, most of them have irrational territorial structure, unbalanced economic system and underdeveloped synergetic effect.

There are some principles of agglomeration development in the scientific practice of transition economies and highly-developed countries can promote decreasing the negative consequences of the Soviet administrative system. According to Deelstra, T. (1998), Geenhuizen, M., Nijkamp, P. (1995) and Fujita, M. (2004), one can formulate 10 principles of rational territorial (sustainable) development of economic agglomerations: 1) Rational usage of territorial agglomeration effect advantages; 2) Rational usage of industrial production specialization and concentration advantages; 3) 4) Disposition of economic enterprises with due regard for their functional destination, optimal location, highest profitability and social needs; 5) Limitation of excessive concentration of economic activities in the central core of agglomeration; 6) Development of high-tech and science-intensive industries as well as of the institutions of the social sphere in the central core of economic agglomerations; 7) Redistribution of functions between central and peripheral territories of agglomeration; 8) Maximum adaptation of branch and territorial structure of suburban agricultural complex for the needs of the central core and urbanized regions; 9) Regional development of industrial, social, ecological and administrative relations between different belts and sectors of agglomeration; 10) Improvement of human living conditions and development of the social complex; 11) Integration of central and peripheral administrative systems in economic agglomeration; 12) Government support and economic stimulation of priority industrial branches development in agglomeration; 13) Transparency and impartiality at distribution of economic factors development of enterprises; 14) Maximum use of the achievements of scientific-and-technical progress; 15) Rational use of natural resources and environmental protection.

Conclusions

In Eastern Europe, large agglomerations are developed without any scientifically justified spatial concept, which worsens their economic parameters and human living conditions. To solve the problems mentioned above and to create the necessary prerequisites for social and economic growth, Ukrainian geographers have proposed the concept of development of agglomeration effect that influence on economic efficiency growth of different human activities. This effect is based on complex and proportional development of agglomerations system and provides competitiveness growth of agglomeration’s enterprises that increase their profitability, labor productivity and other economic indices.

Acknowledgements

The author is grateful to senior lecturer Tatyana I. Shparaga and professor Stepan I. Ischuk for fruitful discussions and comments on the earlier drafts as well as to Dr. Serhiy Vasnyov and Dr. Vladyslav Kravchenko for invaluable assistance.

References:

[1] DEELSTRA, T. (1998) What is Sustainable Development? *In: Indicators for Sustainable Urban Development,* pp. 59-74. Delft: The International Institute for the Urban Environment.

[2] GEENHUIZEN, M., NIJKAMP, P. (1995) Urbanization, Industrial Dynamics, and Spatial Development: A Company Life History Approach. *In: Urban Agglomerations and Economic Growth. (Publications of the Egon-Sohmen-Foundation),* pp. 39-79. Berlin: Springer-Verlag.

[3] GLADKEY, A. (2010) *Scientific Fundamentals of Socio-Geographic Investigations of Industrial Agglomerations*. Kyiv: Obriyi.

[4] FUJITA M., KRUGMAN P. R., et al.: (1999) *The Spatial Economy: Cities, Regions and International Trade,* MIT Press, Cambridge MA.

[5] FUJITA M., THISSE J.-F. (2004) *Economics of Agglomeration: cities, industrial location and regional growth,* Cambridge, Cambridge University Press.

SPA POTENTIAL OF TOWNS LOCATED IN CENTRAL POLAND ON AN EXAMPLE OF CIECHOCINEK

Eleonora Gonda-Soroczyńska
Wroclaw University of Environmental and Life Sciences
eleonora.gonda-soroczynska@up.wroc.pl

***Key words*:**
tourism – spa – Ciechocinek – spa potential

Abstract:
The spa potential of Ciechocinek, part of touristic potential created by natural conditions (esp. microclimate, brines), spa buildings, landscape and tourist attractions, is highlighted in the study. Ciechocinek, often referred to as "Pearl of Polish Spas", is a town located in the lowlands of central Poland, in the Kujawsko-Pomorskie voivodship. It is one of the oldest and most popular spa towns in Poland. Rich brine deposits with medicinal qualities are its natural resource. The brine is used for drinking, treatment baths, inhalations as well as douches. The very beneficial climatic conditions fulfill the spa requirements. Unique microclimate is to be found especially in the areas close to the graduation towers.

1. Introduction

It is indicated in the study that Ciechocinek is a unique place with very high spa potential. This small Polish town (population of 11 335 inhabitants) in the Kujawsko-Pomorskie voivodship, Aleksandrowski poviat, was granted town privileges in the year 1916 and had a status of a spa before the Second World War. It is in the so called "White Kujawy", in the middle of Ciechocinek Lowland. The town is characterized by very beneficial climatic conditions, required from spas and fully deserves its being referred to at present as "Pearl of Polish Spas". Ciechocinek is one of the most popular spas in Poland. Its natural resource is the rich brine deposits with unique medicinal properties. The brine is used for drinking, treatment baths, inhalations as well as douches. The microclimate in the vicinity of graduation towers is rich with particles of iodine, bromine and ozone. It has a beneficial influence on the respiratory system, regulates blood pressure, has antibacterial qualities and has a positive influence on patients with thyroid disorders. Ciechocinek is a place where diseases of respiratory, circulatory and nervous systems as well as orthopedic, rheumatic and female disorders are treated. The Institute of Natural Medicine provide health resort visitors with a wide choice of treatments: massages, inhalations, baths, douches, peloid baths, gymnastics, showers and many others.

2. Ciechocinek – not only a spa town

The history of brine sources in Ciechocinek dates back to the 13th century. The year 1838 was decisive for its history as it was when the first four copper treatment baths were installed in a local inn. 120 persons could benefit from brine baths at that time – that was the beginning of the Spa House. Since that year the town was known as a spa. New baths, houses, villas and hotels were built with the patients, who were more and more frequently coming, on mind. The resort was developing since 1894 and attracted visitors with the beauty of its parks and squares, known far outside the borders of Poland. After the First World War, the spa was rebuilt. Health Park was created around the graduation towers. It was in the 1930s of the 20th century that Ciechocinek started becoming a town-garden. During the Second World War, it was literally transformed into one huge military hospital for the Germans. During the occupation period, the town kept its role of a health resort, but it was accessible for German citizens only. German scientists, who compared local brine sources with those found in the Reich, indicated their high quality and called the thermal source no. 14 a "wonder of Nature". Luckily, the most important buildings in town were not destroyed during the war. In the year 1950, all-year-round treatment activity was started. Its development continued in the 60s and 70s, when numerous spa houses and branch preventoria were built. Spa treatment of Ciechocinek is especially recommended to persons with diseases of respiratory, circulatory and nervous systems as well as orthopedic, rheumatic and female disorders. The present-day Ciechocinek attract patients and health resort visitors not only with its medicinal qualities, but with picturesque location, green squares and parks and numerous tourist attractions as well.

3. Natural and landscape qualities of the spa

Mineral waters, beneficial climatic conditions and diversified vegetation are the wealth of Ciechocinek. Its mineral waters are rich in such substances as sodium chloride, compounds of calcium, magnesium, iron, free hydrogen sulphide, iodine, bromium as well as others. Their temperature ranges from 8 to 37°C and salination from 0.19% to 6.43%. From the year 1841, when the first brine bore was made, 19 other have been made. The climate of the town is that of lowland character, milder for human organism than the mountain or sea climate. The process of acclimatization in Ciechocinek is easy and relatively short. That is why visiting Ciechocinek is recommended for persons sensitive to stronger climatic stimuli. Ciechocinek meets the conditions put for health resort towns as far as sun exposure is concerned as it is a place with a small number of cloudy days. The town is located in an area belonging to the group of the warmest areas in the lowlands of Poland. The yearly average air temperature is 7.9°C. Moreover, low precipitation, mild and moderate winds, big number of days with moderate humidity and good hygienic condition of the air create the very beneficial bio-climatic conditions of Ciechocinek [KOZŁOWSKA-SZCZĘSNA T. 2002]. The area in the vicinity of graduation towers is characterized by unique climate. Aerosol is created from brine which flows down the blackthorn twigs, turns into particles and, in a form of droplets or crystals, is

carried with air. Staying in the area around graduation towers makes it possible to inhale the medicinal aerosol in natural conditions.

4. Spa infrastructure as an element of spa potential

The spa infrastructure is in good or very good technical condition. Spa hospitals, sanatoriums and treatment centers need to be enumerated. They are: 22nd Military Spa-Rehabilitation Hospital [314 beds], Railway Spa Hospital [420 beds], PUC hospital no. 4 "Spa House" [262 beds], Dr. Marcinkiewicz PUC Hospital no. 3 [168 beds], PUC "Pomorzanka" hospital [241 beds], PUC hospital no. 1 [120 beds], Hospital-Sanatorium Unit no. 6 "Grażyna" [188 beds], Spa Health Resort "Gracja" [185 beds], Spa Health Resort "Łączność" [110 beds], Spa Health Resort "Pod Tężniami" [206 beds], Spa Health Resort "Promień" [130 beds], Spa Health Resort "Sanvit" [240 beds], Spa Health Resort "Wrzos" [164 beds]d, Spa Health Resort "Chemik" [156 beds], Spa Health Resort "Z.Z. and O.S. Union" [145 beds], Spa Health Resort "Ruch" [120 beds], ZNP Spa Health Resort [290 beds], Holiday-Prophylaxis Centre "Krystynka" [100 beds], PZN Treatment and Rehabilitation Centre [71 beds], Treatment and Rehabilitation Centre "Julianówka" [120 beds] (according to data of Diagnoza Miasta Ciechocinka [Diagnosis of the Town of Ciechocinek]). The spa offers a total of 3750 places, not taking numerous guest houses and hotels into account. Other elements of the spa infrastructure of the town are: 3 wooden brine graduation towers with a total length of 1740 meters (a unique technical construction from the 19th c.); neoclassical bath; Spa Park with a band shell, summer theatre, drinking hall, roofed walkway, fountain; Graduation Tower Park; Health Park with a swimming pool; Pine Park.

5. Functional and spatial structure of the town

The spatial and functional arrangement of Ciechocinek is the same as it was before the Second World War. New objects, such as hotels, guest houses, hospitals and sanatoria were built after the war, which helped develop spa treatment on a large scale. In the functional and spatial structure of the town, an important role is played by areas with spa buildings, well designed green areas as well as other spa areas characterized by suitable natural qualities. The spa character of the town is the key element deciding about its spatial functions and management. According to the Act on spa treatment, spas and spa protection areas as well as on spa communes (Dz. U., 2005 no. 167, point 1399) three zones of spa protection with specific functions have been created within the town limits. There are also specific regulations concerning management of such zones, which decides about the investment plans corresponding to the spa character of the town. The Study on Conditions and Directions of Spatial Management of the Town of Ciechocinek defines four functional areas in the spatial arrangement of the town: an area of spa functions in the centre and the oldest part of the town, where degraded buildings should be rebuilt, green areas and spa-related infrastructure should be developed; a multifunctional-residential area, adjacent to the central area, with spa-related

functions; a multifunctional-service area for services and non-intrusive economic activity; a rest and recreation area taking advantage of its natural qualities.

6. Functions and landscape-natural qualities of green areas

There are five parks in Ciechocinek: Spa Park, Graduation Tower Park, Health Park, Millennium Park and Pine Park. The Spa Park (19 ha) is a health-resort park. It was created in the middle of the 19th century as a spa garden. The dominant architectural elements of the park are: mineral waters drinking hall, Jaś and Małgosia fountain, the Frog, band shell, tennis courts and bowling centre. The park's flora is diversified, there are old trees: maple trees, oaks, lime trees and spruces as well as introduced species, such as maidenhair trees, liriodendrons and cork oaks. The Graduation Tower Park is the largest park in town and is a relevant part of the urban system. It surrounds the graduation towers and is an important element creating medicinal qualities of the spa. Its area, together with the, so called, Health Park and Millennium Park is 39 ha. The Pine Park (8 ha) is a forest park with old pines as predominant trees. Apart from parks, attention should also be paid to smaller green areas, including: the Hellwig Parterres close to the baths; the square with the "Grzybek" fountain; the square with Traugutt monument; the church square; the square next to the summer theatre, the square next to the market hall, sanatorium gardens. There is one natural monument located in the Spa Park (pedunculate oak, 22 m tall, 3.9 m around). There are also rare plants, specific due their habitat, halophytes which naturally grow in salinated environments. They may be found close to graduation towers as well. Their presence in this region makes it specific on the national scale. There is an area of protected landscape, "Ciechocinek Lowlands" within the town limits (36814 ha). Both natural and cultural elements of landscape are legally protected. The most valuable protected area is the "Ciechocinek" Flora Reserve (1.88 ha) located next to the graduation towers. With Poland's accession into European Union, areas were designated and criterions for their including in the European ecological network Natura 2000 were defined. All this is to ensure lasting existence of ecosystems. In Ciechocinek commune, a special area of bird protection was created (420.20 ha) along the Wisła River and between the dykes.

7. Protection of cultural heritage

The spatial policy of the town ensures protection of objects included in the register of monuments and cultural heritage, mainly through their preservation and conservation. All works conducted in monument areas or in their immediate vicinity, following the Act on the protection of cultural heritage, need a permit issued by the Voivod Monuments Preservation Department. The most important monuments of Ciechocinek, deciding about its touristic potential are: the Swiss style Spa Park with mineral waters drinking hall (est. 1880), with a band shell (1909) and "Jaś and Małgosia" fountain (1926); graduation towers designed by Jakub Graff, engineering monuments from the years 1824-33 (tower I and II) and

from the year 1859 (tower III); the "Grzybek" fountain (1926); St. Peter and Paul neo-gothic from the years 1877-1884; field Eastern-Orthidox church from the year 1894; train station building from 1870 and 1901-1902; the Baths Complex; Summer Theatre from the year 1891; brine-thermal swimming pool from the year 1931; post office building from 1932-34; president's palace from the years 1932-33 and 1999-2006; water tower – engineering monument from the 1st half of the 20th century and the former "Casino Europa" from the year 1932.

8. Conclusions

Ciechocinek is one of the largest spas in Poland. There are areas of spa protection located within the administrative limits of the town, which require the authorities to manage the town in a way which gives priority to the spa character of the place. As far as the development and accessibility of spa infrastructure are concerned, Ciechocinek has a high position on the regional and national scale. As far as natural conditions are concerned, the analyzed area belongs to areas which need special protection.

References:

[1] *Aktualizacja Strategii Rozwoju Miasta Ciechocinka 2007-2013*

[2] *Diagnoza Miasta Ciechocinka*

[3] KOZŁOWSKA-SZCZĘSNA, T., BŁAŻEJCZYK, K., KRAWCZYK, B., LIMANÓWKA, D., *Bioklimat uzdrowisk polskich i możliwości jego wykorzystania w lecznictwie*, PAN, Warszawa 2002, s.60-78, PL ISSN 1643-2312 ISBN 83-87954-13-6.

[4] *Lokalny Program Rewitalizacji Miasta Ciechocinka 2008-2013*

[5] *Program Ochrony Środowiska dla Miasta Ciechocinka na lata 2007-2013*

STOCK FUNDAMENTAL ANALYSIS USING P/E INDICATOR
FUNDAMENTÁLNÍ ANALÝZA AKCIÍ S VYUŽITÍM UKAZATELE P/E

Radim Gottwald
Mendelova univerzita v Brně
radim.gottwald@mendelu.cz

Key words:
stock – P/E indicator – profit model – fundamental analysis of stocks
Abstract:
Stocks belong to ordinarily traded securities in regional and world Stock Exchanges. The paper focuses on P/E indicator, which is used for stock fundamental analysis. First of all the types of P/E indicators are described. Then computing and progress of P/E of selected stock during seven years are mentioned. The way of computing of stock´s intrinsic value in profit model is mentioned too. The review of advantages and disadvantages of indicator P/E using in profit model of fundamental analysis is in the end of the paper.

Introduction

Investors use various investment analyses, which describe specific factors. These factors influence stock prices. Mostly used is fundamental analysis. It is more applicable in practice than psychological and technical analysis. Fundamental analysis consists of three parts – macroeconomic analysis, sector analysis and company analysis. Macroeconomic analysis describes factors like GDP, balance of payment, inflation etc. Sector analysis describes factors like sector structure model, sector dependence on business cycle etc. Company analysis consists of quantitative analysis, qualitative analysis and intrinsic value computing by dividend discount model, profit model and other models.

Objectives and methodology

The objective of this paper is to analyze using of P/E indicator, which is often used by many investors. These investors find under valuated and over valuated stocks. The principle of profit model, advantages and disadvantages of indicator P/E using in profit model of fundamental analysis is described in detail. Czech company CEZ stocks are used for explaining of P/E computing. P/E progress is presented in graph. Descriptive and analytic method is mainly used in the paper. Also fundamental analysis methods and comparative method is used.

Results

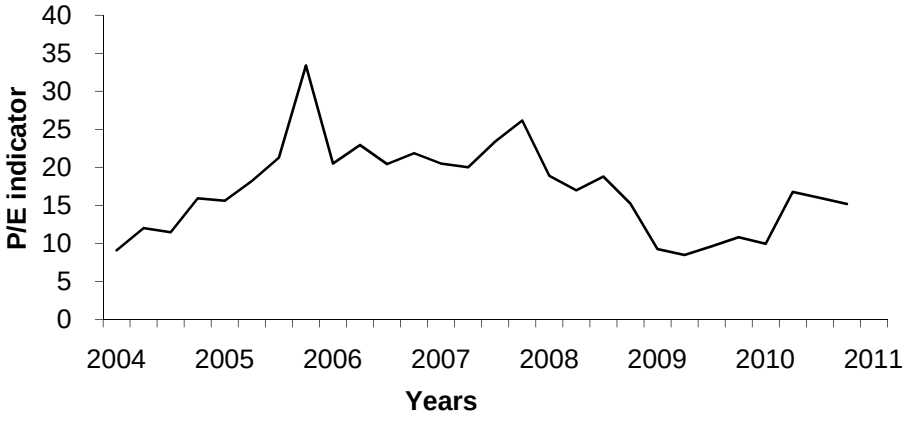
There are three types of P/E - Shiller P/E, forward P/E and trailing P/E. Shiller P/E considers inflation and cyclically modified profit (last 10 years profits average). Forward P/E considers profit in next year and mailing P/E profit in actual year.

P/E can be associated with one stock or several stocks of companies, which carry business in the same sector or market. In the first case, P/E depends on dividend policy, company management quality, sector and expected growth opportunities. In the second case, P/E in according with **Musílek (1999)** depends on expected yield rate and inflation. Therefore investors compare P/E of one stock with average P/E of whole sector or market.

P/E progress of selected security and value range

P/E of CEZ stock progress is illustrated in Graph 1.

Graph 1: **P/E of CEZ stock progress**



Source: own calculations based on http://www.cez.cz/

This stock is quoted in Prague Stock Exchange. Standard investment means P/E from 8 to 12. Higher value doesn´t mean unprofitable stock, but possible short-term fall in stock price in the future. The higher P/E is the less demand for stocks. Developed market stocks mean P/E about 20, new market stocks about 50. P/E of some stocks during speculative bubble in 2000 was about 1000.

Stock´s intrinsic value

Stock´s intrinsic value is according to **Rejnuš (2006)** theoretical price, which is perceived like „justified price"by investors. It can be appraised by profit model,

historical model, free cash flow model, dividend discount model and other models. Profit model assumes this computing of intrinsic value:

$$VH = E_1 \cdot \frac{P}{E_N}$$

whereas:

E_1 ... expected profit one stock next year

$\frac{P}{E_N}$ ... normal P/E

$\frac{P}{E_N}$ value is estimated by basic or regression method. Basic method considers expected dividends later first year, expected interest rate and fixed dividend growth rate. Regression method considers more parameters. Investors can choose these parameters. Historical data time series are used for this method. The more parameters, the more exact estimation of $\frac{P}{E_N}$. Based on moving average, investors find the signals to buy or sell stocks. There is a disadvantage of regression method consisting in mutual correlation of parameters, coefficients instability and dependence of coefficients on selected period. V.S.Whitbeck and M. Kisor estimated coefficients based on data of 135 stocks from U.S. market:

$$\frac{P}{E_N} = 8{,}2 + 1{,}5g_E + 6{,}7p - 0{,}2\sigma$$

whereas:

g_E ... profit growth rate

p ... dividend payout ratio

σ ... standard deviation like risk rate (profit volatility)

Watsham (1993) describes factors which influence P/E value in practice. Problems with using of P/E indicator in practice are details described by **Chisholm (2009).** He focuses on differences in used accounting methods for valuation, problems with average P/E estimation by companies from different sectors and companies which realized a loss. In this case is predicative ability of P/E rather limited. **Azhar (2009)** uses except P/E more exact indicator PERS (price earnings ratio share) and he describes dependence of PERS on profit and value of company.

Advantages and disadvantages of P/E

Stock analysis using P/E has some advantages and disadvantages. Investors often use P/E for its simple computing and availability of needed data. Czech investors use within fundamental analysis the P/E „nearly always“ in 56 % of cases and „usually“ in 25% of cases. It was found in research project c. 10 years ago. **Veselá (2006)** researched whether investment strategy to buy stocks with low P/E could be

succesful. It could be, that is the result of research works „The New Contrarian Investment Strategy“ from **Dreman (1982)** and „How little we know about P/Es, but also perhaps more than we think“ from **Bleiberg (1989)**.

Investors cannot rely on P/E in every time. High P/E means that company realizes low profit per stock because of concentration to new technology development. Profit can be distorted by single short financial operations. There is no sense to compute P/E for a company which realized a loss.

Advantages and disadvantages of profit model

Investors often use profit model, even more than dividend discount model, which is rather theoretical model. There is a little problem with finding of parameters needed for dividend discount model. Profit model is used rather for short term investing. Investor can find under valuated and over valuated stocks, but for example technical analysis is more credible than profit model. Company sales are less volatile than company profit and management influence realized sales less than profit, so that profit model is less suitable than historical model.

Conclusion

Investors decision about optimal investment depends on various factors. Using fundamental analysis, they need to know trend of P/E. This indicator is not reliable in every case, for example when company realized a loss. Nevertheless, many investors compute intrinsic value of security by this way. The question is predicative ability of this indicator in regard of other used indicators. That will be – together with comparison of other stock valuation methods like psychological and technical analysis - the subject of next research.

The paper was compiled in terms of Thematic direction 02 solution of Research plan FBE MENDELU in Brno MSM No. 6215648904/02 named „Main tendencies in the development of a competitive environment within the integration and globalisation processes, and the adaptation of business entities to the new conditions of the integrated market“realized by means of financial support of state resources through Ministry of Education, Youth and Sports.

References:

[1] AZHAR, A. K. M., OSMAN, S. I. W., PARINDURI, R. A. *On Capital Market Ratios and Stock Valuation: A Geometric Approach* [online]. Sydney: 22nd Australasian Finance and Banking Conference 2009. 2009 [cit. 2010-11-14]. Available from: <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1460594>.

[2] CHISHOLM, A. M. *An Introduction to International Capital Markets*. 2. issue West Sussex: John Wiley & Sons, 2009, 428 p. ISBN 978-0-470-75898-4.

[3] MUSÍLEK, P. *Finanční trhy a investiční bankovnictví.* 1. issue Praha: ETC Publishing, 1999, 852 p. ISBN 80-86006-78-6.

[4] REJNUŠ, O. *Peněžní ekonomie : (finanční trhy).* 2. issue Brno: Akademické nakladatelství CERM, 2006, 258 p. ISBN 80-214-3235-7.

[5] VESELÁ, J. *Analýza trhu cenných papírů - II.díl: Fundamentální analýza*, Praha: VŠE, 2003, 362 p. ISBN 80-245-0506-1.

[6] WATSHAM, T. J. *International Portfolio Management: A Modern Approach*. 1. vyd. London: Longman Group UK Ltd. 1993. 440 p. ISBN 978-0-851-21912-7.

SPECIFICITY OF MANAGEMENT IN TERRITORIAL SELF-GOVERNMENT UNITS

Mariola Grzebyk
University of Rzeszów
mgrzebyk@op.pl

Key words:
local authority – development – management

Abstract:
What currently plays a more and more significant role is the research concerning the management, competitiveness, development and other aspects of the regional systems. Local governments are complex and difficult to manage organizations functioning in the rapidly changing organizational, political and economic circumstances. Therefore, a thorough understanding of the essence and the specific character of their management, with regard to the management of other economic entities, seems to be of prime importance.

Introduction

Scope of applications of the theory of organisation and management is universal. Its normative character is related to each organisation that groups people's teams, considering differentiation of variable structures, in particular, factors of economic, technological or social and political environment [3,3]. In self-government management principles and rules of standard management are applied. However, specificity of such management must be considered. [5,60]

Management is variously defined in literature. Difficulty in defining this notion results from the fact that it concerns differentiated units (organisations) which are open systems i.e. having connection with an environment.

The analysis of the essence of public management allows for its defining as management of processes relying on rendering public services i.e. satisfying needs in a collective manner. It encompasses planning and organising public services as well as motivating managers (or other persons included in this process) to provide services at a high level within reasonable use of possessed resources as well as controlling the level of usefulness gained by means of actions of public organisations. [5, 80]

Many authors believe that the processes taken place within territorial units are similar to those within a giant company manufacturing many products with the use of many supply sources. [6, 210] As claimed by Kieżun W. this is a misleading thesis that principles of organisation and management theories are related exclusively to economic activity of enterprises. This thesis is not confirmed by world theory and practice. [3, 3]

In this context, the aim of this article is to depict specificity of management in territorial self-government units in comparison to management of economic entities.

Similarities in management of economic and territorial units

Similarities between economic and territorial units are as follows: [4, 143-146]

- Their actions are directed at achieving the main goal No matter whether it is an economic organisation or a territorial unit, their functioning is determined by directions of their actions i.e. goals. Obviously, these goals may have various features, deadlines etc. However, we always deal with a goal-oriented action.

- They function within the conditions of market and global economy. As a result, they undergo market regulations. Market logic requires holding a competitive position in the market and aiming at gaining advantage over other competitors.

- They act in the conditions of competition and cooperation. The actions of such units compete against each other, though; the subject of competition may be different in both cases. Economic units refer to sales markets and for territorial units gaining external capital. From one point of view, these units are forced to constantly strive against competitors i.e. other organisations; on the other hand, they will be seeking ways of establishing cooperation. [2, 95-96]

- They act in a certain legal environment These are determinants that appear in the macro-environment and these units have to accommodate, independently on their scope of activity and character.

- They have certain financial resources and methods of their acquiring and management. Greater limits in this capacity are imposed on territorial units. The possibilities of gaining financial resources are defined in proper acts. - They possess certain assets and resources. They are an owner of these assets. In case of economic organisations these are i.a. buildings, lands, technology, and inventories of material and finished goods and in case of territorial authorities, these are communal assets granted to communes for its disposal.

- They have incomes and expenditures. Independently on the fact whether it is an economic or territorial unit, it is required to finance their activity out of incomes which are gained by them. Territorial units, acting in specific conditions, have legally defined sources of incomes and directions of their spending financial means.

- They have a certain organisational structure. Irrespective of the kind of a unit, each has to be properly organized. As a result, these structures are characterised more or less by the level of hierarchy and centralisation depending on the assumed model of management.

- They function within an environment. Economic units or territorial units are open systems.

- They have certain decision making procedures. Both economic and territorial units apply certain decision making procedures, strictly connected with their organisational structure. These procedures have a more or less democratic

character. It is assumed that democratisation of management is greater in territorial units.

- They use management and planning methods that are optimal from the viewpoint of assumed goals. In order to fulfil the entrusted functions and perform tasks (territorial units) and achieving the best financial results (economic units), they apply methods in the scope of standard management. They act in the methodological, reasonable and goal-oriented manner, using scientific advancement and experiences of many various fields of science. These methods in many cases are similar, though, the subject of activity is different. It regards management, strategic planning as well as creating and implementing strategies.

- Actions have a permanent character in the scope of conception and strategy in both cases, there is a problem of long term development. The longer time period, the less significance of current benefits is greater creation of stable fundaments of such development. [7,16]. In case of territorial units, it is about maintaining competitive advantage in a long-term period as well as greater and greater satisfaction of the needs demonstrated by local societies.

- They influence and undergo influences of natural and anthropological environments, in which they act. In case of territorial units, these environments are elements of the system "commune" i.e. its subsystems, however, they constitute environment of activity for economic units. They are elements of close external environments defining their location or urbanisation benefits.

- The role of leadership and its weight in the processes of management and planning is great. Force, efficiency of actions and competences of leaders determine the effectiveness of using resources, management instruments and at the same time, the level of achieving goals.

Summing up the similarities between economic units and territorial units, it shall be emphasised that they are various forms of organisation and, consequently, they reveal features typical for organisations such as: openness, awareness and goal-orientation of actions, hierarchy of structure and great significance of human factor.

Differences in management of economic and territorial units

Apart from similarities in management of economic and territorial units, there are some differences: J. Kot provides as follows:

- Content of the main (general) goal and goals of lower significance. The main goal of economic organisations relies on survival and development, and as a consequence, maximisation of profit, however territorial self-governments are interested in maximisation of social well being.

- Management and its participants. The basic difference relies on democratisation of life regarding social societies. Any decisions made by self-governments are based on the principles of participation in decision making processes of various groups of

entities functioning in a local area. In economic organisations, all participants of processes conform their actions towards one goal - profit.

- Strategic planning and management. Methodology of strategic planning and management is similar both in self-government units and in private sector, however these processes are more complex and time consuming in the former. It is caused by the previously mentioned democratisation of public life.

- Character of decisions in territorial self-government units and economic organisations. In territorial self-government units, decisions are made by clashing interests and views of various subjects of social life, including self-government authorities. They mostly rely on political choices. In economic units decisions are made beyond political criteria, at camera meetings and procedures are simpler.

- Management board of territorial and economic units. The executive body in commune units is voted for on the basis of democratic principles by elections. In private organisations, authorities are elected on totally different bases. It depends on i.a. size, type of a given entity or ownership of capital.

- Control of procedures, decision making and implementation. In territorial units, decision making and their implementation is of an unclassified character, they undergo social supervision and assessment. Social supervision is not connected with economic units. Decisions are made on the basis of an economic account.

- Pressure towards action. Activity of territorial self-governments undergoes permanent social and political pressure. Negative assessment of self-government authorities results in the end of the career and at the same time, social and economic promotion. Internal pressure from various stakeholders is great, in comparison to the authorities of economic units, in which particular elements aim at one main goal.

Summary

Despite clear specificity of public authorities, territorial self-governments undertake and will be undertaking more and more elements typical for private sector. Consequently, an enterprise becomes a source of solutions for public administration and processes of its reformation, as territorial self-governments act in more and more competitive environment and they have to act in accordance with market logics. It must be remembered that all economic and innovative mechanisms are to serve management for the interests of self-government communes. Due to differences, territorial self-governments may only act in the manner similar to a private enterprise. Only some solutions may be mechanically transferred to self-governments, however, other must be modified. It is sufficient, so as to take opportunities by applying modern management of territorial self-government units, acting for the benefit of common well being [1,140- 142]. Even cursory glance at self-government reality in Poland is enough to state that using reliable management methods and techniques is not only possible but absolutely indispensible.[8, 40]

References:

[1] FILIP, P. *Audyt wewnętrzny jako narzędzie wspomagające procesy zarządzania w jednostkach sektora finansów publicznych* [Internal audit as a tool supporting management processes in the units of the public finance sector], [w:] Sprawozdawczość i rewizja finansowa w procesie poprawy bezpieczeństwa obrotu gospodarczego [Reporting and financial audit in the process of improving security of the economic turnover], wyd. AE Kraków [Published by AE in Kraków], Kraków 2005 p.139-146, ISBN 83-922067-2-X

[2] GRZEBYK, M. *Determinants influencing the competitiveness of local government units,* [w:] Ekonomicky rozvoj a management regionu, Hradec Kralove 2.a 3. unora 2010, p.95-98 , ISBN 978-80-7435-040-5

[3] KIEŻUN, W. *Transformacja administracji publicznej w świetle teorii organizacji i zarządzania* [Public administration transformation in the light of the organization and management theory], Master of Business Administration, nr 1, 2000, p.3

[4] KOT, J. *Zarządzanie rozwojem gmin a praktyka zarządzania strategicznego* [Management of the local communities' development and the strategic management practice], wyd. Uniwersytetu Łódzkiego [Published by Łódz University], Łódź 2003, p.143, ISBN 83-7171-625-7

[5] KOŻUCH, B. *Zarządzanie publiczne w teorii i praktyce polskich organizacji* [Public management in the theory and practice of the Polish organizations], wyd. PLACET, Warszawa 2004, p.60-80, ISBN 83-85428-89-5

[6] LEVEN, CH. *Lokalne inicjatywy na rzecz rozwoju gospodarczego* [Local initiatives for the economic development], [w:] Gospodarka samorządów terytorialnych w świetle doświadczeń amerykańskich [The economy of local governments in the light of the American experience], pod red. L. Salamon, B. Seidel, P. Bury, T. Markowski, TECHEKO, Łódź 1995, p. 210

[7] MARKOWSKI, T. *Zarządzanie rozwojem miast* [Urban development management], PWN [Scientific Publishing House], Warszawa 1999, p. 16, ISBN 83-01-12971-9

[8] WOJCIECHOWSKI, E. *Zarządzanie w samorządzie terytorialnym*, [Management in the local government], Difin, Warszawa 2003, s. 57, ISBN 83-7251-313-9

DEGREE OF ECONOMIC FREEDOM AND RELATIONSHIP TO ECONOMIC GROWTH AND HUMAN DEVELOPMENT

Grzegorz Chodak, Krzysztof Kowal
Wroclaw University of Technology
grzegorz.chodak@pwr.wroc.pl

Key words:
liberalism – economic growth – index of economic freedom

Abstract:
Presented in this article is an analysis of the relationship between the Index of Economic Freedom and indices of economic growth, i.e. GDP per capita and the Human Development Index. The McPherson coefficient of correlation was calculated from several different perspectives. Described in the final part of the article is the testing of the hypotheses, while a short commentary on the results obtained is also presented.

Introduction

Freedom is an intrinsic element of the life of every person, yet is often noticed only in the event that attempts are made at limiting it. It is possible today to select many areas in which it is more or less consciously diminished. One of these is the field of economic freedom, which may be reduced through bureaucracy for example, as well as through various forms of concession. The means of preventing this particular weakening of the development of an economy may be a gradual liberalization of it.

Individuals aspire to gain happiness through the fulfillment of their needs, assistance in which may be provided by an increase in income. Economic growth triggers an increase in the income of individuals, but is also equated with an increase in access to such goods as better medical care or education. On account of this it becomes vital to investigate the influence of the liberalization of an economy on economic growth.

The purpose of this article is to examine the relationship between the Index of Economic Freedom and indices of both human development, in HDI, and GDP per capita. The conception that level of economic freedom has an influence on economic growth was investigated. Confirmation of this hypothesis may assist in answering the question of whether liberalization of an economy leads to an improvement in economic growth, and thereby in the living conditions of the society.

1. Data completion method

Data for the study was obtained from reports available, accessible at the sites www.heritage.org and www.worldbank.org. On account of their incompleteness, it

was necessary to extrapolate and interpolate using data contained within them. The greatest number of values was lacking in the Human Development Index and constituted 10.34% of its data. In general it was necessary to supplement almost 6.5% of the data.

It was necessary to select a method of estimating the data from among those which adjust values lacking to linear or exponential trends. Chosen therefore were two functions of the spreadsheet of Microsoft Office Excel: REGEXPW and REGLINW. The REGEXPW function fits the exponential curve $y = b * m^x$ to existing data relating to year (x) and index value (y) [http://office.microsoft.com/pl-pl/excel/HP052091081045.aspx]. The REGLINW function utilizes the method of least squares to fit a linear function to known values [http://office.microsoft.com/pl-pl/excel/HP052093201045.aspx?pid=CH062528311045].

The functions mentioned above give various values in estimation. It is thus necessary to check whether the data available better fit the linear trend or the exponential trend. States were selected for which all data were available, with these countries representing five categories of the Index of Economic Freedom (IEF) and GDP and four groups of the Human Development Index (HDI). Initial years were assumed to be unknown and their extrapolation was performed with the use of both functions. Checked next was error, calculating the absolute value from the difference in real and extrapolated values.

In all indices the average percentage value of the error of REGLINW was greater than that with the use of the function REGEXPW. On account of this it was necessary in estimating the values lacking to use the REGEXPW exponential function, which best filled the deficiencies in the data presented.

2. Correlation between the index of economic freedom and gross domestic product per capita

The relationship between the IEF and GDP per capita was investigated on the basis of data on the 150 states selected. From among all 183 states of the Index of Economic Freedom (contained in the report from 2009) it was necessary to reject those for which no data on gross domestic product was made note of. Also excluded were those countries in which the number of cells with data available for both GDP and the index of freedom was lower than 50% of all values. Given that the report relating to the Index of Economic Freedom is published on the basis of data from the preceding year it was necessary to take this into consideration in calculating the correlation coefficient. As such, the linear relationship was counted with the use of Index of Economic Freedom data from the given year and GDP per capita for the preceding year.

Presented in Graph 1 are values of the McPherson coefficient for correlation between the Index of Economic Freedom in a given year and GDP per capita from later years. Year 1 for Index of Economic Freedom 1995 is 1995 of GDP per capita, with year 2 of GDP per capita being 1996. The graph shows with which years of GDP

per capita the index is most correlated, that is, on which years of GDP per capita the Index of Economic Freedom has the greatest influence.

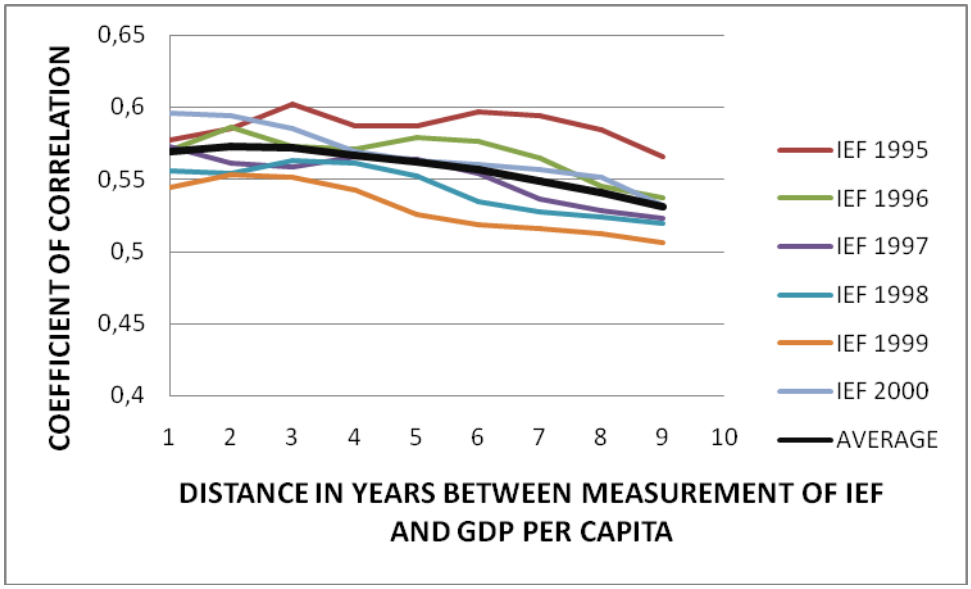
Following calculation of the coefficients of correlation between individual years, their mean average was found. The manner in which this was calculated is presented by the following formula:

$$\rho_{IEF,\ PKB\ per\ capita} = \frac{+ \ldots + \rho_{IEF\ 2009\ ,\ PKB\ per\ capita\ 2008}}{13}$$

where:

$\rho_{IEF,\ PKB\ per\ capita}$ is the average McPherson coefficient of correlation from the 13 years studied;

$\rho_{IEF\ rok1\ ,\ PKB\ per\ capita\ rok2}$ is the McPherson coefficient of correlation for a given pair of years.



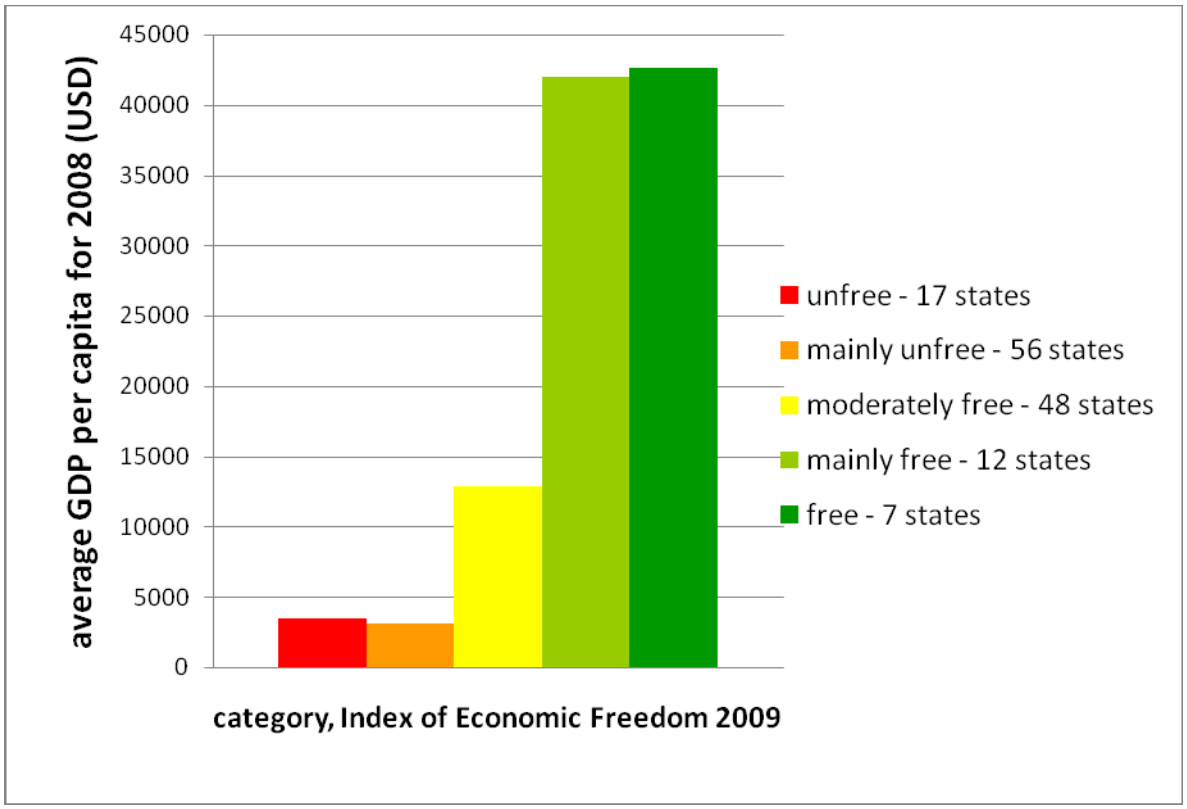
Graph 1 Influence of the Index of Economic Freedom on later years of GDP per capita

[Source: Own compilation on the basis of http://www.heritage.org/index/Explore.aspx?view=by-region-country-year and http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2]

The value of the coefficient of correlation fluctuated between 0.602 in the second year and 0.51 in the ninth year. On average the Index of Economic Freedom is most correlated with year of GDP per capita x+2 and x+3. That is, for example, IEF 1995 (calculated for 1994) has the greatest influence on GDP per capita in the years 1996-1997. This shows that the improvement of the Index of Economic Freedom through liberalization of an economy brings with it growth in GDP per capita with a delay of around two years. The more distant the years of GDP per capita from the year of the

Index of Economic Freedom, the lower the coefficient of correlation (following the third year of GDP per capita). This means that the Index of Economic Freedom has an ever smaller influence on GDP per capita in later years.

Presented in Graph 2 are average values of GDP per capita for 2008 achieved in individual categories of the Index of Economic Freedom 2009. The numbers in the legend denote the number of countries in a given category. Countries belonging to the category of free countries possess the greatest average GDP per capita (USD 42,643). Immediately behind them are the mainly free countries, the GDP per capita of which is slightly smaller. The two highest categories enjoy a decisive advantage in size of GDP per capita compared with the remainder. Average GDP per capita of countries in the free countries category is over twelve times greater than the average GDP per capita of unfree countries. There is quite a large difference between states mainly free and moderately free and this amount to around USD 29,000. In general, the lower the category of freedom is the lower the average GDP per capita. An exception is the two final categories, where GDP per capita of unfree countries is around USD 400 greater than GDP per capita of mainly unfree countries.



Graph 2 Average GDP per capita in categories of the Index of Economic Freedom

[Source: Own compilation on the basis of http://www.heritage.org/index/Explore.aspx?view=by-region-country-year and http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2]

Analyzing data for 2009 in individual categories of the Index of Economic Freedom, it may be observed that the category of mainly free countries is characterized by the greatest distribution of GDP per capita. Influencing this were the data for Luxembourg, which achieved a very high income per person, and Mauritius, in which GDP per capita was quite low. This variance amounted to over USD 104,000. In remaining categories this distribution ranged between a level of over USD 15,600 in unfree countries to a level of around USD 47,600 in moderately free countries.

Presented in Table 1 are three countries which recorded the greatest improvement Index of Economic Freedom in the course of 13 years. The percentage change of individual indices was calculated by use of the following formula:

$$\text{Zmiana } \% = \frac{Wk - Wp}{Wp} \times 100\%$$

The value of a given index in the earliest year is denoted in the formula as Wp, and in the latest as Wk.

In Azerbaijan a change in the index of 93% caused a growth in GDP per capita of 1,242%, and in Angola of 1,051%. The countries given in the table achieved some of the highest growths in GDP per capita. Greater growth occurred solely in Equatorial Guinea (over 7,600%), where the Index of Economic Freedom grew in the course of these years by 16%.

TAB. 1 Countries with the greatest improvement in the Index of Economic Freedom

	Index of Economic Freedom			GDP per capita		
	1996	2009	change (%)	1995	2008	change (%)
Azerbaijan	30.0	58.0	93	397.20	5,330.03	1,242
Angola	24.4	47.0	93	401.90	4,627.10	1,051
Bosnia-Herzegovina	28.1	53.1	89	560.18	4,890.39	773

[Source: Own compilation on the basis of http://www.heritage.org/index/Explore.aspx?view=by-region-country-year and http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2]

Table 2 shows three countries with a greatest fall in the Index of Economic Freedom in the course of 13 years. In Zimbabwe a drop in the index of 51% caused a drop in GDP per capita of 23%. In the remaining two countries GDP per capita grew, yet in comparison with other countries this is a very small growth.

TAB. 2 Countries with a greatest fall in the Index of Economic Freedom

	Index of Economic Freedom			GDP per capita		
	1996	2009	change (%)	1995	2008	change (%)
Zimbabwe	46.70	22.70	-51	607.11	466.40	-23
The Central African Republic	75.94	48.30	-36	325.20	445.39	37
Argentina	74.70	52.30	-30	7,407.28	8,235.12	11

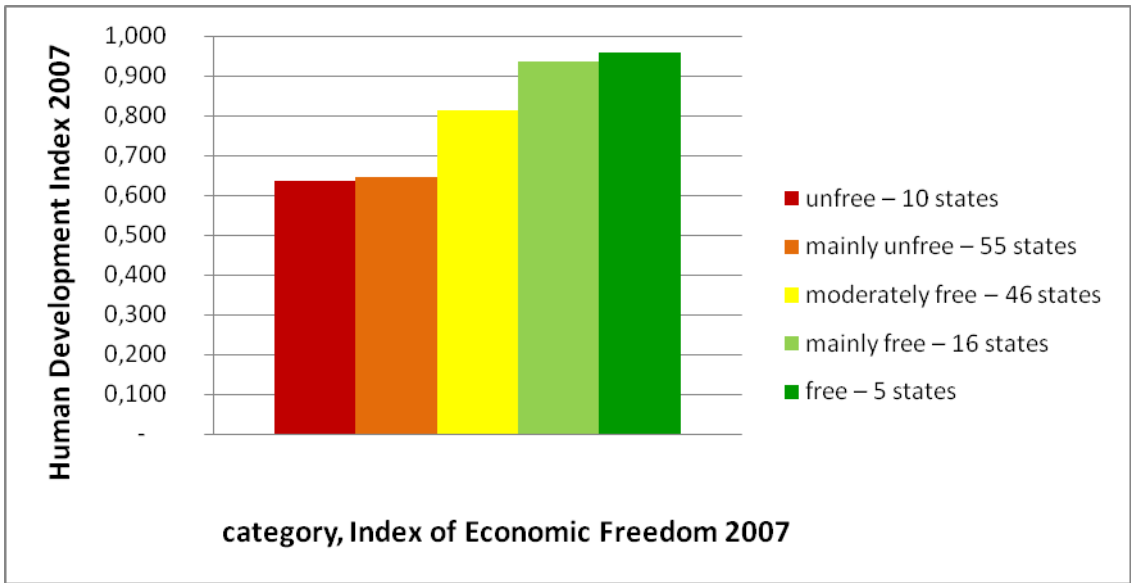
[Source: Own compilation on the basis of http://www.heritage.org/index/Explore.aspx?view=by-region-country-year and http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2]

The average coefficient of correlation between the Index of Economic Freedom and GDP per capita amounts to 0.612 and is calculated for a range of years: 1995-2007 for GDP and IEF 1996-2008 (coefficient of correlation was investigated for pairs of years, i.e. for GDP per capita for 1995 and IEF 1996 etc.). This value for the McPherson coefficient of correlation indicates a significant linear relationship between IEF and GDP per capita. The positive level of the coefficient of correlation provides the information that growth in gross domestic product per capita may be caused by growth in the value of the Index of Economic Freedom. The level of the coefficient of correlation increased gradually with the passage of the years, achieving in 2006 its highest value (0.66). In subsequent years the coefficient fluctuated slightly (by no more than 0.03). The indicator for linear determination shows that in over 37% of cases the changes in GDP per capita could be determined by changes in the Index of Economic Freedom.

3. Correlation between the index of economic freedom and the human development index

The relationship between the IEF and HDI was investigated for 132 states. Rejected were those countries for which Human Development Index data were not collected and those which had an insufficient number of data.

Graph 3 presents average sizes of the Human Development Index, achieved by selected countries grouped in the categories of the Index of Economic Freedom for 2007 (the research was conducted at the end of 2009 and beginning of 2010, at which time 2007 was the last year for which it was possible to collect data for such a significant number of countries). It may be observed that the higher the range of the IEF, the higher the average HDI. The highest level for the Human Development Index was obtained by free countries. The greatest difference between the average level of the Human Development Index in neighboring categories came between mainly unfree and moderately free countries (0.168).



Graph 3 Average level of the Human Development Index in categories of the Index of Economic Freedom

[Source: Own compilation on the basis of http://www.heritage.org/index/Explore.aspx?view=by-region-country-year and http://hdr.undp.org/en/media/HDI_trends_components_2009_rev.xls]

Analyzing data of the Index of Economic Freedom for 2007, it may be observed that countries from the mainly unfree category are characterized by the greatest distribution of values for the Human Development Index. Influencing this was, among others, the data for Greece, which achieved a very high level of HDI, and Niger, where the Human Development Index achieved very low values. This variance amounted to 0.602 of a point. In the category of free countries this distribution was considerably lower. Quite a low level of variance in data was also seen in the mainly free countries (0.099).

The average coefficient of correlation measured for individual years, utilizing the value for the Index of Economic Freedom and Human Development Index, amounts to 0.598 (this was calculated as the mean average of the coefficients of correlation for the years 1995, 2000, 2005, 2006 and 2007, in that the HDI in earlier periods was calculated every five years). This is a moderately high level for the coefficient of correlation, indicating a significant linear relationship between the Index of Economic Freedom and Human Development Index. The coefficient of correlation takes positive values, which indicates that growth of the Index of Economic Freedom may cause growth of the Human Development Index. In individual years the value of the coefficient rose, the greatest being in 2006 and holding the level of 0.65. The indicator for linear determination shows that in over 34% of cases the changes in the Human Development Index are determined by changes in the Index of Economic Freedom.

Analyzing the connections between the Index of Economic Freedom and Human Development Index, it may be concluded that people live longer in freer societies.

On account of the fact that the HDI also contains information on the health of citizens it may be inferred that an increase in the index causes also an improvement in the health of inhabitants. Individuals feeling safe in a given environment may freely develop various spheres of their own lives. Taking into consideration the third component of the HDI, i.e. gross enrolment ration, availability of education is also determined by level of economic freedom. The prosperity which springs from economic freedom leads to wider access to education. This access is one of the basic conditions of development of societies. Reducing illiteracy and increasing the number of pupils at various levels of education leads to dynamism being added to the process of development.

It may be observed that the average HDI of the most free countries is 1.5 times greater than in the case of the countries least free.

4. Testing of hypotheses

Supplementing analysis of the coefficient of correlation is performance of a test of hypotheses for the coefficients of correlation. The hypotheses put were H_0: $\rho = 0$, denoting that the features are not correlated, and the alternative hypothesis, H_1: $\rho \neq 0$.

The test statistics were calculated according to the formula [8]:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

where r is the coefficient of correlation from the test, with n the size of the test.

With the level of significance $\alpha = 0.05$, the critical value read from the Student's *t* tables for 148 degrees of freedom (in testing correlation between the Index of Economic Freedom and GDP per capita) amounted to $t_{\alpha 1} = 1.976$, and for 130 degrees of freedom (in testing correlation between the Index of Economic Freedom and Human Development Index) $t_{\alpha 2} = 1.978$.

The test statistics for the correlation of GDP per capita and the IEF amount to $|t_1| = 9.41$, and for the HDI and IEF $|t_2| = 8.5$. In both cases $|t| > t_\alpha$, and it is therefore necessary to reject the hypothesis of a lack of correlation, H_0, and accept the alternative hypothesis. This means that the relationship between the variables studied is statistically significant.

5. Discussion of results and summary

It should be remarked that it is not possible to reach unambiguous conclusions solely through analysis of the coefficient of correlation. This is confirmed only by a linear connection of both factors in a strictly mathematical sense. Correlation does not necessarily indicate a cause-effect relationship between the features described.

It is not possible to say clearly that an increase in the index of freedom is certain to trigger growth in GDP per capita or the Human Development Index. It may, however, be stated that in more free societies higher indices of economic growth

were observed. It may not be ruled out that rapid economic growth caused by other factors led in some countries merely to evolution of the societies in the direction of more liberalized.

Citing the analysis of the coefficient of correlation conducted, it is possible to find the existence of a perceptible connection between the size of the indices of economic growth and the Index of Economic Freedom. The most significant connection could be observed between the Index of Economic Freedom and gross domestic product per capita. It may be concluded from the research presented that economic freedom resulting from the liberalization of an economy positively influences the income of citizens. In general it may be stated with a large measure of probability that in a more liberal economy inhabitants live better, on account of a higher level of human development.

References:

[1] 2009 Index of Economic Freedom, http://www.heritage.org/index/pdf/Index09Full.pdf (downloaded: 29.11.09)

[2] http://office.microsoft.com/pl-pl/excel/HP052091081045.aspx (downloaded: 06.04.10)

[3] http://www.databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2 (downloaded: 04.04.09)

[4] http://www.hdr.undp.org/en/media/HDI_trends_components_2009_rev.xls (downloaded: 20.02.09)

[5] http://www.heritage.org/index/Explore.aspx?view=by-region-country-year (downloaded: 02.03.10)

[6] http://www.office.microsoft.com/pl-pl/excel/HP052093201045.aspx?pid=CH062528311045 (downloaded: 06.04.10)

[7] http://www.zarz.agh.edu.pl/bsolinsk/data/diagram%20korelacji.pdf (downloaded: 10.09.10)

[8] ŻYŻYŃSKI, J. (2007), *Podstawy metod statystycznych dla zarządzania: metody estymacji, testowanie hipotez, korelacja i regresja, analiza indeksowa* Wydawnictwo Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego, Warsaw.

INSTITUTIONAL PICTURE OF TRAVEL AGENCIES IN POLAND

Małgorzata Januszewska, Mirosław Januszewski
University of Economics in Wrocław, The Silesius University of Applied Sciences in Wałbrzych,
mjanuszewska11@wp.pl, mirjanus@wp.pl

Key words:
travel agencies - organization and intermediary tourism services

Abstract:
Following transformations at other markets, also in Polish tourism economy did occur changes stimulated by the expansion of the biggest tour operators and the concentration of tourism organization services market. The objective of the hereby article is the presentation of institutional structure characteristic for travel agencies in Poland, as well as trends occurring at the market of organization and intermediary services provision in tourism. Table 2,3 presents structure of travel agencies in Poland.

Introduction

Travel agencies, representing professional business entities, which provide organization and intermediary services, constitute an important link focused on tourism services supply in the process of tourism market development. Since the intensity of transformations occurring at the market of organization and intermediary services provision persists in close interdependence with the level of a specific tourism market development, so it is related to the relative demand and tourism services supply potential, as well as the defined economic system, therefore the scale of changes at particular national markets is significantly diversified. When the process of splitting the paths of organization and intermediary services institutional development was initiated in the developed countries in 1960s of the 20th century and meant the origin of professional companies specializing in travel organization and a large number of retail agents participating in providing intermediary sales of tourism services, in Poland in was not until the second half of 1990s of the 20th century that this process entered its initial phase.

Typology and spatial structure of travel agencies in Poland

The establishment and development of travel agencies resulted from the dynamic expansion of tourism movement, which stimulated entrepreneurs to undertake activities dealing with the sales of such services as accommodation, catering or transport, and also in the preparation of complex tourism oriented offers. The core concept of travel agencies is presented in table 1.

TAB. 1. The concept of a travel agency

The concept of a travel agency	Attributes emphasized in the definition	Names of definition authors
A company which takes care of all arrangements connected with a trip outside the place of residence.	Advantages for a tourist	Informal meaning
An entity functioning within the framework of one intermediary institution and organization offering the special type of services aimed at facilitating tourism services turnover.	The range of performed functions and the position in distribution system	A. Konieczna-Domańska
A company which deals in providing intermediary services and organization in tourism.	Performed functions	M. Łazarek
A company creating and selling tourism packages.	Product offered by an enterprise	G. Gołembski
A profit oriented entity , plays the role of a link between a producer of tourism services and a client.	Commercial nature of functioning, a link in tourism chain	E. Eckemann

Source: author's compilation based on: [5,16; 6,220; 10, 90; 7,13].

A travel agency performs several functions:

- providing information – presents an offer to a client including terms and conditions of purchasing it, while to service providers the level of demand for services and their expected quality,
- integration – travel agencies combine the sphere responsible for tourism services provision with the sphere of consumption,
- distribution – travel agencies represent distribution channels ensuring the flow of information about an offer,
- prediction – based on the sales of tourism services offer it is possible to forecast the size of tourism services sales as well as make predictions regarding tourism market prosperity.

Starting from mid 19th century, when first travel agencies were established worldwide significant changes occurred in the way of their functioning. These

transformations resulted in the diversification of business range, organization form and travel agencies' size. Therefore, at present different types of travel agencies may be listed. When in 1997 The Act on tourism services came into force in Poland [11] it introduced order in the scope of travel agencies functioning by distinguishing three groups of entities:

- Tourism organizer, i.e. an entrepreneur who organizes tourism events in the form of a ready made package consisting of tourism services. The organizer functions in his/her own name as a service provider for clients. He/she performs business services in his/her clients' place of residence, in the location where the given tourism oriented trip starts.
- Tourism intermediary, whose function consists in performing actual and legal activities ordered by a client, such as concluding contracts for providing certain tourism services. An intermediary represents his/her client's interests and frequently acts directly in his/her name. Additionally, such middlemen cannot be a party in an agency agreement or represent the other contractual party [2,110].
- Tourism agent who's functioning consists in offering permanent intermediary services in concluding contracts for providing tourism services for tourism organizers. The term 'travel agent' refers to a person or an organization selling travel services such as transport, accommodation and lump trips for the benefit of ordering entities (transport companies, hotels, tour operators) and receiving commission for it. The majority of agents also sell additional services: assistance in arranging passports, visas, insurance, etc. Therefore, the basic task of a travel agent is the same as that of any retailer and consists in ensuring the service provider with access to the market, while the client with a place where the required tourism services could be purchased [8,247].

Currently tourism agents represent the most diversified group of entrepreneurs. In Great Britain there are three types of such agents: Multiples – these agencies establish networks cooperating with national or international tour operators, such as e.g.: TUI, My Travel Thomas, Cook; Miniples represent companies characterized by a small number of divisions and function in a defined geographical area, their advantage is an excellent recognition of local market, their sale offer is smaller than that of Multiples, all of their divisions look the same and sell the same product, they take advantage of economies of scale. On the other hand there are Independent Agencies which function individually, they focus on taking over market niches, e.g. on organizing trips for schools, pilgrimages for certain religious groups, they obtain attempted results owing to their flexibility and specialization. Similar division occurs in USA where four types of travel agencies are functioning: Mega agencies (functioning globally), regional agencies, consortiums (networks of independent agents) and independent agencies [3].

Development of the Internet, as well as information and communication technologies has also resulted in changes of the way agents function. Currently at the market there are present traditional travel agencies and on-line ones, which

reach the client by means of a virtual distribution channels. The latter do not present a homogenous group and refer to the forms of functioning following different business models, such as: Agency Model Services – functioning on the basis of agency agreements, i.e. selling services at prices imposed by the producer for which they receive commission; Merchant Model Services – cooperating with producers of individual services and conducting sales in their own name and with a due margin; Opaque Model Services – functioning based on agreements with service producers and searching for the required services in client's name according to specified criteria, including price, without an option to disclose producer's name [9,110-114].

In Poland there are over 3000 travel agencies registered which are listed by Central Register of Tourism Organizers and Intermediaries authorized by the Ministry of Sport and Tourism. Their number keeps changing which is illustrated in table 2. Since 2002 frequent close-ups of travel organizers have been observed owing to termination of permission or refusing permission to conduct business activity, and also bankruptcy. The reason for such situation is an increase in insurance prices for companies active in the sector of tourism, decreasing demand for foreign tourism and their low profitability which brought about a few spectacular bankruptcies of such travel agencies as: Aladin, Big Blue, Selecturs, Orbis Travel. The highest stability regarding their number is observed among travel agencies combining organization and intermediary services in tourism.

TAB. 2. Travel agencies listed by Central Register of Tourism Organizers and Intermediaries in the period of 2002-2010 (update as of 30.11.2010)

Years	Poland total		Organizer		Organizer and intermediary		Intermediary	
	Number	Dynamics w %	Number	Dynamics w %	Number	Dynamics w %	Number	Dynamics w %
2002	3650	100	1675	100	1942	100	33	100
2004	2839	77,7	792	47,3	1999	102,9	48	145,4
2006	2689	94,7	559	70,6	2080	104,0	50	104,2
2008	2733	101,6	611	118,2	2089	100,4	33	66,0
2010	3073	112,4	684	111,9	2370	113,4	32	96,9

Source: Author's compilation based on data from Central Register of Tourism Organizers and Intermediaries

Table 3 presents spatial structure of travel agencies in Poland. It should be noticed that Mazowieckie, Śląskie and Małopolskie represent regions characterized by the biggest concentration of travel agencies. The dominating position of Mazowieckie region results from foreign agencies representation offices located in Warsaw. The share of travel agencies according to the objective of conducted business activities is diversified by territory. In such regions as Podlaskie mainly tourism organizers are

functioning, while in others travel agencies which combine intermediary and organization services are the dominating ones (Świętokrzystkie, Warmińsko-Mazurskie, Mazowieckie, Lubuskie, Małopolskie and Wielkopolskie).

TAB. 3. Spatial structure of travel agencies and their share according to the objective of conducted business activities following regional arrangement in Poland in 2010 (update as of 30.11.2010)

Region	Total share of entities	Share of organizers	Share of organizers and intermediaries	Share of intermediaries
Dolnośląskie	8,5	26,2	72,7	1,1
Kujawsko-pomorskie	3,0	36,3	63,7	0,0
Lubelskie	3,2	27,9	70,1	2,0
Lubuskie	1,6	10,2	89,8	0,0
Łódzkie	5,0	27,3	72,7	0,0
Małopolskie	12,2	10,9	87,5	1,6
Mazowieckie	19,9	9,3	89,7	1,0
Opolskie	1,9	25,0	75,0	0,0
Podkarpackie	3,4	10,6	87,5	1,9
Podlaskie	2,6	94,9	5,0	0,0
Pomorskie	6,8	29,4	69,2	1,4
Śląskie	13,9	29,8	69,7	0,2
Świętokrzyskie	1,8	0,0	100,0	0,0
Warmińsko – Mazurskie	3,4	4,8	95,2	0,0
Wielkopolskie	8,2	15,9	82,5	1,6
Zachodniopomorskie	4,6	48,2	48,2	3,5
Poland total	**100,0**	**22,0**	**76,9**	**1,1**

Source: Author's compilation based on data from Central Register of Tourism Organizers and Intermediaries

Defining the overall group of tourism agents is not an easy task since these entities do not have an obligation of being listed in the Central Register. The Institute of Tourism in Warsaw estimates that there are about 2650 tourism agencies functioning in Poland. The majority of them are small entities employing up to 9 workers (97,3%), private entities (98,5%), run by sole proprietors (70%) and civil partnerships (14,5%), single entity businesses (85%), these which were established in the period of 1989-1996 (73,3%) [4,191-205].

Trends observed in the functioning of travel agencies

The job of an organizer does change in time. It may be analyzed based on observing trends occurring at tourism market, among which these should be, distinguished which influence an organizer's activities [based on 1,236-237]:

- The dominating market is that of a purchasing party, while organizers function in the system of permanent, international competition, which results in an on-going search for sources helpful in functioning costs reduction.
- The number of great transnational corporations keeps increasing and the phenomenon of travel agencies merging and buying others out occurs, e.g. German TUI AG and British First Choice. In spite of the fact that over 3000 travel agencies function in Poland, there are only several major players which sell over 50 thousand trips annually. An advancing market consolidation results in the fact that the group of leaders will be shrinking in the future. Soon it will consist of 4 - 5 companies which will service over 200 thousand clients annually.
- Companies, so far not related with tourism sector, entered the market of tour operators, e.g. such commercial networks as Quelle or OTTO.
- Completely new companies of tour operator orientation are established, which results from the development of different electronic information and reservation systems.
- The focus is transferred from quantity to quality of tourism offers.
- Again it is the price of tourism offer which gains importance, as well as orientation towards novelties, besides of charge to basic package additional services become of major significance, especially these which are added free.
- The increasing number of applications and the widespread implementation of information and communication systems is observed in creating and distributing an organizer type of services.

At the market of tourism agencies trends in their functioning may be defined as follows:

- A decreasing importance of intermediaries and traditional agents interrelated with major tour operators (wholesalers).
- From fear of becoming eliminated from the market the agents look for new ways of operation, e.g. market niches.
- Focus on customer service quality.
- Flexibility of agents functioning resulting from spontaneous consumer decisions and making these decisions in the very last minute.
- Implementation of new information sources (mainly the Internet), distribution and sales of tourism organizers offer resulting in new entities entering tourism market, which so far were not active in tourism sector, but in information and communication technology and in marketing.

References:

[1] ALEJZIAK, W. *Turystyka w obliczu wyzwań XXI wieku*, Albis, Kraków 2000, s. 236-237;

[2] GOSPODAREK, J. *Prawo w turystyce i rekreacji*, Difin, Warszawa 2007, s.110

[3] http://www.bized.co.uk

[4] JANUSZEWSKA, M. *Struktura rynku biur p6,6odróży*, w: S. Bosiacki, *Gospodarka turystyczna w XXI wieku – stan obecny i perspektywy rozwoju*, Wydawnictwo AWF w Poznaniu, Poznań 2003, s.191-205.

[5] KONIECZNA–DOMAŃSKA, A. *Biura podróży na rynku turystycznym*, Wydawnictwo Naukowe PWN, Warszawa 1999, s.16;

[6] ŁAZAREK, M., ŁAZAREK, R. *Gospodarka turystyczna*, Wyższa Szkoła Ekonomiczna w Warszawie, Warszawa 2002, s.220;

[7] ŁYŻWA, D. Organizacja pracy biura podróży, Ministerstwo Edukacji Narodowej, Wydawnictwo Instytut Technologii Eksploatacji – Państwowy Instytut Badawczy, Radom 2006, s. 13.

[8] MEDLIK, S. *Leksykon podróży, turystyki i hotelarstwa*, PWN, Warszawa 1995, s. 247.

[9] NALAZEK, M. *Internetowe kanały dystrybucji na rynku turystycznym*, Difin, Warszawa 2010, s. 110-114;

[10] PETROZOLIN-SKOWROŃSKA, B. (red.) Encyklopedia Powszechna PWN, Wydawnictwo Naukowe PWN, Warszawa 1997, s.90;

[11] The Act dated 29th August 1997 on tourism services, uniform text in the Journal of Laws of 2004, No. 223, item 2268.

THE IMPLEMENTATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE DISTRIBUTION OF TRAVEL AGENCIES OFFER

Małgorzata Januszewska, Mirosław Januszewski

University of Economics in Wrocław, The Silesius University of Applied Sciences in Wałbrzych

mjanuszewska11@wp.pl, mirjanus@wp.pl

Key words:

travel agencies – communication technologies

Abstract:

ICTs (Information and Communication Technologies) have introduced changes into contemporary consumers' lifestyle, since along with the availability of computers, the Internet, mobile phones and other technologies, consumers obtained access to information, products and services, as well as people characterized by similar interests. The objective of the hereby article is to present changes and effects brought about by ICT development in distribution activities of a travel agency. In order to accomplish the set objective it was necessary to review professional literature and perform due observations of business practice.

Introduction

Forms of competition at the tourism market have recently experienced significant transformations. While in the 1970s the level of goods and services quality constituted an element of competition, in the 1980s is was marketing which was used as the fundamental component of winning market advantage. In the 1990s the level of consumer service became the decisive and distinctive market factor. At the beginning of the 21st century an important supportive role in customer service is played by the Information and Communication Technologies (ICT). ICT is understood as technologies facilitating automation of business processes in an enterprise and free flow of information both at the level of a company and in contacts with outside environment [9,49-50]. Along with the advancement of information and communication technologies the development of tourism services distribution has been observed. These transformations did change the functioning of travel agencies.

An economic entity active in organizing and providing intermediary services in tourism is defined in Polish language as a travel agency, in spite of the fact that Polish legislation describes such an enterprise more extensively [11]. The primary task of a travel agency is to provide services for tourists by offering them easy and comfortable access to tourism packages, or individual services in a specific place and time, which helps in obtaining detailed information regarding these services and opportunities for purchasing them [6,160]. The above understanding of travel agencies functioning objective is, at the same time, understood as exerting

influence on the system of distribution. The complex structure of distribution channels includes all enterprises participating in supplying a tourist with a tourism product, i.e. services providers (hotels, airlines, tour operators) and tourist agents.

ICT influence on the process of travel agencies development

As many as over 13% of plane tickets purchased in Poland in 2009 were booked on-line. 42% of the Internet users choose to pay by means of electronic banking facilities, over 50% of Poles travelling by planes decide to invest in budget airlines, which can be booked only on-line. 40% of the Internet reservations are made outside the hours 10 a.m. – 6 p.m., 15% of on-line bookings are done on Saturdays and Sundays, every second ticket booked on the Internet can be issued completely automatically. The above information confirms the significant role played by ICTs with regard to activities performed by travel agencies and their extensive influence on such entities' functioning.

In 1841 the Englishman Thomas Cook opened the first travel agency. Since that time many changes occurred in the way tourism services have been offered. In the 1960s of the 20s century the first electronic distribution systems were created. In the 1970s Computer Reservation System (CRS)[1] was introduced, based on which Global Distribution System (GDS)[2] was applied in the 1980s. Global application of the Internet brought about the most extensive changes in the distribution of travel agencies offer. At the turn of the 1990s and 2000s travel agencies established inter-organizational systems and networks based on the Internet, aimed at the improvement of both effectiveness and capacity of travel agencies functioning, as well as their communication with partners and clients. In recent years specialized on-line distribution platforms, metasearch engines and semantic networks have become very active.

It is estimated that the value of travel agencies market in Poland has grown up to about 4 billion PLN in 2009. Major part of this amount originates from selling the available offer by traditional tourism agencies. However, the dynamics of on-line tourism services sales is extremely high. According to performed estimations in 2008 Poles spent about 850 million PLN on purchasing tourism services via the Internet, including about 300-350 million PLN on airfares. It is estimated that in 2009 the value of tourism offer on-line sales amounted to over 1 billion PLN.

Purchasing behaviour of tourists has been changing significantly under the influence of new technologies which may be noticed by following changes in the

[1] CRS represents a computer system established in order to provide adequate conditions for communication between producers of tourism services and their recipients, it is a computer network focused on making reservations of products offered by a certain tourism enterprise (agent, tour operator, hotel, airline, etc.) and managed by this enterprise [4,217-219].

[2] GDS is a macro-version of CRS equipped with professional and systematically improving technology aimed at the distribution of tourism products mainly used by travel agencies [1,24]. Among the biggest GDS the following are listed: Sabre, Galileo, Worldspan, Amadeus ,which offer tourism packages, reservations and sell accommodation, flight or railway tickets, tickets to important events, car rental and other tourism services. They are of global range and are currently available for both institutions and individual clients.

share of particular distribution channels referring to hotel services. The ongoing research regarding the Internet application in selling accommodation is done by TravelClic portal which lists distribution channels favoured by tourists. Due details are illustrated in table 1.

TAB. 1: Share of particular distribution channels in making reservations of hospitality services worldwide in the period of 2005-2009 (in %).

Channe	2005	2006	2007	2008	2009
Internet	35,2	37,6	43,0	47,6	54,2
Travel agencies	34,6	31,3	29,3	27,3	23,6
Call Center	30,2	31,1	28,8	25,1	22,2

Source: [7,94 and 14]

It may be noticed that direct involvement of traditional travel agencies in making hotel reservations keeps dropping from 35% in 2005 to 24% in 2009. The decreasing share of reservations made by means of Call Center is not so rapid and amounts to 8% in the studied period. It is the Internet which is responsible for such market changes, the share of which grew by almost 20%.

The market of organization and intermediary services, along with the development of communication and information technologies, offers conditions for developing and differentiating travel agencies [5,20]. Among new entities the following should be listed: on-line travel agencies (Online Travel Agent OTA), metasearch engines (also called side-by-side or compare engines)[3] which can be referred to as the "tool" saving time necessary for finding best tourism offers. Metasearch engines keep undergoing transformations by creating the, so called, semantic networks[4]. Despite the fact that OTA and TME are quite different, they are interrelated. Any good compare engine presents an offer of different OTA services and an extensive part of activities from tourism focused compare engines are transferred to OTA web sites. At Polish market the most important on-line travel agencies are the following ones: TravelPlanet.pl, Fly.pl, Wakacje.pl, Tourispol.pl, Traveligo.pl and Nestro.pl.

[3] Metasearch machine is a specialist service which sends its user's question to many data bases. The results are aggregated into one list of data which can be filtered by the user e.g. by price, number of stars, location of hotels. It also compares the reviews of clients about a certain hotel, or allows for making direct contact with a client. In Poland their occurrence is marginal [12] was initiated in 2008 and [13] in 2009. CRS and GDS became beneficiaries of these systems. For example Amadeus has a built-in metaserch engine and also initiated the semantic system implementation.

[4] Semantic networks constitute the future. They allow for selecting an offer according to specific criteria. Computers will be capable of combining meanings of words and respond to such enquiries as: "We would like to travel from Cracow to Paris and spend three nights in a 2* hotel in the vicinity of Louvre" and defining additionally the trip budget. More at [15].

TAB. 2. Differences between an on-line travel agency (*Online Travel Agent)* and a metasearch engine *(Travel Metasearch Engine).*

Criterion	On-line travel agency (OTA)	Metasearch engine (TME)
Goal	Finding an event, hotel, flight, transport requested by the client.	Searching through many portals, comparing prices and other conditions of the trip.
Time	Long time necessary to find an offer.	Short time necessary to find an offer.
Presentation of a web site and its organization	Similar to TME	Similar to OTA
Type of business	Tourism company earning by selling in retail.	Media oriented company earning by selling advertisements and obtaining commission from transferring clients to web sites of tourism services providers.
Number of offers	Significantly smaller offer than TME.	Very extensive offer.
Mutual relations	For OTA TME play the role of an advertisement publisher.	TME presents such services as OTA and other, as the result clients can compare prices and brands of different OTAs.
Activity of users	Persons using tourism portals focus on "hunting the best offer" and at the same time look for advice, support, or contact with a consultant.	Users of compare engines want to find and book a specific service at the best price.
Approach to marketing	They establish loyalty by managing relations with clients and creating a unique product. It is also important to create client's trust for OTA as a qualified consultant.	Compare engine is a "stage in-between" on the way from finding an offer to its purchasing.
Target market	Tourists	Travel agencies

Source: author's compilation based on [10].

Effects of ICT introduction into travel agencies functioning

New technologies and the Internet are more and more extensively applied in the process of providing services for the clients of travel agencies. As the result of new technologies introduction into travel agencies functioning the following changes may occur in their management [8,209-210]:

- new organization forms and new working methods (e.g. client service systems, data bases, vertical communication using both the Internet and Intranet),
- opportunities for commercial application of the Internet (e.g. presentation of services at a web site, virtual tours of locations and places included in the offer, speed of sending information, virtual meetings, anonymous sales networks, e-service for clients, etc.),
- new automation forms (e.g. e-service for workers, automation of calculations, automation of distribution),
- improvement of performance effectiveness and efficiency (e.g. information and communication technologies result in costs reduction, prices optimization, better offer implementation),
- better service management (e.g. higher service attractiveness, opportunity for servicing more clients in a unit of time, faster service, providing individualized service for clients).

The details of new information and communication technologies introduction to tourism offer distribution by travel agencies and client service are presented in table 3.

TAB. 3. Main results of ICT application in tourism offer distribution

Effects	For travel agencies	For travel agencies' clients
organizational	Mobility of staff and computers allowing for solving client's problems "at a distance". Improved flow of information among office staff, as well as between the staff and clients, providing information for potential business partners, higher work effectiveness. It offers opportunities for improving customer service by quick access to diversified information and better safety (e.g. financial safety).	Owing to new information and communication technologies a client is capable of organizing the trip himself, he/she may book rooms, tickets, view the gallery of pictures or even enjoy a "virtual walk". A client is offered quick service 24/7 of global range.
financial	Information and communication technologies result in cutting staff costs, office functioning costs and marketing costs.	Cutting costs of planned trip (e.g. lower than traditional operational and transactional costs), easier process of making

		payments (e.g. in local currency, by credit cards).
marketing	ICT results in economies of scale and standardizes customer service. Owing to ICT there is an oportunity to plan and present an offer in many places at the sme time. ICT allows for extending the scope of performed services and making the service more attractive. It offers the possibility of global promotion, which was not possible before.	It provides an opportunity for rewieving and comparing an offer of many service providers, for improving customer satisfaction from obtained service (e.g. possibility of making the booking in real time, or many services at the same time, increased reliability of functioning). It facilitates two-sided flow of information, makes possible obtaining up-dated information with many options to choose from, offers improved capacity for carrying out tourism needs (e.g. smantic networks in recent years).
technological	The existing ICT facilitates searching for new information and communication solutions. Owing to dynamic ICT development it is higly likely to spread innovation in travel agencies.	On-going pressure to extend the so far applied communication methods and easier ways for booking or selling tourism enterprises offer, as well as safety of tourism services.
social	ICT results in upgrading qualifications and skills of staff. It gives the sense of following modern and open to the world system of functioning which additionally motivates staff. It may result in staff becoming addicted to using ICT.	Wider opportunities for consumption individualization, substituting direct human contacts by electronic ones.

Source: based on [3]

The Internet influence on travel agencies functioning is confirmed by studies performed for Google [2] company and defines its role in the process of purchasing tourism services in Poland. The results of the above studies allow for putting forward the following conclusions:

- Polish Internet user – tourist is more and more demanding which means that he/she keeps looking for an offer which meets his/her needs best, but also has an attractive price,

- before making their choice respondents browse through tourist locations web sites (86%), get acquainted with opinions of other tourists regarding the offered tourism services (78%), compare prices (71%),
- after making the choice a tourist wants to book the event and purchase it on-line,
- as many as 29% of respondents make their purchase on-line,
- tourists look mainly for hotels (63%), guest-houses (55%), railway services (54%) in the Internet,
- respondents point to the major barrier in purchasing tourism services on-line which is the lack of direct contact with the sales person (60%) and no possibility of finalizing the purchase in real time (24%).

References:

[1] GIAOUTZI, M., NIJKAMP, P. (ed.) *Tourism and Regional Development: New Pathways*. Ashgate Publishing Ltd, Aldershot., 2006. s.24.

[2] http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.pl/pl/pl/googleblogs/pdfs/ropo_travel_tns_obop_210110.pdf

[3] JANUSZEWSKA, M., NAWROCKA, E., OPARKA, S., *Rola ICT w obsłudze klienta przedsiębiorstwa hotelarskiego,* w: Marketing XXI wieku, PWE Warszawa 2010.

[4] KUBIAK, B. *Model zarządzania informacją turystyczną*. Zeszyty Naukowe nr 429. Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin. 2006. s. 217-219.

[5] MAREK, R. *Determinanty rozwoju polskich biur podroży w Internecie,* Wydawnictwo Promotor, Warszawa,2009. s.20.

[6] MICHALSKA-DUDEK, I., PRZEOREK-SMYKA, R. *Marketing biur podróży*, Wydawnictwo C.H. Beck, Warszawa 2010, s. 160.

[7] NALAZEK, M. *Internetowe kanały dystrybucji na rynku turystycznym*, Difin, Warszawa 2010, s. 94.

[8] NAWROCKA, E., OPARKA, S. *Hotel w XXI w. Zarządzanie w warunkach globalizacji*, Wydawnictwo Wyższej Szkoły Zarządzania "Edukacja", Wrocław. 2007. s. 209-210.

[9] OLSZEWSKA, K. *Nowe trendy na rynku usług łączności elektronicznej Unii Europejskiej w pierwszej dekadzie XXI wieku*. Prace Naukowe WP,AiE Uniwersytetu Wrocławskiego, E-Monografie nr 2, Wrocław 2009, s. 49-50.

[10] ORLEWSKA, E. *Porównywarka turystyczna a internetowe biuro podróży – główne różnice*, w: www.travelmarketing.pl

[11] The Act dated 29th August 1997 on tourism services (uniform text in Journal of Laws of 2004, No. 223, item 2268) defines the discussed enterprises as tourism organizers, tourism intermediaries and tourism agents.

[12] www.hotelcalculator.com

[13] www.obibuk.pl.

[14] www.travelclick.net

[15] www.wirtualnyturysta.pl.

THE DIVERSIFICATION OF EFFICIENCY IN PUBLIC SERVICES

Marian Kachniarz
Wrocław University of Economics
marian.kachniarz@ue.wroc.pl

***Key words*:**
efficiency – public administration – local self-government

Abstract:
The organization of public sector is influenced by institutional order, also at local level. Therefore, it does not surprise that the problem of this particular self-government level proper organization, which covers the issues of overall system efficiency and effectiveness, becomes the core component of public debates. Presented in article empirical research does not confirm the leading argument of larger units' advocates that they function more effectively and represent higher efficiency. In many cases breaking the ties of direct social control and distancing administration from local level resulted in the relative increase of structures, lower effectiveness and higher costs of functioning. The above experiences should serve as a warning before undertaking simple and unfounded changes in local administrative structures.

Introduction

The organization of public sector is influenced by institutional order, also at local level. It manifests itself in the nature of self-government administrative structures which, quite extensively, take over the task of providing a wide spectrum of decentralized public services [3, p. 23]. Therefore, self-government plays the role of such public sector component which is the closest to an individual inhabitant and this is frequently considered the decisive factor regarding its overall perception by local residents [4, p. 60-61]. Therefore, it does not surprise that the problem of this particular self-government level proper organization, which covers the issues of overall system efficiency and effectiveness, becomes the core component of public debates [1, p. 31].

The objective of the hereby article is to describe diversification of efficiency in public services, which are by self-government structure making. The applied research methods were mainly based on basic, primary research performed directly in the due units. The accepted methodology influenced territorial scope of research, which was limited to the area of Lower Silesia region.

Research methodology

The first stage of research focused on defining the efficiency of particular public services, performed by districts in all three categories: administrative, social and technical one. The research objective was not an exogenously defined self-government *(black box)*, but a diversified set of processes occurring within its scope. Therefore, the definition of self-government functional efficiency was not based on external indicators, but on the compilation of measures describing its endogenous parameters. The identification of consistent services and procedures, outlays for their functioning and effects obtained in the process of their realization, became the basis for hereby research. However, in order to ensure the comparability of homogenous services effectiveness, performed by different self-governments, the individual indicators were constructed. They allow for defining, in case of every researched service, both effectiveness and efficiency measure [2, p. 165-172].

Synthetic effectiveness and efficiency measures were based on detailed measures referring to particular services. However, the aggregation was gradual in this case. Firstly, measurement results regarding a given service category were presented. As the result the perception of effectiveness and efficiency was prepared, separately for administrative, technical and social services. In the second stage summary results for all service categories in a given unit was presented. Synthetic measures represent the sum of standardized results for each service as its component. Such summary included the nature of particular attributes (stimulants and destimulants). Synthetic measures of effectiveness and efficiency obtained in the above manner were subject to correlation study related to the size of districts expressed by the due number of their inhabitants.

Research results

The main observation made, based on results' analysis, is the significant diversity of effectiveness measures even in the group of neighbouring districts. Extreme results, translated into absolute values, cannot be explained by just simple determinants. It is not enough to consider district size, landscape or local community features as fully responsible for such extensive differences.

As the results of research conducted in the above way is the most effective group of districts turned out to be as follows: Oleśnicki, Bolesławiecki and Dzierżoniowski. These districts owe their ranking mainly to good indicators of employment and expenditure on administration in relation to serviced clients, even though in none of these domains they are ranked as regional leaders. The ranking of least effective district is closed by Wrocławski (rural district), Kłodzki and Górowski districts. Wrocławski district is characterized by low effectiveness indicators in education, geodesy and architecture – the units servicing investment processes. It evidently results from geographical location and nature of a district.

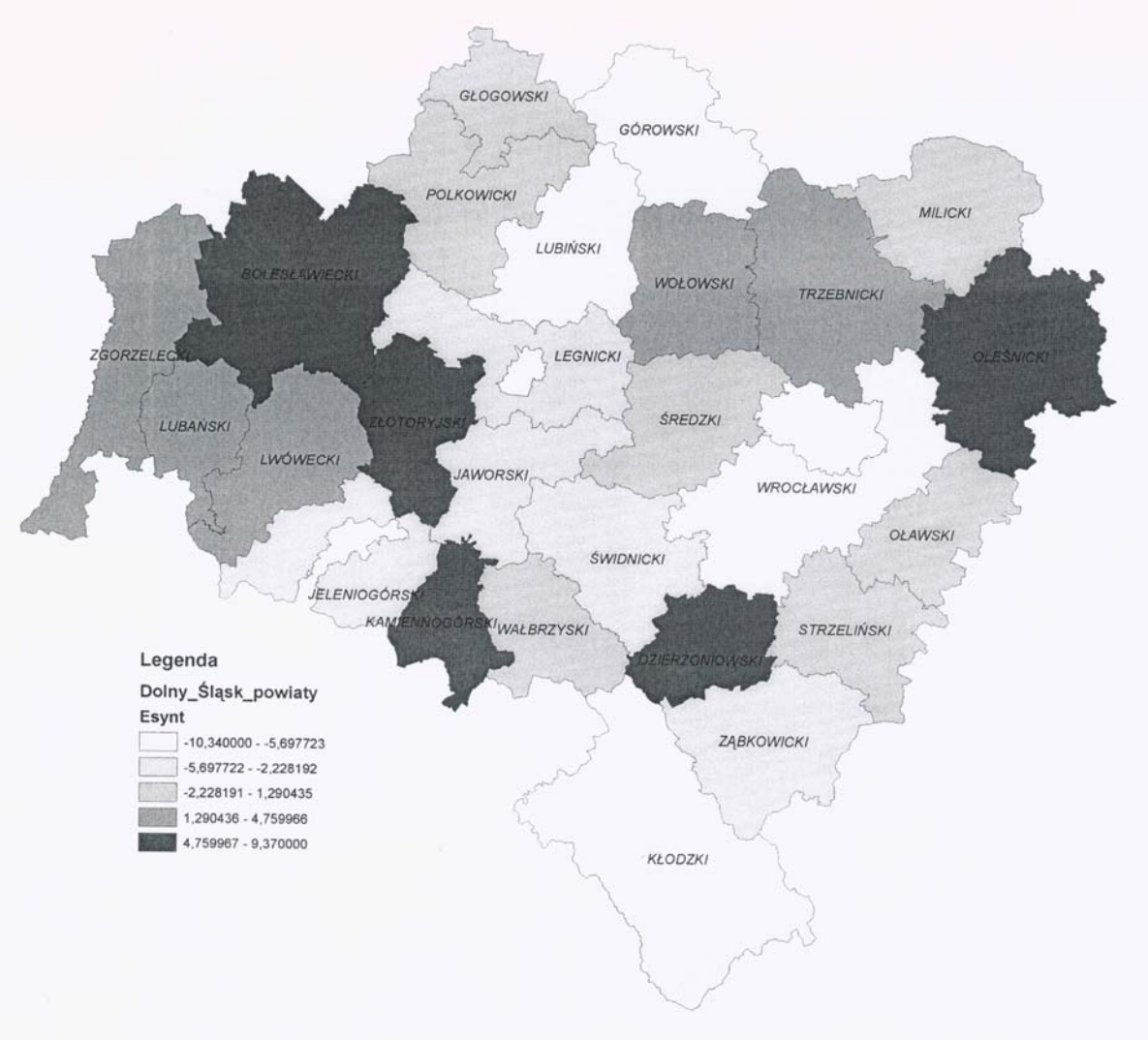


Figure 2. Synthetic indicator of districts effectiveness E_{synt}

Source: Author's compilation

The separate part of research focused on particular services performance. Just like in case of effectiveness, the observed feature of a synthetic measure becomes the limited balance of individual values as its components. In this way such measure presents the result of quite diversified effects characteristic for particular scopes of services. Conclusions of such observations are identical as the ones in case of cumulated performance measure – absence of internal homogeneity in the functional administrative structures.

The studied scopes of services allowed for the arrangement of districts regarding performance in performing these services. The spread of results between extreme districts is smaller than in case of effectiveness, however, here also it is difficult to explain them by means of simple determinants.

At the top of ranking list prepared in this way there are placed the same districts (although in different sequence) which were the leading ones regarding effectiveness (Bolesławiecki, Oleśnicki and Dzierżoniowski). Similar are also the properties which pushed them to these leading positions. Among them mainly low employment, comparing to the number of serviced procedures, should be emphasized.

The ranking is closed by Jeleniogórski, Wrocławski and Jaworski districts. All three of them are characterized by relatively high number of full-time jobs comparing to the number of carried out procedures. In case of Jeleniogórski and Wrocławski districts the frequently listed reason for relatively higher employment is the fact that these districts have taken over human resources persisting at the job market after the liquidation of regional authorities offices. Legnicki rural district, which is also listed in the zone of low efficiency, finds itself in a similar situation. These historical determinants (10 years have passed since districts were established) may confirm not just the quantitative role of taken over human resources, but the staff being used to a certain style of work.

It is interesting to notice a good position of these districts which were established (in 1999) totally from basics, without any prior functioning material base, or experienced staff taken from the closed down and previously functioning offices (e.g. Zgorzelec, Złotoryja, Polkowice, Kamienna Góra, Środa Śląska, Strzelin). In spite of the above, at present they frequently have better material base at their disposal, or as it is visible, are characterized by quite good results of their activities. The second factor is especially important from the point of view of administration functioning, where knowledge and many years of experience presented by an employee seem an indispensable component necessary for maintaining administration stability and high quality of performed services. The functioning based on young, inexperienced, or with little experience, human resources does increase the risk of unprofessional activities. The risk is high especially at the initial stage of functioning. On the other hand it opens an opportunity for creating innovative teams, not spoiled by rigid bureaucratic rules. Therefore, initial risk may be transformed into a serious advantage. It is confirmed by the examples of some districts in Lower Silesia region which are more open to innovation and do implement modern functioning methods much quicker.

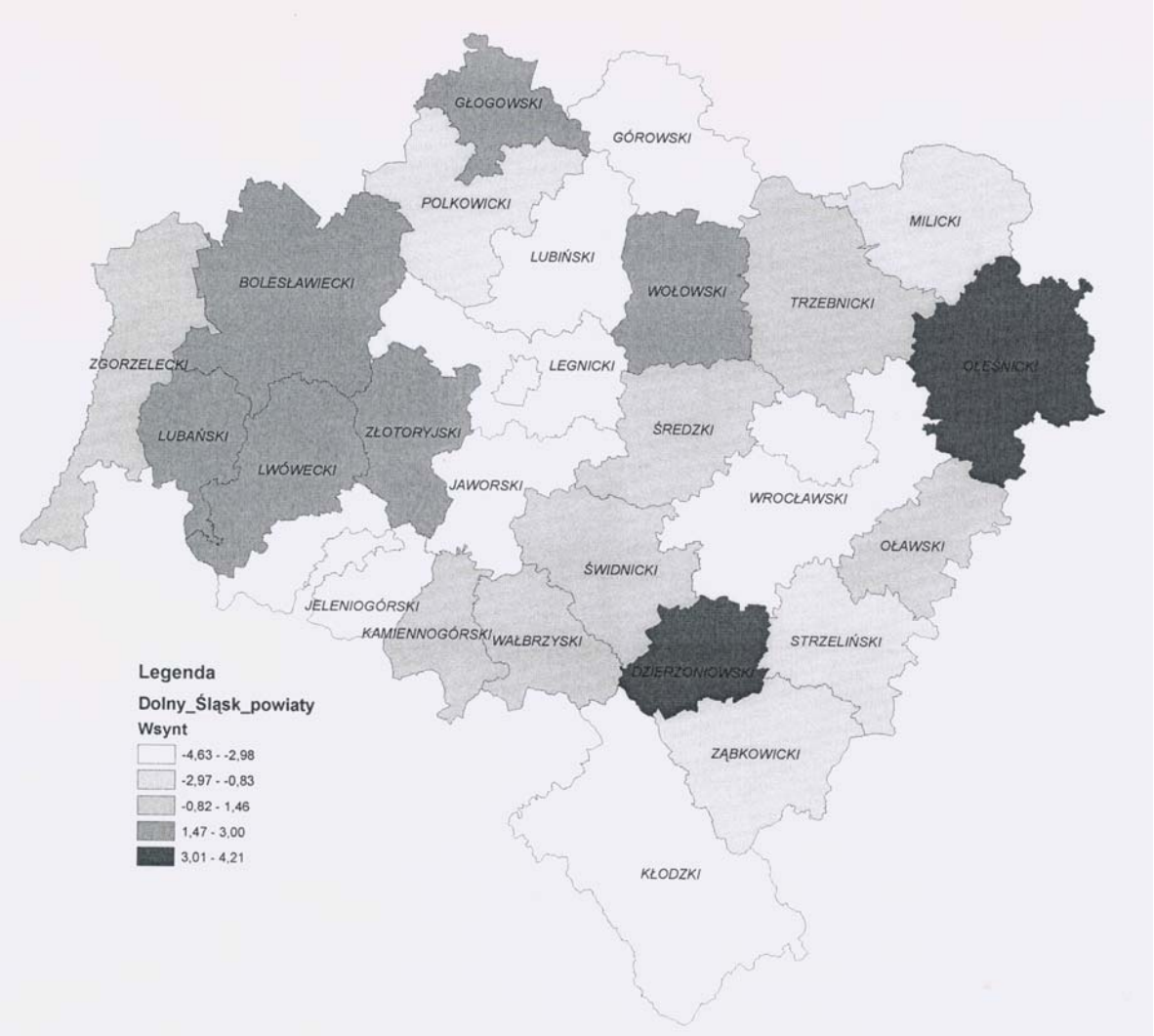


Figure 4. Synthetic indicator of districts performance W_{synt}

Source: Author's compilation

Final remarks

The diversity of efficiency and capacity indicators is surprisingly high which conforms significant opportunities for improvement in this sphere of administration. If so, this research field definitely has to be studied more extensively!

The current dominating opinion about small differences in efficiency (resulting from services standardization) is completely wrong The reason for it are missing data systems without which proper positioning, benchmarking and (what result from it) improvements in this sphere of administration are impossible!

Research doesn't confirm economies of scale effect consisting in the interdependence between efficiency und unit size Investigating reasons for efficiency diversity eliminates economies of scale effect as substantial basis for consolidation projects in administration

No correlation between efficiency and quality, standard of services provided and keeping their deadlines was observed. It is not true that higher outlays on providing services result eg. from better standard of offices, or in quicker, more efficient and comfortable services. Informal determinants have the dominating influence on efficiency and capacity which results from the manner of influencing administration by the management of offices. To informal determinants belongs among others: character of leadership, culture of management, quality of staff etc.

References:

[1] KACHNIARZ, M. *Is measuring the efficiency of Local Authorities grounded*, Service Management vol. 4, The University of Szczecin, Szczecin 2009, ISSN 1640-6818

[2] KACHNIARZ, M. *Ekonomia skali w administracji publicznej [Economy of scale in Public Administration]*, Gospodarka lokalna w teorii i praktyce, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu nr 109, Wrocław 2010

[3] KLEER, J. (red) *Samorząd lokalny. Od teorii do badań empirycznych [Local self-government. From theory to empirical studies]*. CeDeWu, Warszawa 2009, ISBN 978-83-7556-192-0

[4] KLEER, J., KARPINSKI, A. OWSIAK ST., *Spór o przyszłość sektora publicznego [Contoversies on the future of the Public Sektor]*. Polska Akademia Nauk, Warszawa 2005, ISBN 83-922032-6-7

BALANCED SCORECARD IN THE BUSINESS ENVIRONMENT IN SLOVAKIA FOLLOWING THE ENVIRONMENTAL ASPECT

Veronika Kaiserová, Peter Sakál
Slovak University of Technology in Bratislava
veronika.kaiserova@stuba.sk, peter.sakal@stuba.sk

***Key words*:**
The Treaty of Lisbon – Balanced ScoreCard - environmental politics – business environment survey

Abstract:
This paper focuses on the short survey of industrial enterprises in Slovakia and presents the most significant results. The main theme of this paper was to highlight the need for implementation of the BSC tool in business practice and its link to the environmental aspects of business. These aspects connecting businesses with environmental policy and law are described in the first chapter, which disputes in short about the environmental future needs of the SR in the context of a corporate environment, taking account in particular of industrial production which has usually the most impact on the environment.

1. Environmental politics in Slovak Republic

Environmental strategy in SR and its related environmental policy has not only given their own face, local market conditions, the needs of environmental approach to problems solving, but it is mainly based on the requirements of European legislation. The basic environmental political orientation mainly included [1]:

1. **Creation of conditions for the promotion of environmental product policy** - ensure that the protection and conservation of the environment is reflected in the product policy by introducing further selective environmental criteria along with the existing socio-economic, technical, technological and security criteria defining the quality of a product. At present, it is necessary to support the processes related to the implementation of the voluntary instruments of the product policy in the Slovak Republic. This task is oriented on increasing the proportion of production and sale of eco-labelled products and services in the total number of products and services sold on the market in the Slovak Republic. The support for the European and national system of eco-labelling of products is focusing on the improvement of environmental behaviour of producers and the provision of information to consumers about the environmental criteria of products and services.
2. **The creation of conditions for the promotion of environmental product policy is focused on [1]:**

- the reduction of unfavourable impacts of production on the environment and health of the population,
- the promotion of the production and sale of environmentally-friendly products, promotion of environmentally-friendly innovation of production systems, application of environmental technology and environmental systems of management of production and services,
- the creation and accessibility of information on environmental and health impacts of products, technology and production systems,
- the promotion of "green public procurement of goods and services" in the context of the process of public procurement of products and services,
- support for the European and national system of eco-labelling of products,
- promotion of the sustainable development strategy through the application of the voluntary instruments of environmental product policy.

Measurable indicators: adoption of the eco-label scheme, the number of eco-labelled products, the number of technical reports and orders prepared for the required product groups.

3. **Assistance to organisations in the area of improving environmental behaviour and increasing credibility and transparency**
   From the standpoint of sustainable development, innovation in the production sector related to both goods and services needs to be directed at greater efficiency of resources, in particular non-renewable resources, so that the permissible level of burden on the environment is not exceeded. The implementation of this seemingly simple but in fact complex task is assisted in a market-conforming way by European Parliament and Council Regulation No. 761/2001 on the EMAS, which defines a common scheme allowing organisations in the whole economic area of the EU to demonstrate their compliance with environmental protection and sustainable development requirements.
   Assistance to organisations (in the development of their skills) in the area of improving environmental behaviour and increasing credibility and transparency with the aim of [2]:

- creating an institutional framework for the use of EMAS in Slovakia,
- ensuring the credibility of the EMAS verification and registration process (professionally qualified persons authorised to perform environmental verification),
- creating conditions for the use of EMAS on a broad basis,
- using the participation in EMAS as a selective criterion for the use of EU expenditure programmes.

Measurable indicators: adoption of the act, programme of support for the development of EMAS.

By creating of environmental policies define the government the bounds where can each company operates. Here is not only businesses by their obligations and responsibilities towards other parties, but creates here is also scope for innovation and wide range of options that an enterprise can use for its further growth and market position. To these options we can also includes a tool for measuring corporate strategic performance - Balanced ScoreCard. Although this tool is in general used to measure business indicators, on the other hand its modifications can bring us the space for implementation in the form of environmentally oriented BSC. In this case, the including of environmental legislative requirements in corporate BSC more than an effective tool for achieving sustainable development business, both from an economic perspective, also in terms of corporate social responsibility.

2. Balanced Scorecard survey in Slovak business environment

Survey of using the BSC in business practice in Slovakia took place in 2010 and was attended by more than 70 medium and large enterprises, mostly from field of industry [3, 50]. The reason for executing this survey was a particular need to test the hypothesis - the BSC tool is not too well-known in Slovakia and it is no longer used as much as abroad [Figure 1]. According to survey results is BSC tool using in Slovakia by 32% of enterprises, while foreign companies is a group of incomparably greater - BSC implememented abroad counted more than 57% of companies.

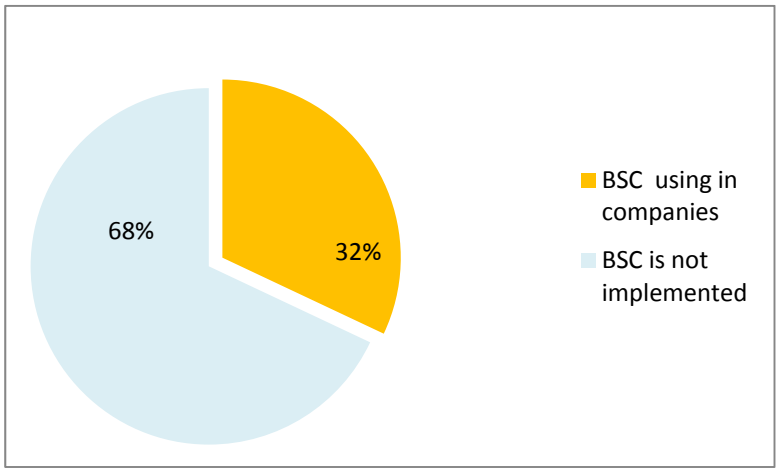


Figure 1: Percentage value of implemented BSC in companies in SR (results based on my own analysis)

Another equally important reason for taking place this survey was an effort to clarify stance on environmental issues in companies operating in Slovakia. The findings were clear - companies operating in Slovakia, you need to address the environmental issues recognize even an idea strongly supported environmental policies [Figure 2].

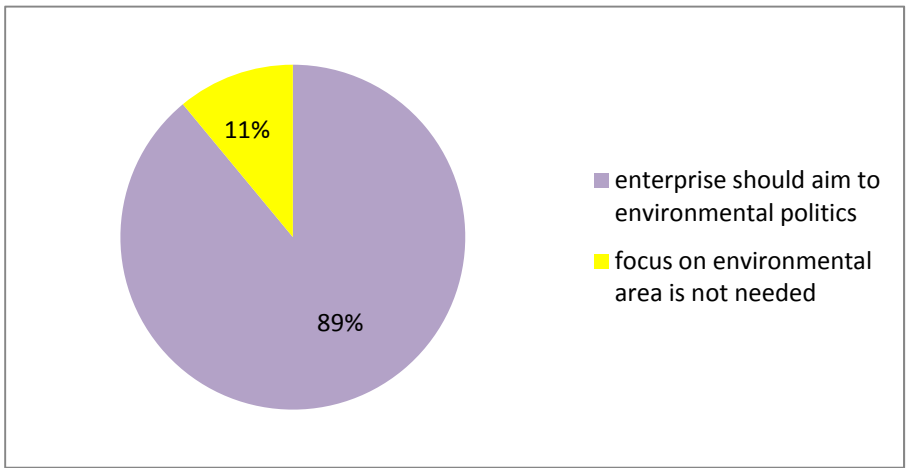


Figure 2: Enterprises focused on environmental aspect (results based on my own analysis)

What degree of business activities in the field of environment to draft requirements and the extent to which businesses are willing and capable of independent initiative, although not subject to review, but its results can be deduced that if the establishment meets only basic environmental requirements imposed by law, initiatives of attitudes in the field of environmental protection are missing.

The survey focused on the investment priorities of enterprises with the question of whether they were willing to invest in the implementation of environmental

performance evaluation tool company, where the results were surprising - 84.5% of surveyed enterprises would be interested in investing in the mentioned tool to be able to increase their impact to the business environmental performance and promote sustainable development [Figure 3].

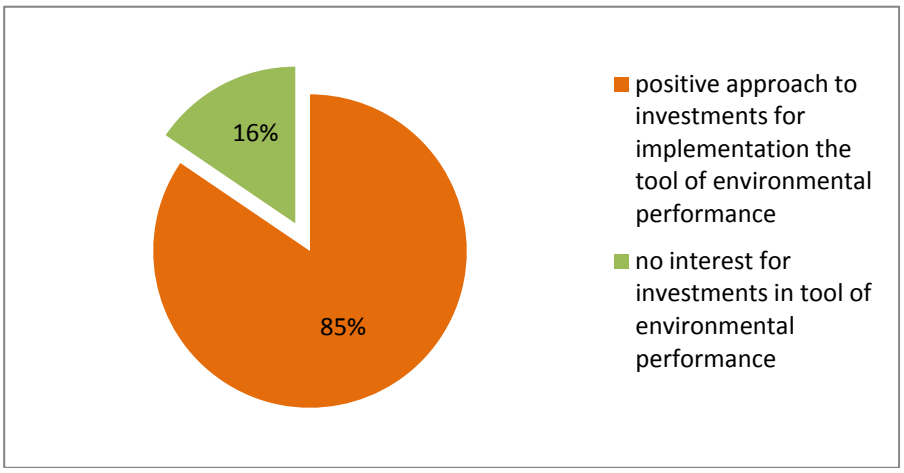


Figure 3: Investments in environmental performance tool in enterprises (results based on my own analysis)

Overall the survey results can be described as a progressive development in the right direction and interest in the emergence of new trends in environmental policy.

References:

[1] EUROPEAN UNION. *The Treaty of Lisbon*. Brussels 2007. ISSN: 1725-2423

[2] EUROPEAN COMMISION – JOSÉ MANUEL BARROSO. *COMMUNICATION FROM THE COMMISSION. EUROPE 2020 - A strategy for smart, sustainable and inclusive growth.* Brussels. 2010

[3] KOČANOVÁ, Z. *Závery a odporúčania z kritickej analýzy využívania BSC (Balanced Scorecard) a HCS modelu 3E v podmienkach priemyselných podnikov v Slovenskej republike.* Bakalárska práca. Trnava 2010.

This paper was supported by the Slovak Research and Development Agency under the contract No. LPP -0384-09„ Concept HCS model 3E vs. concept Corporate Social Responsibility (CSR)“.

HOLISTIC CONCEPT OF ENTREPRENEURSHIP AS THE BASIS FOR DEVELOPMENT

Lidia Kaliszczak
University of Rzeszów
lidia.kaliszczak@neostrada.pl

Key words:
entrepreneurship – development – innovations – s mall and medium enterprises (SME) – organisational entrepreneurship (intra-entrepreneurship) – social entrepreneurship

Abstract:
The paper presents the process of transforming individual entrepreneurship into holistic entrepreneurship, identified by multifaceted analysis of units, organisations and the public sector. It has been proved that such an approach has been useful in explaining the role of entrepreneurship as a chief determining factor of contemporary social and economic development.

Introduction

In academic literature, development is understood as the process of transformations, changes, transforming into states and forms which are more complex or, to some extent, more perfect. In a broader context, this development is a process of transforming economic, social, political and mental structures, which cannot happen in a short time [3, 18]. One of the most important determinants of the process of broadly understood transformations of a structural nature is entrepreneurship – a special feature of human capital, distinguishing this resource from assets involved in the manufacturing process. Contemporary understanding of entrepreneurship and its role in the society goes beyond classic (according to J. Schumpeter) comprehension of the function of an entrepreneur and entrepreneurship, in which it is related to individual behaviours. This challenge is taken upon by the concept of holistic entrepreneurship, constituting evolution from an individual's entrepreneurship through the activity of small and medium enterprises, large corporations (so-called intra-entrepreneurship), entrepreneurial activity of local authorities (communes, districts, provinces) to social entrepreneurship which refers to innovative activity in for-non-profit sector, in order to create socially desired value.

Individualistic approach

J. B. Say, R. Cantillon and J. Schumpeter are the pioneers making a significant contribution both to the initial development and contemporary achievements of entrepreneurship. Two main streams can be distinguished here. According to Say

(1767-1832), an entrepreneur is someone who '(...) establishes an enterprise or takes control over it'. The cited author perceives the essence of entrepreneurship as the ability to act rationally, the result of which is achieving a measurable objective, namely profit in market conditions [8, 195-212]. R. Cantillon was the first to define the notion of an entrepreneur (1755), pointing out their direct role in creating the balance between the supply and demand. He also emphasised two important features of an entrepreneur, which are referred to these days, namely perceiving the opportunity and taking risk [2, 468]. According to J. Schumpeter (1883-1950), entrepreneurship is directly related with the person of an entrepreneur-innovator, who, while introducing new combinations of manufacturing factors (namely, innovations), contributes to the progress and development by the process of 'creative destruction' [13]. It is based on replacing machines, products and services which are still in operation, with newer, more efficient ones, whose principle of operation is often totally different. The person of I. Kirzner falls into the stream of individual approach to entrepreneurship. The essence of entrepreneurship is based on the ability to see opportunities appearing on the market, while everyone individually interprets the observed circumstances. Some perceive them as opportunities, chances, others as limitations or threats to activities. Contemporary continuator of Schumpeter's ideas, Peter F. Drucker concludes that 'entrepreneurship is a feature of a given person or institution, but it is not the feature of personality' [6, 34], as (...) people of many different personalities and tempers achieve good results in entrepreneurial actions. Entrepreneurship as a feature is demonstrated in the person of the entrepreneur, who '(...) always seeks changes, and responds to and uses them as an opportunity' [6, 37]. Therefore, entrepreneurship is most fully revealed in actions which result from specific attitudes. These attitudes are shaped by recognised values, such as objectives of management and personal objectives, tendency to take risks (courage in taking decisions), openness to changes, ability to think creatively. Many discussions on the issue of entrepreneurship of individuals in the last 25 years have been based of concepts of behaviour and personal features of entrepreneurs, mainly the need of success and acceptance of risk.

Small and medium enterprises as a form of individual entrepreneurship

Creating small, new enterprises, family-owned companies, and managing them in entrepreneurial manner (implementing innovations, perceiving opportunities) by courageous entrepreneurs – their owners – is another demonstration of relation between the entrepreneurship and economic development. The importance of small and medium enterprises was marginalised in the 1980s. A new outlook on their role was also presented in the well-known Bolton's Committee report (1971) in Great Britain. It proved that small and medium enterprises cope with stagflation crisis of that period much better than large corporations. At present, there is an opinion that small and medium enterprises are the most important link, by means of which entrepreneurship is demonstrated, implemented and has impact on macroeconomic effects, such as economic growth, by creating new workplaces, implementing

innovations, maintaining competition, internationalising the activity, creating cooperation networks.

Organisational entrepreneurship (intra-entrepreneurship)

Many authors point out that entrepreneurship also refers to processes occurring inside large organisations [4,47; 11, 30-31]. A lot of notions are used, such as corporate entrepreneurship, joint-venture, intra-entrepreneurship, etc. This context comprises a new approach to entrepreneurial management of organisations. It is about the ability to think creatively and implement innovations, preferring work in conditions of relative safety, which is created by a big organisation, but at the same time, accepting continuous, even radical changes, as well as initiating changes. The concept of internal entrepreneurship was born in 1979, at the initiative of G. and E. Pinchot, who proved that entrepreneurship is desired and possible in large corporations [12, 487-488]. Contemporary research has shown that it is necessary to create appropriate organisational conditions so that creativity and innovation could be revealed as chief differentiating factors of entrepreneurship [9, 171 and n.].

Social entrepreneurship

At present the attempt to conceptualise entrepreneurship is so wide that it can also include other signs of entrepreneurial activity than its classic (traditional) form, related with business activity and private sector. In the opinion of Wickham, entrepreneurship is also social activity taken in order to create values for the society [14, 180-181]. However, it is distinguished by other elements, presented in table 1. It does not mean that individual or organisational entrepreneurship models lose their importance – it is only complemented by adding a new dimension. Thus, information in the right-hand column of table 1 complements orientation of entrepreneurship as a holistic approach.

Table 1. From individual entrepreneurship to social entrepreneurship

From: Individual entrepreneurship	To: social entrepreneurship
Individuals	A participant or an agent such as a network or a team
An action	A holistic process
Innovation and favourable opportunity	Societal innovations create favourable opportunities
Risks may be taken	Minimising uncertainty and risk

Source: [7, 38].

In a broader perspective, social entrepreneurship refers to innovative activity taken in for-profit sector (commercial undertakings aiming at social context) or non-

profit (public organisations using innovative approach in order to implement social mission).

Innovation dimension is also characteristic for social entrepreneurship. Its solutions, referring to the entrepreneurship concept by J. Schumpeter may include: 1) a new product (e.g. in the area of professional integration of persons at risk of exclusion, innovative education programs for difficult youth) 2) new methods of organisation or opening new market (kindergartens run by parents), 3) new market relations (e.g. contracting services by public authorities) [5, cited from 10, 277].

In the concept of contemporary local development, the importance of entrepreneurial orientation of local authorities is emphasised. Self government creates the commune, which learns entrepreneurial capturing opportunities for development by means of partner relations with other stakeholders representing both public, private (business) and social (volunteer) sector) [1, 83-84]. Participation of self government in implementing initiatives supporting the development of entrepreneurship is mainly demonstrated in creating conditions for conducting business activity in general social sense. It is about integration of local community in creating partnership and cooperation in governance of all stakeholders. The essence of such an approach is best reflected in the notion of 'joint governance'. The bureaucratic attitude to exercising power is replaced by a new, entrepreneurial approach. It is expressed mainly in the courage to break barriers and stereotypes, departing from the principles of 'traditional economy' in organisation of human activities for joint governance (joint actions).

Summary

Entrepreneurship is an important factor of social and economic development, due to creation of new value through innovations, leading to improvement of society members. In the light of the presented article, it seems that holistic entrepreneurship model best reflects its intrinsic and multifaceted nature. It proves that it prevails over an individualistic approach, limiting this phenomenon to features of a creative person, succeeding only in economic (business) activity. It should be emphasised that the holistic concept of entrepreneurship is not a simple return to the roots of private entrepreneurship 100 years ago. At present, it is necessary to be able to organise the cooperation and interoperability of entrepreneurial persons, groups and institutions which, according to P. F. Drucker – constituting a specific tool of entrepreneurship, adds to the possibility of creating wealth, and consequently, the development.

References:

[1] BARCZYK, Z., BINIECKI, J., SZCZUPAK, B. *Przedsiębiorczość gminna a rozwój lokalny: nowa faza przemian w samorządach lokalnych*, [w:] Górnośląskie Studia Przedsiębiorczości, rocznik, tom I, Oficyna Wydawnicza Górnośląskiej Wyższej Szkoły Przedsiębiorczości im. Karola Goduli w Chorzowie, Chorzów 2002.

[2] BLAUG, M. *Teoria ekonomii. Ujęcie retrospektywne*. Warszawa PWN 1994.

[3] BOROWIECKI, R. (red.), *Nadzór korporacyjny w procesie kreowania wartości i rozwoju przedsiębiorstwa*, wyd. ABRYS, Kraków 2005.

[4] BRATNICKI, M. *Kategoria przedsiębiorczości we współczesnym myśleniu strategicznym*, [w:] *Krytyczna analiza szkół i kierunków zarządzania strategicznego. Nowe koncepcje zarządzania,* (red. R. Krupski), Wałbrzych 2004.

[5] DEFOURNY, J. Nyssens M., *Social Enterprise and Social Entrepreneurship*, EMES Roskilde 2007.

[6] DRUCKER, P. F. „Innowacja i przedsiębiorczość. Praktyka i zasady, PWE Warszawa 1992.

[7] HERLAU, H., TETZSCHNER, H. *Fra jobtager til jobmager* – model II, Kobenhavn: Samfundslitteratur, 1999.

[8] KALISZCZAK, L. *Przedsiębiorczość – przegląd koncepcji*, [w:] „*Przesłanki aktywności ludzkiej*", pod redakcją K. Jaremczuka, PWSZ im. prof. St. Tarnowskiego w Tarnobrzegu, 2007.

[9] KALISZCZAK, L. *Kształtowanie kultury przedsiębiorczości oraz próba jej empirycznej weryfikacji,* [w:] *Uwarunkowania przedsiębiorczości – różnorodność i jedność*, t. I, pod red. K. Jaremczuka, Tarnobrzeg 2010.

[10] KRAŚNICKA, T., WRONKA, M. *Istota i uwarunkowania przedsiębiorczości społecznej*, [w:] *Uwarunkowania przedsiębiorczości – różnorodność i jedność*, t. I, pod red. K. Jaremczuka, Tarnobrzeg 2010.

[11] PIASECKI, B. *Ekonomika i zarządzanie małą firmą*, PWN Warszawa-Łódź, 2001.

[12] PIECUCH, T. *Ewolucja teorii przedsiębiorczości – od przedsiębiorczości indywidualnej do wewnętrznej*, [w:] *Uwarunkowania przedsiębiorczości – różnorodność i jedność*, t. I, pod red. K. Jaremczuka, Tarnobrzeg 2010.

[13] SCHUMPETER, J. *Teoria rozwoju gospodarczego*, Warszawa PWN 1960.

[14] WICKHAM, P.A. *Strategic Entrepreneurship*, Fourth edition, Prentice Hall, England London 2006.

THE PUBLIC-PRIVATE PARTNERSHIP AND THE REGIONAL POLICY OF THE EUROPEAN UNION

Aneta Kargol-Wasiluk
University of Bialystok, Poland
aneta.kargol@wp.pl

Key words:
public-private partnership – regional policy

Abstract:
The article deals with the place of the public-private partnership (PPP) in the regional policy of the EU. PPP is a still developing form of cooperation between the public sector and the private sector aiming at modernization of infrastructure construction and public services provision. In some cases the PPP can help the public finances being the additional financial resource. At the EU level PPP is discussed as an instrument of realization of the essential projects in different areas such as alternative energy sources, sustainable transport, health care, technology initiatives, research projects, innovative projects etc. [3, p. 2]. This article is divided to three main parts connected to the philosophy of PPP, types of PPP and the PPP as a new element of regional policy of the EU

1. The philosophy of public-private partnership

Public private-partnership is an essential instrument of the provision of public goods and services in modern economies. It has become increasingly popular in sectors such as transportation, social infrastructure, public utilities, government buildings and other specialized services lately.[10, p. xv]. Characteristic feature of this usually long term cooperation is the specific role of the private sector, who is involved in various stages of the project (planning, implementation, financing, operation and maintenance), who is intended to bear risks that are traditionally borne by the public sector [2, p. 3]. The public infrastructure generally includes [10, p. 1]:

- economic infrastructure (transportation facilities, waste utilization, water, electricity), i.e. infrastructure considered essential for day-to-day economic activity and
- social infrastructure (schools, hospitals, libraries, prisons), i.e. infrastructure considered essential for the structure of society.

Of course we should know that there is no clear-cut definition of this concept in economic literature. The PPP term is not defined at the EU level too, but there are some similar features of almost each kind of PPP. The motives of engaging of public and private sector in PPP are different. The public sector can attract private

capital investments, exploit the innovative potential of private sector, increase efficiency and reform sectors through a reallocation of roles, accountability and incentives [1, p. 3]. On the other hand the private sector can use the possibility of long term investment, because the PPP cooperation is rather long and based on mutual trust. It is noticed that PPP is the instrument of a new public management and the instrument of the economization of public sector and public sphere functioning.

2. Types of public-private partnership

The concept of PPP covers a wide range of different models from PPP contracts to the more institutional forms of cooperation. In the table below the authoress introduces some of the many types of PPP. The most popular forms are: Design-Build-Finance-Operate (DBFO), Design-Construct-Manage-Finance (DCMF), Design-Build-Maintain-Finance (DBMF), Build-Transfer-Lease (BTL), Build-Lease-Operate-Transfer (BLOT), Build-Own-Operate-Build (BOOT) and Build-Operate-Transfer (BOT). Build-Own-Operate (BOO) is a kind of privatization sometimes.

Table 1: Public and private provision of infrastructure

Public project ⟷ **Private project**					
		Public-Private Partnership ⟷			
Contract type	**Public-sector procurement**	**DBFO/DCMF/ DBMF**	**BTO/BTL/ BLOT/BLT**	**BOT/BOOT**	**BOO**
Construction	Public sector	Private sector	Private sector	Private sector	Private sector
Operation	Public sector	Private sector	Private sector	Private sector	Private sector
Ownership	Public sector	Public sector	Private sector during construction, then public sector	Private sector during Contract then public sector	Private sector
Who pays?	Public sector	Public sector or users	Public sector or users	Public sector or users	Private-sector offtaker public sector, or users
Who is paid?	n/a	Private sector	Private sector	Private sector	Private sector

Source: [10, p. 12].

3. PPP as a new element of regional policy of the EU

In the EU context we can deal with three kinds of policy: regional, structural and cohesion policy [8]. In fact (in practical sense) we can use these concepts instead. In the current programming period (2007-2013), the EU cohesion policy realizes three aims [9]:

- the convergence objective,
- the regional competitiveness and employment objective,
- the european territorial cooperation objective.

These objectives were determined in the Council Regulation in 2006. *The Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999* introduced the following principles and rules of the financing assistance: partnership, programming, evaluation, management, monitoring and control.

The European Commission pays a great attention on the partnership principle and encourages different entities: member states, regional, local urban and other public authorities, economic and social partners and other appropriate body representing civil society, environmental partners, and non-governmental organizations to use such instrument in realizing investment projects [9]. At present regional (cohesion) policy of the EU is realized by financing its objectives by three funds: European Regional Development Fund (ERDF), European Social, Fund (ESF) and Cohesion Fund (CF).

Table 2: Objectives, Structural funds and instruments 2007-2013

OBJECTIVES	**Structural funds and instruments**		
Convergence	ERDF	ESF	Cohesion Fund
Regional Competitiveness and Employment	ERDF	ESF	
European Territorial Cooperation	ERDF		

Source: [7]

In the same time the European Commission underlines that in the case of big infrastructural projects, needed enormous amount of the financial resources, the PPP is a very useful instrument. From the nineties of XX century the EU is working on the conception of PPP. The intensification of the work on that started in 2004, when the Green Paper on PPP was published [4].

It is worth taken notice that in 2006 the European Parliament (EP) announced: *Report on public-private partnerships and Community law on public procurement and concessions* [5]. In mentioned document the EP determined the principles of applying the law on concessions and public procurement and pointed out the features of institutionalised public-private partnership (IPPP). Apart from that the cooperation of regional and local entities in case of PPP was determined too. The EP supported the different forms of cooperation on regional level with a view to achieving the synergetic effects.

In 2008 the European Commission published *Communication on the application of Community law on Public Procurement and Concessions to Institutionalised Public Private Partnerships* [2]. It is one of the latest official documents connected to the Green Paper from 2004. The process of consultations with member states (in many areas of PPP – procurement law, two main types of PPP such as contracts and special purpose vehicles etc.) has been almost finished. In 2009 the European Commission announced Communication from to the European Parliment, the Council, the European Economic and Social Committee and the Committee of the Regions, Mobilising private and public investment for recovery and long term structural change: developing Public Private Partnerships [3]. Representative approach of the EU has been meant the change into the increasing the role of PPP in the realisation of infrastructural projects (at every level, regional, national, EU).

From the begining of launching of PPP by the EU (almost two decades) this instrument is still developing and developing. In the table below the data on PPP projects in member states has been gathered yet. The highest number of PPP projects is realised in the countries: France, Germany, Greece, Italy, Portugal, Ireland, Spain and UK. Sector by sector differences are depeneded on the specific conditions of the analysed country.

TAB. 3: PPP project by sectors in the EU* in 2009 (number of projects)**

Country	Accommodation	bridges and tunnels	Education	Health care	Social housing	Defence	rail	light rail	roads	Street lighting	Transport/ bus	Vaste management	water/vastewater	Air/ airports	IT	Leisure	ports	Prisons	Urban regeneration	Regional development	Environmental	District heating
Austria	1	1	1	11	n/a	n/a	4	n/a	8	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Belgium	7	n/a	3	n/a	n/a	n/a	7	2	3	n/a	n/a	n/a	n/a	1	1	14	2	1	16	3	n/a	n/a
Bulgaria	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	1	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
Croatia	n/a	n/a	1	2	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a
Cyprus	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a
Czech Republic	3	n/a	n/a	3	n/a	n/a	n/a	2	9	n/a	1	n/a	n/a	n/a	n/a	3	n/a	1	n/a	n/a	1	1
Denmark	3	2	2	n/a	n/a	n/a	n/a	2	3	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a
Finland	n/a	n/a	n/a	1	n/a	n/a	n/a	1	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
France	**14**	**1**	**11**	**20**	**n/a**	**3**	**9**	**7**	**28**	**5**	**n/a**	**4**	**n/a**	**8**	**3**	**6**	**3**	**4**	**n/a**	**n/a**	**n/a**	**n/a**
Germany	**24**	**2**	**51**	**9**	**n/a**	**2**	**2**	**2**	**25**	**n/a**	**n/a**	**n/a**	**n/a**	**1**	**1**	**6**	**1**	**6**	**n/a**	**n/a**	**n/a**	**n/a**
Greece	**23**	**n/a**	**10**	**6**	**n/a**	**4**		**1**	**7**	**n/a**	**n/a**	**3**	**n/a**	**n/a**	**2**	**n/a**	**1**	**1**	**n/a**	**n/a**	**n/a**	**n/a**
Hungary	3	n/a	1	n/a	n/a	n/a	n/a	2	14	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	2	n/a	n/a	n/a	n/a
Italy	**13**	**5**	**n/a**	**36**	**1**	**n/a**	**2**	**16**	**47**	**n/a**	**n/a**	**6**	**10**	**n/a**	**n/a**	**2**	**4**	**1**	**1**	**n/a**	**n/a**	n/a
Latvia	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Malta	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The Netherlands	**11**	**n/a**	**2**	**1**	**n/a**	**n/a**	**1**	**n/a**	**12**	**n/a**	**n/a**	**n/a**	**2**	**n/a**	**n/a**	**n/a**	**n/a**	**3**	**1**	**n/a**	**n/a**	n/a
Poland	1	n/a	n/a	1	n/a	n/a	6	1	14	n/a	n/a	5	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Portugal	**2**	**n/a**	**1**	**17**	**n/a**	**n/a**	**11**	**4**	**30**	**n/a**	**n/a**	**n/a**	**2**	**1**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
Ireland	**14**	**n/a**	**10**	**3**	**5**	**n/a**	**1**	**4**	**15**	**n/a**	**n/a**	**25**		**n/a**	**n/a**	**2**	**2**	**2**	**2**	**n/a**	**n/a**	**n/a**
Romania	n/a	n/a	n/a	3	n/a	n/a	n/a	n/a	13	n/a	n/a	7	2	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Slovakia	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Spain	**3**	**n/a**	**1**	**20**	**n/a**	**n/a**	**1**	**14**	**67**	**n/a**	**n/a**	**1**	**4**	**3**	**n/a**	**n/a**	**2**	**2**	**n/a**	**n/a**	**n/a**	**n/a**
Sweden	1	n/a	n/a	1	n/a	n/a	1	1	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a
Turkey	n/a	n/a	n/a	2	n/a	n/a	n/a	1	3	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
United Kingdom	**35**	n/a	**135**	**125**	**49**	**42**	**6**	**13**	**14**	**24**	n/a	**46**	**1**	**2**	**1**	**1**	**1**	**5**	n/a	n/a	n/a	n/a

* the analysis covers 25 countries because there is no project list for Lithuania and Slovenia

** projects are in different phase of realization: pre-approval, in tender, in construction, in finance, closed

Own study on the base: [6].

Conclusions

The PPP instrument is present in regional policy of the EU for sure. The concept is developing from early nineties of XX century but it is noticed that in the current period of programming (2007-2013) the intensification of research and using the analysed instrument are greater and greater. The membership countries of EU use the PPP instrument in different way. The richest countries are the more advanced in the applying of PPP (for example: United Kingdom, France, Germany), but due to the regional policy of EU and the possibility of combining PPP with European funds, it is really possible that the significance of PPP will be growing up.

References:

[1] Asian Development Bank, *Public Private Partnership Handbook*, Metro Manila, Philippines 2008, Publication Stock No. 071107.

[2] Commission of the European Communities, *Commission Interpretative Comunication on the application of Community law on Public Procurement and Concessions to Institutionalised Public Private Partnerships (IPPP)*, COM (2007) 6661, Brussels, 05.02. 2008.

[3] Commission of the European Communities, Communication from the Commission to the European Parliment, the Council, the European Economic and Social Committee and the Committee of the Regions, *Mobilising private and public investment for recovery and long term structural change: developing Public Private Partnerships,* COM (2009) 615 final, Brussels, 19.11.2009.

[4] Commission of the European Communities, *Green Paper on public-private partnerships and Community law on Public Contracts and Concessions*, COM (@))$) 327 final, Brussels, 30.04.2004.

[5] European Parliament, *Report on public-private partnerships and Community law on public procurement and concessions* (2006/2043(INI)), final, A6-0363/2006, 16.10.2006.

[6] European PPP Expertise Centre, *European PPP Report 2009*, Piper, http://www.mrr.gov.pl/fundusze/Partnerstwo_publiczno_prywatne/Documents/Podreczniki_2.pdf (16.11.2010)

[7] *Kluczowe cele*, http://ec.europa.eu/regional_policy/policy/object/index_pl.htm (17.11.2010)

[8] *Polityka spójności*, http://ec.europa.eu/regional_policy/glossary/cohesion_policy_pl.htm (18.11.2010)

[9] The Council Regulation (EC) No. 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No. 1260/1999.

[10] YESCOMBE, E. R. *Public-Private Partnerships. Principles of Policy and Finance*, Elsevier, 2007, pp. 350, ISBN 978-0-7506-8054-7.

IMPLICIT CORPORATE TAXATION*

Ivana Koštuříková
Slezská univerzita v Opavě
kosturikova@opf.slu.cz

Key words:
corporate taxation – implicit tax rate – European Union

Abstract:
The significance of taxes, being income of public budgets, is indisputable in different concepts of the tax system. It is important for the state to pursue favourable tax policy, by which it would ensure support of all taxpayers, by which it would ensure competitiveness of the state and development of the society. For companies investing their capital, quality and the specific form of tax environment is one of the most important criteria, which have substantial effects on selection of the right place of their business. A question is what comparison variable to use when taking a decision concerning a location of the investment.

Introduction

The taxation system is one of the critical factors in decisions taken by corporate management. As a result, the amount of taxation becomes a considerable perspective for selection of the place of business for foreign investors; with administrative complexity of taxes being another important criterion, and, last but not least, followed by their total number.

The individual countries attempt to attract new investors, who would support the economic growth of the whole country in a form of additional tax income as well as new job positions. On the other hand, foreign investors select a country with a low tax burden for their company. However, the problem may rest in on the basis of which rates or variables the tax burden of corporations should be compared.

Implicit corporate taxation

Implicit corporate tax rate appears to be an appropriate measure of comparison of effective taxation of corporations, which are tax rates where consideration is taken not only of the amount of the statutory tax rates from corporations' rates, but also other aspects of taxation systems determining the total amount of effectively paid taxes. Therefore, account is taken of the tax base and the method (if any) by which the systems of corporate and personal income taxes are integrated.

So as to determine the average effective rate, certain simplifications must be applied, whereas each method of simplifications shows its pros and cons. In principle, there exist three methods of determination of effective tax rates. These

* This paper was published as a part of ESF project no. CZ.1.07/2.200/07.0427 at School of Business Administration in Karvina at Silesian University in Opava.

methods are coined as methods of backward macroeconomic view, backward microeconomic view and forward microeconomic view. The differences between macroeconomic and microeconomic approaches are determined by the applied data. The macroeconomic approach calculates effective tax rates of aggregated macroeconomic data contained in the national accounting of the individual states. On the contrary, microeconomic approaches calculate these rates from the financial statements of the individual companies containing either empirical data or data concerning the theoretical perspective. The differences between the approaches with backward and forward perspective are determined by the type of applied information. For estimation of tax burden of companies, approaches with backward view use ex-post data concerning the real life of companies, while the approaches with forward perspective use statutory characteristics of a tax system for determination of tax aspects concerning future business decisions of companies [1].

The implicit corporate tax rate is calculated as a ratio of the aggregated income taxes or from profits paid by corporations to the value of tax base, which is the corresponding potentially taxable base including these aggregated values: net operating profit/loss of non-financial and financial corporations, the difference between the received and paid interest, rent of lands, income from property insurance and dividends distributed by companies operating in the particular state and credited to non-financial and financial corporations, households, independent entrepreneurs and non-profit institutions, state authorities and the rest of the world. The following table and graph represent the development of the implicit rate of tax from profit of companies.

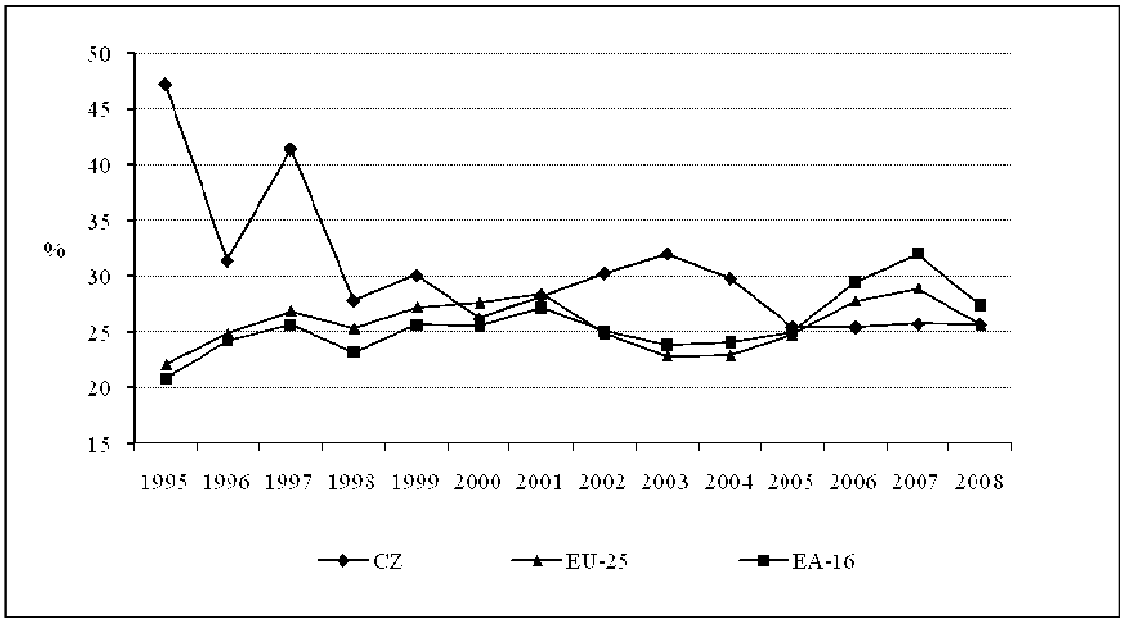
TAB. 1: Implicit corporate tax rate in European Union between 1998 - 2008

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
AT	29,4	27,6	27,1	37,6	28,7	27,1	26,2	23,7	23,5	25,1	26,1
BE	28,3	27,9	24,4	24,2	23,2	22,3	22,0	22,0	22,7	20,9	21,4
CY	30,6	36,2	28,6	29,3	30,7	28,3	23,0	26,8	30,4	34,2	37,3
CZ	***27,8***	***30,1***	***26,2***	***28,3***	***30,3***	***32,0***	***29,8***	***25,5***	***25,5***	***25,7***	***25,7***
DK	27,4	19,7	23,0	21,1	20,0	22,3	24,9	26,7	28,7	28,9	24,9
EE	11,9	8,9	4,1	3,0	4,7	6,5	6,9	5,7	6,5	7,7	8,3
EL	-	-	29,0	25,1	26,0	21,0	20,1	21,6	18,6	-	-
ES	-	-	30,7	28,5	31,4	31,2	35,2	43,5	51,9	61,8	34,0
FI	26,0	25,3	30,4	18,5	21,2	18,7	18,7	17,9	15,2	17,8	19,3
FR	24,7	28,7	29,6	32,9	29,0	24,4	26,4	26,1	31,8	30,5	29,1
HU	22,7	25,8	28,7	25,6	20,1	19,3	17,4	18,2	15,6	18,1	19,9
IE	-	-	-	-	10,0	10,2	10,4	10,2	10,4	8,7	7,6
IT	18,8	22,4	19,2	23,6	20,9	24,6	21,3	20,7	27,0	30,0	31,5
LT	10,3	7,4	3,9	2,5	2,6	5,7	7,2	8,0	10,8	9,8	11,1

LV	17,1	12,6	8,6	8,8	8,3	6,6	8,0	9,6	11,1	13,1	15,2
NL	22,8	21,9	18,5	17,3	18,1	14,4	14,4	12,5	12,0	10,7	11,9
PL	42,7	42,5	37,1	37,2	37,0	21,9	18,7	21,0	19,1	20,3	20,0
PT	20,0	21,5	25,5	22,7	22,4	19,0	18,8	19,4	22,6	-	-
SE	23,6	29,2	41,0	30,8	23,5	25,3	22,7	31,7	21,9	28,4	23,2
SI	19,0	16,6	19,6	22,2	24,6	21,0	23,0	33,8	30,5	30,5	27,4
SK	52,7	49,7	40,2	32,5	34,4	34,8	22,6	23,3	20,3	19,4	20,7
UK	29,3	30,2	31,0	31,8	23,9	19,4	19,6	23,5	25,5	22,1	22,2

Source: author by Taxation trends in European Union. Luxembourg: Publications Office of the European Union, 2010. ISBN 978-92-79-15801-8

GRAF. 1: The development of the implicit corporate tax rate between 1995 - 2008



Source: author by Taxation trends in European Union. Luxembourg: Publications Office of the European Union, 2010. ISBN 978-92-79-15801-8

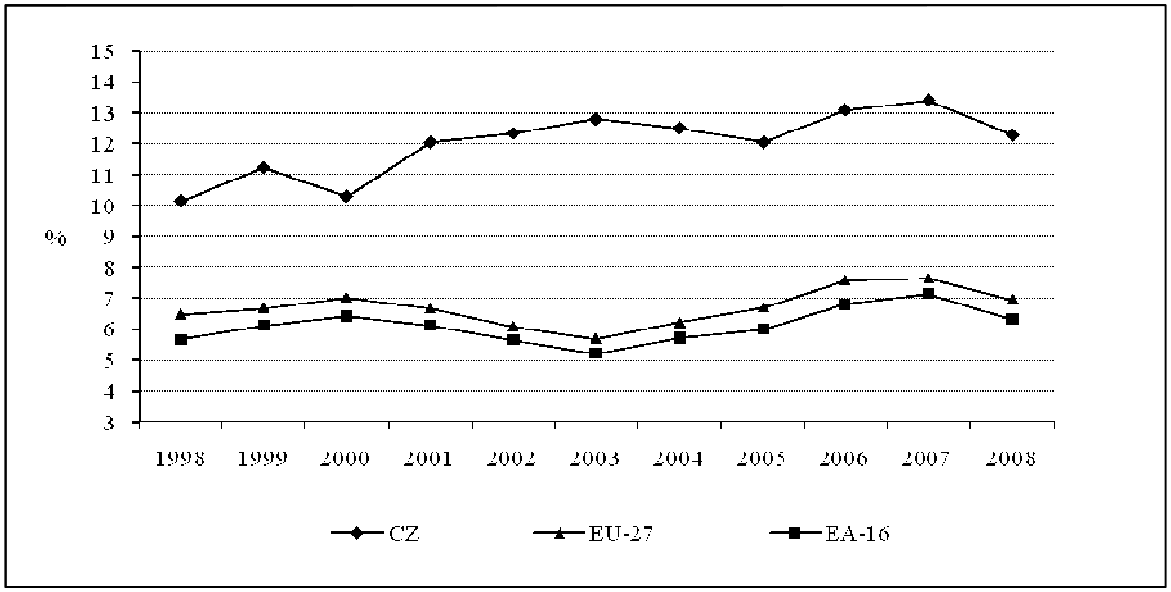
As it has been indicated above, the implicit corporate tax rate is the tax rate which does not take into consideration only the statutory tax rate but also other aspects of the tax system which determine the volume of effectively paid tax. According to these statistics, the general dramatic fall in the statutory rates is not accompanied by a fall in tax payments proportionally with GDP, as it is apparent in the following table and graph.

TAB. 2: The proportion of the tax on corporations' profits in GDP between 1998 - 2008

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
AT	5,3	4,5	5,0	7,2	5,5	5,3	5,6	5,5	5,6	6,2	6,2
BE	7,4	7,1	7,1	6,9	6,7	6,4	6,9	7,2	8,1	7,9	7,5
BG	12,3	10,1	8,2	12,3	9,9	9,5	7,3	7,0	8,1	9,5	10,0
CY	17,7	21,3	20,6	20,1	19,2	13,1	11,1	13,1	15,0	16,6	18,0
CZ	***10,1***	***11,2***	***10,3***	***12,0***	***12,3***	***12,8***	***12,5***	***12,0***	***13,1***	***13,4***	***12,3***
DE	3,3	3,6	4,0	1,4	1,5	1,9	2,4	2,8	3,5	3,5	2,8
DK	6,1	4,8	6,6	5,8	6,0	6,1	6,5	7,7	8,8	7,7	7,1
EE	7,1	6,0	2,9	2,3	3,6	5,1	5,4	4,7	4,9	5,2	5,1
EL	8,6	9,5	12,0	10,1	10,0	9,1	9,6	10,3	8,5	7,8	7,5
ES	7,7	8,7	9,2	8,6	9,6	9,3	10,0	11,0	11,6	12,8	8,7
FI	9,4	9,4	12,5	9,4	9,3	7,7	8,1	7,6	7,7	9,0	8,1
FR	5,3	5,9	6,3	7,0	5,9	5,0	5,4	5,3	6,6	6,8	6,5
HU	5,5	5,9	5,6	6,0	6,1	5,8	5,6	5,6	6,3	6,9	6,5
IE	10,6	12,1	12,0	12,1	13,1	13,1	12,2	11,4	12,3	11,2	9,8
IT	5,9	6,6	5,9	7,8	6,6	5,7	5,9	5,8	7,0	7,6	7,4
LT	4,1	2,6	2,3	1,9	2,1	4,9	6,6	7,3	9,4	8,7	9,1
LU	19,4	17,4	17,8	18,4	20,4	19,2	15,3	15,4	13,8	14,8	14,3
LV	6,8	6,4	5,3	6,6	7,1	5,3	6,1	6,9	7,5	8,9	10,9
MT	9,6	10,0	10,3	10,6	12,3	14,4	12,5	13,2	14,8	19,4	19,6
NL	11,4	11,0	10,9	11,0	9,4	8,1	8,8	9,7	9,4	9,1	8,8
PL	7,3	6,9	7,5	5,8	6,3	5,6	7,1	7,6	7,1	7,9	7,9
PT	9,5	10,6	11,3	10,0	9,9	8,2	8,7	7,9	8,4	10,1	10,2
RO	12,8	12,3	9,8	8,8	9,3	10,1	11,6	9,8	10,0	10,5	10,7
SE	5,1	5,9	7,3	5,3	4,3	4,6	6,0	7,3	7,5	8,1	6,3
SI	2,6	3,1	3,1	3,4	4,1	4,6	5,0	7,2	7,7	8,6	6,7
SK	8,8	8,8	7,7	7,8	7,6	8,4	8,2	8,7	9,9	10,2	10,8
UK	10,8	9,8	9,7	9,5	8,2	7,9	8,1	9,3	10,8	9,4	9,6

Source: author by Taxation trends in European Union. Luxembourg: Publications Office of the European Union, 2010. ISBN 978-92-79-15801-8

GRAF. 2: The proportion of the tax on corporations' profits in GDP between 1998 - 2008



Source: author by Taxation trends in European Union. Luxembourg: Publications Office of the European Union, 2010. ISBN 978-92-79-15801-8

In part, the reason rests in changes in profitability of taxpayers and in some countries also in the actual taxation system, where a fall in the rates is accompanied by extension of the tax base (e.g. tightening the rules of low capitalisation or extension of the tax depreciation period).

Conclusion

When companies are taking a decision about the location and implementation of their business activities, they find out the consequences of such activities. In most cases, they address the question by comparison of statutory corporate income tax rates. Nonetheless, this approach does not seem to be satisfactory with respect to complexity and diversity of elements creating of the national tax systems. The statutory tax rates may include besides the actual rate, so-called nominal tax rates, also effects of different tax surcharges or relieves, including tax rates, if any, concerning also local taxes. Their construction is not identical in different countries. A possibility to impartially compare the tax burden of corporations in different states by the statutory rates of income tax is also substantially limited as a consequence of unequal rules for determination of the amount of the corporate income tax base, which result from tax legislation applicable in the individual states. Consequently, statutory tax rates may not hold the role of an impartial indicator for the purposes of mutual comparison of this burden in different states, and therefore economists had to come with a new measure for effective taxation of corporation. This was the implicit corporate tax rate, which are tax rates where consideration is taken not only of the amount of the statutory tax rates from

corporations' incomes, but also other aspects of taxation systems determining the total amount of effectively paid taxes.

References:

[1] BLECHOVÁ, B. Charakteristika přístupů používaných v EU pro hodnocení efektivního daňového zatížení příjmů korporací. In. *Theoretical and Practical Aspects of Public Finance*. VŠE Prague 2008. ISBN 978-80-245-1378-2.

[2] *Taxation trends in European Union*. Luxembourg: Publications Office of the European Union, 2010. ISBN 978-92-79-15801-8

FAST FOOD PRODUCTS AND OBESITY — A STUDY BASED ON OPINIONS OF STUDENTS OF PRIMARY AND MIDDLE SCHOOLS IN DOLNOŚLĄSKIE VOIVODSHIP

Anna Kowalska
Wroclaw University of Economics
anna.kowalska@ue.wroc.pl

Keywords
obesity - fast food products

Abstract:
Poles more and more often dine out. The most frequently mentioned reasons of this situation are: higher incomes, staying at work for many hours, and spending leisure time out of home. Fast food bars gained particular popularity and found many customers not only among children and youth, but also among adults. The food offered by fast food bars, which is intended to be consumed as a snack, is treated by many people as the main meal.

Introduction

Recently in many countries there is observed an upward trend in the consumption of processed food, which is culinary prepared to a high extend and requires only minimal processing before using. A consumer spends less and less time for preparing meals in a traditional way at home. This typical function of a household is taken over by highly processed food and different catering establishments.

Recently, in many countries and also in Poland, fast food establishments underwent dynamic organizational and technical changes, particularly with respect to popularisation of modern solution models in the scope of furnishings, service systems, technology, work organization, etc. This process began in the first half of the 1990s and is constantly evolving, which is proved both by the experience from the world market and the successful development of chains of international fast food corporations in Poland. The most popular fast food restaurants include: McDonald's (which at the end of 2009 had 245 restaurants, including 105 franchise restaurants run by 50 franchisees, 170 McDrive restaurants, 6 locations at motorways, and 22 restaurants with a McCafé outlet) and the AmRest company which operates several premium brands, such as KFC, Pizza Hut and Burger King, and currently has over 150 establishments. Sfinks and Telepizza companies are popular as well.

The goal, research materials and methodology

The surveys were conducted on a sample of 8,684 school students, aged 10 -15, attending 134 primary and middle schools located in Dolnośląskie voivodship A

purposive sampling method with the use of the quota sampling technique was adopted for the study.

One of the goals of the study was to determine the degree of students' interest in consumption of fast food products, the frequency of consumption of such products, and the dependence of the consumption on the gender, age and financial situation of families of the surveyed students.

Fast food products and obesity

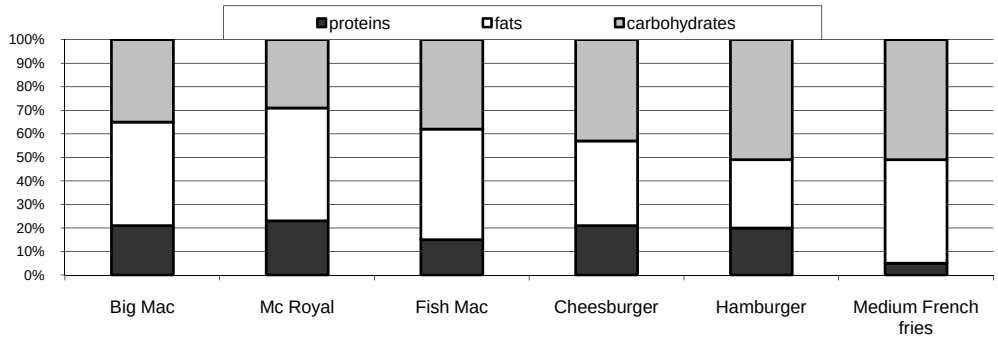
The popularity of fast food products, such as hamburgers, pizza, French fries, etc., is observed first of all among children and youth, although some adults are also somehow addicted to them to a considerable degree. The main reasons of consumption of such products include: the willingness, or rather the need to reduce the time spent for cooking meals in a traditional way at home, wider and wider range of products offered in fast food restaurants and bars, as well as the omnipresent promotion and advertising, which recently have an increasing impact on the diet of average people.

Although the relationship between the consumption of fast food meals in the society and the obesity index has not been conclusively determined by any long-term epidemiological studies, it can be noted that in all locations covered by fast food restaurant chains, there is an increase in the number of obese or overweight people. In the United States of America as much as 50% of adults are overweight, 30% are considered to be obese, and almost 1/4 of American children are overweight or obese. American children consume about 1/4 of their vegetable meals in the form of chips and French Fries. Obesity affects not only Americans but also the British or Frenchmen, who in the latest ranking were among the top ten countries with the population characterized by the highest overweight in the world. Currently, the British eat more fast food than any other nation in Western Europe. They have also the highest rate of obesity among adults. In Germany, every fifth child is too fat and in Japan, along with a rapid growth in fast food sales, the obesity among children doubled. On the other hand, people are much less obese in Italy and Spain, where expenditures on fast food products are relatively low [3].

In Poland, a dozen or so years had passed since the time, when first fast food restaurants appeared. Researches show that over half (52%) of customers of fast food restaurants eat there driven by a sudden impulse. This concerns first of all children and teenagers, because many surprises, such as balloons, toys and playgrounds, are waiting for them in such places [2].

In Poland, only few analytical studies concerning the nutritional value of fast food products have been conducted so far. However, they draw attention to the fact that the freshness, appearance, smell and taste of many such products do not go hand in hand with their nutritional value (Fig. 1). The quantity and quality of fats found in such products and their share in the coverage of the daily demand for energy provoke most controversy. Such products contain too much fat - predominately saturated fats.

Fig. 1. The energy structure in the selected fast food products



Source: prepared on the basis of [4]

Most fast food products also include unsaturated fatty acids, and in many cases also unsaturated fatty acids in the trans configuration. It is worth recalling that in accordance with the recommendations of FAO/WHO, the amount of energy from fat should not exceed 30% of the total energy from the daily food ration [1].

In many cases fast food products are deficient in protein, complex carbohydrates and minerals: calcium, iron, magnesium, zinc, and vitamins. The content of nutrients in the selected fast food products is shown in Table 1.

Table 1. The calorific value and content of nutrients in 1 portion of fast food products

Product name	Kcal	KJ	Protein (g)	Carbohydrates (g)	Fats (g)	Calcium (g)	Magnesium (g)	Cholesterol (mg)
Big Mac^{MT}	486	2036	25.2	42.8	23.8	0.119	0.031	85
Mc Royal^{MT}	512	2144	29.9	36.7	27.3	0.159	0.040	70
Fish Mac^{MT}	382	1597	14.2	36.7	19.8	0.114	0.021	50
Cheeseburger	294	1233	15.3	31.5	11.8	0.143	0.021	45
Hamburger	245	1031	12.5	30.8	8.0	0.090	0.019	30
Small French fries	192	803	2.4	24.3	9.4	0.007	0.016	0
Medium French fries	273	1145	3.5	34.7	13.4	0.011	0.023	0
Large French fries	383	1605	4.9	48.7	18.8	0.015	0.033	0

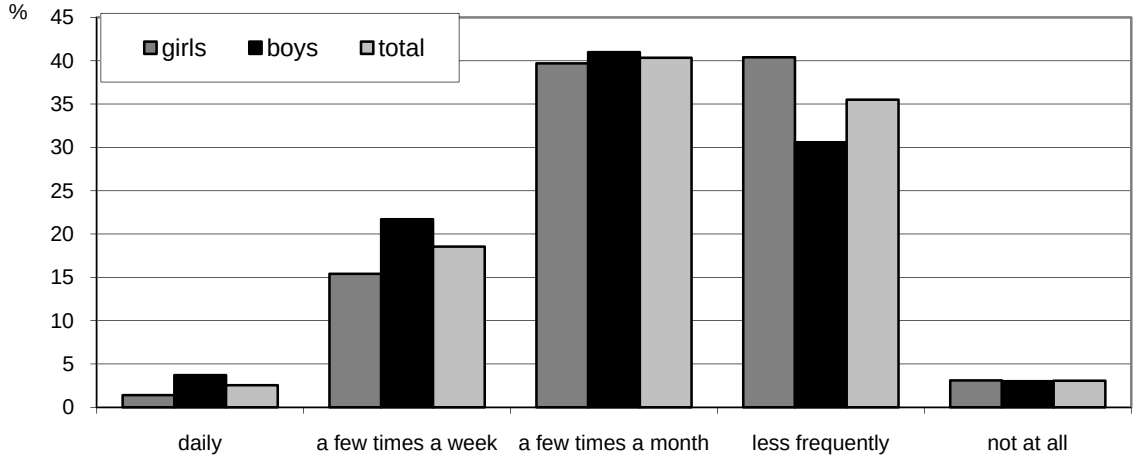
Source: own study based on [4]

Therefore, when composing meals from fast food" products, it is necessary to include some vegetable additions in the form of salads and to remember that fast food products should be consumed only occasionally, and not be a basis of daily meals.

Consumption of fast food products by school students in Dolnośląskie voivodship

Fast food products are very popular, especially among children and youth. About 2.6% of all surveyed students ate such products every day. However, as much as 18.6% of all respondents consumed fast food products a few times a week. It follows that fast food products became a regular component of the menu for every fifth student in primary and middle schools (Fig. 2).

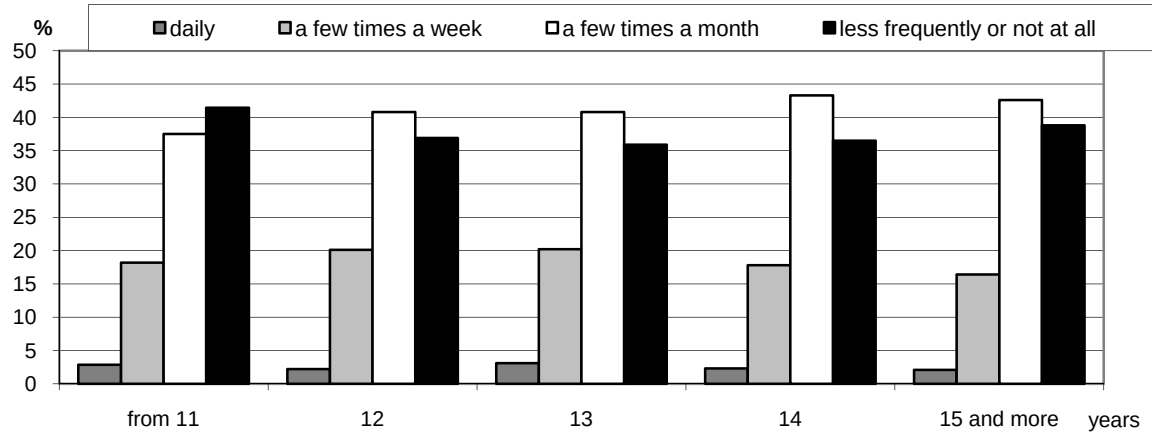
Fig.2. Frequency of consumption of fast food products in Dolnośląskie voivodship per gender [%]



Source: own study based on surveys

From Fig. 2 it can be concluded that boys consumed such products more often than girls: every fourth boy and every sixth girl ate fast food at least a few times a week. A larger group of respondents consumed such products a few times a month (about 40%) or less frequently (over 35%). The age of the surveyed students had also an influence on the consumption of fast food products (Fig. 3).

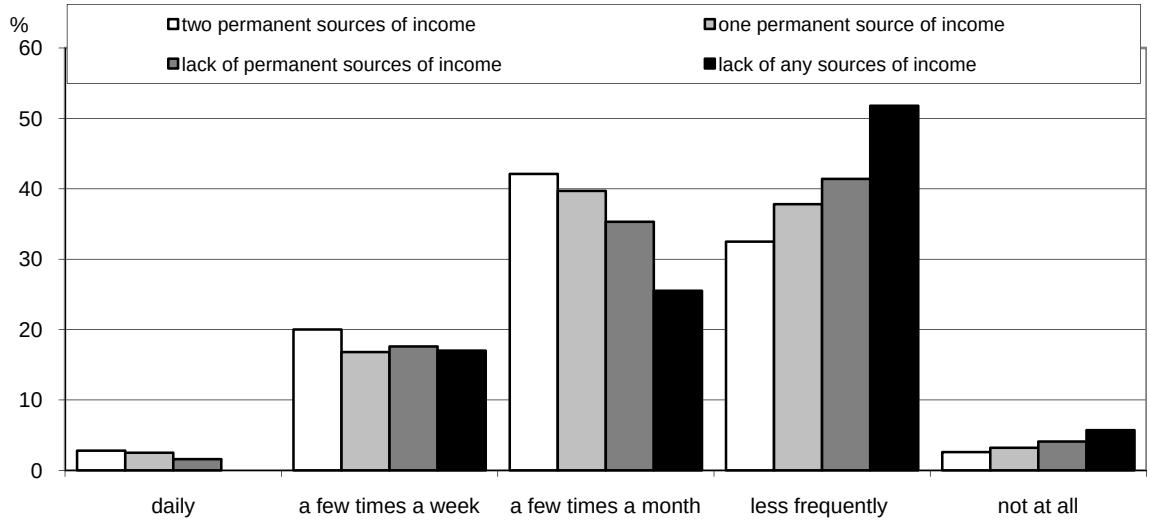
Fig. 3. The frequency of consumption of fast food products in Dolnośląskie voivodship per age groups [%]



Source: own study based on surveys

Students aged 12 and 13 declared consumption of such products most frequently - every fourth among them ate fast food at least a few times a week, and 3.1% of them ate fast food every day. Most fourteen-year-old students (43.3%) declared consumption of such products a few times a month. Youth aged 15 and older (2.1%) constituted the least numerous group among the students eating fast food products every day. The differences between the surveyed groups were not significant. The financial situation of families had also an influence on the frequency of consumption of such products (Fig. 4).

Fig. 4. Frequency of consumption of fast food products in Dolnośląskie voivodship per source of livelihood of students' families [%]



Source: own study based on surveys

The largest share of students eating fast food products every day was observed among children and youth from the families where parents had a regular source of income. However, among the students from the families without any sources of income, neither declared consumption of such products every day. As much as 51.8% of students in this group consumed such products less frequently than once a month. The highest percentage of the students who did not eat such products at all (5.7%) also occurred in this group.

Conclusions

Fast food restaurants belong currently to the catering establishments most frequently visited both by children and adults. This situation is caused mainly by a significant increase in the prices of meals offered in traditional restaurants and the speed of serving in such restaurants as compared with fast food restaurants. Consumption of fast food products in the surveyed population depended on:

- Sources of family income: the better material conditions, the more students dine out in fast food restaurants. It is understandable that the students' parents with high incomes often give their children pocket money.
- Age of the students: the most susceptible to this type of products are students aged 12-13. This may be caused by a higher availability of such products for this age group and by lower levels of parental control. The fact that the frequency of consumption of such products changes with age is associated with becoming aware of the consequences which may result from improper nutrition habits.
- Gender of the respondents: the share of boys, who declared consumption of fast food products every day and a few times a week, was higher than among the surveyed girls. Boys are more eager to eat processed food, as they spend many hours outside home and need a lot of energy products, which can provide a young organism with fat reserves, which will be burned on a playing field.

References:

[1] DANIEWSKI, M. Zawartość tłuszczu i kwasów tłuszczowych w wybranych produktach typu "fast food". "Żywienie Człowieka i Metabolizm" 1997, No. 4, p. 414, ISSN 0209-164X

[2] MASŁOWSKI, A. *Gastronomia w Polsce. Stan obecny i perspektywy*. "Przegląd Gastronomiczny" 1995, No. 9, p. 4-5, ISSN 00332118

[3] SCHLOSSER, E. Kraina fast foodów. Ciemna strona amerykańskich szybkich dań. Wydawnictwo MUZA S.A., Warszawa 2005, p. 410-430, ISBN 83-7311-586-2

[4] www.mcdonalds.pl/ 12-02-2010

MARKET RISK BACKTESTING BY ORDINARY LÉVY COPULA MODEL

Aleš Kresta, Tomáš Tichý
VŠB – Technical University of Ostrava
ales.kresta@vsb.cz, tomas.tichy@vsb.cz

Key words:
market risk – backtesting – Lévy model – copula approach

Abstract:
Market risk is an inherent part of riskmanagement of financial institutions. More importantly, for internationally active banks or insurance companies, the FX rate risk is probably the most important part. In this paper we make further contribution to the analysis of subordinated Lévy models coupled together by copula functions, see Tichý (2010) – more particularly, increasing the number of scenarios we analyze, whether the maximal likelihood approach or methods of moments provide better results.

Introduction

Financial risk modeling and its subsequent management is a very important and no less challenging task of quantitative units of financial institutions, such as banks, insurance companies, or securities firms. An efficient management of financial risk can increase the performance of any given entity. Generally, taking additional risk can, on average, increase the return on equity. However, considering a particular mix of stakeholders, there always exist some risk limits, which should not be exceeded. Otherwise, the business would become more risky than desired. Evidently, under standard assumption of convex utility function it would have negative impact on the entity value as perceived by a particular mix of stakeholders.

Recently, several interesting alternatives to standard models of market risk modeling have been suggested. For example, Alexander and Sheedy (2008) assumed Gaussian/Student/GARCH/Empirical models for a simple position and Rank (2007) analyzed similar multi-position models joined by several copula functions. However, Tichý (2010) made a further contribution by analyzing the performance of ordinary elliptical copula Lévy driven models (i.e. the skewness and kurtosis in the marginal distribution and potentially a non-linearity, but still symmetry in the dependency was allowed by parametrical approach). The author applied the two most popular subordinated Lévy models – variance gamma model and normal inverse Gaussian model. However, since the definition of the variance gamma model is rather complicated, the evaluation of the inverse function to the distribution function (necessary for copula function usage) is very costly.

In this paper we restrict ourselves to the normal inverse Gaussian model, which allows us to evaluate the model with 100 000 scenarios in reasonable time – in line

with backtests of Kupiec (1995) and Christofersson (1998) we need to repeat the procedure day-by-day (over 5 years in our case).

We proceed as follows. First subordinated Lévy models are defined. Then, the copula approach to joint distribution modeling is briefly explained. Finally, the data set of six FX rates is described and simulation results are provided.

Marginal distribution by subordinated Lévy models

The first focus at Lévy models with jumps goes back to 1930's. The most recent and complete monographs on the theory behind and/or application of Lévy models are e.g. Applebaum (2004) or Cont and Tankov (2004). However, a subordinated Lévy model, a rather non-standard definition of Lévy models as time changed Brownian motions, goes back to Clark (1973) or even Bochner (1949).

Generally, a Lévy process is a stochastic process, which is zero at origin, its path in time is right-continuous with left limits and its main property is that it is of independent and stationary increments. Another common feature is a so called stochastic continuity. Moreover, the related probability distribution must be infinitely divisible. The crucial theorem is the Lévy-Khintchine formula:

$$\Phi(u) = \mathrm{i}\gamma u - \frac{1}{2}\sigma^2 u^2 + \int_{-\infty}^{\infty} \left(\exp(\mathrm{i}ux) - 1 - \mathrm{i}ux\mathbb{I}_{|x|<1}\right)\nu(\mathrm{d}x). \tag{1}$$

For a given infinitely divisible distribution, we can define the triplet of Lévy characteristics,

$$\{\gamma, \sigma^2, \nu(\mathrm{d}x)\}.$$

The former two define the drift of the process (deterministic part) and its diffusion. The latter is a Lévy measure. If it can be formulated as $\nu(\mathrm{d}x) = u(x)\mathrm{d}x$, it is a Lévy density.

Let X be a Brownian motion. If we replace standard time t in Brownian motion X,

$$X(t; \mu, \sigma) = \mu dt + \sigma Z(t), \tag{2}$$

by its suitable function $\ell(t)$ as follows:

$$X(\ell(t); \theta, \vartheta) = \theta\ell(t) + \vartheta Z\left(\ell(t)\right) = \theta\ell(t) + \vartheta\varepsilon\sqrt{\ell(t)}, \tag{3}$$

we get a subordinated Lévy model. Due to the simplicity (tempered stable subordinators with known density function in the closed form), the most suitable candidates for function $\ell(t)$ seem to be either the variance gamma model – the overall process is driven by a gamma process from the gamma distribution with shape a and scale b depending solely on variance κ, $G[a, b]$, or normal inverse Gaussian (NIG) model – the subordinator is given by an inverse Gaussian process based on the inverse Gaussian distribution, $IG[a, b]$. Hence, in the particular case of NIG model, we get $IG[1,1/\nu]$. Hence, if we model a variable, which can be both positive and negative (eg. price returns), we can proceed as follows:

$$x(t) = \mu t - X\left(\ell(t)\right) - \theta t, \tag{4}$$

so that the long-term drift is fit again.

Copula functions

A useful tool of dependency modeling are the copula functions,[1] i.e. the projection of the dependency among particular distribution functions into [0,1],

$$\mathcal{C}: [0,1]^n \to [0,1] \text{ on } \mathbb{R}^n, \; n \in \{2,3,\dots\}. \tag{5}$$

Actually, any copula function can be regarded as a multidimensional distribution function with marginals in the form of standardized uniform distribution.

For simplicity, assume two potentially dependent random variables with marginal distribution functions F_X, F_Y and joint distribution function $F_{X,Y}$. Then, following the Sklar's theorem:

$$F_{X,Y}(x,y) = \mathcal{C}(F_X(x), F_Y(y)). \tag{6}$$

If both F_X, F_Y are continuous, a copula function $\mathcal{C}$ is unique. Sklar's theorem implies also an inverse relation,

$$\mathcal{C}(u,v) = \mathrm{F}_{X,Y}\left(F_X^{-1}(u), F_Y^{-1}(v)\right). \tag{7}$$

The formulation above should be understood such that the joint distribution function gives us two distinct information: (i) marginal distribution of random variables, (ii) dependency function of distributions. Hence, while the former is given by $F_X(x)$ and $F_Y(y)$, a copula function specifies the dependency, nothing less, nothing more. That is, only when we put both information together, we have sufficient knowledge about the pair of random variables X, Y.

It is therefore obvious that the n-dimensional subordinated Lévy model can be defined by terms of ordinary elliptical copula functions as follows:

$$F_{X_1,X_2,\dots,X_n}(x_1, x_2, \dots, x_n) = \mathcal{C}\big(F_1(x_1), F_2(x_2), \dots F_n(x_n)\big),$$

where $F_i(x_i)$ states for marginal distribution, ie. a suitable subordinated Lévy model, which can be different for particular i, and $\mathcal{C}$ is ordinary elliptical copula function.

Results

The basic descriptive statistics for the data are provided in Table 1 and since the data set is identical to the time series analyzed in Tichý (2010), we suggest the reader to check detailed analysis there.

[1] In this paper, we restricted ourselves to ordinary copula functions. Basic reference for the theory of copula functions is Nelsen (2006), while Rank (2007) and Cherubini et al. (2004) target mainly on the application issues in finance. Alternatively, Lévy processes can be coupled on the basis of Lévy measures by Lévy copula functions. However, this approach is not necessary in our case.

TAB. 1: Descriptive statistics of FX rate returns

Time series	Minimal return	Maximal return	Mean	Median	Standard deviation	Kurtosis	Skewness
EUR	-3.316 %	3.186 %	-0.013 %	-0.014 %	0.384 %	13.010	-0.131
GBP	-4.871 %	3.995 %	-0.032 %	-0.017 %	0.595 %	9.357	-0.236
HUF	-4.506 %	2.388 %	-0.015 %	0.000 %	0.543 %	9.951	-0.737
PLN	-5.621 %	5.341 %	-0.013 %	0.000 %	0.651 %	11.511	-0.410
SKK	-3.140 %	3.241 %	0.002 %	0.014 %	0.414 %	11.192	0.209
USD	-5.737 %	4.333 %	-0.027 %	-0.040 %	0.736 %	6.829	0.029

TAB. 2: **Backtesting results**

VaR	Number of exceptions								
	Assump-tion	Gaussian distribution			NIG – ML			NIG – MM	
		ND	Ga	St	ND	Ga	St	ND	Ga	St
15.00 %	190.05	294 (0.000)	161 (0.019)	167 (0.065)	301 (0.000)	175 (0.231)	186 (0.749)	302 (0.000)	178 (0.339)	186 (0.749)
5.00 %	63.35	165 (0.000)	69 (0.473)	69 (0.473)	165 (0.000)	71 (0.333)	73 (0.224)	161 (0.000)	72 (0.275)	74 (0.181)
1.00 %	12.67	88 (0.000)	25 (0.002)	22 (0.017)	83 (0.000)	19 (0.096)	16 (0.366)	81 (0.000)	18 (0.157)	15 (0.523)
0.50 %	6.34	78 (0.000)	17 (0.000)	14 (0.009)	74 (0.000)	12 (0.045)	12 (0.045)	68 (0.000)	12 (0.045)	10 (0.178)
0.03 %	0.38	35 (0.000)	7 (0.000)	4 (0.001)	27 (0.000)	3 (0.007)	2 (0.065)	24 (0.000)	3 (0.007)	2 (0.065)

The backtesting results are reviewed in Table 2. First, we provide the assumed No. of exceptions for VaR with significance of 15% (MCR – Solvency II), 5%, 1% (Basel II), 0.5% and 0.03% (AA rating). Next, we run the backtesting procedure for three kind of marginal distribution: Gaussian, normal inverse Gaussian (NIG) with estimation on the basis of maximal likelihood and NIG on the basis of method of moments. Each marginal distribution model is coupled together either by Gaussian copula or Student copula function and also ignoring the dependency. Moreover, the obtained number of exceptions for each model is accompanied by *p*-value – generally, the model is more reliable the higher *p*-value we provide.

Conclusion

We have documented that the Student copula NIG model is by far the best way how to estimate the risk magnitude and its specification via methods of moments slightly overcomes its specification via maximum likelihood approach.

References:

[1] ALEXANDER, C., SHEEDY, E. : Developing a stress testing framework based on market risk models. *Journal of Banking & Finance* 32, 2220–2236, 2008.

[2] APPLEBAUM, D. *Lévy Processes and Stochastic Calculus*. Cambridge: Cambridge University Press, 2004.

[3] BOCHNER, S. Diffusion equation and stochastic processes. *Proceedings of the National Academy of Science of the United States of America* 85, 1949, pp. 369–370.

[4] CHERUBINI, G., LUCIANO, E., VECCHIATO, W. *Copula Methods in Finance*. Wiley, 2004.

[5] CLARK, P. K. A subordinated stochastic process model with fixed variance for speculative prices. *Econometrica* 41, pp. 135–-156, 1973.

[6] CONT, R., TANKOV, P. *Financial Modelling with Jump Processes*. Chapman & Hall/CRC press, 2004.

[7] CHRISTOFFERSEN, P. F. Evaluating interval forecasts. *International Economic Review,* vol. 39, 1998, no. 4, p. 841-862.

[8] KUPIEC, P. Techniques for verifying the accuracy of risk measurement models. *Journal of Derivatives,* vol. 3, 1995, no. 2, p. 73-84.

[9] NELSEN, R.B. *An Introduction to Copulas*. 2nd ed. Springer, 2006.

[10] RANK, J. *Copulas. From theory to application in finance.* Risk books, 2007.

[11] TICHÝ, T. Posouzení odhadu měnového rizika portfolia pomocí Lévyho modelů. *Politická ekonomie 58* (4), pp. 504–521, 2010.

DYNAMICS OF CHANGES OF THE GROSS DOMESTIC PRODUCT OF POLAND WITHIN 1995 – 2009

Andrzej Krowiak
Central Mining Institute Katowice
akrowiak@gig.eu

Key words:
macroeconomics – national economy – gross domestic product – analysis of structure

Abstract:
There was the analysis of results of dynamics of changes of the gross domestic product of Poland within 1995 – 2009 in this article. Analyses were conducted in two thematic diameters: analysis of the percentage structure of GDP counted in current prices and the influence of dynamics the components of GDP to complete GDP, counted in constant prices.

Introduction

The economy of every country has its specificity manifesting itself, among others, different proportion of disintegration of components creating the Gross Domestic Product. It was decided to present this problem for the economy of Poland within 1995 – 2009 in this article. The Gross Domestic Product is a measurement of the size of the economy. Growth or fall real GDP institutes the measurement of economic growth. There are a few ways of defining the GDP

For the purposes of this analysis it was stated that:

GDP = private consumption expenditure + public consumption expenditure + gross capital formation + exports of goods and services – imports of goods and services.

Private consumption expenditure – consumption expenditure in the households sector – individual (from the personal income) and consumption in the non-profit institutions sector (concerning goods and services supplied to households as a social transfers).

Public consumption expenditure – expenditure of the general government sector concerning services dedicated to the population (among others education, culture, health, social welfare) and general-public consumption (among others the civil service, national defence, scientific and research activity).

Gross capital formation – allocating the part of the national income for investments and for increasing resources of current assets and reserves.

Exports (imports) of goods and services - includes a value of the goods taken away (brought) from foreign countries in the range of trade transactions as well as cross-border services.

Method of analysis

Analyses were conducted in two thematic diameters. The first one concerns the analyses of the percentage structure GDP counted in current prices. The results of these analyses were presented in Table 1 and on fig. 1.

The ruthless values of individual component in first section of table *Values* were presented there. Second piece *Percentage participation in creating PKB* contains the calculation a.m. part in percentages accepting, that total is 100 %.

The counting of the relationship of balance of export and import of goods and the services to GDP was added in this Table.

The second diameter of analysis is showing the participation of dynamics of individual components in dynamics of changes the GDP counted in constant prices. Results of these analyses were presented in Table 2 and on fig. 2.

It is included the dynamics of individual changes of components GDP in the first part of the Table *Dynamics of changes in comparing to the previous year*. In the second section *Influence of dynamics of changes of components on dynamics of changes GDP* was contained the calculation, the taking into account the participation of individual component in creating the dynamics of changes of the whole GDP.

Table 1a: Components of GDP in current prices

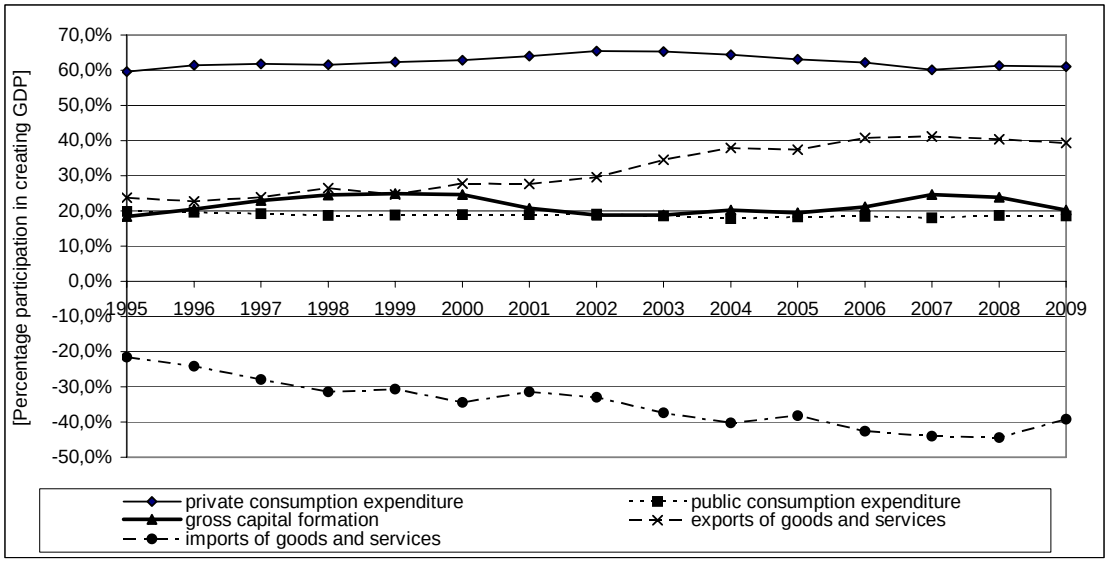
Description	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
Values [mln zl]								
private consumption expenditure	196 251	254 470	311 531	363 074	406 517	455 405	486 504	510 817
public consumption expenditure	65 375	81 168	96 973	110 287	122 831	137 239	144 347	148 492
gross capital formation	60 705	84 818	116 003	145 005	162 285	178 561	157 721	147 267
exports of goods and services	78 234	94 239	120 634	156 122	161 040	201 548	210 585	231 409
imports of goods and services	70 975	-100 284	-140 870	-185 155	-200 396	-248 867	-238 562	-257 535
Gross Domestic Product	**329 567**	**414 425**	**504 133**	**589 361**	**652 517**	**723 886**	**760 595**	**780 450**
Percentage participation in creating GDP								
private consumption expenditure	59.5%	61.4%	61.8%	61.6%	62.3%	62.9%	64.0%	65.5%
public consumption expenditure	19.8%	19.6%	19.2%	18.7%	18.8%	19.0%	19.0%	19.0%
gross capital formation	18.4%	20.5%	23.0%	24.6%	24.9%	24.7%	20.7%	18.9%
exports of goods and services	23.7%	22.7%	23.9%	26.5%	24.7%	27.8%	27.7%	29.7%
imports of goods and services	-21.5%	-24.2%	-27.9%	-31.4%	-30.7%	-34.4%	-31.4%	-33.0%
Gross Domestic Product	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Relation of the balance of the export and the import of goods and services relating to the GDP [%]	2.2%	-1.5%	-4.0%	-4.9%	-6.0%	-6.5%	-3.7%	-3.3%

Source: [1], [2] + own calculation

Table 1b: Components of GDP in current prices

Description	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*
Values [mln zl]							
private consumption expenditure	530 796	589 390	614 295	652 826	701 556	773 911	813 214
public consumption expenditure	150 939	162 656	177 786	193 708	211 028	236 263	247 291
gross capital formation	153 530	185 285	189 168	222 978	287 458	301 791	270 378
exports of goods and services	280 888	346 631	364 658	427 776	479 606	508 888	523 414
imports of goods and services	-303 575	-368 366	-371 946	-446 928	-513 426	-559 521	-522 985
Gross Domestic Product	**812 578**	**915 596**	**973 960**	**1 050 361**	**1 166 222**	**1 261 331**	**1 331 313**
Percentage participation in creating GDP							
private consumption expenditure	65.3%	64.4%	63.1%	62.2%	60.2%	61.4%	61.1%
public consumption expenditure	18.6%	17.8%	18.3%	18.4%	18.1%	18.7%	18.6%
gross capital formation	18.9%	20.2%	19.4%	21.2%	24.6%	23.9%	20.3%
exports of goods and services	34.6%	37.9%	37.4%	40.7%	41.1%	40.3%	39.3%
imports of goods and services	-37.4%	-40.2%	-38.2%	-42.5%	-44.0%	-44.4%	-39.3%
Gross Domestic Product	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Relation of the balance of the export of import of goods and services relating to GDP [%]	-2.8%	-2.37%	-0.75%	-1.82%	-2.90%	-4.01%	0.03%

Source: [1], [2] + own calculation



Source: own elaboration

Fig. 1: Percentage shares of components creating the GDP

Table 2a: The dynamics of influence of changes the component GDP on change GDP in constant prices

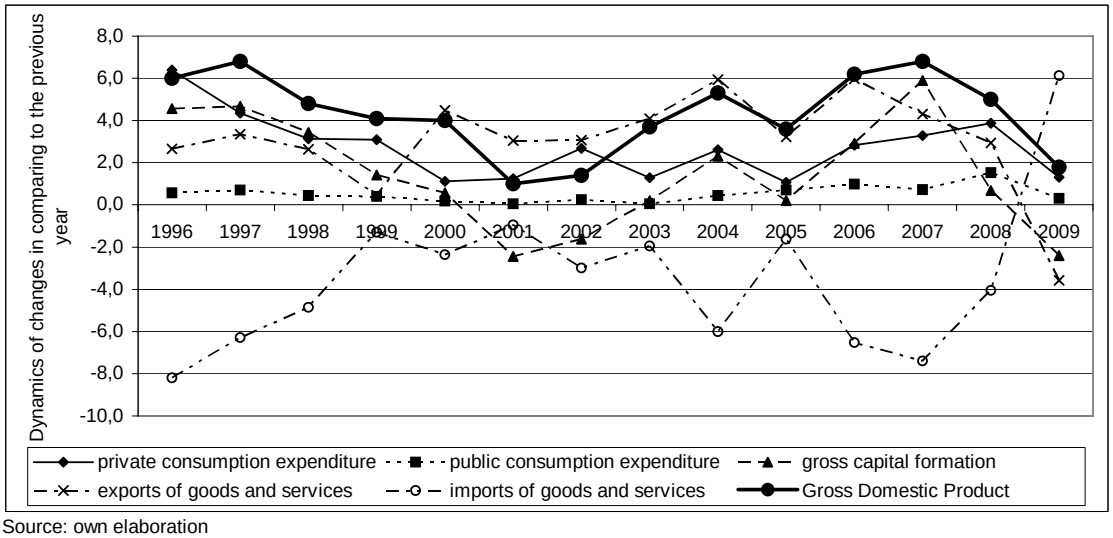
Description	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
Dynamics of changes in comparing to the previous year [%]							
private consumption expenditure	8.6	6.9	4.8	5.2	2.8	2.1	3.3
public consumption expenditure	2.4	3.5	2.2	2.2	1.5	0.4	1.1
gross capital formation	19.5	20.8	13.8	6.2	3.9	-12.6	-6.8
exports of goods and services	9.7	13.7	9.4	2	25.3	11.8	8.3
imports of goods and services	28	22	14.6	4.4	10.8	3.2	7.3
Influence of dynamics of changes of components on dynamics of changes GDP[%]							
private consumption expenditure	6.4	4.4	3.1	3.1	1.1	1.3	2.7
public consumption expenditure	0.6	0.7	0.4	0.4	0.2	0.1	0.3
gross capital formation	4.6	4.7	3.4	1.4	0.6	-2.4	-1.6
exports of goods and services	2.7	3.4	2.6	0.5	4.5	3.1	3.1
imports of goods and services	-8.2	-6.3	-4.9	-1.3	-2.4	-0.9	-3.0
Gross Domestic Product	**6.0**	**6.8**	**4.8**	**4.1**	**4.0**	**1.0**	**1.4**

Source: [1], [2] + own calculation

Table 2b: The dynamics of influence of changes the component GDP on change GDP in constant prices

Description	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*
Dynamics of changes in comparing to the previous year [%]							
private consumption expenditure	3.1	4.7	2.1	5	4.9	5.9	2.2
public consumption expenditure	0.4	2.9	4.8	5.9	3.6	7.6	1.8
gross capital formation	1.8	14.7	1.4	16.1	24.3	2.9	-11.6
exports of goods and services	18.7	18.2	10.6	16.1	9.4	6.8	-9.3
imports of goods and services	8.2	17.3	5.2	16.8	15.1	8.5	-16
Influence of dynamics of changes of components on dynamics of changes GDP [%]							
private consumption expenditure	1.3	2.6	1.1	2.8	3.3	3.9	1.3
public consumption expenditure	0.05	0.4	0.7	1.0	0.7	1.5	0.3
gross capital formation	0.2	2.3	0.2	2.9	5.9	0.7	-2.4
exports of goods and services	4.1	5.9	3.2	6.0	4.3	2.9	-3.6
imports of goods and services	-1.9	-6.0	-1.6	-6.5	-7.4	-4.0	6.1
Gross Domestic Product	**3.7**	**5.3**	**3.6**	**6.2**	**6.8**	**5**	**1.8**

Source: [1], [2] + own calculation



Source: own elaboration

Fig. 2: Influence of dynamics of changes of components on dynamics of changes GDP

Conclusions

Participation of the private consumption expenditure in creating the GDP, counted in current prices, fluctuates in range of values from the minimum 59.5 % in 1995 to the maximum 65.5 % in 2002. The value similar to the minimum i.e. 60.2 % appeared in 2007 and it was a result among others of growth of the participation of the gross capital formation in creating the GDP to the level 24.6 %.

The participation of the public consumption in creating the GDP is showing the great stability relatively in the time changing in the range from the minimum value 17.8 % in 2004 to the maximum value 19.8 % in 1995.

Participation of the accumulation in creating the GDP, counted in current prices, is fluctuating from the minimum 18.4 % in 1995 r. to the maximum 24.9 % in 1999 r. These changes have the shape similar to the sine function with maximum values within 1998 – 2000 and 2007 – 2008.

Participation of the export of goods and services in creating the GDP, counted in current prices, is presenting the positive trend. The minimum of the participation in the GDP, we can find in 1996 (22.7 %) and maximum in 2007 (41.1 %).

Participation of the importation of goods and services in reducing the GDP, counted in current prices, is presenting the increasing trend. The minimum of this participation we can find in 1995 r. (21.5 %) and maximum in 2008 r. (44.4 %).

The negative balance of the export and the import we can find almost in all years of analysis. As the consequence of that, maximum reduction of the GDP, counted in current prices, turned up at 2000 (- 6.0 % GDP). The positive balance of these turnovers appeared only in years 1995 (+ 2.2 % GDP) and in 2009 (+ 0.03 % GDP).

There is a very strong correlation between time series of the participation of the export and the import of products and services (coefficient of correlation - 0.9471). It means that it is large participation of components imported from abroad in products exported from Poland.

The economy of Poland is found as relatively a large participation of the consumption (private consumption + public consumption). It is in the range from the minimum 78.3 % in 2007 to the maximum 84.5 % in 2002. It is the element stabilizing the economy of the country in case of global economic crises.

Dynamics of changes GDP, counted in constant prices, describes the large changeability in the time. The growth was positive in all years of analysis. The maximum of the growth is found in 2007 (+ 6.8 %) and minimum in 2001 (+ 1.0 %).

The biggest impact on the dynamics of changes of GDP was noticed as follows in the correct order: dynamics of changes of the import, dynamics of changes of the export and the private consumption in the entire period of analysis

Closure

The method of analysis presented in the article is suitable for conducting international comparisons of the economy of different states. Proportion between the private and public consumption is defining the internal model of states.

The high level of the accumulation is evidence for the economic development and creating the industrial base of the development of the country.

The participation of the export and the import in creating the GDP is attesting to the openness of the economy for the international cooperation.

References:

[1] *Roczniki Statystyczne Rzeczypospolitej Polskiej*, Wydawca: Główny Urząd Statystyczny, Warszawa, 1995 – 2010

[2] witryna internetowa: www.stat.gov.pl

ENOTOURISM AS FORM OF ACTIVATING RURAL AREAS (ON THE BASIS OF THE PROVINCE OF PODKARPACKIE)

Wiesława Kuźniar
University of Rzeszow
wkuzniar@univ.rzeszow.pl

Key words:
vineyards – winemaking tourism – local development – promotion

Abstract:
This study encompasses selected issues connected with the development of wine tourism in the province of podkarpackie. Its development is based on wine production which has been of greater and greater importance in Poland. Wine tourism defined as enotourism provides the opportunities of local development, especially for the areas of natural predispositions to wine making. The example of such a region is the province of podkarpackie, which has been playing a significant role in the revival of Polish contemporary wine making. In recent years, there have been observed many initiatives, including marketing ones, stimulating development of enotourism in the studied region.

Introduction

Tourism as a dynamic phenomenon undergoes constant transformations under many factors, including social and cultural, economic, political, natural and technological ones.

The introduced changes have caused an increase of interest in new forms of tourism which may include wine tourism in Poland defined as enotourism. This kind of tourism has been developed particularly in Western Europe, in highly developed countries in the scope of wine production and drinking (Italy, France, Spain, and Germany). In recent years, also in Poland, a growth of interest in wine making has been observed, which is mainly connected with development of wine tourism. One of the regions of high predispositions to develop enotourism is the province of podkarpackie, in which there are favourable conditions for keeping vineyards.

The aim of this study is to present the significance of development of enotourism in the context of activating rural areas on the basis of the province of podkarpackie.

Along with the theoretical considerations, predispositions of the province of podkarpackie to development of wine production have been presented, with a particular emphasis on connecting this form of activity with tourism. Moreover, attention has been paid at the necessity of marketing support of enotourism, identifying the examples of selected actions in this capacity.

Wine production and enotourism - mutual relations

The condition for proper local development relies on correlation and integrity of long term development of the economic, social and natural subsystem, having its material implications in developing and using a geographic area. In relation to the areas predisposed to development of wine making and having any experiences in this capacity, the ideal form of activity is development of enotourism.

Referring to the statement that the condition for tourism existence relies on differentiation of space (areas), C.M. Hall and co-authors emphasises that wine is presently one of the products that have names based on geographical names of their origin. As a result, there are strong connections between the location of areas for viticulture and wine production (wine regions) and development of tourism on them, which exerts an influence not only on the development of local economy but also on sustaining residents' awareness of the geographical and cultural autonomy of a given location (by aiming at preserving a specific cultural landscape, preservation of the tradition connected with cultivating, production, trade and consumption of wine etc.) [3].

The aforementioned authors identified three stages of development of wine tourism in the context of its influence on regional development. The first phase relies on the fact that owners of particular vineyards, producers of wine and owners of wineries lack cooperation and each of them separately performs actions relying on gaining customers etc. In the second phase, it may be claimed that these are actions aimed at performing a coordinated promotion policy. However, the final stage is characterised by developed cooperation in the scope of wining customers and their servicing.

The significance that is attached to wine tourism in particular regions of viticulture may prove the fact that in Alsace around 23% of wines offered by producers are purchased by tourists and in Burgundy the share of wines purchased by tourists amounts to 12% [2]. It shall be emphasised that apart from wines, tourists also purchase other products and they take advantage of many accompanying services.

Apart from economic significance, wine tourism has also great cultural importance. From the viewpoint of regions and other locations in which grapevines is cultivated, interest of tourists in wine and wine making allows for preservation of tradition and its habits. Tourism also forces care for tidiness and proper rural development, favouring the maintenance of durability of cultural landscape. In order to make the tourists' stay more attractive, interesting events are organised, pertaining to local traditions, customs and old recipes. It is mainly connected with the period of grapevine harvesting, production of wine or its tasting.

Selected determinants stimulating development of enotourism in the province of podkarpackie

The province of podkarpackie is one of the most important regions for wine making in Poland as well as it has played a crucial role in revival of contemporary Polish winery. It is a typical piedmont area; there are gentle slopes, clay soil, hot summers,

sunny autumns and snowy winters, which constitute favourable conditions for viticulture.

Among vineyards of podkarpackie, small plantations with the area of several or even several dozens of areas are dominant, whereas there is a lack of multihectare vineyards. The overall area of vineyards in the province of Podkarpackie amounts to more than 30 hectare and encompasses several average and more than hundred small and very small vineyards.

An important stage in development of wine production was the year 2004, in which the three year pilot project was commenced, known as Vineyards of Podkarpackie. This was the first initiative supporting development of wine making in contemporary Poland. Within the framework of the project more than 150 people participated in professional trainings in the scope of viticulture, wine production and winery economics. Part of them took a chance to visit small wine households in Hungary, Austria and Germany. There was also established the Winery Association of Podkarpacie Region in 2006 and now it brings together the majority of vineyards in the region.

The development of wine production in the region of Podkarpacie is closely connected with development of wine tourism. As a result, an initiative has been undertaken in order to establish the Wine Route of Podkarpackie aimed at promoting wine tourism and vastly understood wine making in the province of podkarpackie. It is also an interesting form of promotion for the entire region of Podkarpacie, which strengthens its competitiveness in comparison to other regions of Poland. At present, the Wine Route of Podkarpackie has around 40 vineyards, in the future it is planned to enrich it by additional touristic attractions and infrastructure. The indispensible condition for its success are professional promotion actions which mainly rely on simple forms of advertising (e.g. colourful folders) and Public Relations (e.g. organising events). A professional website also plays essential its role in this capacity. In future, it is planned to place offers of enotourist households (with the possibility of booking rooms) or a possibility of holding tastings or vineyard sightseeing. A separate section of the website would be an e-shop with wines from the region of Podkarpacie. The important form of gaining marketing information may constitute a forum thanks to which it is possible to exchange opinions, sharing experiences or ask questions. In the nearest future, it is planned to use billboarding or informative tables with the map of the Wine Route of Podkarpackie which will be placed at the entry routes to communes or towns in which vineyards are located. It is very important to visualise the promotion information along with exposing its logo [5].

Within several years, two models of wine tourism have been established, that is the European model which is clearly connected with culture tourism as well as American and Australian model, which is more connected with entertainment and trade. The common element for both wine tourism models relies on active relaxation and tourists' desire to maintain contact with nature [4]. Similar expectations also refer to the persons visiting the region of Podkarpacie. Wine gourmets benefiting from wine tourism relies on the persons interested not only in

tasting but also cultural wealth or regional cuisine. Consequently, their expectations in the scope of enotourist offers encompass willingness to gain information on a given wine, its history, producer or history of the region. The condition for satisfaction of tourists shall be subject to creating a complex marketing product whose significant elements are based on exceptional atmosphere of places and regions in which wine is made, accessibility to tourist infrastructure of proper quality, ability to take advantage of original cuisine or a range of additional services of a cultural and entertaining character allowing for nicely spending time with family and friends. Enotourism is connected with development of many accompanying services that create new workplaces, which contributes to local revival of a given entity.

Summary

Podkarpacie is a typical mountainous region, with favourable climate conditions, having a rich tradition in viticulture. Consequently, the studied province is a magnificent area for wine making. Concurrently, thanks to natural and landscape values such as rich cultural heritage, the region of Podkarpacie has natural predispositions to development of tourism. In recent years, tendencies of combining these two functions have been observed, meaning development of wine tourism that constitutes one of activating form of selected communes in the province of podkarpackie.

In the light of shaping partnership relations that integrate actions of many local entities, a vital role is played by creating the conception of the wine route. It is especially useful in development of local regions which apart from natural predispositions to viticulture and wine production experience, similarly as the province of podkarpackie, social and economic difficulties. Wine tourism may constitute an alternative source of incomes not only for producers but also for the persons providing tourist services in its vast capacity.

Forms of local initiatives in the scope of development in enotourism allow for statement that in the next few years in the region of Podkarpacie, the number of vineyards will be increasing especially those which are worth visiting and which have a kind of image within Poland. In order to stimulate further development of actions in the scope of enotourism, it is indispensible to provide marketing support of tourist products especially by various promoting actions, in particular, advertising and PR. A significant role in promoting wine tourism of the studied region is played by the “Wine Route of Podkarpackie” which is aimed at moulding the tourist image of Podkarpacie in which a significant role may be played by dynamically developing enotourism.

References:

[1] BROL, R. *Zarządzanie rozwojem lokalnym – studium przypadków*. Akademia Ekonomiczna, Wrocław 1998, p. 9

[2] CAMBOURNE, B., MACIONIS N. *Meeting the wine-maker: wine tourism product development in an emerging wine region* [in:] HALL, C.M., SHARPLES, L., CAMBOURNE, B., MACIONIS, N. (red.) *Wine tourism around the world: development, management and markets.* Butterworth-Heinemann, Oxford-Amsterdam-Boston-London-New York-Paris-San Diego-San Francisco-Singapore-Sydney-Tokyo 2002, p. 81-101.

[3] HALL, C.M., JOHNSON, G., MITCHELL, R, 2002, Wine tourism and regional development. [in:] HALL, C. M., *Wine tourism around the world: development, management and markets.* Butterworth-Heinemann, Oxford- Amsterdam-Boston-London-New York-Paris-San Diego-San Francisco-Singapore-Sydney-Tokyo 2002, *tourism around……* , p. 196-225.

[4] KOWALCZYK, A. *Szlaki wina- nowa forma aktywizacji turystycznej obszarów wiejskich* [in:] Geografia turyzmu. Wydawnictwo UW, Prace i Studia Geograficzne, Tom 32, Warszawa 2003, p. 72

[5] Podkarpacki Szlak Winnic, http://www.podkarpackiszlakwinnic.pl

EGTC AS A TOOL OF CROSS-BORDER COOPERATION MANAGEMENT

Jerzy Ładysz
Wrocław University of Economics
Jerzy.Ladysz@ue.wroc.pl

Key words:
European grouping of territorial co-operation – cohesion policy of the European Union – cross-border cooperation – territorial cooperation

Abstract:
Different legal and administrative systems in Member States are the main obstacles of territorial (cross-border) cooperation among regions. The EGTC is new tool to help regions team up for projects across borders. Last year there was a significant increase in new cross-border initiatives aiming to create new EGTCs. EGTCs were established in 2006 by the European Parliament and the Council with the political support of the Committee of the Regions. They enable regional and local authorities from different member states to cooperate more effectively, for example by allowing them to directly apply for and manage European funds. The aim of the article was to show the potential of EGTCs in managing of cross-border co-operation. Author analyzed characteristic features of EGTC important for the better management of cross-border cooperation.

1. From "cross-border cooperation" to "territorial cooperation"

Promotion of cooperation between territorial authorities is a third objective of the 2007-2013 cohesion policy. The concept of "territorial cohesion" was incorporated in the Reform Treaty signed in Lisbon on 13 December 2007, becoming the third objective of the European Union next to economic and social cohesion [4]. The introduction of the EGTC in the EU's legislative framework is inserted in process of substantial redefinition of European cohesion policy and arises from the desire to introduce an effective instrument to proactively achieve the harmonious development of the Union's territory in its whole and strengthen the cohesion between regions.

Cohesion policy encourages regions and cities from different EU Member States to work together and learn from each other through joint programmes, projects and networks. In the period 2007-13 the European Territorial Co-operation objective covers three types of programmes:

– 52 cross-border co-operation programmes along internal EU borders. ERDF contribution: €5.6 billion.

– 13 transnational co-operation programmes cover larger areas of co-operation such as the Baltic Sea, Alpine and Mediterranean regions. ERDF contribution: €1.8 billion.
– The interregional co-operation programme (INTERREG IVC) and 3 networking programmes (Urbact II, Interact II and ESPON) cover all 27 Member States of the EU. They provide a framework for exchanging experience between regional and local bodies in different countries. ERDF contribution: €445 million [6; 151].

The budget of €8.7 billion for this objective accounts for 2.5% of the total 2007-13 allocation for cohesion policy, including the allocation for Member States to participate in EU external border co-operation programmes supported by other instruments.

Cross-border cooperation is essentially about "filling the gaps". It does so through agreed cross-border programmes. It deals with a wide range of issues, which include: encouraging entrepreneurship, especially the development of SMEs, tourism, culture and cross-border trade; improving joint management of natural resources; supporting links between urban and rural areas; improving access to transport and communication networks; developing joint use of infrastructure; administrative, employment and equal opportunities work [1]. Whether the challenge relates to infrastructure (building bridges), to markets and services (linking universities to business to clients) or to cultural or linguistic barriers, cross-border co-operation is intended to address them.

2. Features of EGTC important to cross-border cooperation management

The European grouping of territorial cooperation (EGTC) is a new European legal instrument designed to facilitate and promote cross-border, transnational and interregional cooperation. Unlike the structures which governed this kind of cooperation before 2007, the EGTC is a legal entity and as such, will enable regional and local authorities and other public bodies from different member states, to set up cooperation groupings with a legal personality. EGTC members can be: Member States, regional or local authorities, associations or any other public body [2; art.3]. Until now (30.11.2010) there are 20 EGTCs have been registered and 20 potential EGTCs (table 1).

TAB. 1: Functioning EGTCs

	NAME OF EGTC	STATES OF PARTNERS
1.	Amphictyony	Greece, Cyprus, Italy and France
2.	ArchiMed	Italy, Spain and Cyprus
3.	Cerdanya Cross-Border Hospital	Spain and France
4.	Duero-Douro	Portugal and Spain
5.	Eurodistrict Saar Moselle	France and Germany

	NAME OF EGTC	STATES OF PARTNERS
6.	Eurodistrict Strasbourg - Ortenau	France and Germany
7.	Euroregion Pyrénées-Méditerannée	Spain and France
8.	Galicia-Norte Portugal	Portugal and Spain
9.	GECT- INTERREG - Programme Grande Région	France, Germany, Belgium and Luxembourg
10.	Ister-Granum	Hungary and the Slovak Republic
11.	Karst-Bodva	Hungary and the Slovak Republic
12.	Lille-Kortrijk-Tournai	France and Belgium
13.	West-Vlaanderen/Flandre-Dunkerque-Côte d´Opale	Belgium and France
14.	UTTS	Hungary and Slovak Republic
15.	ZASNET	Portugal and Spain

Source: [3].

The EGTC is unique in the sense that it enables public authorities of various Member States to team up and deliver joint services, without requiring a prior international agreement to be signed and ratified by national parliaments. Member States must however agree to the participation of potential members in their respective countries. The law applicable for the interpretation and application of the convention is that of the Member State in which the official EGTC headquarters are located.

The main role of EGTCs is to organize and manage cross-border, trans-national or interregional cooperation measures with or without EU financial support. EGTCs can do it for example by: running cross-border transport or health services; managing cross-border or inter-regional sustainable development projects (innovation and technology, environmental protection, etc.); strengthening economic and social cohesion across borders.

Among the advantages of forming an EGTC are:

- Allowing members to create a single legal body, using a single set of rules to implement joint initiatives in two or more Member States. This means, for instance, a single staff employment contract, and common procedures for procurement. Such measures make it far easier for contractors to work with an EGTC.
- Allowing stakeholders in two or more Member States to cooperate on joint initiatives without the need to sign an international agreement needing ratification by their parliaments. EGTC members can choose the activities over which they will cooperate, and specify the decision-making process and internal rules.

– Allowing EGTCs to respond directly to calls for projects launched by EU territorial programmes and to act as the single Managing Authority for them.
– Giving a clear political signal that cooperation with partners in other Member States is important and supported at the highest political level.

Most of existing EGTCs focuses on ensuring the representation, cross-border coordination of the activities of its partners, defining the strategies, cross-border action programmes in order to meet the needs of inhabitants in the region. For the preparation of their further projects in the areas concerned, the partners have already got some EU financial support. Some EGTCs are involved in cross-border cooperation between hospitals in the border area (West-Vlaanderen Dunkerque Côte d'Opale, Cerdanya Cross-Border Hospital, Ister-Granum EGTC, etc.). They provide technical cooperation with the purpose of delivering a hospital network as well as a shared training service for the assistant staff. In La Cerdanya is being built a cross-border hospital (Catalonia, in co-operation with the French Health Service). Other EGTCs foresee health care in their object of co-operation.

Characteristic features of an EGTC are: 1) its cross-boundary nature, 2) its legal personality governed by Community law and, depending on the case, its legal personality governed by either public or private national laws, 3) the broadest legal capacity acknowledged by national legislation, 4) its convention and statutes with which the members define tasks and operational aspects, 5) the existence of organs with the capacity to operate and act on behalf of the members, 6) its single headquarter location, which determines the ancillary applicable governing law for the EGTC and its competent organs, 7) the annual budget [5; 92]. EGTC has been created, oblige to work together in a regular manner beyond borders. It could be achieved by less administrative efforts and other means and this is the next success factor of cross-border cooperation.

It is possible to note five main types of EGTCs according to their goals: 1) for the integrated management of the territory or of cross-border infrastructures, 2) for the protection and valorization of the environment, 3) for the promotion of an economy based on knowledge, of entrepreneurship and innovation economy, 4) for the provision of "cross-border" specific services of general interest, such as health care or first aid, 5) for fund raising at a European and national level to finance programmes or projects [5; 99]. There are different "combinations" of the aforementioned types.

EGTCs create an important territorial development opportunity. If understood and put into effect as a strengthened cooperation able to value the different territories and profit from their individual characteristics, the EGTC will be able to really represent a powerful instrument of territorial development.

3. Conclusions

European Union must face global challenges today, such as: economic globalization, climate changes, the energy emergency, demographic changes, etc. These challenges are above borders. They are creating real "spaces" for cooperation

inside and outside of the European territory and between various types of authorities and different spheres of competence. Therefore it has become necessary to have new instruments available, which allow institutional and territorial actors to take advantage of the wealth represented by the diversity of the existing resources, boosting cross-border cooperation.

By now, EGTC is the most effective tool of cross-border cooperation management. The EGTC is different from other forms and mechanisms of territorial cooperation because it allows broad partnership which includes the Member States; an extended field of action, because it covers the full scale of cooperation: cross-border, interregional and transnational; an objective adaptable to all types of cooperation and activity with the objective of "facilitating and promoting territorial cooperation to strengthen economic and social cohesion"; real intervention capacity: being endowed with a legal personality, it can hire personnel, stipulate contracts, call for tenders, manage a common budget to implement the mission that its members entrusted to it.

The EGTC can work as a coordination platform and implementation instrument for chosen European, national and regional policies. It can better coordinate investments, and to ensure an efficient use of limited resources. The institutions will be able to use this new instrument both to implement big projects in the medium-long term, and to supply cross-border services in daily life.

Worth mentioning is that this new tool does not solve all of problems of territorial cooperation. EGTC meets only few of the problems faced, whereas institutional obstacles continue to exist and even new ones are arising. One of such problems is the obstacle of heterogeneity of partners. Besides the establishment of a common 'registered office' and a common budget, the EGTC Regulation does not contain any detailed provisions to guarantee the parity. Unavoidable are situations when dominant members of EGTC will realize their own aims and solve their own problems by means of EGTC.

References:

[1] *Regional Policy – Inforegio*, http://ec.europa.eu/regional_policy

[2] *Regulation (EC) No 1082/2006 of the European Parliament and of the Council of 5 July 2006 on a European grouping of territorial cooperation (EGTC),* Official Journal of the European Union, L 210/19, 31.7.2006

[3] Committee of the Regions, http://www.cor.europa.eu/

[4] *Lisbon Treaty amending the European Union Treaty and the Treaty establishing the European Community signed in Lisbon on 13 December 2007.*

[5] *European Grouping of Territorial Cooperation. A new Instrument for Territorial Cooperation in Europe. Is It a Useful Instrument?* http://portal.cor.europa.eu/egtc/en-US/Publications/Pages/welcome.aspx

[6] ŁADYSZ, J. *Polityka strukturalna Polski i Unii Europejskiej*. Warszawa: PWE, 2008, 243 p. ISBN 978-83-208-1768-3

INNOVATION AS A COMPETITIVE ELEMENT OF MEAT PROCESSING INDUSTRY IN PODKARPACKIE VOIVODSHIP

Anetta Makarska
Cracow University of Economics
anettam@onet.pl

Key words:
innovation – competitiveness – meat industry

Abstract:
Innovation is the source of competitive advantage of companies and the basis of their development. Contemporary companies, regardless their sphere of activities, face extremely difficult task which is attracting attention to their offers on highly competitive market, directing interests to produced and offered goods. The basis for such actions of business entities is their resources, however their use can be different and the permanence of their effects limited. Innovation is the activity which can help to gain the market leader position and the necessary condition to obtain the high competitive position on European market is implementing innovations.

Introduction

Integration processes in European economy implicate companies 'activity aiming at market challenges within European Union and on the global scale.

In dynamic market changes, globalization and increasing demands of societies, companies are forced to search for advantages that could attract attention of potential customers.

Important factor of competitiveness includes high quality products offered AT affordable prices and accepted by customers. Companies implementing new products and services meet the buyers' needs gaining profits and Chances to survive on the market. Innovations are often based on research activities of companies or technologies used by other entities. Within such processes not only goods for suppliers are made but specific knowledge as well, such knowledge makes the background for competitiveness advantage based on unique concepts, especially in the innovation fields [14, 88-89;93-94]. The role and significance of innovation in the process of economy activity is stressed by P.F. Drucker [1,161], who considers it the basic power of enterprising. He claims that it is well organised and national work giving unproductive resources new opportunities to create riches.

The main determinant of increasing competitiveness and innovation of companies is constant cooperation between science and industry. [5, 70-87]. Polish meat factories are well perceived in comparison with the ones in Western Europe where

such investments have not been carried out and such big investment expenditures have not been done for a long time. [3, 105].

The essence of innovations

Innovations are a very important tool for cooperation between companies, scientific centre and business entities. The word innovation originates from Latin innovates and means renovation, creating something new [11, 19-21]. Technological aspects and systematic action used to be stresses before [19, 104], [10, 135-137], [4, 7], however, in contemporary definitions those aspects are not that stressed. The awareness of meaning of innovations in organization is gradually growing as organization is one of the factors which decide about implementation of technical innovations. [2,541-569]. Innovations are also a basic factor that determines economic and social development. Such a thesis has been proved by W. Janasz [7, 10-11] i Nowak – Fara [12,6] who claim that they influence more economic growth than traditional factors such as ground, labour or capital. They also condition the growth of modernity level and strengthen the competitiveness position. As Leavy stresses [9,435-454], they are the basic source of cumulating social skills. They also decide about directions and pace of economic development and influence the shape and range of cooperation between countries, regions and companies [17,209-218].

On competitive food market the success of companies depends on innovations. Polish food producers have to undertake innovation activities to keep their position on the market. They are implemented with various pace and range which diversify the level of innovations of both individual subjects and regions where they function. [8, 98-102].

The term of company innovation is more often perceived in the context of improvement of its competitiveness. In the literature of the subject such terms as innovation and competiveness are treated as strictly connected. European Union considers innovation the source of competitiveness advantage and company success. [6,192], [15,191-193]. Innovation is the ability and motivation of entrepreneurs to constant search and implementation of the research results, new concepts, ideas and inventions [23,9]. In market conditions where the economy undergoes constant globalization constant innovation is considered the only way to obtain permanent success. [20,111].

Competition and competitiveness

The term competitiveness is strictly connected with the term competition. Competition is the phenomena whose participants compete against each other to obtain analogical aims which means that activities undertaken by one hamper (or even make impossible) obtaining the same objectives by others [21, 76]. Company competitiveness on the market is connected with competing for market position. The definition given by OECD explains that competiveness is the ability of companies , industries, regions, nations and multi-nations unions to generate relatively high and stable income and the level of employment in global

aspect.[14,37-40]. According to W. Świtalski, competitiveness in the reference to a single company means the ability to create foods or services of proper quality, price and time. Competitiveness gets to meeting the needs of buyers in an effective way and better than other companies [22,15].

Companies' competitiveness is influenced by quantity, quality and prices of foods and services on a given market. M. Porter presents competitiveness issues specifying five competition powers ; entrance, substitution thread, suppliers' tender power and competing of present competitors which depicts the thesis that competition in a given sector goes beyond standard participants of market game[16,23]. Competitiveness potential is the whole of material and non material resources essential to allow a company to function on the competitive market.

Research methodology

For the needs of the following study three meat companies in Podkarpackie voivodship have been questioned and tested, they represent a group of big companies: Meat Factory Dobrowolscy Ltd, Meat Factory JSC and Meat Processing factory Taurus JSC.

The researches were carried out in 2008 and 2009. To gain information and data interview method with the use of a survey, the aim of research was of cognitive character. The range of the research included issues connected with functioning of the companies that under went innovation process in internal dimension (staff changes, research and development and influence of new technologies) and external dimension as well cooperation with colleges and universities and research-development units, competitive units influence and relations with suppliers and recipients. The interview were carried out with owners and managers of meat factories.

Research results

During the research it was stated that the managers of the companies considered the interior sources of information the most important ones, they included management knowledge, their own activities B+R, sales results and quality of marketing activities, which amounted to 34% of all answers. Next they mentioned external market sources (26%), generally available information (24%), information form research-development units (9%), cooperation with colleges and universities (5%) and scientific units of PAN (Polish Science Academy) (2%).

The most important resources of companies were human resources. In the companies in question managers with higher education were in majority (95% - MF Dobrowolscy, 79% MF Herman, 68% MF Taurus). The management was aware of the necessity to identify and complete the aims of companies' activity, which influenced innovation and strengthened the competitive position on the market. The quality of managers was extremely important which is presented in Chart 1.

Chart 1 Mangers of selected companies of meat factory in Podkarpackie voivodship in 2009 – education level

Company name	Managers In total	Higher education In %	Secondary and vocational education %	Employment of managers in relation to employees in total in 2009
Dobrowolscy	15%	95%	10%	4,1%
Herman	16%	79%	11%	5,1%
Taurus	10%	68%	22%	3,7%

Source: self-study

Majority of financial means for research and development was worked out by companies themselves, and the innovation growth in the business entities was forced by competition and necessity to strengthen or enlarge the position on the market. Investments on B+R in meat factories show the growing tendency in a period in question.(Chart2)

Chart 2 Amount of financial investment on research development activities in the comanies in 2007-2009 (thousand zloty)

Name	**2007**	**2008**	**2009**
Dobrowolscy	250	280	320
Herman	460	295	385
Taurus	200	230	250
Total	910	805	955

Source: self- study

Key element determining the success on the market of meat products is their quality. Bearing that in mind the companies implemented GPP rules (Good Production Practice) and GHP (Good Hygienic Practice) and system of threads analysis and critical control points – HACCAP. The effectiveness of the system is guaranteed not only by the producer but suppliers as well and storing process, retail and consuming places.

The carried out researches concerning mainly investment directions of companies in question in 2008-2009 show that the biggest stress was put on upgrading machines, production lines and constructing production objects and machines for improving production and services quality. The important direction of investment activities was to implement modern quality management, new technologies, products and services that influenced production abilities and sales network development. Big investment in information Technologies, logistics and research-

development units were done. The investment was of innovative character and was directed at adapting to market requirements and Union standards. That action disseminated new system of quality management, new marketing solutions and human resources development.

Summary

Owners and managers of meat factories in question explicitly assumed that the Reed for innovation results from market situation. The more open and competitive market, and such market is constructed in the process of integration and globalization, the bigger need for innovations as a tool for gaining market advantage. In economy based on knowledge searching for new solutions, planning and implementing appropriate competition rules is becoming particularly important. It requires constant learning and knowledge development in a faster way than competition. Constant education on necessity of new activities and specifying their fields, creating new rules and patterns of functioning, building innovative attitudes, developing competition and constant improvement of present activities become the basis for market competitiveness.

References:

[1] DRUCKER, P. F. *Natchnienie i fart, czyli innowacja i przedsiębiorczość*, Studio Emka, Warszawa 2004. ISBN: 8388931490

[2] EDQUIST, CH., HOMMEN, L., MCKELVEY, M. *Innovation and Employment. Process versus Product Innovations*, Cheltenham: Edward Elgar 2001.

[3] FIRLEJ, K. *Rozwój przemysłu rolno –spożywczego w sektorze agrobiznesu i jego determinanty*, Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie, Kraków 2008, ISBN: 9788372523907

[4] FREEMAN, C. *The Economics of Industrial Innovation*, F. Pinter, London 1982.

[5] HEFFNER, K. Klemens B., *Edukacja i innowacyjność jako czynniki zwiększające możliwości inwestycyjne i tworzące podstawy do powstania klastrów na obszarach wiejskich*. Wieś i Rolnictwo, **2 (135)**, 2007.

[6] JANASZ, W. *Innowacje w strategii rozwoju organizacji w Unii Europejskiej*, Difin, Warszawa 2009. ISBN: 9788372519788

[7] JANASZ, W., JANASZ, K., PROZOROWICZ, M., ŚWIADEK, A., WIŚNIEWSKA J. *Determinanty innowacyjności przedsiębiorstw*, Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin 2002. ISBN: 80320816580

[8] JUCHNIEWICZ, M., GRZYBOWSKA, B. *Innowacyjność przedsiębiorstw przemysłu spożywczego w Polsce w ujęciu regionalnym*, Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu, t. IX, z. 3, Warszawa – Poznań – Kraków 2007. ISBN: 9788392856764

[9] LEAVY, B. *Key Process In Strategy. Themes and Theories*, International Thomson Business Press, Boston – London 1996.

[10] MANSFIELD, E. *Industrial Research and Technological Innovation*, W.W. Norton, New York 1968.

[11] NIEDZIELSKI, P., RYCHLIK, K. *Innowacje i kreatywność*, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 2006.

[12] NOWAK – FAR, A. *Globalna konkurencja*, PWN Warszawa 2000. ISBN: 8301131551

[13] OECD 1998*: Industrial Performance and Competitivness In Era of Globalization and Technological Change*, Directorate for Science, Technology and Industry, Industry Committee, Paris, June 1998.

[14] PLATONOFF, A. L., SYSKO – ROMAŃCZUK, S., MOSZORO, B. *Innowacyjność polskich firm w gospodarce opartej na wiedzy*, „Ekonomika i Organizacja Przedsiębiorstw"2004, nr 1.

[15] PORTER, M. E. *Porter o konkurencji*, PWE Warszawa 2001. ISBN: 8320812879

[16] PORTER, M. E. *Strategia konkurencji, metody analizy sektorów i konkurentów*, PWE Warszawa 2000.

[17] POZNAŃSKA, K. *Innowacyjność jako czynnik wzrostu konkurencyjności przedsiębiorstw*. W: L. Nieżurawski (red.) Zarządzanie przedsiębiorstwem w warunkach konkurencji, UWM Olsztyn 2002. ISBN: 9788372853882

[18] PRAHALAD, C., HAMEL. G. *The Core Competence of the Corporation*. Harvard Business Review, Vol. 68, No May – June 1990.

[19] SCHUMPETER, J. *Teoria rozwoju Gospodarczego*, PWN, Warszawa 1960. ISBN: 8375260290

[20] SIMON, H., DIETL, M. *Tajemniczy mistrzowie XXI wieku*, Difin, Warszawa 2009, ISBN: 9788372519788

[21] SKAWIŃSKA, E. *Konkurencyjność przedsiębiorstw – nowe podejście,* PWN Warszawa - Poznań 2002. ISBN; 8301138785

[22] ŚWITALSKI, W. *Innowacje i konkurencyjność*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2005. ISBN: 832350248X

[23] WISZNIEWSKI, W. *Innowacyjność polskich przedsiębiorstw przemysłowych*, Wydawnictwo Instytutu organizacji i Zarządzania w Przemyśle „Orgmasz", Warszawa 1999, ISBN: 8386929677

CODES OF ETHICS IN THE PUBLIC MANAGEMENT[1]

Ondřej Málek
Tomas Bata University in Zlín
OMalek@fame.utb.cz

Key words:
code of ethics – public service – public management

Abstract:
This text is dealing with ethics codes position in the public service. With the public service reform the question about public service effectiveness is going to the fore and the concept of ethics during providing public services is following. On the example of cities will be presented, how they approach the codes of ethics, how they perceive their significance during execution of their work. There is a considerable group of offices, which does not have ethics code for employees and even does not think about its establishment, and at the same time this group regards them as a redundant document.

Preface

After fundamental restructuring of public power execution and public service reform in nineties the efforts for deeper regeneration of public service function are more visible in the Czech environment. After reinforcement of municipal level we see also here the effort for implementation of Good Governance principle. Although Good Governance is not precisely defined in law of the Czech Republic, legislation is directly handling with this term. Generally this phenomena is defined as group of requirements which lead to such conditions of modern public service functioning, that comes out from the Charter of Fundamental Rights and Freedoms.

In Council of Europe documents, concretely in Code of Good Governance are defined eight rules, which should be fulfilled by public sector. There are these principles: legitimacy, coequality, impartialness, proportionality, legal certainty, acting in appropriate time period, participation and respect for privacy finally. There is grounded a concept base of public power function and the place for implementation of ethics standards into public service execution is opened. "Public service is not only about public services management, which by itself recall plenty of ethical problems, but also about contribution to determination of values and wider society targets." [3, 249].

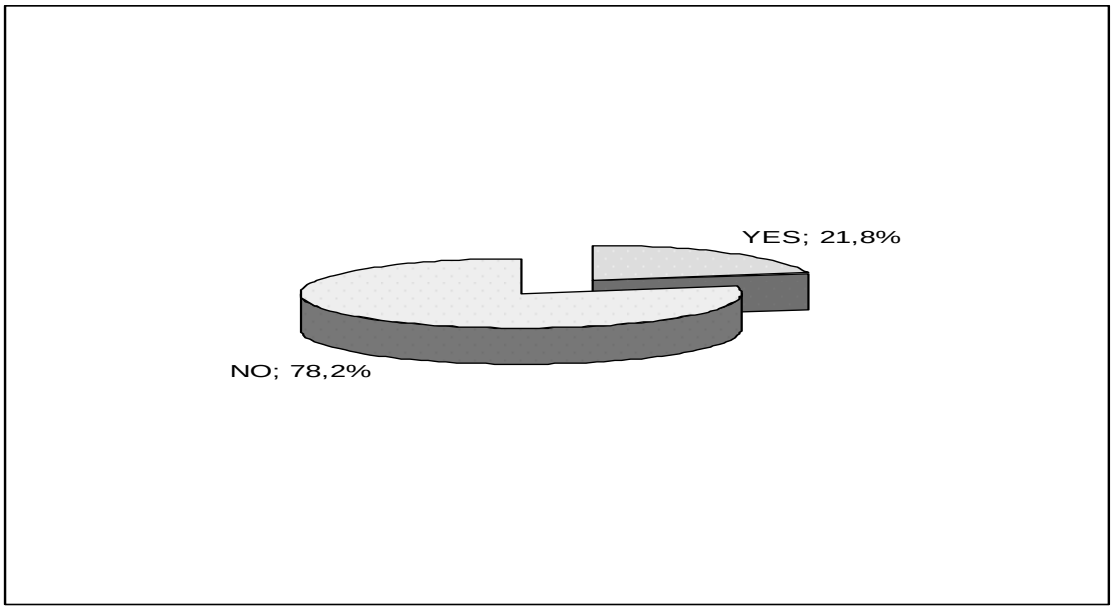
[1] The paper was financially supported by project IGA/69/FaME/10/D from the Internal Grant Agency of Tomas Bata University in Zlín entitled "Management innovation" ("Inovace managementu").

The Code of Ethics Position on Municipal Level

"Ethics is generally regarded as key principle of good governance." [4, 14]. In year 2001 was admitted Ethics Code of Public Service Employees in the Czech Republic. Its purpose was primarily to strengthen the public sector employees' professionalism in relation to clients (citizens). The employment of public service officers is given by officers' law primarily. Ethics Code of Public Service Employees admitted by Czech government is only completing this norm and is not obligatory for employees. By the Ministry of Internal Affairs recommendation every office should have its own Code of ethics. This will enable Code adaptation to the concrete office and its conditions, because "Ethics codes of organizations give only a guide, how to act and what is possible within their terms. This distinguishes them from working regulations of an organization, which distinctly determinate, what has to be." [1, 101].

During analysis of ethics codes expansion in public service on municipal level[2] was found out that only less than 22% of offices dispose with code of ethics.

GRAPH 1: Does office have a code of ethics?



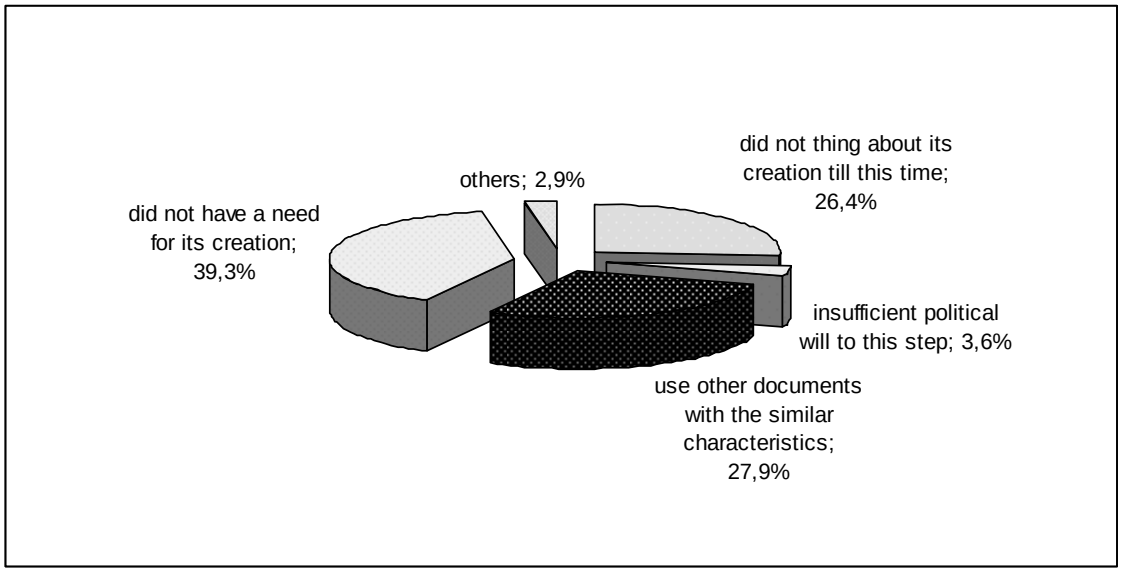
The primary reason of 39, 3% respondents why they have not created code of ethics yet was mentioned the fact that they did not have a need for its creation. 26, 4% of respondents did not thing about its creation till this time. This situation proves the fact of ethics importance underestimation and its implementation in execution of public service by offices. Ethics is not regarded as important tool for increasing the effectiveness of provided services.

[2] Research was addressed to 583 towns in Czech Republic with more than 2 500 inhabitants. Answers sent 179 respondents, i.e. 30, 70%.

27, 9% of respondents have stated that they use other documents with the similar characteristics. The most common mentioned documents were working regulations, organization rule, internal guidelines and the respective laws. As it was already mentioned, working regulations hence the organization rule are the documents focused primarily on the different area. Speaking about laws, concretely the most stated norm 312/2002 Sb., we get into situation described by Dolista and Ježek when "law can not provide the detailed response for every question. This way is the place for ethics opened." [2, 60]. In this case it is possible to presume that they do not take into account the moral values in such thorough way as special documents.

It is a positive finding that only in case of 3, 6% of offices the non acceptation of ethics code was caused by insufficient political will to this step. Because political support is integral part mainly during execution of offices municipal function and thus gives the clear signal to the citizens hence the voters. On the other hand considering the high amount of offices without the norms regulating the ethical behaviour it shows up the fact that even the political representation itself does not make a pressure for their implementation.

GRAPH 2: Why office did not create the code of ethics yet?



The final finding in case of 21, 4% offices is the fact that they are going to create the code of ethics soon (within one year). In many cases they have already prepared the document, which waits for the approval by city political representation.

The Possibilities of Ethics Development in Public Service

Of course when the ethics code is not implemented in respective way into human resources and management system then its creation is not any solution. Code of ethics is not a solution of problems but a certain guideline to an organization culture. Even the often mentioned honest behaviour is not sufficient for

organization ethics because the moral is only a subsystem of business ethics. We encounter this problem mainly in small offices, where the argument against code of ethics is based on perception that small amount of employees are controlling themselves and there is no need to regulate this area. But code has irreplaceable function for employee management. "Codes represent useful management tool...helps to ensure that the everyday activities of the given public administration section and the action of all its employees corresponds to the established fundamentals." [2, 61]. Code of ethics should be a part of documents which support the good performance of the commended authority by office and help the managers during the work with subordinates.

Conclusion

As it implies from the exploration there exists the substantial place for development of ethics importance during the public service execution. The presumption that it is possible to follow the law, which is sufficient guarantee of the responsible behaviour, is void. Such important activity as the public service execution is not possible to do only on the base of law simple interpretation. As it was mentioned the code of ethics itself is not panacea but only a tool which helps all the employees during their work and at the same time is a guideline in concrete situations. It has also the essential role for management and human resources of office.

References:

[1] BLÁHA, J, DYTRT, Z. *Manažerská etika.* 1 vyd. Praha: Management press, 2003, 155 s. ISNB 80-7261-084-8

[2] DOLISTA, J., JEŽEK, R. *Etika zaměstnance veřejné správy*. 1. vyd. České Budějovice: Vysoká škola evropských a regionálních studií, o.p.s., 2006, 122 s. ISSN 80-86708-20-9

[3] CHAPMAN, R.A. *Etika ve veřejné službě pro nové tisíciletí*. 1. vyd. Praha: Sociologické nakladatelství, 2003, 263 s. ISNB 80-86429-14-8

[4] LEŠTINSKÁ, V., VIDLÁKOVÁ, O., ŠELEŠOVSKÝ, J., ŠPAČEK, D. *Personalistika ve veřejné správě. Manuál pro personalisty územních samosprávných celků.* 1. vyd. Jičín: RK Tisk Jičín, 2006, 177 s. ISBN 80-210-3984-1

SOCIAL CAPITAL – AN INTANGIBLE FACTOR OF DEVELOPMENT

Urszula Markowska-Przybyła
University of Economy in Wrocław
ump@ae.jgora.pl

Key words:
social capital – the socio-economic development – measurement

Abstract:
The modern economy is characterized by an intense interest in non-economic factors in explaining economic phenomena - cultural and institutional factors. This is reflected in an increasing interest of economists in the concept of social capital. However, taking into account the difficulties in the measurement of this resource - mentioned and described in this article - it still remains an intangible resource.

Introduction

The concept of social capital has been used for about one hundred years. Its popularity greatly increased in recent decades. However, it resulted in no consensus, even when it comes to a definition of above mentioned capital. Scientists are unanimous that it constitutes a factor in the development, although both the mechanisms and even the direction of influence are not completely known. It is sometimes called an elusive factor in the development (intangible asset) due to its invisibility, the difficulty of measuring and the quality of being untouchable. This factor is getting more and more significant both due to the transformations in our surrounding and changes in science.

The evolution of the role of economic factors

It would be a truism to say that the role of individual factors of the development is variable in time. Their significance in explaining the processes of growth and development also changes. Classical economics in the eighteenth century perceived a fundamental role in the development of economies in the accumulation of physical and financial capital. Although the rank of human being in economic growth was emphasized, nobody was able to explain how this effect took place. Until the 50s of the twentieth century the theories of economic growth were dominated by three factors of production: land, labor and investment (financial capital). In the 50s of the twentieth century R.M. Solow drew attention to the technical and technological progress (physical capital). In the 50s and 60 of the twentieth century, physical capital was generally treated as a necessary and sufficient condition for the development of underdeveloped and developing countries while, at the same time, the analysis of the social and institutional conditions and factors of economic growth was simply ignored. It was in this

period that the voices from the different development economists began to appear , claiming that the accumulation is indeed necessary but not sufficient factor for development. This view was gradually disseminated in the next decade. The study of this period increasingly argued that the effective use of physical capital depends on how the workers are equipped in knowledge and skills which refers to human capital in the modern sense. In the 80s and 90s of the twentieth century the belief in the foundational role of human capital in shaping long-term economic growth has been established. However, in practice, the conclusions derived from both the human capital theory, as well as from the mainstream of economics, have not worked. Discrepancies between theory and practice have led economists to seek the sources of growth diversification in institutional development, including the characteristics of social capital [6, 26 et seq.]. Currently, a human individual in theory of economics has ceased to be a simple, rational entity, unrelated to the social environment, but he/she is rooted in the social environment characterized by a certain norms and values. Currently, the nature of a community is as important as the nature of individuals. Researchers are increasingly referring to the concept of social capital, in order to explain why some societies tend to be more efficient, than their material resources would indicate, pointing out that some factors in the field of culture, psychology or social relationships affect the whole, which is something more than the sum of its parts [7, 11].

The Definition of Social Capital

There are many definitions of social capital. Individual researchers approach the problem in different ways, analyze social capital at different levels (micro, mezo and macro), emphasize the importance of various elements and define it as private or public good. Researchers are focusing on three main aspects: structural (the structure of interpersonal relationships), normative (social norms, especially those relating to interaction and patterns of realization the values and interests, trust, solidarity, custom and habit) and behavioral (referring to specific forms of cooperation - cooperation, assistance, voluntary work, collective action and exchange of information) [9, 61]. There is one thing common in all definitions of social capital: they all say that social capital is a multidimensional phenomenon, multi-faceted and extremely complex.

Such definitions as: P. Bourdieu, J. Coleman, R. F. Fukuyama and Putnam can be treated as the classic definitions of social capital. Pierre Bourdieu defines social capital as ‘the sum of actual and potential resources which are linked to the possession of a durable network of more or less institutionalized relationships based on mutual knowledge and recognition’ [1, 248]. J. Coleman wrote that social capital ‘is defined by its function. It is not a single entity, but a number of different entities, which have two common characteristics: they are composed of some aspects of social structure and facilitate certain actions of individuals which are inside these structures. Like other forms of capital, social capital is characterized by

its productivity, enabling the achievement of certain goals that are unattainable in its absence [2, 302]. According to Fukuyama 'social capital is the materialized informal norm that promotes cooperation between two or more units (...), it is essential for the efficient functioning of modern economies and it is *sine qua non* of stable liberal democracy' [5, 7 et seq.]. According to R. Putnam social capital 'refers to (...) such qualities of society as trust, norms and relationships that can enhance the efficiency of society by facilitating coordinated actions'[8, 258].

Measuring Social Capital

Discussions on the phenomenon and the concept of social capital, even if very broad and thorough, are not accompanied by equally extensive empirical research. The reasons for this are in the way of defining social capital, considering it at different levels of analysis and specificity of the phenomenon, which is characterized rather by its soft qualities not quantitative traits. Economists - in contrast to sociologists – while measuring the social capital want to use the methods developed by economics, methods that are not necessarily appropriate for measuring such a complex phenomenon. Therefore, in this field a number of simplifications, reductions, assumptions that distort the essence of social capital can be made. It comes to a kind of paradox: the economists want to recognize new factors of non-economic nature in economic theories, which are to make their models real, but when they do it, they simplify reality and reduce the set of variables to those relatively easily measurable.

The second problem is caused by the issue of aggregation. It has several dimensions. The first is the aggregation of data referring to the sources of data about the effects of social capital. One of the reasons is lack of unanimity as to what is a manifestation and what is its source. So the data about social networks including data on trust and turnout is aggregated, and this is usually dictated by the availability of statistical data. Secondly, concerns also refer to the aggregation of unit data into the collective one. The aggregation of data obtained from the responses of people in the polls to an average (e.g. on the level of one nation) is incorrect, since it distorts the influence of the local context, which affects the generation of social capital. As M. Foley, B. Edwards and M. Diani claim, researchers tend to treat social capital as an attribute of an individual unit, which you can freely use and which neither changes or disappears when the unit moves between equal social contexts [3, 267].The third controversial issue connected with aggregation is a problem of 'disappearing' image of uneven distribution of social capital among different groups, social strata and uneven distribution of its capital in space.

Thirdly, the assessment of the size of social capital resources is impossible without understanding the context. The same statistics are interpreted differently for different moments in time for different communities or for different locations in

space. It has important implications for the comparability of data and research results in temporal and spatial terms. Moreover, taking into account the context is inseparably connected with the subjectivity of a researcher.

The attempts to measure social capital are based on very different data. Here a list of frequently used features and the main concerns referring to their use in measuring social capital is presented:

- number of associations, voluntary organizations, and the number of members of different organizations in terms of number of residents - the role of associations in generating social capital is often overestimated. Not all groups are working towards the common good, many of them try to maximize the realization of their own interests at the expense of people from 'outside' of their groups.
- norms, patterns of behavior, customs, manners - recognizing the same values and standards is not sufficient to produce social capital because it is still important that these are the appropriate values'[4, 169].
- trust (to people, institutions) - there is a problem with defining the relationship between trust and social capital. Is it synonymous with social capital, as F. Fukuyama claims, or as a source and a major component of this capital, as does R. Putnam, or perhaps as one of the form of it, as Coleman suggests?
- networks of family, social contacts; the strength of relationship is tested, its diversity, direction, frequency and formalization. There are differences in views on the nature of the networks that improve building the positive social capital (what is better: strong or weak ties, permanent or transient ones, dense networks or maybe so called: structural holes);
- philanthropic, charitable, voluntary activities (including e.g. the number of honorary blood donors in relation to the population) - some believe that these features characterize the human capital rather than social development;
- civic participation (voter turnout, participation in marches) - but the data on the turnout could be misleading because in some countries voting is compulsory;
- level of social inequality, inequality of income (which in turn affects the cohesion of society, trust) – it is difficult to determine the optimal level of inequality;
- illustrating the lack of social capital: the percentage of divorces, the number of processes, crime rate, suicide rate, the size of shadow economy, corruption, alcoholism;
- religiosity, the degree of secularization of society, the correlation between different religions is examined, and between social capital and economic growth.

– population mobility - on the one hand low mobility is not favorable for building a positive social capital, on the other hand too high mobility is associated with a sense of temporaries.

Summary

The modern economy is characterized by an intense interest in non-economic factors in explaining economic phenomena. One of these factors is social capital. However, taking into account the difficulties in the measurement of this resource, which were described in this article – it still remains an intangible resource.

References:

[1] BOURDIEU, P. The Forms of Capital, *Handbook of Theory and Research for the Sociology of Education*, J. G. Richardson (red.), Greenwood Press, Nowy Jork, 1986.

[2] COLEMAN, J. *Foundations of Social Theory*, Belknap Press of Harvard University Press, Cambridge, 1990.

[3] FOLEY, M., EDWARDS, B., DIANI M. Social Capital Reconsidered, *Beyond Tocqueville: Civil Society and The Social Capital Debate in Comparative Perspective*, M. Foley, B. Edwards, M. Diani (red.), University Press of New England, Hanower, 2001.

[4] FUKUYAMA, F. Kapitał społeczny*. Kultura ma znaczeni*e, L. E. Harrison, S. P. Huntington (red.), Poznań, Wyd. Zysk i S-ka, 2000

[5] FUKUYAMA, F. Social capital, civil society and development, *Third World Quarterly*, 1, 2001.

[6] JABŁOŃSKI, Ł. Ewolucja poglądów na temat konwergencji w ekonomii rozwoju, *Gospodarka Narodowa* 2008, nr 5-6.

[7] POGONOWSKA, B. Kapitał społeczny – próba rekonstrukcji kategorii pojęciowej, *Kapitał społeczny – aspekty teoretyczne i praktyczne*, H. Januszek (red.), Wyd. AE w Poznaniu, Poznań, 2004.

[8] RYMSZA, A. Klasyczne koncepcje kapitału społecznego, *Kapitał społeczny. Ekonomia społeczna*, T. Kaźmierczak, M. Rymsza, Instytut Spraw Publicznych, Warszawa, 2007.

[9] THEISS, M. Operacjonalizacja kapitału społecznego w badaniach empirycznych, *Kapitał społeczny we wspólnotach*, H. Januszek (red.), Wyd. AE w Poznaniu, Poznań, 2005.

CONCENTRATION AND CONSOLIDATION AS DETERMINANTS OF EXTERNAL COMPETITIVENESS OF ENTERPRISES IN FOOD INDUSTRY

Grażyna Michalczuk, Urszula Widelska
University of Bialystok, University of Finance and Management in Bialystok
michal149@vp.pl, widelaskau@poczta.onet.pl

Key words:
concentration – consolidation – external competitiveness – food industry – determinants of competitiveness – cluster initiatives

Abstract:
The aim of this paper is presenting the level of concentration and consolidation processes in food industry in Podlaskie Voivodship as a determinant of external competitiveness. The analysis was conducted on the basis of the results of research carried out within the analysis of key sectors of Podlaskie Voivodship. The external competitiveness is related to the adjustment of an enterprise to changes in the environment, taking into consideration cooperation conditions and becoming open to external markets in particular.

Introduction

The external competitiveness is related to the adjustment of an enterprise to changes in the environment, taking into consideration cooperation conditions and becoming open to new markets in particular. In this aspect the greatest significance is attributed to:

- concentration processes;
- consolidation processes.

The aim of this paper is presenting the level of concentration and consolidation processes in food industry in Podlaskie Voivodship as a determinant of external competitiveness. The analysis was conducted on the basis of the results of research carried out within the analysis of key sectors of Podlaskie Voivodship.[1]

[1] The aim of conducted research was detailed presentation of the role and importance of food industry in Podlaskie Voivodship. The object of the research were enterprises of the following sectors: meat processing and preservation and production of meat products (PKD 2007 10.1), vegetable and fruit processing and preservation (PKD 2007 10.3), beverage production (PKD 2007 11). The report was prepared on the basis of already existing data and as well questionnaire surveys on the sample of 100 enterprises of the sector. The complete report on research results can be found in: [5]

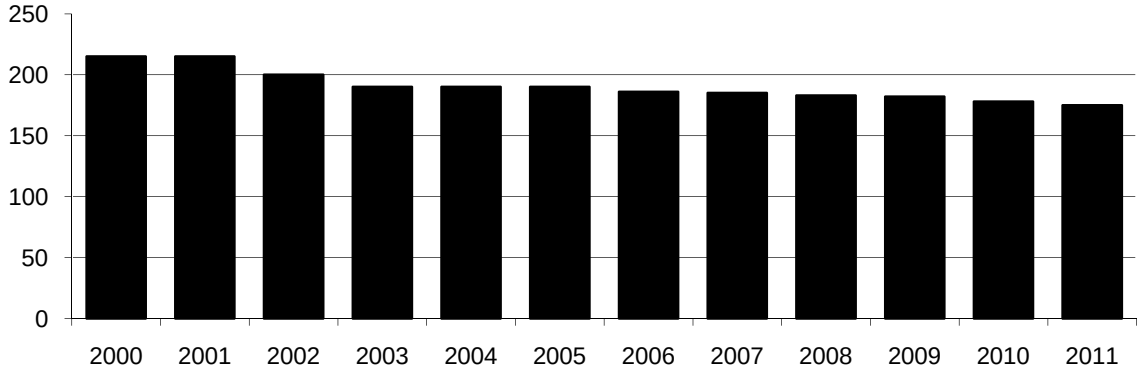
The essence of concentration as a factor of external competitiveness

Concentration processes are characteristic for Polish food industry. They are a consequence of the transformation process, when significant structural changes took place:[1,54]

- in the ownership structure private companies have dominated, they share increased from 10% to more than 95%;
- in the assortment structure product diversity is dominant connected with the improvement of the quality of manufactured goods;
- in the sector structure, at the expense of traditional companies, mainly sectors representing secondary food processing have started to develop.

However, an increase in the production share of large industrial factories is recognized as the main characteristic of structural changes in Polish food industry. It is also a consequence of adjustments to the EU standards, and at the same time a condition of increasing abilities to compete in external markets.

Graph 1: The number of enterprises of food industry in Podlaskie Voivodship in years 2000-2008 and forecasts for years 2009-2011



Source: [5].

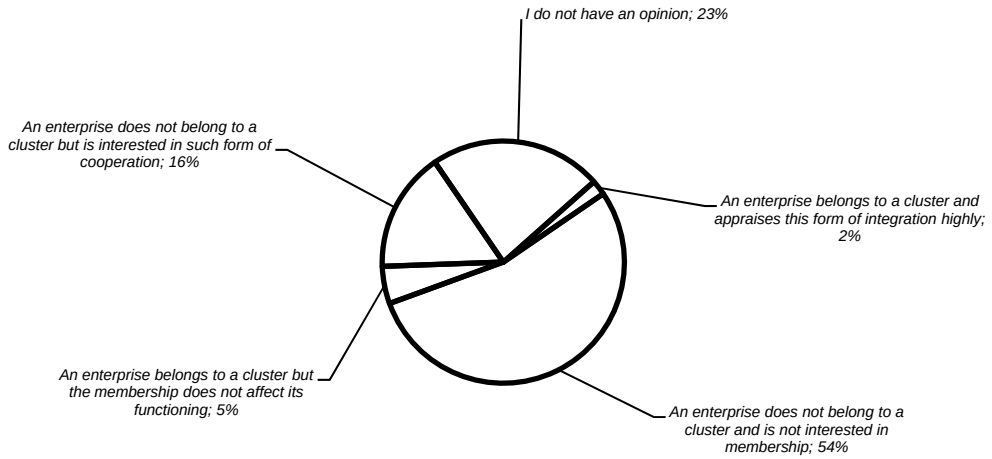
The concentration process often forced by the necessity to meet substantial quality requirements, are connected with the necessity to incur high outlays. This trend can also be confirmed in Podlaskie Voivodship, where the number of companies in examined sectors as well as in the whole industry is slightly but consistently decreasing. While the number of entities employed more than 9 people in 2000 was 215, in 2008 it decreased to 185 (Graph 1). The forecasts show that the trend will last in consecutive years. It should be remembered, of course, that official statistics does not consist of small entities whose share is very high and in 2006 constituted about 65% total companies. Thus, it is highly possible that taking into consideration these entities as well in the analysis would change views in this matter.[2, s.283]

The share of entities of examined sectors in total number of entities of food industry in Podlaskie Voivodship constituted in 2008 about 36%, thus resembled that of the share in terms of value of production sold. The number of companies in meat industry in 2008 was 46, in vegetable and fruit industry – 13, and in beverage production – 8. From 2000 the number of entities producing beverages decreased to the largest extent, thus as much as 60%. [5]

The essence of consolidation as a factor of external competitiveness

The consolidation processes are to create favourable conditions for increasing an ability to compete through creating cluster initiatives. Building such initiatives increases cooperative capabilities, allows to prepare a new offer as well as strengthens competitive position, particularly with reference to both domestic and international competition. Enterprises of food industry in Podlasie show rather low awareness in the area of functions and role which consolidation processes may perform in increasing the sector's competitiveness. More than a half of enterprises (54%) declare the lack of cluster membership and at the same time demonstrate the lack of interest in becoming a member in such structure in future. Only 16% examined companies show interest in such form of cooperation. Little percentage of respondents (7%) are members of a cluster, however only 2% among them appraised this form of integration highly. A large number of companies (23%) have not form an opinion about this matter (Graph 2).

Graph 2: Assessment of integration possibilities though membership of clusters in the opinion of examined enterprises



Source: [5].

The results of conducted research show on the one hand a low level of knowledge of enterprises on cluster initiatives, and confirm at the same time an unsatisfactory degree of enterprises' activity in a business-related sphere. On the other hand, this

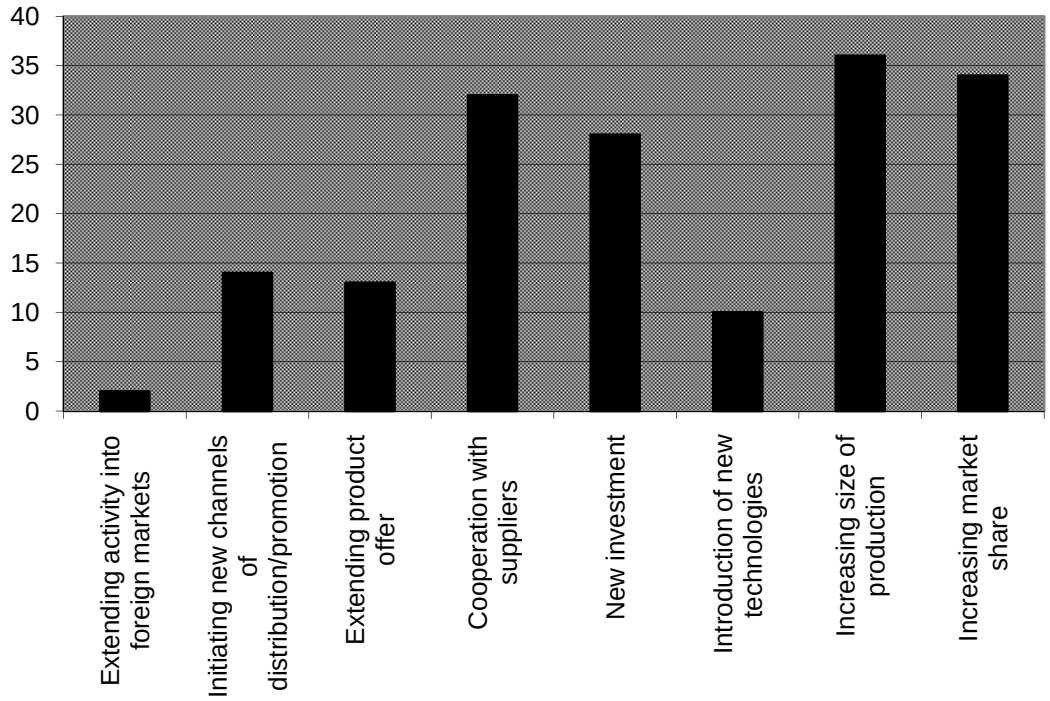
is a chance to create new clusters in the analysed sector. Another research in turn pays attention to other relations. It turns out that great significance in this field is attributed to a size of an enterprise, its experience, and also to the level of education of its owners or management.[4, 153]

Openness to foreign markets is also an important determinant of the competitiveness of the analysed sector. The research results seem to confirm a low level of expansiveness of enterprises in Podlasie.

More than 90% respondents do not also plan to increase their share in the market through taking over other companies. Only 5% respondents have considered such possibility, certainly bigger enterprises, whose position in the market is strong enough so a takeover would be possible to carry out.

A few examined enterprises plan to expand their activity to other segments of the market. Only 11% positive responses were obtained in this respect. There were 8% indecisive people, while convinced that nothing changes in this respect as much as 81%.

Graph 3: Strategic development directions of enterprises in the opinion of respondents



Source: [5].

Such research results are a consequence of the structure in examined enterprises, among which small companies were dominant, to larger extent oriented on developing their position in local markets.[3] It may also result from enterprises'

experience in relation to accomplishment of their market activity within already known target markets.

Summary

Concentration is not only a process vital from the point of view of large companies. It is also a challenge of modern market. It is as well a factor which determines marketing activity of small enterprises in food industry oriented on distinguishing themselves and strengthening unique characteristics. The research shows that consolidation processes are not advanced to such degree as concentration processes. Enterprises in Podlasie do not recognize benefits resulting from functioning within cluster initiatives and a chance to strengthen their competitive position.

References:

[1] KRACIUK, J. Procesy koncentracji w polskim przemyśle spożywczym. *Ekonomika i Organizacja Gospodarki Żywnościowej,* 2007, nr 63, s. 54, ISBN ISBN 83-7244-986-3

[2] MICHALCZUK, G., WIDELSKA U. *Relative Capital in Development of Food Industry on the Basis of Podlskie Voivodoship in Poland*. Hospodraska Politika v Clenskich Zemich Evropeskie Unie, Fakulty v Karvinie, Horni Lomna, Czech Republic, 2010, s. 283, ISBN 978-80-7248-601-4

[3] MICHALCZUK G., WIDELSKA U. Marketing Determinants of Small Enterprises Competitiveness in Beverage Sector, (in:) Strategie zarządzania małym przedsiębiorstwem, Uniwersytet Szczeciński, Szczecin 2010, ISSN 1640-68-18

[4] DANILUK, A., WASILUK, A. *Food Cluster of Food Industry*, s. 153, ISSN 1232-8553

[5] PRZYGODZKA, R., KOZŁOWSKA-BURDZIAK, M., DĘBKOWSKA, K., SADOWSKI, A., WIDELSKA, U., *Analysis of Key Sectors Of Podlaskie Voivodship, Food Industry*. Wyd. WUP in Białystok, Białystok, 2009, ISBN 978-83-62258-01-7

THE DIFFERENTIATION OF LIVING STANDARD OF POPULATION IN THE SELECTED EUROPEAN COUNTRIES

Joanna Muszyńska
Nicholas Copernicus University in Toruń
Joanna.Muszynska@umk.pl

Key words:
regional differentiation – multivariate statistical analysis – synthetic variable – synthetic measure of development – linear classification of objects

Abstract:
The contribution presents the level of living of population in Poland against the background of the selected countries of the European Union. The key to the selection of objects was the year of their accession to the European Union. All the selected countries joined the European Union in 2004.

The study covered years 2004 and 2009. It was based on the data collected by the Central Statistical Office of Poland, the Statistical Office of the EU and the OECD. In order to estimate level of living methods of multivariate statistical analysis were applied. On the basis of the synthetic variable, created for the research purposes, a ranking of countries was constructed.

Introduction

Poland acceded to the European Union in 2004. However the accession process of our country was accompanied by many fears it also evoked hope of the social and economic development and the improvement of level of living of population. The membership in the European Union and financial support of European funds were expected to enhance developmental possibilities of the Polish economy [3, 245].

No doubt, the countries – members of the European Union – differ with the extent of the social and economic development as well as the living standard of population. There are two important questions – the aims of the paper:

- to estimate the level of living and to indicate differences and similarities among the selected countries,
- to assess the changes of living standard after five years of membership.

The study was based upon the data, concerning years 2004 and 2009, collected by the Central Statistical Office of Poland, the Statistical Office of the EU and the OECD. In order to estimate the living standard of population methods of multivariate statistical analysis were applied.

Definition of level of living

There is no one, precise definition of level of living. Most of them combine only some aspects of phenomenon being analysed. Sometimes, level of living is comprehended solely as an extent of consumption of goods and services. In other cases, it's defined very widely and identified with quality of life.

The United Nations defines level of living as the whole of the real living conditions of population and also the extent of satisfying their material and cultural needs by means of goods, paid services and public funds [1, 11].

According to Drewnowski, level of living is an extent of supplying needs, which is combination of goods, services and living conditions. His definition includes: food, clothing, housing conditions, health, education, safety, the environment and social surroundings [4, 48].

The study was based on the definition that covered the following aspects of the living standard: social and economic development of country, economic situation of households, education, healthcare and the environment.

Methodological aspects

Level of living, as a complex phenomenon, was described with wide set of variables. Each of the determinants characterized only one feature of the phenomenon being analysed. In order to estimate level of living and to compare objects methods of multivariate statistical analysis were applied.

The estimation was made on the basis of the synthetic variable, created as a result of aggregation process of the determinants. Since the diagnostic variables were expressed in different units of measure and they belonged to the different intervals, all the determinants were normalised before the aggregation. The normalisation process was made according to the formula [6, 57]:

$$z_{ij} = \frac{x_{ij}}{\overline{x}_j}, \qquad (1)$$

Since the method of normalisation demanded that the set of the diagnostic variables covered only stimulants, all destimulants had been transformed before normalisation. The synthetic variable was constructed as follows [2, 227]:

$$z_i = \frac{1}{n} \sum_{j=1}^{n} z_{ij} \qquad (2)$$

Upon the results the ranking of objects was created.

The applied methods of normalisation and aggregation of determinants didn't standardize the values of the synthetic variable. Because of that the synthetic variable was transformed into the synthetic measure of development according to the formula [7, 138]:

$$m_i = \frac{z_i}{\max_i z_i} \qquad (3)$$

The values of the synthetic measure, obtained according to the formula no. 3, belonged to the closed interval [0;1]. Its higher values meant the higher level of living of population.

Empirical results

The process of estimation of the level of living consisted of three stages. Firstly, the set of the potential variables, describing thirty-two aspects of the phenomenon being analysed, was selected. Since the lack of statistical data the set of determinants was reduced to twenty-six variables.

At the second stage, all of the potential variables were verified. During the verification process, differentiation and correlation of determinants were analysed. Upon the results, the set of the potential variables was reduced to eleven diagnostic variables. All of them met the postulates of maximum spatial differentiation and the lack of multicollinearity [5, 25].

The diagnostic variables covered the following aspects of the level of living: social and economic development of country, economic situation of households, education, healthcare and the environment. There were among them: gross domestic products per capita, harmonised index of consumer prices, unemployment rate, inability to face unexpected financial expenses, inability to afford paying for one week annual holiday, enforced lack of a washing machine, motorisation rate, live births, education expenditures, number of students, air-pollution.

At the third stage the value of the diagnostic variables were normalised according to the formula no. 1 and aggregated according formula no.2. On the value of the synthetic variable the ranking of the selected countries was constructed (see tab.1).

TAB.1: The rankings of countries upon the value of synthetic variable

2004				2009			
no.	country	synthetic variable	measure of development	no.	country	synthetic variable	measure of development
1	Cyprus	1.202	1.000	1	Cyprus	2.406	1.000
2	Slovenia	1.180	0.982	2	Estonia	2.332	0.969
3	Lithuania	1.098	0.913	3	Slovenia	1.514	0.629
4	Czech Republic	1.077	0.896	4	Czech Republic	1.507	0.627
5	Estonia	0.988	0.821	5	Slovakia	1.190	0.495
6	Latvia	0.965	0.802	6	Lithuania	1.063	0.442

2004				2009			
no.	country	synthetic variable	measure of development	no.	country	synthetic variable	measure of development
7	Malta	0.948	0.789	7	Malta	1.061	0.441
8	Hungary	0.921	0.766	8	Latvia	1.048	0.436
9	Poland	0.822	0.683	9	Poland	0.949	0.394
10	Slovakia	0.799	0.664	10	Hungary	0.917	0.381

Source: Own calculations.

The dynamics of changes of the living standard of a single country was estimated upon the values of the synthetic variable. The highest level of living of population was attained by Cyprus. During the EU membership, its synthetic variable doubled in value. Hungary achieved the lowest level of living standard. In 2009, the value of the synthetic variable amounted 0,917 and it was slightly lower than in 2004. Beside Hungary only Lithuania registered the decrease of the synthetic variable (by 3.2%). The other countries increased their value of z_i. The highest growth, by 136%, was obtained by Estonia. The increase of the synthetic variable, for most of the countries, indicates that their level of living has grown.

The spatial differentiation of the living standard was evaluated on the values of the synthetic measure of development. All the descriptive statistics of m_i (mean, median, fist and third quartiles, standard deviation, variation coefficient, skewness) indicated the higher differentiation of objects in 2009 than in 2004. During that period the variation coefficient almost tripled in value.

TAB.2: Descriptive statistics of the measure of development

statistics of m_i	2004	2009
mean	0.832	0.581
median	0.812	0.469
quartile1	0.772	0.437
quartile3	0.909	0.629
minimum	0.664	0.381
maximum	1.000	1.000
standard deviation	0.115	0.229
variation coefficient	0.138	0.394
skewness coefficient	0.040	0.897

Source: Own calculations.

The positive value of skewness coefficient meant the majority of countries obtained the level of living lower than average. Only four countries: Cyprus, Estonia, Slovenia and Czech Republic attained the level higher than average.

Conclusions

The article doesn't cover all aspects of living standard. It's only an attempt at estimating the differentiation of the level of living of the selected European countries. However, the results that had been attained were helpful to indicate differences and similarities among the countries.

Compared to 2004 year, most of the countries, except Lithuania and Hungary, improved the living standard of their population. But the growth of the level of living was accompanied by the increase of its spatial differentiation. This means that in comparison with "the best" objects the living standard of the majority of the selected countries has been decreased.

Estimation of the position of Poland against the background of the selected countries has fallen out badly. The value of the synthetic measure of development indicates that the level of living of population in Poland is lower than the living standard of the other countries.

There's no question that the level of living of population depends on the social and economic development of country. But it's also a result of geographical, historical and cultural conditions. The expansion of the European Union contributes to emphasizing the differentiation of living standard of population. It reveals the differences among the countries, but it's also a chance for their elimination.

References:

[1] JOHANN, M. *Polska – UE. Porównanie poziomu życia ludności*. Warszawa: Difin, 2005, p.11, ISBN 83-7251-515-8.

[2] KUKUŁA, K. *Metoda unitaryzacji zerowanej,* Wydawnictwo Naukowe PWN, Warszawa, 2000, p.227, ISBN 83-01-13097-0.

[3] MAŁUSZYŃSKA, E., GRUCHMAN, B. (ed.): *Kompendium wiedzy o Unii Europejskiej*. Warszawa: Wydawnictwo Naukowe PWN, 2007, p.245, ISBN 978-83-01-15164-5.

[4] PISZ, Z. (ed.) *Zadania społeczne*. Wrocław: Wydawnictwo Akademii Ekonomicznej im. O. Langego, 2002, p.48, ISBN 83-7011-587-X.

[5] PODOLEC, B., ZAJĄC, K. *Ekonometryczne metody ustalania rejonów konsumpcji*, PWE, Warszawa, 1978, p.25.

[6] ZELIAŚ, A. (ed.) *Poziom życia w Polsce i krajach Unii Europejskiej,* PWE, Warszawa, 2004, p.57, ISBN 83-208-1526-6.

[7] ZELIAŚ, A. (ed.) *Taksonomiczna analiza przestrzennego zróżnicowania poziomu życia w Polsce w ujęciu dynamicznym,* wyd. AE Kraków, 2000, p.138, ISBN 83-7252-065-8.

[8] http://epp.eurostat.ec.europa.eu/portal

[9] http://www.oecd.org.statsportal

[10] http://www.stat.gov.pl/

CHANGES IN SPATIAL DIFFERENTIATION OF PIG LIVESTOCK PURCHASING IN POLAND IN 1999-2008

Anna Olszańska
Wrocław University of Economics
anna.olszanska@ue.wroc.pl

Key words:
regional changes – purchasing – pig livestock

Abstract:
The purpose of this study is to indicate regional changes, which took place in the sphere of pig livestock purchasing in Poland in 1999- 2008. In the analysed years the production of livestock in Poland, including the production of pig livestock, increased considerably. Quite substantial changes in the intensity of pig production in individual voivodships were observed in the analysed years. The differences between individual voivodships were also deepening.

Introduction

System changes in the Polish economy as well as the accession of Poland into the EU structures resulted in dynamic changes in agriculture and in the entire food economy. Such processes in the economy of so-called "Old Union" were occurring evolutionarily throughout decades. In Poland, the processes of restructuring and concentrating the food production and adapting its entire marketing chains to improve the competitiveness of the entities making up each link take place abruptly and very quickly.

The purpose of this study is to indicate regional changes, which took place in the sphere of pig livestock purchasing in Poland in 1999- 2008. There were used the data of the Central Statistical Office (GUS) concerning the livestock purchasing volume in the years 1999, 2004 and 2008. These periods were selected deliberately to track the processes, which took place in the years preceding the accession of Poland into EU and in the four years after the accession, when the first effects of this process were already seen. Basic methods of descriptive statistics were used.

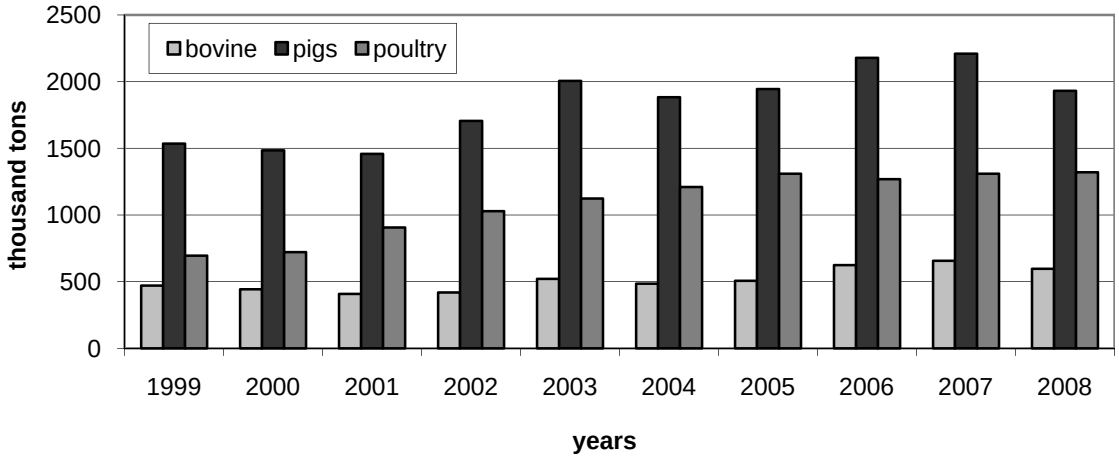
Pig, bovine and poultry livestock purchasing in 1999-2008

In the analysed years, the purchasing of basic kinds of livestock substantially increased - from 2701.3 thousand tons in 1999 to 3849 thousand tons in 2008. The minimum level of the purchasing was recorded in 2000, while maximum one - in 2007 (Fig. 1). The volume of the purchasing of pigs, which are the main kind of livestock in Poland, was changing according to cyclical fluctuations in the situation on this market, generally with a growing trend [3,139-141]. A similar trend is observed in the case of the poultry livestock purchasing, however stabilization in

the level of the purchasing in this market has been clearly visible since 2005. Production and purchasing of bovine livestock, after a considerable breakdown in the first half of the 1990s, stabilized at a relatively constant level. After opening of the EU market, a small increase in the bovine livestock purchasing took place. More significant increase in the production of this kind of livestock and meat is inhibited by the barrier of internal demand and the possibilities of selling Polish beef on foreign markets.

Changes in the structure of the produced livestock also took place. The share of the poultry livestock in the total volume of livestock purchasing increased approximately 8 %. This increase occurred at the cost of the share of pig livestock, which decreased from 57 % to 50 % in the total volume of the purchasing of these three kinds of livestock. In 1999 - 2008 the share of the bovine livestock decreased from 17 % to 16 %.

FIG. 1 Pig, bovine and poultry livestock purchasing in Poland in 1999-2008 (thousand tons)



Source: own study based on the data [1]

Regional changes in the pig livestock purchasing

In the analysed years, the average volume of the pig livestock purchasing in Poland per 1 ha of the arable land increased from 83 kg to 138 kg, that is by more than 66%. A much bigger increase was recorded in 2004-2008. The gap between the maximum volume of the purchasing recorded in each of the analysed years in Wielkopolskie voivodship and the minimum volume (occurring in Świętokrzyskie voivodship in 1999, and in Dolnośląskie voivodship in 2004 and 2008) has increased systematically and amounted to 207 kg/ha of AL in 1999, 239 kg/ha of AL in 2004, and 294 kg/ha of AL in 2008. This proves that the differentiation between individual voivodships in the level and intensity of pig production is deepening.

The biggest leap in the volume of the pig livestock purchasing took place in Łódzkie voivodship - by 129 kg/ha of AL (increase by 117%). Wielkopolskie voivodship took

the second place - 100 kg/ha of AL (increase by 43%). A considerable increase was recorded also in Śląskie voivodship (93 kg/ha of AL). It should be emphasized that the highest growth dynamics in the purchasing volume was recorded in this voivodship - by 182%. A substantial increase in the purchasing took place also in Pomorskie voivodship - by 86 kg/ha of AL (increase by 146%), Kujawsko-Pomorskie voivodship - by 79 kg/ha of AL (increase by 54%), and Opolskie voivodship - 73 kg/ha of AL (increase by 170%).

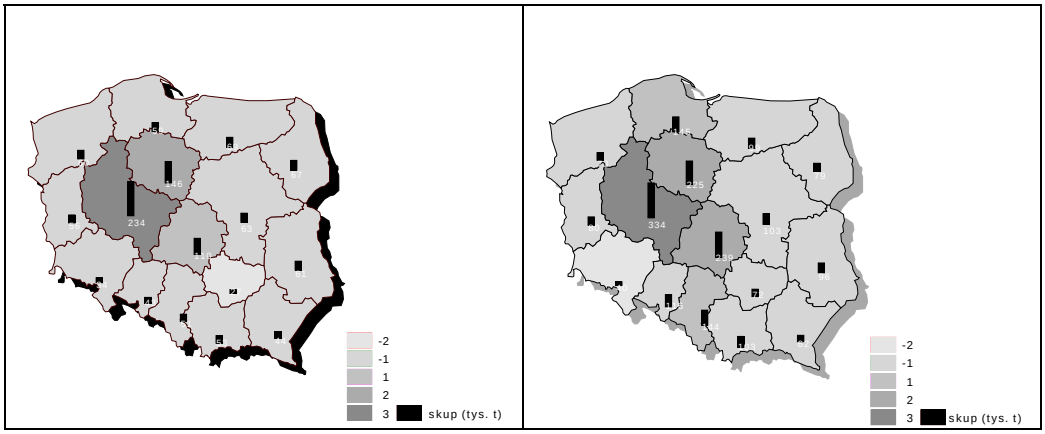
The lowest increase in the purchasing was recorded in Dolnośląskie voivodship - by 6 kg/ha of AL (increase by 18%), Podlaskie voivodship - by 12 kg/ha of AL (increase by 18%), and Zachodniopomorskie voivodship - by 13 kg/ha of AL (increase by 22%). These data show that the level of the pig production intensity and purchasing is considerably differentiated throughout the country, but also indicate that significant changes in this scope occur in some voivodships.

Standard deviation was adopted as a measure of differentiation in the purchasing volume between voivodships. As a result, all voivodships were divided into groups, where: the purchasing volume was higher than the mean value (group 1 — the mean for a given year to the mean +1 standard deviation, group 2 — the mean +1 standard deviation to the mean + 2 standard deviations, group 3 — the mean + 2 standard deviations to the mean + 3 standard deviations), the purchasing volume was lower than the mean value (group -1 — the mean to the mean - 1 standard deviation, group -2 — the mean +1 standard deviation to the mean - 2 standard deviations.)

The results of the calculations indicate that in the case of pig purchasing, as compared with other kinds of livestock, there occurred the highest differentiation and disproportions between individual voivodships (Fig.2). In 1999 only one voivodship (Łódzkie) belonged to group 1, and in 2004 - Śląskie and Łódzkie voivodships. In 2008 two voivodships (Śląskie and Pomorskie) belonged to this group. In 1999 and 2004, the group 2 included Kujawsko-Pomorskie voivodship. Łódzkie voivodship also joined this group in 2008. Wielkopolskie voivodship was the absolute leader in pig breeding. In each analysed year the level of the purchasing in this voivodship was higher than in the voivodship that took second place by approx. 90 kg/ha of AL. In total, the group of the voivodships with the purchasing volume above the mean included three voivodships in 1999, four voivodships in 2004, and five voivodships in 2008. Śląskie voivodship moved up to the group of the country leaders in pig production from 12^{th} to 5^{th} place, while the Pomorskie voivodship - from 9^{th} to 4^{th} place.

The group of the voivodships with the purchasing volume below the mean for the country (group -1) was the most numerous group in all analysed years. In 1999 and 2004 this group included in total 12 voivodships, while in 2008 - 10 voivodships. In 1999, the group -2 included only Świętokrzyskie voivodship, and in 2008 - only Dolnośląskie voivodship.

FIG.2. Regional differentiation in the volume of pig livestock purchasing in 1999and 2008 (kg/ha of AL)



1999 2008

Source: own study based on the data [1]

When analysing the changes taking place in the ranking of individual voivodships, it can be found that the intensity of pig breeding increased considerably in four voivodships as compared with others. They included the following voivodships: Opolskie (from 14th to 6th place), Śląskie (moved up by 7 places), Pomorskie (moved up by 5 places) and Małopolskie (moved up by 4 places). The position of three voivodships worsened considerably. In 1999, Podlaskie voivodship took 5th place in the country, while in 2004 and 2008 - 12th place. Warmińsko-Mazurskie voivodship dropped from 4th place in 1999 to 9th place in 2008, and Zachodniopomorskie voivodship - from 8th to 13th place. The position of the remaining nine voivodships did not change. It should be noted that both improvement and worsening of the position of individual voivodships took place in a systematic way. So this is not an effect of random events in a given area.

To assess the changes taking place in the rank orders of individual voivodships by the analysed feature, the Spearman's rank correlation coefficients were also calculated. They determine only the correlation of rank orders and reflect changes in the values merely to the extent, in which the changes in the rank order will take place. This coefficient is a dimensionless quantity and takes values from the interval of <-1.1>. The value 0 means that variables are not correlated. Positive and negative values indicate respectively positive and negative correlation [1,287-289]. The calculated values show relatively small changes in the rank order of the voivodships in the investigated period.

In 2008, as compared with 2004, Spearman's rank correlation coefficient was 0.92. More significant changes were observed in 2004 as compared to 1999, however the level of this coefficient was also high - 0.69. When analysing the rank order in 2008 in relation to 1999, the rank correlation coefficient was obtained at the level of 0.59.

Conclusions

In the analysed years the production of livestock in Poland, including the production of pig livestock, increased considerably. It was possible thanks to constant, although relatively small, increase in the internal consumption, but also thanks to the opening of EU markets. These changes should be assessed as positive for agricultural producers.

Quite substantial changes in the intensity of pig production in individual voivodships were observed in the analysed years. The differences between individual voivodships were also deepening. At present, three voivodships situated in the central and western part of Poland - Wielkopolskie, Łódzkie and Kujawsko-Pomorskie - can be classified as the areas with the highest intensity of pig breeding. In other voivodships, the intensity of breeding and the purchasing volume are substantially lower.

The biggest changes in the rank order of voivodships in respect of the intensity of pig breeding (taking into account the analysed period) occurred in the period of 1999- 2004, whereas the highest increase in the production of livestock took place in the period from 2004 to 2008.

References:

[1] PUŁASKA –TURYNA, B. *Statystyka dla ekonomistów*. Wyd. Warszawa: Difin, 2008, 287-2989, ISBN 978-83-7251-908-5

[2] *Statistical Yearbook of the Republic of Poland*. Wyd. Warszawa: Zakład Wydawnictw Statystycznych, 2000-2009 ISSN 1506-832

[3] *Wybrane rynki branżowe produktów spożywczych*. Edit. by S. Urban. Wyd. Wrocław: Wrocław University of Economics, 2008, p. 139-141, ISBN 978-83-7011-908-9

CZECH PHOTOVOLTAIC BUSINESS AND SUSTAINABLE DEVELOPMENT

Adam Pawliczek
Slezská univerzita v Opavě
pawliczek@opf.slu.cz

Key words:
photovoltaic – entrepreneurship – sustainable economy – legal control – technology

Abstract:
Presented item deals with expansion of Czech photovoltaic (PV) business sector, emphasizing the quantity and total installed power (MWe) of PV power plants is using timeline analysis method. Identification of main impulses that impacted the sector growth is done. Three distinguish chronological phases of PV sector advancement are suggested. Major focus is directed to II. phase called "stimulation"; analyses of trends and average project size (MWe per project) are provided for that phase. Expectations for III. phase called "stabilization" are formulated. Concordance with principles of sustainable development is discussed.

Introduction

Photovoltaic (PV) technology deserves to be treated seriously because of extreme energetic power of the Sun that can be effectively utilized for the sake of mankind. Support for renewable resources is long-term priority of EU authorities [5]. M. Šúri & team [8] present calculations of electricity generation potential based upon PVGIS data and concludes that solar electricity potential is underestimated by many EU countries´ policies. Nevertheless Czech Republic supports since 2005 production of energy from renewable resources by legal norms well summarized by H. Doležalová [2]. In effect of year 2007 real estate market fall, these stimulating legislative together with technology improvement and PV panel price reduction brought recently great boom in PV business investments resulting in urgent need of consequent legislative limitation which would prepare environment for better stability and sustainability of PV business segment. Table 1 shows descriptive decomposition of PV era into three chronological phases.

TAB. 1: Timetable of dates significant for PV business in Czech Republic [1, 4, 5].

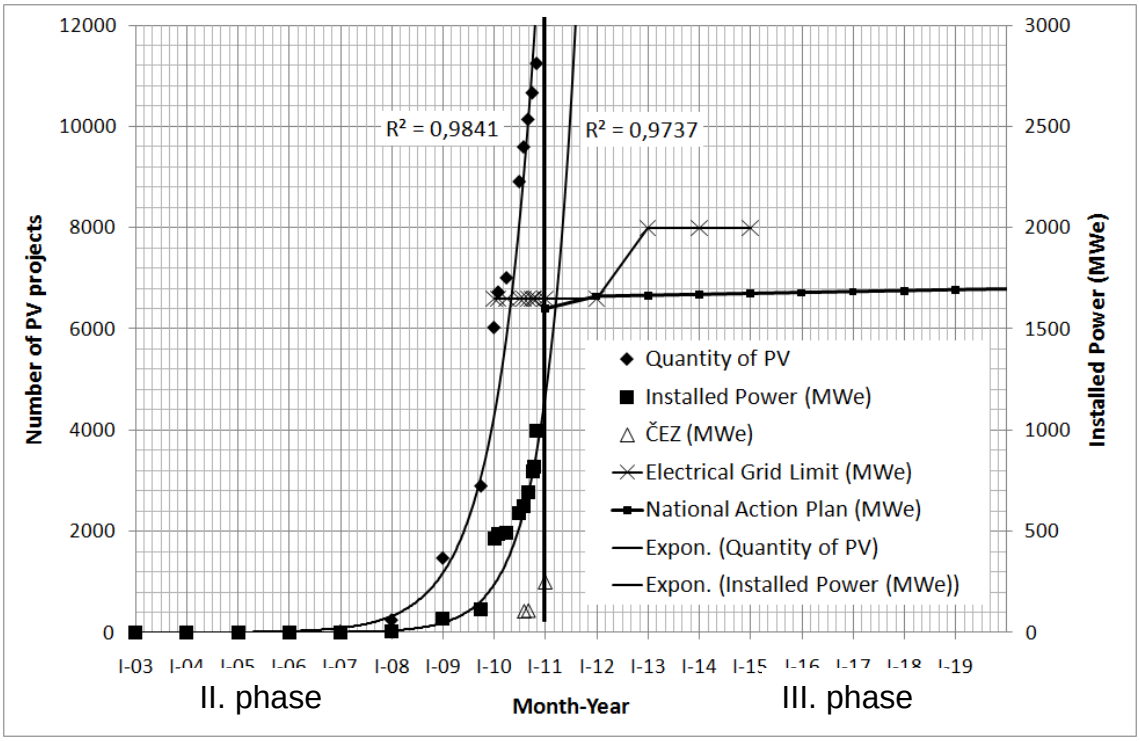
Date	Event
I.	**Phase – preparation (Initial, preparatory, non commercial phase)**
1839	Discovery of photovoltaic effect by A. E. Becquerel
1954	Bell Labs: invention of the first modern silicon solar cell (6% efficiency)
1985	20% efficient silicon cells created at the University of New South Wales
1999	Total worldwide installed photovoltaic power reached 1000 MW
II.	**Phase - stimulation**
2003	Pioneer PV power plant in Czech Republic (10kW)
2005	Legislative support for renewable resources and PV (Act No.180/2005 Coll.)
2007	Renewable Energy Roadmap: towards a 20% share of renewables in the EU's energy mix by 2020 – EU Commission Communication
2009	PV boom: 463 MWe total installed (CZ)
2010	PV boom: estimated 1200 MWe total installed (CZ) Legislative intervention – amended Act No. 180/2005 Coll. and others.
III.	**Phase – stabilization**
2011+	Slow PV sector growth with roof projects subvenced by limited budget

The I. phase, more than 160 years long, took to prepare commercially applicable product converting solar power into electricity with effectiveness about 20%. The next two phases are closely described in further paragraphs.

Stimulation phase (II. phase)

The stimulation phase is determined by the years 2003 to 2010 with strong acceleration at the end of the period (fig. 1 – left part). Total number of realized PV plants in the end of 2010 is estimated at 12000 projects with total electric output about 1200MWe.

FIGURE. 1: Time-chart illustrates increasing amount of new built PV power plants and their electric output (MWe). There is well apparent, that exponential approximation of trends is closely reliable in both cases. Trigons depict about ¼ of PV projects operated by ČEZ. Crossed line is limit of electrical grid declared by EGÚ research company paper presented by ČEPS. Small checked line show slow further subsidized growth of PV projects set by National Action Plan [1, 3, 4].



The PV boom is characteristic with these important legal conditions [1, 2, 4]:

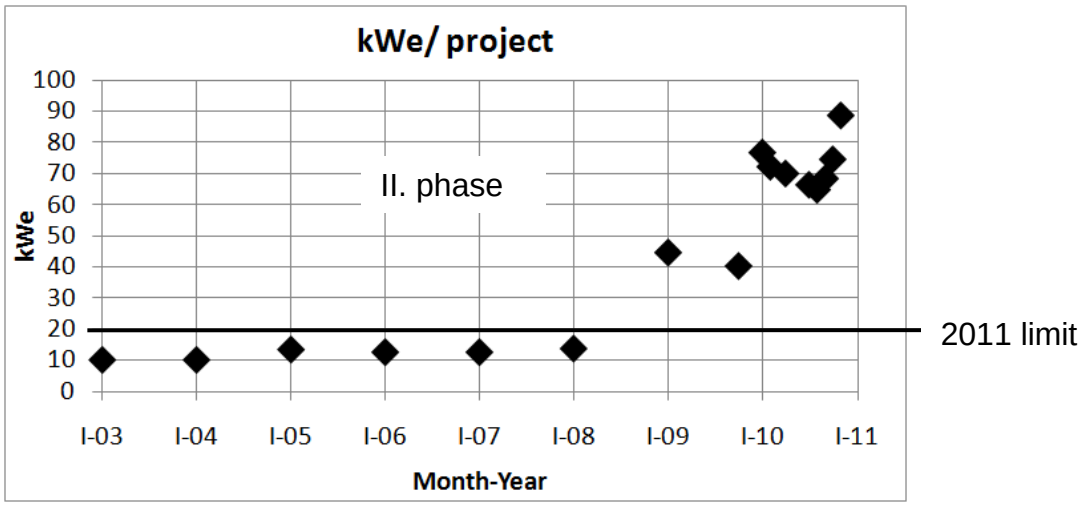
- Guaranty of generous minimal buy-out prices for 20 years onward or Green bonuses (with only up to 5% annual discount)
- Tax advantage of ecologic energy production (tax holiday 5+1 years)
- Depreciation rate = 5 years (2. group)
- Further subventions for support of PV projects in non-commercial sphere

Important factor influencing boom is connected with PV panels price reduction, which according Scott & team [7, *95*] decreases 18% every time the production doubles. Also technical parameters as effectiveness, material consumption, weight, need of precious metals, etc. improve quickly.

Interesting originally published evaluation presents Figure 2: average installed power of PV power plants increased ~9 times since y. 2003 (10kWe) till XI/2010 (88,7kWe). This progress can be explained by input of more speculative investment capital instead of primary sustainability motivated SMEs´ approach in early years.

PV business is often rejected by general public due to increase of allowance ascribed to “green energy” reflected in each electricity invoice.

FIGURE. 2: **Time-chart shows increasing dimensions of new built PV projects. First five years of PV business were characteristic with small projects of electric output about 10 to 15 kWe. This size corresponds to one family house, garage roof and few panels in the garden. Projects of 2008/2009 years started to be about 40 to 50 kWe. However such amount is 4 times larger, this is still a garden-size. The year 2010 brought powerplants of average size 65 to 90 kWe. The largest projects are about 35 MWe (80ha) and even bigger have been planed.**



Stabilization phase (III. phase)

Stabilization should bring further legislative adjustments valid since 1.1.2011:

- PV power plants opened in years 2009-2010 are subject of the tax 26% in next three years.
- Increase of depreciation rate from 5 to 20 years.
- Increase of fee for land plot exemption from stock of land.
- Cancelation of tax holidays for PV power plant entrepreneurs.

Expectation of development in PV business (fig. 1 – right part) is based on roof projects with small energy output up to 30kWe; bigger project won’t be subvenced. PV should be more a tool of energetic independence than investment speculations funded by state. This approach should bring III. phase. Wider application of PV is question of further technological development; as an illustration Schüco Company [6] introduce practical examples of modern roof, shade and facade (semitransparent) applications.

Discussion and Conclusions

- During the past two years the PV business has been very popular sector for many speculative investments. Rapid development of huge green-field photovoltaic projects brought soon need for legislative adjustment.
- Czech Republic passed stages of PV technology implementation and wild early business (II. phase). After recent legislative regulation, transformation of sector into more stable and sustainable form can be expected.
- The PV technologies will certainly retain important role in energetic future of the Czech Republic. Increasing efficiency as well as lower production costs and flexibility of utilization of solar cells widespread PV into households and SMEs during next years. Proximity of energy source and consumption point is economical also for energy transmission grid.
- Proper adaptation of PV technology by SMEs may bring (partial) energetic self sufficiency, which effect is well in tune with philosophy of sustainable development.
- Further research will be aimed to financial impact of PV boom. Nearby theme concerns monitoring of current situation in other important sectors of sustainable energy business and mutual confrontation.

References:

[1] *Aktuálně.cz: První čistě online deník v České republice* [online], Praha, Centrum Holdings 2010, [cit. 2010-10-31] Vychází denně: <http://aktualne.centrum.cz/>

[2] DOLEŽALOVÁ, H. Podpora využívání energie z obnovitelných zdrojů: fotovoltaika. *COFOLA 2010: the Conference Proceedings*, 1. Edition. Brno: Masaryk University, 2010, ISBN 978-80-210-5151-5

[3] *Energetický regulační úřad* [online], Praha, [cit. 2010-11-09] <http://www.eru.cz/>

[4] *iHNed.cz: Online zprávy Hospodářských novin* [online], Praha, Economia 2010, [cit. 2010-11-08] Vychází denně: <http://ihned.cz/>, ISSN 1213-7693

[5] *Renewable Energy Road Map – Renewable energies in the 21st century:* [online], Commission of the EU Communities, Brussels 10.1.2007 COM (2006) 848 <http: //ec.europa.eu/energy/energy_policy/doc/03_renewable_energy_roadmap_en.pdf>

[6] SCHŰCO INTERNATIONAL KG, Panley ProSol TF – nový směr ve fotovoltaice i architektuře, *TZB Haustechnik – technická zařízení budov* 4 (2010), III. ročník, pp. 4, ISSN 1803-4802

[7] SCOTT, J. T. *The Sustainable Business*, First Edition, European Foundation for Management Development (EFMD), Brussels 2010, ISBN 978-0-9818260-2-8

[8] ŠÚRI, M., HULD, T. A., DUNLOP, E. D. Potential of solar electricity generation in the European Union member states and candidate countries. *Solar Energy* 81 (2007), pp. 1295-1305, ISSN 0038-092X

MODELS OF OPTIMAL DOUBLING

Jan Pelikán
University of Economics, Prague
pelikan@ vse.cz

Key words:
reliability – integer programming – operations research

Abstract:
The article deals with the problem of doubling the part of the system in order to increase the reliability of this system. The task is to find out which part should be doubled if it is not possible to double all of them for economic reasons. The goal is to maximize the system's reliability characterized by the probability of the faultless functioning or to minimize the losses caused by the system's failure. The article proposes a procedure based on linear programming methods that find the optimal decision, which of the parts should be doubled.

1. Introduction

An optimization model proposed in the article is solving the question of the reserves for the functional components-parts of a mechanism in order to increase its reliability. It presupposes the knowledge of the probabilities of these parts' failure and the estimation of the losses caused by this failure. The model is a problem with 0-1 variables. The solution of the model divides the parts into those which are to be doubled and those which are not.

The following example illustrates the model. Large and complex mechanisms are composed of a great number of components, aggregates, partial machinery's. Each of the parts is responsible for the right functioning of the whole system and vice versa, each part's failure can disturb the system or completely put it out of operation and cause damages in its effect.

One of the possibilities of eliminating or at least diminishing these damages is the doubling of some important parts. Having these parts doubled, there is a possibility to replace immediately a non-functioning part by a functioning one (or in other words, the failure is reduced only to a necessary time of a switch-over).

On the other hand, when the part is not doubled, it has to be removed from the system and then replaced by a new one. The example can be a power-distribution network composed of the electric line, switches, fuses, transformers and other parts. If, for example, a transformer fails out, the consumers dependent on this particular transformer are without the power supply for a certain time and the losses as an effect are obvious.

This period depends on the time of removing the transformer and replacing it by another one. If there is, at the same location, another transformer as a reserve, then

the period of switching over the reserve is much shorter than the period of the transformer's replacement.

Similar problems can emerge in projects of a regulating system or a communication network and so on.

On the other side there are costs of doubling, that is the price of a doubled part. For that reason not all of the parts can be doubled, especially the expensive ones and also those whose failure does not bring so expensive damages.

2. Reliability model

If we want to know which parts are to be doubled, the following optimization model can be used. First we introduce the assumptions of the model.

Let us consider n parts of the system (aggregates, components) Z_1, Z_2,...,Z_n . Each of these parts is characterized by:

p_i probability of the failure-free run of Z_i without a reserve,

$\overline{p_i}$ probability of the failure-free run of Z_i with a reserve,

q_i the mean value of losses caused by Z_i's disorders without a reserve,

$\overline{q_i}$ the mean value of losses caused by Z_i 's disorders with a reserve,

c_i costs of the purchase and maintenance of the reserve for Z_i .

Obviously: $p_i \le \overline{p_i}$ and $q_i \ge \overline{q_i}$.

Next we assume:

- statistical independence of the failures of parts,
- the costs of the parts' doubling are limited by the amount *K*.

Let us introduce 0-1 variables $x_1, x_2, \ldots x_n$, the variable x_i involves the decision between the doubling of Z_i (x_i=1) or not-doubling (x_i=0) . Total costs of the reserves for the parts are $\sum_{i=1}^{n} c_i x_i$ and since the resources for reserves are limited by K, so it has to be valid $\sum_{i=1}^{n} c_i x_i \le K$.

Under those conditions we can:

(a) maximize the reliability of the system, that is the failure-free run,

(b) minimize the mean value of the sum of losses caused by the parts' disorders.

In the case (a) the probability of the failure-free state of the system is the product of the probabilities of the failure-free states of all the parts.

The part Z_i will be failure-free with the probability $\overline{p_i}$, if it has a reserve (x_i = 1). If the part Z_i is without reserve x_i = 0) then the failure-free probability is p_i. Altogether the probability of the part Z_i's failure-free state can be put in the form $p_i + (\overline{p_i} - p_i)x_i$. Hence the total probability of the failure-free state is

$\Pi = \prod_{i=1}^{n} [p_i + (\overline{p_i} - p_i)x_i]$. After taking logarithm in order to make the objective function linear we get the objective function in the form $z(x) = \log(\Pi) = \sum_{i=1}^{n} \log[p_i + (\overline{p_i} - p_i)x_i]$. This function will be maximized. Since the expression $\log[p_i + (\overline{p_i} - p_i)x_i]$ for x_i=0 equals $\log[p_i]$ and for x_i=1 equals $\log[\overline{p_i}]$, we can write the expression $\log[p_i + (\overline{p_i} - p_i)x_i]$ in the form $(1 - x_i)\log(p_i) + x_i \log(\overline{p_i})$.

The function $z(x) = \sum_{i=1}^{n} [(1 - x_i)\log(p_i) + x_i \log(\overline{p_i})] =$

$\sum_{i=1}^{n} [\log(p_i) + x_i \log(\overline{p_i} / p_i)] = \sum_{i=1}^{n} \log(p_i) + \sum_{i=1}^{n} x_i \log(\overline{p_i} / p_i)$

expresses the logarithm of the whole system's reliability.

Maximizing reliability model is:

$$z(x) = \sum_{i=1}^{n} \log(p_i) + \sum_{i=1}^{n} x_i \log(\overline{p_i} / p_i) \to \max ,$$

$$\sum_{i=1}^{n} c_i x_i \le K ,$$

$$x_i \in \{0,1\}, i = 1,2,...,n.$$

In the case (b) the mean value of the losses caused by the part Z_i's failure without the reserve is q_i and with the reserve $\overline{q_i}$. The mean value of the total losses is then: $z(x) = \sum_{i=1}^{n} (1 - x_i)q_i + x_i \overline{q_i} = \sum_{i=1}^{n} q_i - \sum_{i=1}^{n} x_i \Delta q_i$, where $\Delta = q_i - \overline{q_i}$. This function will be minimized.

The minimal losses model is:

$$z(x) = \sum_{i=1}^{n} q_i - \sum_{i=1}^{n} x_i \Delta q_i \to \min ,$$

$$\sum_{i=1}^{n} c_i x_i \le K ,$$

$$x_i \in \{0,1\}, i = 1,2,...,n.$$

Now, two models can be distinguished: The first one is a one-case situation, when the function operates for a short period - the static case. The second one is a long-time model for a longer time period - the dynamic model.

3. Static model

The probability of the components' failure Z_i will be denoted as π_i. Consequently the probability of the failure-free run of the part without reserve is $p_i = (1-\pi_i)$ and the probability of the failure-free run of the part with a reserve is $\overline{p}_i = (1-\pi^2{}_i)$.

If the loss caused by one failure of the part Z_i is denoted by Q_i, the mean value of the losses is: $q_i = \pi_i Q_i$ in case when there is no reserve for the part Z_i, $\overline{q}_i = \pi^2{}_i Q_i$ in case when there is a reserve.

TAB. 1: Example

	Z_1	Z_2	Z_3	Z_4	Z_5
p_i	0.9	0.8	0.9	0.93	0.91
$\pi_i = (1-p_i)$	0.1	0.2	0.1	0.07	0.09
$\pi_i{}^2$	0.1	0.04	0.01	0.0049	0.0081
$\overline{p_i} = 1-\pi_i{}^2$	0.99	0.96	0.99	0.9951	0.9919
c_i	80	30	35	50	20
Q_i	1666	250	333	1613	989
$q_i = Q_i \pi_i$	167	50	33	113	89
$\overline{q}_i = Q_i \pi_i{}^2$	16.6	10	3.3	8	8
$\Delta q_i = q_i - \overline{q}_i$	150	40	30	105	81

Example

Let us have parts Z_1, Z_2, Z_3 ,Z_4 ,Z_5. TAB. 1 contains their main characteristics. The costs of the parts' doubling are limited by the amount K=100.

Reliability model which maximizes the failure-free probability is:

$$z(x) = \log(0.548402) + x_1 \log(0.99/0.9) + x_2 \log(0.96/0.8) + x_3 \log(0.99/0.9) + \\ + x_4 \log(0.9951/0.93) + x_5 \log(0.9919/0.91) \to \max$$

$$80x_1 + 30x_2 + 35x_3 + 50x_4 + 20x_5 \le 100,$$

$$x_i \in \{0,1\}, i = 1,2,...,5.$$

Using standard software LINGO (Solver Suite) we get the optimal solution x=(0,1,1,0,1) with the failure-free probability equal to 0.789041, which is maximal. From the result follows that we have to double Z_2,Z_3,Z_5.

TAB. 2: Example solution

solution x	Reliability	losses	doubling costs
(0,0,0,0,0)	0.548402	452	0
(0,1,1,0,1)	**0.789041**	301	85
(1,0,0,0,1)	0.657534	**221**	100
(1,1,1,1,1)	0.934507	46	215

Model which minimizes the mean value of the total losses is :

$$z(x) = 452 - 150x_1 - 40x_2 - 30x_3 - 105x_4 - 81x_5 \rightarrow \min$$

$$80x_1 + 30x_2 + 35x_3 + 50x_4 + 20x_5 \leq 100,$$

$$x_i \in \{0,1\}, i = 1,2,...,5.$$

When we use again LINGO system, we get the optimal solution x=(1,0,0,0,1) with the minimal value of losses 221 in the mean value. According to this solution only Z_1 and Z_5 will be doubled.

The differences in the solutions obtained above can be explained by great influence of the amount of the losses in the optimal solution in the second model. First solution x=(0,1,1,0,1) means the most reliable system, but the losses are not minimal. Second solution x= (1,0,0,0,1) gives us less reliable system, but the losses are minimal.

We can observe the values of reliability, mean losses and costs of reserves for different solutions in the TAB. 2. The values with a bullet are optimal for K=100.

4. Dynamic model

Let us suppose that the system's reliability should be optimized within a period <0,T> and the periods between failures of the parts are exponentially distributed. Let the mean value of the period between two failures of the component Z_i be $1/\lambda_i$.

If the Z_i is without a reserve, then the probability of the failure-free run is $p_i = \exp(-\lambda_i T)$. Since number of failures within the period <0,T> is Poisson distributed with the mean value λ_i T, the mean value of the losses in the case $x_i=0$ is equal to $q_i = \lambda_i T Q_i$,where Q_i is the loss caused by the part Z_i 's failure.

In case that component Z_i has a reserve ($x_i=1$) then the failed component is replaced by its reserve immediately; however, the installation of a new reserve takes a fixed time t_i, where t_i <<T. During the period t_i the failure-free probability is $p_i = \exp(-\lambda_i t_i)$.

Since the mean value of the number of the component Z_i 's failures within <0,T> is $\lambda_i T$, we get an approximate formula describing the reliability in the form

$$\overline{p}_i = \exp(-\lambda_i T) + (1 - \exp(-\lambda_i T))\exp(-t_i \lambda_i T).$$

When the part is doubled, the expected number of its double-failures is λ_i times the total period of installations, which is approximately $(\lambda_i T)t_i$. Hence the mean value of losses is $\bar{q}_i = \lambda_i^2 T t_i Q_i$. The reduction of time period T by reserve parts' installations was not taken into account in the formula for $\bar{q}_i$.

The research was supported by the grant no.402/09/0041, 402/09/0405 of the Grant Agency of the Czech Republic and the project FIS18/2010.

References:

[1] NEMHAUSER, G. L.,WOLSEY, L. A. *Integer and Combinatorical Optimization.* J.Wiley, New York 1988.

[2] Solver Suite, LINDO Systems Inc., Chicago 1995

[3] PELIKÁN, J. *Diskrétní modely v operačním výzkumu*. Professional Publishing.2001. ISBN 80-86419-17-7.

MEASURING AND MANAGING INTELLECTUAL CAPITAL FOR EXTRACTING VALUE IN THE BENEFIT OF ENTERPRISES

Luciana Picioruş, Cosmin Ionuț Imbrişcă
Academy of Economic Studies, Bucharest
lusianapiciorus@ yahoo.co.uk

Keywords:
intellectual capital – human capital – valuation method – new economy – intangible resources

Abstract:
Intangible Economy is a fact; companies have transformed their management styles, while theoreticians and practitioners debate on intellectual capital, the key intangible resource. This is why the paper focused on the relationship between intellectual capital and value creation in corporate environment by suggesting a new intellectual capital valuation model. According with the intricacy of the topic, a multi-method research combination is used, including both primary and secondary data as well as qualitative and quantitative data, according to the sources. The findings are relevant, focusing on practical aspects of enterprises management.

1. Challenges of the New Economy

In the context of a cyclic existence, the world and the economies are nowadays going again through transformations. One of these challenges is posed by the new way of wealth creation, though its trajectory is far from being completely revealed. Material goods production is insufficient. Investing in creation, acquisition and exploitation of intangibles is the real base for sustainable growth, as dematerialization of industrial activities takes place.

The factors which contribute greatly to this imbalance of power in favor of intangibles are *modifications of accounting systems*, currently dealing with historical costs and reported transactions but not with value creation items like human capital, organizational or structural capital, *globalization and rise of information technology*, stressing innovation as key generator of competitive advantage, but not as much as before on financial indicators role in guaranteeing global success of a company, and *the death of physical paradigm* [1, 19-20], namely the shift from tangible, physical assets to a mix of intangibles and competencies derived from knowledge.

2. Valuation and measurement of immeasurable

In the economy that trades experiences, ideas or services it is difficult to measure the created value, as the Report of the Brookings TASK Force on Intangibles mentions [2, 15-23]. But up to now, according to the literature there about 25

methods [3, 87-88] to determine the intangibles value, the invisible value for the accountants.

According to the object to be valued, the framework for the valuation and the criterion used, there are *financial valuation methods*, if the criterion is expressed in monetary units, *nonfinancial valuation method* if the criterion is non-monetary, but can be translated into a phenomenon, when it is based on personal judgment of an evaluator is a *value assessment method*, and if it operates without any value criterion but uses a metrical scale which can be connected to an observable phenomenon is called *measurement method* [4, 11-12].

3. Intellectual Capital and a new valuation model

The purpose of the model we propose is to create a link between current valuation of an item and its ability to create value for the company. The 2 principles which ought to be respected when using this intellectual capital valuation model are to first base all the calculus on real quantifiable items and second under-evaluation is undesirable it is preferable to over-evaluation.

Because of the need to relate with real facts the model will focus on revenues and profits that can be linked to investment in intellectual capital. Therefore, it comprises two parts:

a. *Initial research period*: bearing in mind that one can take into account a plethora of items when considering intellectual capital, and in light of the first principle, the specific item(s) considered by this valuation model must both work and generate results or at least can be sold.

Because of the uncertainty of the inputs, the large number of factors to be taken into consideration and the absence of an already formed transparent market it is hard to find a deterministic method for valuation. Instead what we propose is the use of a Monte Carlo method in order to determine an estimated value.

For these purposes several items must be considered: costs so far, time table of research, breakthroughs and costs in order to continue. Also the results should answer the following key questions:

1. Would any stakeholder be interested in the progress so far?

2. How much of the investment can be recovered now?

3. Is the plan being respected, should the research proceed further?

It should be underlined that exact details are up to the evaluators and they should be determined in accordance with the principles mentioned earlier. Also a research period is not mandatory and should be taken into consideration only when actual research and development are done.

b. *Valuation period*: mining the parties which have interest in the company, separation being done in accordance with the reasons of the parties' interests- investors, creditors, and internal stakeholders.

When the project is deemed marketable it will be evaluated in terms of:

1) *Cash analysis* (by using the discounted net present value);
2) *Profitability analysis* (focusing on revenues and costs for the entire company, again, with and without the investment in intangibles, ceteris paribus);
3) *Bankruptcy value* (of little concern to internal stakeholders and investors as they presume the company will keep going, however, creditors take great interest in it- the value of the company's assets at their market value, maximum value being considered the book value minus the depreciation).

4. Conclusions

The findings of this research are practical as they provide the management of the enterprises with an efficient valuation model to be applied to intangible resources, intellectual intangibles. The main advantage is the flexibility in adapting to managerial requirements, both at general and specific level. Nevertheless, it may have a flaw when considering cases with highly advanced technology is involved. In this case the basic model should be modified either with industry specific weights assigned to both phases, by moving the transition point from phase one to the second phase or simply by using an industry specific valuation in both phases instead of the standard.

References:

[1] MORE, L., CRAIG, L. *Intellectual capital in enterprise success: strategy revisited*, published by John Wiley & Sons, Inc., Hoboken, New Jersey, USA, 2008, chapter I, pp. 19–20, ISBN 978-0-470-22479-3

[2] BLAIR, M. M., WALLMAN, S. M. *Unseen Wealth: Report of the Brookings Task Force on Intangibles*, Brooking Institution, published by Donnelley and Sons, Harrisonburg, Virginia, USA, 2001, chapter I, pp. 15-23, ISBN 0-0-8157-0113-6

[3] ANDRIESEN, D. *Making sense of Intellectual Capital: Designing a Method for the Valuation of Intangibles*, published by Elsevier Butterworth- Heinemann, USA, 2004, chapter III, pp. 87-88, ISBN 0-7506-7774-0

[4] ANDRIESEN, D. *IC Valuation and Measurement Classifying the state of the art*, published in: Journal of Intellectual Capital, Vol. 5, No 2, pp.11–12, ISBN 0-7506-7774-0

NATURAL DISASTERS POLICY IN ZGORZELEC COUNTY

Zbigniew Piepiora
Wrocław University of Economics
znp@ae.jgora.pl

Key words:
disaster – natural – policy – county – Zgorzelec

Abstract:
The aim of this article is to present the issue of counteracting the results of natural disasters. Conducting the natural disasters policy can reduce the results of their occurrence. The necessary condition for the implementation of this policy in Poland on local level of county (NUTS 4, LAU 1) and district (NUTS 5, LAU 2) is applying the economic instruments which regulate the functioning of adequate institutions. It is verified by the author using the example of the Zgorzelec County.

1. Introduction

The natural disaster can be defined as the sudden event with the tragic effect, which causes damages, suffering of people and often also changes connected with the affected area. This kind of phenomena can be caused by the natural factors: biological (e.g. epidemic), geological (e.g. earthquake), hydrometheorological (e.g. flood including flash flood, storm, drought).

To counteract the results of the flash floods and the other phenomena the natural disasters policy (NDP) is conducted in many countries in the world. The notion of NDP is not quite recognized category in Poland. It can be defined as the conscious activity of the government and council authorities, as well as the national and international institutions specialized to reduce the damages caused by natural disasters.

The aim of this article is to examine the level of execution of this policy on the local level of county (NUTS 4, LAU 1) and district (NUTS 5, LAU 2). The necessary condition for the implementation of this policy on local level of county (NUTS 4, LAU 1) and district (NUTS 5, LAU 2) is applying the economic instruments which regulate the functioning of adequate institutions. It is verified by the author using the example of the Zgorzelec in the years 1997-2007.

2. General characteristic of the Zgorzelec County, the chosen natural disasters and their results

The Zgorzelec County is situated in the west part of the Lower Silesian Province. It borders on the Czech Republic and the Germany. The county consists of two urban districts (GM) – Zgorzelec, Zawidów and three urban-rural districts (GMW) – Bogatynia, Węgliniec, Pieńsk and two rural districts (GW) – Sulików and Zgorzelec.

The main part of the county is forests. The Zgorzelec County occupies 838 km^2. The number of inhabitants is 95 731. The population density is 114,2 person/km^2, and the urbanization rate – 32,83% [1, 5-8].

The largest damages in the area of the county in the years 1997-2007 were caused by floods, including flash floods (50%), storms (25%) and droughts (25%) resulting in wild fires (comp. tab. 1). These phenomena belong to the group of hydrometheorological disasters. Floods occurred in the county in the years 2002 and 2006. Destructive storms occurred in the area of the Zgorzelec county in the year 2007 (orcan *Kyrill*). The drought occurred in the Zgorzelec county in the year 2006.

TAB. 1: Losses caused by the natural disasters in the area of Zgorzelec County in the period 2002-2007 (in '000 of polish zloty indexed to the year 2007)

No.	County / district	2002	2003	2004	2005	2006	2007
1.	Bogatynia GMW	0	0	0	0	3415	101
2.	Pieńsk GMW	0	0	0	0	5427	29
3.	Sulików GW	673	0	0	0	5545	0
4.	Węgliniec GMW	0	0	0	0	1714	5
5.	Zawidów GM	0	0	0	0	53	0
6.	Zgorzelec GM	0	0	0	0	309	20
7.	Zgorzelec GW	236	0	0	0	6681	0
8.	Zgorzelec county	121	0	0	0	0	0
9.	Zgorzelec county area - total	1030	0	0	0	23144	155
9.	Total – all years	24329					

Source: Own study on the basis of data provided by Wydział Bezpieczeństwa i Zarządzania Kryzysowego - Dolnośląski Urząd Wojewódzki we Wrocławiu.

3. Counteracting the results of natural disasters in the Zgorzelec County

For the natural disasters policy in the area of the Zgorzelec County responsible are the Mayor of the Zgorzelec County, the Board and Council of the Zgorzelec county, mayors of the districts and the departments subordinate to them appropriate to the spatial economy, the water management, the environment protection and the crisis management. Particular departments are different by the number of regular employments, nomenclature and the range of performed professional duties. All districts cooperate immediately with County Police Office, County Fire-Brigade Office, County Building Supervisor, County Sanitary-Inspector, County Veterinary Medicine Doctor, six units of the Voluntary Fire-Brigade (OSP) connected to the State Extinguish-Rescue System (KSRG); 21 OSP units not connected to KSRG; and with other organizations functioning in the area of each district or the entire county.

The natural disasters policy is executed in the Zgorzelec County by the: spatial planning; expenses funds for the public safety, fire and health protection; raising the promises for removing the results of the natural disasters.

The local spatial management plans and other documents concerning the counteracting floods and droughts are prepared in each district. The Zgorzelec County is in above 51,5% covered by the local spatial management plans. On the background of Poland and the entire Lower Silesian Province it is a good result.

TAB. 2: Expenses for the public safety, the fire and the heath protection in the budget of Zgorzelec County and the districts in the Zgorzelec County area in the period 2002-2007 (in '000 of polish zloty indexed to the year 2007)

Year	2002	2003	2004	2005	2006	2007
County / district	**Expenses for the public safety and the fire protection**					
Bogatynia GMW	0	0	0	0	0	1034
Pieńsk GMW	0	0	0	0	0	63
Sulików GW	0	0	0	0	0	99
Węgliniec GMW	0	0	0	0	0	203
Zawidów GM	0	0	0	0	0	103
Zgorzelec GM	0	0	0	0	0	824
Zgorzelec GW	0	0	0	0	0	478
Zgorzelec county	13467	3986	4285	4444	4657	5007
Total – the p.s. and the f.p.	13467	3986	4285	4444	4657	7810
County / district	**Expenses for the health protection**					
Bogatynia GMW	90705	85061	91424	97904	100928	110026
Pieńsk GMW	11177	12867	26434	17652	22124	20076
Sulików GW	6530	8492	14269	13978	13615	15311
Węgliniec GMW	11392	11923	14527	16733	20854	19569
Zawidów GM	6466	7207	9356	13675	11427	10867
Zgorzelec GM	42376	54711	45550	56701	61915	71380
Zgorzelec GW	11825	11824	15489	15142	18889	18453
Zgorzelec county	1273	1713	1445	1860	3624	1664
Total – the heath protection	181743	193798	218494	233645	253376	267346
Total	195210	197785	222779	238089	258033	275156
Total – all years						**1387052**

Source: Own study on the basis of data provided by GUS.

Expenses for the public safety, the fire and the heath protection in the budget of Zgorzelec County and the districts in the Zgorzelec County area are presented in the table 2. The expensing funds for the public safety, the fire and the heath protection in the budget of Zgorzelec county has been started in the year after creating the county in the year 2000[2], while the expensing funds from the budgets of the districts in the Zgorzelec County area has been started in the year of resoluting the Emergency Management Law[3], which caused increasing the expenses for the public safety and the fire protectionin the Zgorzelec county area for 3 153 000 zł. The total expenses the public safety, the fire protection the health protection amounted approx 1.4 billion zł in the years 2002-2007.

These measures enable executing the rescue actions in the case of occuring the natural disaster. According to the Emergency Management Law, the County Crisis Management Centre (PCZK) and the County Crisis Management Team (PZZK) function in the area of Zgorzelec county.

The main respond forces for the disaster consist of the rescue and order-protection units which operate in the intervention procedure and cooperate immediately the the Zgorzelec County Office and the each districts. It means that in the case of receiving the information about the natural disaster, the units start working as soon as it is possible.

The Zgorzelec County Office also cooperates with the District Offices in the county area to estimate the damages caused by the natural disasters. During the years 2002-2007 only one district – Pieńsk received 31 thousands zloty (indexed to the year 2007) from the Lower Silesian Province Office in the year 2006 for removing the results of the natural disasters.

The sounding examinations conducted by the author with the with the employees responsible for counteracting the results of natural disasters in the Zgorzelec County confirm that the main issues connected with functioning of each unit for the 38% surveyed is insufficient cooperation with other institutions and for the 25% surveyed is lack of funds for counteracting the results of the natural disasters. 13% of surveyed think that the issue is inexact and incoherent Law and too low number of human resources for counteracting the results of the natural disasters.

4. Conclusion

The natural disasters policy is executed in the area of the county by the Zgorzelec County Office. The institutions responsible for the policy are also particular district offices with the specialized units such as the police or the fire-brigade. The NDP is executed by the: spatial planning; expenses funds for the public safety, fire and health protection; raising the promises for removing the results of the natural disasters.

The measures received by the Zgorzelec County for removing the results of the natural disasters in the period 2002-2007 cover only 31 thousands of polish zloty. This is only 0,13% of total losses caused by the natural disasters in the area of

Zgorzelec county in the same period estimated on 24 329 thousands of polish zloty. In the case of adding the districts expenses for the public safety (1 387 052 thousands of polish zloty) to the measures received by the Zgorzelec County for removing the results of the natural disasters in the relation to the estimated losses, it is fully covered.

References:

[1] *Plan rozwoju lokalnego powiatu zgorzeleckiego*, Załącznik do uchwały Nr XXIX/169/2004 Rady Powiatu Zgorzeleckiego z dnia 29 października 2004 r., Zgorzelec, październik 2004.

[2] Ustawa z dnia 5 czerwca 1998 r. o samorządzie powiatowym, Dz. U. 1998 nr 91 poz. 578 z późniejszymi zmianami.

[3] Ustawa z dnia 26 kwietnia 2007 r. o zarządzaniu kryzysowym, Dz. U. z 2007 r. nr 89, poz. 589 i 590 z późniejszymi zmianami.

SPATIAL VARIABILITY IN DEVELOPMENT OF ORGANIC FARMING IN POLAND

Arkadiusz Piwowar
Wroclaw University of Economics
arkadiusz.piwowar@ue.wroc.pl

Key words:
organic farming – organic farms – territorial differentiation

Abstract:
Organic production is more and more popular system of farming in the Polish agriculture. In 2004-2008, a dynamic development of organic farming and processing was observed in Poland. The number of organic farms and the area of arable lands, where such an activity was carried out, increased four times. A considerable territorial differentiation was observed in development of the organic farming in Poland.

Introduction

Development of organic farming is important both for maintaining the natural balance and for human health [3, 172–185]. In Western Europe, this system of farming has been developing already since 1970s, and the status of organic farming in the European Union was legally regulated by the Regulation of the Council of the European Union No 2092/9 dated 24 June 1991. While in the EU countries, organic farming, already in 1990s, was functioning under very good institutional conditions and was supported by adequate subsidies; its development in Poland was very slow.

Organic farming became an important element of the agrarian structure of the Polish agriculture only after 1999, when agricultural producers started using the direct subsidies to areas with organic crops [1, 200]. However, a considerable increase in the interest in the organic farming methods in the Polish agriculture has been observed since 2004, i.e. from the accession of Poland to the European Union. The Common Agricultural Policy enabled a considerable financial support for organic farming. Development of organic farming in Poland resulted not only from the subsidies granted to agricultural producers, but also from increasing social demand for eco-products. Poland has a considerable potential for a further increase in organic food production, connected mainly with a low level of environmental pollution, traditional technologies of agricultural production, and considerable labour force resources in rural areas [2, 44].

Methodology and sources of materials

The purpose of this study was to present the state of development and the extent of territorial differentiation of organic farming in Poland. The studies covered the

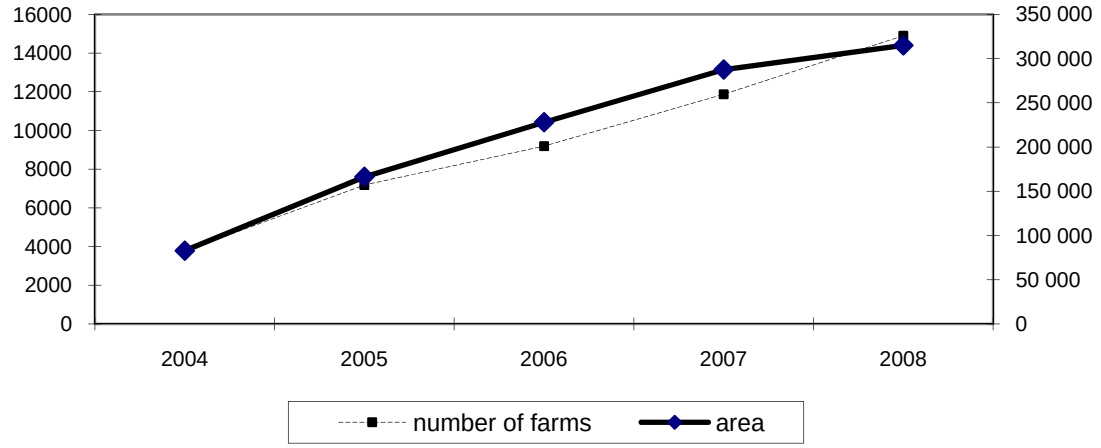
period of 2004-2008. The analyses were performed basing on the numerical data from the Main Inspectorate of Agricultural and Food Quality, which characterize:

- the number of the organic farms holding a certificate and the farms in the transition phase,
- the area of ecological arable lands,
- the structure of organic farms as to the area of arable lands.

Development of organic farming and processing in Poland in 2004-2008

In the investigated period, a systematic and dynamic increase in the number of farms producing organic food in Poland was observed. In consequence of the increase in the number of organic farms and in the land area covered by such farms, there was a steady growth in the number of organic processing plants. In 2008, there were registered 236 organic processing plants, i.e. over four times more than in 2004. The highest number of such processing plants was operated in: Mazowieckie (37), Wielkopolskie (30) and Lubelskie (30) provinces.

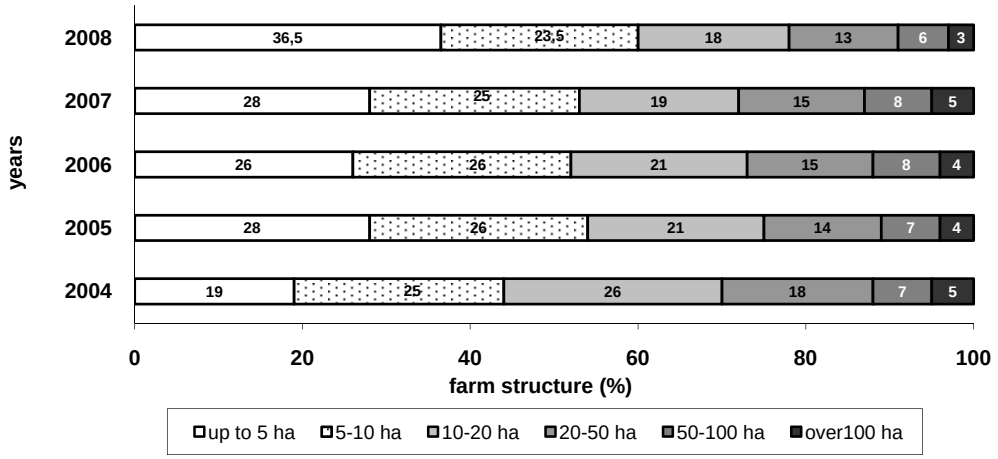
FIG. 1: The number of farms carrying out production with the use of ecological methods (holding a compliance certificate and being in the transition period) and area of ecological arable lands in Poland



Source: own study based on numerical data of the Main Inspectorate of Agricultural and Food Quality

In Poland, in late 2008, the number of farms in Poland carrying out production with the use of ecological methods (holding a compliance certificate and switching to organic production) amounted to 14 896, that is 0.82% of the total number of individual farms. In 2004-2008, the number of organic farms increased by 11,136. In 2004, the area of agricultural crops in Poland was 82,730 ha. In 2004-2008, the number of arable lands, on which the production was carried out with the use of organic methods, increased by 232,191, that is by 381%.

FIG. 2: The structure of organic farms with respect to the size of the area of arable lands in Poland



Source: own study based on numerical data of the Main Inspectorate of Agricultural and Food Quality

The changes in the structure of organic farms with respect to the size of farms indicate that there is a progressive fragmentation of organic farming. In the Polish organic farming, there prevail farms with the area up to 5 ha (36.5%), and the farms with the area of 5 –10 ha (23.5%) In the investigated period, the share of farms with the area of 1-10 ha in the structure of farms increased from 44% in 2004 to 60% in 2008.

The state and scope of development of organic farming in poland in territorial arrangement

From the beginning, the organic farming in Poland has been characterized by regional differentiation. Organic farms are established in the regions with relatively large resources of the natural environment and with less intensive agricultural production. Organic farms in Poland are territorially differentiated, but they distinguish themselves against the background of general population of farms by certain features:

- the average area of arable lands is about three times larger,
- the share of permanent grasslands is about two times higher,
- the share of grains in the structure of crops is 30 % lower [4, 62].

TAB. 1: The number of organic farms in individual provinces in 2004-2008

Specification	Years					Growth in the number of farms in 2004-2008	Dynamics of growth in the number of farms in 2004-2008
	2004	2005	2006	2007	2008		
	[pcs]						[%]
Dolnośląskie	197	395	481	652	879	682	446
Kujawsko-pomorskie	89	145	173	217	258	169	290
Lubelskie	393	774	1072	1402	1566	1173	398
Lubuskie	66	188	256	361	480	414	727
Łódzkie	71	171	218	261	314	243	442
Małopolskie	697	1187	1363	1627	2100	1403	301
Mazowieckie	434	852	1028	1215	1481	1047	341
Opolskie	26	38	46	53	62	36	238
Podkarpackie	430	855	1164	1577	1892	1462	440
Podlaskie	207	482	628	847	1160	953	560
Pomorskie	66	180	222	273	392	326	594
Śląskie	47	92	116	143	176	129	374
Świętokrzyskie	547	785	892	995	1165	618	213
Warmińsko-mazurskie	244	432	586	773	1059	815	434
Wielkopolskie	70	202	265	415	516	446	737
Zachodnio-pomorskie	176	404	678	1059	1396	1220	793
Total	**3760**	**7182**	**9188**	**11870**	**14896**	**11136**	**396**

Source: own study based on numerical data of the Main Inspectorate of Agricultural and Food Quality

The organic farming in Poland is most widespread among the agricultural producers from the following provinces: Malopolskie (14% of all organic farms in Poland) and Podkarpackie (12.7% of organic farms in Poland). The lowest number of organic farms is in Opolskie province. In the investigated period, the number of farms in Poland carrying out production with the use of organic methods increased four times. The highest absolute increase in the number of farms took place in Podkarpackie and Malopolskie provinces. On the other hand, in the investigated period, the highest dynamics of growth in the number of organic farms was observed in Zachodniopomorskie (793%), Wielkopolskie (737%), Lubuskie (727%), Pomorskie (594%) and Podlaskie (560%) provinces.

TAB. 2: The area of ecological arable lands in a breakdown by provinces in 2004-2008

Specification	Years					Growth in the area 2004-2008	Dynamics of growth in the area in 2004-2008
	2004	2005	2006	2007	2008		
	[ha]						[%]
Dolnośląskie	8 789	16 482	19 303	21 988	28 467	19 677	324
Kujawsko-pomorskie	1 719	3 570	4 846	5 884	5 943	4 223	346
Lubelskie	5 706	11 133	19 957	23 934	26 892	21 186	471
Lubuskie	2 298	7 429	12 094	18 201	18 207	15 909	792
Łódzkie	1 195	2 489	3 378	3 561	4 829	3 633	404
Małopolskie	7 626	11 160	13 827	14 481	22 655	15 029	297
Mazowieckie	6 075	16 552	20 878	23 218	27 742	21 667	457
Opolskie	447	590	1 196	934	1 571	1 124	352
Podkarpackie	10 711	16 020	20 601	27 047	28 671	17 959	268
Podlaskie	3 863	8 747	11 657	15 391	20 410	16 547	528
Pomorskie	1 781	7 185	8 037	10 968	11 366	9 585	638
Śląskie	487	1 835	2 340	3 079	3 934	3 448	809
Świętokrzyskie	4 995	7 637	8 964	9 824	10 841	5 846	217
Warmińsko-mazurskie	9 497	15 342	23 991	28 810	28 828	19 331	304
Wielkopolskie	4 816	12 011	14 511	21 096	20 417	15 601	424
Zachodnio-pomorskie	12 725	28 118	42 431	59 114	54 151	41 426	426
Total	**82 730**	**166 300**	**228 010**	**287 528**	**314 921**	**232 191**	**381**

Source: own study based on numerical data of the Main Inspectorate of Agricultural and Food Quality

The largest area of organic crops was recorded in Zachodniopomorskie, Warminsko-mazurskie and Dolnoslaskie provinces, while the smallest area of these crops was in Opolskie, Slaskie and Lodzkie provinces. The area of organic production in four provinces: Zachodniopomorskie (17.2%), Warminsko-mazurskie (9.2%), Podkarpackie (9.1%) and Dolnoslaskie (9%), accounted for almost 45% of the total area of ecological arable lands. The dynamics in the growth in the area of organic crops in these provinces was very differentiated (average index of the dynamics for the whole country was 381%).

Conclusion

1. In the investigated period, there was a dynamic growth both in the number of organic farms in Poland (by 11,136, that is by 396%) and the area of arable lands, on which such activity was conducted (by 232,191 ha, that is by 381%).
2. The analysis of the structure of organic farms with respect to the size of farms indicated that there was a progressive process of fragmentation in organic farming in Poland. Within the structure, there prevail farms with the area up to 5 ha, and the share of this group in the period of 2004-2008 increased nearly twice. The share of the farms with the area of 10-20 ha, 20-50 ha, 50-100 ha and over 100 ha decreased in the investigated years.
3. A considerable territorial differentiation in development of organic farming in Poland keeps at a constant level. The highest number of organic farms in 2008 occurred in the Malopolskie (2,100) and Podkarpackie (1,892) provinces, while the lowest one – in the Opolskie province (62). There is also a considerable spatial variability in the average area of an organic farm in Poland. The largest farms were located in Wielkopolskie, Zachodniopomorskie and Lubuskie provinces (two time larger than the area of arable lands in an average farm in Poland).

References:

[1] JANOWSKA-BIERNAT, J., GOLINOWSKA, M. Tendencje w rozwoju rolnictwa ekologicznego w Polsce w latach 1990–2005, *Zeszyty Naukowe Akademii Rolniczej we Wrocławiu*, Rolnictwo LXXXVII, No 540, Wrocław 2006, ISSN 1897-4732

[2] KOMOROWSKA, D. *Perspektywy rozwoju rolnictwa ekologicznego w Polsce. Problemy Rolnictwa Światowego,* T. XV, Wydawnictwo SGGW, Warszawa 2006, ISSN 2081-6960

[3] LUCZKA-BAKUŁA, W. Rozwój rolnictwa ekologicznego oraz dystrybucji i konsumpcji jego produktów, *Wieś i Rolnictwo*, No 2, PAN, IRWiR,Warszawa 2005, ISSN 0137-1673

[4] NIEWIADOMSKI, K. Wybrane aspekty rozwoju rolnictwa ekologicznego w Polsce, *Wieś i Rolnictwo*, No 4, PAN, IRWiR, Warszawa 2006, ISSN 0137-1673

[5] Raport o stanie rolnictwa ekologicznego w Polsce w latach 2005-2006, IJHARS, Warszawa 2007, 62 s.

[6] Rolnictwo ekologiczne w Polsce. Raport 2007-2008, IJHARS, Warszawa 2009, 88 s.

THE TRANSFORMATIONS IN THE FUNCTIONAL STRUCTURE OF JELENIA GÓRA

Zbigniew Przybyła, Katarzyna Przybyła
University of Economy in Wrocław, University of Natural Science in Wrocław
Zbigniew.Przybyła@ue.wroc.pl, katarzyna.przybyła@up.wroc.pl

Key words:
the economic base of a town – the functions of a town – the functional transformations

Abstract:
Jelenia Góra is a middle size town situated in the south - west of Poland in the Lower Silesia region. In this article, based on the theory of the economic base of a town, the attempt of identification of specialized functions of Jelenia Góra was made. The analyses of transformations undergoing in this area in the years 2003 - 2008 was also carried out. This research was carried out using both the Florence'a coefficient of specialization and the index of surplus of employees (the H. Hoyt's methods of the residuals).

The introduction

Jelenia Góra is a town situated in the west part of the Sudety Mountains in the Jelenia Góra valley. Its area (little above 108 square kilometers) and the number of inhabitants (according to the state from the year 2009, 84 564 people) allows us to classify it into the category of middle size towns. It is worth reminding that until the year 1975 Jelenia Góra was a county seat and then, until the year 1998, it held the status of a capital of a province. Nowadays it is both the seat of a town and land district. The aim of this article is an attempt to identify specific functions of Jelenia Góra, and the analyses of transformations undergoing in this branch in the years 2003-2008.

The method of research

The searches for specialized (exogamous) functions of Jelenia Góra were based upon the theory of an economic base of a town. According to this theory the people employed in the same town can be divided into two groups: the endogamous group made up from people working for the needs of the town and its inhabitants and the exogamous group to which those employees would be classified who work to satisfy the needs of inhabitants of other regions.

To measure the index of economic base of a town, the index of the surplus of the employees (figure 1) and the Florence'a coefficient of specialization (figure 2) were used:

Figure 1: the index of the surplus of the employees

$$Z_{egiM} = Z_i M - \left(ZM \cdot \frac{Z_i K}{ZK} \right)$$ where:

Z_{egiM} - the size of the employment in the activities directed outside the town area (exogamous groups) in the specific (i) branch of a town's economy,

$Z_i M$ - the employment in the specific (i) branch of a town's economy,

ZM - the employment in town in general,

$Z_i K$ - the employment in the specific (i) branch of a country's (region's) economy,

ZK - the employment in the country (region) in general.

Figure 2: the Florence'a coefficient of specialization

$$W = \frac{(Z_i M)/(ZM)}{(Z_i K)/(ZK)}$$ where:

W - the Florence'a coefficient of specialization,

$Z_i M$ - the employment in the specific (i) branch of a town's economy,

ZM - the employment in town in general,

$Z_i K$ - the employment in the specific (i) branch of a country's (region's) economy,

ZK - the employment in the country (region) in general.

The level of specialization of a researched town is being described with the use of the below mentioned assumptions:

$W \leq 1$ - the town does not specialize in i- section, this area of activity has endogamous character,

$1<W \leq 1{,}5$ - the town has a low level of specialization in the i-section,

$1{,}5<W \leq 2$ - the town has a medium level of specialization in i-section,

$W>2$ - the town has the high level of specialization in i-section [2, 110].

The use of the method of the surplus of employees (WNP) enables us to define the size of employment in the exogamous group. It can be done by comparing the real structure of the town's employment with the structure accepted as a base of reference. It can be for example the structure of the employment in the country or in the region. The negative value of a gauge means that there is a shortage in the researched section, which must be covered with the import of products from external areas [4, 70].

After bringing the form index to the comparable form of relative, useful in the reasearch of the definite set of cities, it becomes the index of a structure of

employment in the exogamous group and at the same time the measure of specified features responsible for town creations in the investigated objects [1, 75-76].

The Florence'a coefficient of specialization (WSF) allows identifying the specialized functions which define the significance of a town in the region or in the country. The coefficient allows to define if the town produces goods and services only for local market or does it 'send' them outside which means that it has got the exogamous functions in the specified section.

The transformations within the functional structures of a town

Numerous and often significant changes in the functional and spatial structure of Jelenia Góra occurred within the centuries of its history. In the postwar period, over the years 1950 - 1980 there was a significant reduction in the importance of the role of industry and construction and also partly material services, which was followed by the relative importance of agriculture and intangible services. At the same time one needs to stress the ever increasing importance of tourist services – spa in this period. One needs to emphasize the fact that beside the undergoing changes, the dominant role in this period of time was maintained by the industrial function [3].

Based on data from tables 1 and 2, using the formulas 1 and 2, the rates of surplus employees and Florence coefficient of specialization were calculated (tab. 3, 4).

TAB. 1: Number of employed persons[1] by economic sectors in 2003

Territorial unit	2003					
	Total	The agricultural sector	The industrial sector	*Total service sector*	Market services	Non-market services
Poland	9 632 381	2 120 774	2 827 011	4 684 596	2 572 192	2 112 404
Jelenia Góra	22 915	194	7 450	15 271	8 320	6 951

Source: Own study based on GUS data [6]

TAB. 2: Number of employed persons[2] by economic sectors in 2008

Territorial unit	2008					
	Total	The agricultural sector	The industrial sector	*Total service sector*	Market services	Non-market services
Polska	10 684 307	2 125 193	3 163 361	5 395 753	3 172 872	2 222 881
Jelenia Góra	25 114	191	8 251	16 672	9 867	6 805

Source: Own study based on GUS data [4]

[1] The number includes people employed in private farming, according to economic sectors, with no economic entities employing up to 9 people.

[2] as above

In calculating the value of the WNP (tab. 3) and the WSF (tab. 4) the structure of employment in Poland was adopted as a basis of reference.

TAB. 3: WNP values for Jelenia Góra in 2003 and 2008

Jelenia Góra	**WNP**					
	Total size of the exogamous group	The agricultural sector	The industrial sector	*Total service sector*	Market services	Non-market services
2003	4851,3	-4851,2	724,7	4126,6	2200,9	1925,7
2008	4804,4	-4804,4	815,4	3989,0	2409,0	1580,0

Source: Own study

TAB. 4: WSF values for Jelenia Góra in 2003 and 2008

Jelenia Góra	The agricultural sector	The industrial sector	*Total service sector*	Market services	Non-market services
2003	0,04	1,11	1,37	1,36	1,38
2008	0,04	1,11	1,31	1,32	1,30

Source: Own study

WNP has also been made into the comparable relative form. Therefore they became both the indicators of the employment structure in the group of exogamous and measures of different types of functions responsible for creation of a town in Jelenia Góra (tab. 5).

TAB. 5: Indicators of employment structure in the group of exogamous

Jelenia Góra	The agricultural sector	The industrial sector	*Total service sector*	Market services	Non-market services
2003	-	14,94%	85,06%	45,37%	39,69%
2008	-	16,97%	83,03%	50,14%	32,89%

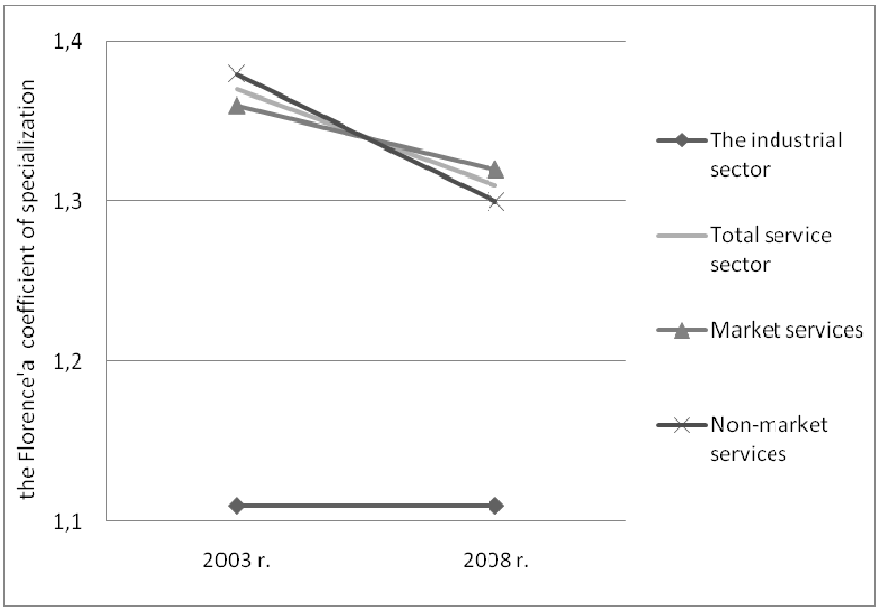
Source: Own study

It can be said that from 2003 to 2008, the examined town remained the polyfunctional centre, with services being a strong dominant. Apart from the agricultural sector, which naturally does not possess an ability to create a town, a low degree of specialization was received in comparison with other areas in the country. It is worth noting that both in 2003 and in 2008, the examined fields took the value WSF > 1, which allows us to assume that they performed the exogamous

functions in greater or lesser extent. The market service sector, which also influenced the economic character of Jelenia Góra to the greatest extend, distinguished itself in a special way. In 2003, about 45.4% of all exogamous groups' workers were employed in the activities classified as the market services, and in the year 2008 it was over 50%.

It is also worth to notice, that the level of specialization of the town in the country in the area of services, particularly non-market during the examined period decreased (graph 1, tab. 4). Specialization in the industrial sector remained unchanged.

Graph 1: Changes in the level of specialization of the economic sectors of Jelenia Góra in the years 2003 - 2008



Source: Own study

The Summary

Data presented in this paper suggests that in recent years there has been a decline in economic importance of Jelenia Góra for the country's economic life. Despite the increase in the total number of employed persons, the level and range of expertise of the city has been reduced. This was reflected in a decline in the exogamous group in general, and in particular, in reducing the employment characterized by its ability to create a town in the field of non-market services. One can presume that these are further consequences of losing the status of a provincial capital city. At the same time employment growth in the market services and industrial sector of Jelenia Góra was not sufficiently dynamic to offset changes in those areas in Poland.

References:

[1] BROL, R., MAJ, M., STRAHL, D. *Methods of typology of cities and towns*, printed. AE in Wrocław, Wrocław 1990

[2] OBRĘBALSKI, M. *Functional transformations of Jelenia Góra subregion in the late nineteenth and twentieth century*, in: Statistical Review of Silesia nr 1(7), printed. AE in Wrocław, Wrocław 2002

[3] OBRĘBALSKI, M. *Transformation of the functional - spatial structure of Jelenia Góra* in: The functional – spatial structures, Works KTN nr 33, Jelenia Góra 1983

[4] SŁODCZYK, J. The city space and its transformation, printed. The Univerity of Opole, Opole 2001

[5] *Voivodship. Subregions. Counties. Municipalities 2009*, The statistical office in Wrocław, Wrocław 2009

[6] Regional Data Bank, http://www.stat.gov.pl

ENVIRONMENTAL POLICY AND ITS INSTRUMENTS IN FLANDERS (THE REGION OF BELGIUM)

Michał Ptak
Wrocław University of Economics
michal.ptak@ue.wroc.pl

Key words:
environmental policy – instruments for environmental policy – Belgium – Flanders

Abstract:
The aim of the article is to present the division of responsibilities in the field of environmental policy in Belgium and to discuss instruments used for environmental protection in Flanders (one of the three regions of Belgium). The study focuses on legal and economic instruments. Flemish environmental policy deserves attention because of the relatively large number of "green" charges levied at the regional level, and also due to the financing of environmental protection from the earmarked fund.

Introduction

Belgium is a federal state comprising three regions, three communities, and four language areas. The regions are: the Brussels-Capital Region (Brussels), the Walloon Region (Wallonia) and the Flemish Region (Flanders).

The regions of Belgium have considerable responsibilities in environmental policy. These include, inter alia, environmental planning, protection of the environment (wastewater treatment, air protection), waste management (except for inter-state transit), drinking water supply and nature conservation [8, 6; 7, 30]. The Federal Government is responsible for product policy (standards, taxes, labelling and environmental advertising), waste shipments and marine environment protection [1, 89; 8, 6].

Flanders is the Dutch-speaking northern part of the country. The objectives of environmental policy of this region are determined in documents (Environmental Policy Plans) periodically issued by Ministry of the Flemish Community. The documents provide some requirements for instruments used for environmental protection.

Flemish Environmental Policy

To date, three Environmental Policy Plans were published: Environmental Policy Plan 1990-1995 (so called Mina-plan 1), Environmental Policy Plan 1997-2002 (Mina-plan 2) and Environmental Policy Plan 2003-2007 (Mina-plan 3). The Mina-plan 3 has been extended to 2010. The Environmental Policy Plan 2011-2015 (Mina-plan 4) is currently subject to public consultation.

The Flemish Environmental Policy is not a sustainable development plan, it is rather treated as part of sustainable development (defined as a coherence between environmental quality and developments in society) [13, 106-107]. The Mina-plan 3 assumes inter alia [13, 106-107]:

- improving environment law quality by increasing internal cohesion, mutual adjustment and efficacy, simplification and by increasing the technical applicability, legal certainty and ability to maintain;
- maximizing the cost effectiveness of economic instruments,
- contributing to a more efficient environmental policy by a better financial underpinning and a better use of the economic instruments.

The documents also addresses the issue of effective "mix of instruments". The core question concerns the relationship between the various types of instruments [13, 101].

Command and Control instruments

According to Environmental Policy Plan 2003-2007 legal instruments (more specifically permits and environmental inspection) play a central role in the Flemish environmental protection policy [13, 107].

The environment licensing system consists of environmental permits which are required for specified activities. Environmental permits are classified into three categories depending on how the specific activity harms the environment:

1) category I – hazardous activities (eg. the production of pesticides),
2) category II – activities that have intermediate impact on the environment (eg. abattoirs and privately-owned slaughterhouses for poultry and rabbits),
3) category III – activities which have "limited" effects on the environment (eg. storage facilities for textile goods with a capacity of over 10 tonnes).

The approval procedure contains an assessment of the potential impact on the environment [1, 89].

Environmental inspectorates exist at both federal and regional level. The sanctions include warnings or fines [9, 149-151]. Fines are, inter alia, applied when the companies fail to meet the requirements regarding the recycling of packaging waste [1, 96].

Economic instruments

There are some types of economic instruments used in the Flemish environmental policy. These instruments include inter alia: environmental levies, environmental subsidies and instruments creating new markets (tradable permit systems).

Some environmental taxes in Belgium, such as product taxes (so called ecotaxes) on drink containers or batteries, are under federal authority [9, 153]. There are also some environmental taxes in the Flemish region [9, 152-153]: groundwater abstraction charge, water pollution charge, waste water user charge (for waste water

treatment), tax on the landfilling and incineration of waste[1], user charges for waste collection and gravel extraction charge.

In 1991-2006 there was a manure tax in Flanders. The tax was levied per kg nitrogen and phosphate produced by animals. An additional tax was levied when manure production exceeded the amount allowed [16, 18].

It should be noted that both Flanders and Belgium have relatively low share of environmental taxes in GDP in comparison with the other countries (table 1) [4, 111].

TAB. 1: Environmental taxes in Belgium, Flanders and EU-27 as % of GDP

COUNTRY (REGION)	1995	2002	2008
Flanders	2.3	2.4	.
Belgium	2.2	2.2	2.0
UE-27	2.7	2.7	2.6

Source: [11, 298; 12, 356; 4, 111]

Levies on industrial water pollution and groundwater abstraction are collected by the Flemish Environment Agency [5, 20]. The revenues from some environmental levies in Flanders, such as waste-disposal taxes, charges for groundwater abstraction and water pollution charges, are allocated to the earmarked fund, so called MINA Fund (Milieu- en Natuurfonds) [6, 48]. The revenues are used for financing various environmental policy projects. It is estimated that this form of earmarking has led to stable funding of environmental purposes in Flanders over a long period of time, particularly in the area of wastewater treatment. The support from the fund played a large role in the development of a reliable sanitation infrastructure in the region [7, 39]. It should be noted that MINA Fund disburses subsidies for supra-municipal waste water investments through Aquafin NV. The latter company was established in 1990 by the Flemish Government. Its purpose is to expand, operate and pre-finance the wastewater treatment infrastructure in the Flemish Region [2, 7].

Environmental subsidies in Flanders are granted for sewage infrastructure but also for collecting of animal waste, soil remediation, provision of green cover (sowing of a crop in order to cover the ground in the winter period) or reduction of pesticide and fertilizer use in ornamental crops cultivation [14]. In 2005 “single farm payments” were introduced in order to reward environmental farms which respect food safety and animal welfare standards.

There are also some instruments creating new markets in Flanders. Flemish enterprises (about 170 installations) participate in the European Union Emissions Trading Scheme (EU ETS). There is also a nutrient emission rights system for farmers in Flanders.

[1] The highest rate applies to flammable landfilled waste, the lowest – to waste for incineration [10, 101].

The Flemish regions have established two separated tradable energy certificate systems: a system of green certificates and a system of combined heat and power (CHP) certificates. The objective of the former is to promote electricity from renewable energy sources. The latter one promotes primary energy savings through the use of qualitative CHP-facilities for the generation of electricity and heat. Certificates are issued monthly and should be submitted (presented to the Flemish Regulating Authority for Electricity and Natural Gas Market, VREG) once a year. If an electricity supplier submits too few certificates, he has to pay an administrative fine of 45 euro per missing certificate [3].

There are also two other tradable certificate systems in Belgium (in Walloon and in Brussels). However, these systems are different from the Flemish one. For example, in Walloon certificate system is based on trimesters [15, 211].

Summary

The analysis shows that there are some interesting solutions in the Flemish environmental policy. These include, inter alia, relatively large number of "green" charges or taxes levied at the regional level and financing environmental policy purposes from the special earmarked fund. Especially noteworthy are considerable and clearly defined responsibilities of Flanders (and other regions of Belgium) in the area of environmental protection. The region enforces the implementation of environmental law by command and control instruments.

References:

[1] *An Investment Guide to Establishing a Business in Flanders*, Brussels: Government of Flanders, 2007.

[2] *Anuual Report 2009*, Aquafin (available at: http://www.aquafin.be/nl).

[3] *Cogeneration*. The Flemish Regulating Authority for Electricity and Natural Gas Market (available at http://www.vreg.be).

[4] *Environmental Indicators in Pocket Size. Environment Report Mira-t 2006*, Mechelen: Flemish Environment Agency, 2006.

[5] *Experience by Inspiration. Environmental Policy of Flanders*. Brussels: Flemish Government, 2010.

[6] *Market-Based Instruments for Environmental Policy in Europe*. Copenhagen: European Environmental Agency, 2005.

[7] *Mechanisms for Managing Public Environmental Expenditure in Selected OECD Countries*. Paris: OECD, 2006.

[8] O'BRIEN, P., CAREY, D., HØJ, J., WOERGOETTER, A. *Encouraging Environmentally Sustainable Growth in Belgium*. Paris: OECD, 2001.

[9] *OECD Environmental Performance Reviews: Belgium*. Paris: OECD, 2007. ISBN 978-92-54-03111-1

[10] OOSTERHUIS, F., BARTELINGS, H., LINDERHOF, V., van BEUKERING, P. *Economic Instruments and Waste Policies in the Netherlands. Inventory and Options for Extended Use*. Amsterdam: Institute for Environmental Studies, 2009.

[11] *Taxation Trends in the European Union (2008)*. Luxemburg: Eurostat, 2008. ISBN 978-92-79-08400-3

[12] *Taxation Trends in the European Union (2010)*. Eurostat: Luxemburg 2010. ISBN 978-92-79-15801-8

[13] *The Environmental Policy Plan 2003-2007 (Summary)*. Brussels: Ministerie van de Vlaamse Gemeenschap, 2003.

[14] The OECD/EEA Database on Instruments used for Environmental Policy and Natural Resources Management (http://www2.oecd.org/ecoinst/ queries/index.htm).

[15] VERHAEGEN, K., MEEUS, L., BELMANS, R. Towards an International Tradable Green Certificate System – The Challenging Example of Belgium. *Renewable and Sustainable Energy Reviews* 2009, No. 1. ISSN 1364-0321.

[16] WUSTENBERGHS, H., VERHAEGEN, E., LAUWERS, L., De HAES, E., VERVAET, M. *Towards Integrated Economic and Environmental Accounts for Agriculture*. Brussels: Ministerie van de Vlaamse Gemeenschap, 2005.

COMPETITIVENESS OF EU MEMBER STATES ON THE BASIS OF CIA DATA

Edyta Ropuszyńska-Surma, Witold Wilczewski
Wrocław University of Technology
witold.wilczewski@pwr.wroc.pl, edyta.ropuszynska-surma@pwr.wroc.pl

Key words:
EU – competitiveness – Factbook

Abstract:
This paper presents the influence of selected features of the economy on level of competitiveness of EU member states. The analysis is based on the global competitiveness index, published by the World Economic Forum, and data published by the CIA in its *Factbook*.

1. Introduction

Presented in this paper are the results of research relating to the influence of selected indices published by the CIA (Central Intelligence Agency) in its *Factbook*, on the competitiveness of states of the European Union. Both the research conducted and this paper are a continuation of work presented at the conference *Hradecké Ekonomické Dny 2009* in the paper *Competitiveness of States of the Old and New European Union* (*Konkurencyjność państw starej i nowej Unii Europejskiej*) [5] as well as in a publication [6]. On the basis of the earlier research it was found that a relationship exists between level of economic freedom and the competitiveness of a given country. Freer and more competitive countries achieve a higher level of GDP per capita.

At present the object of the research is determining the strength of correlation between selected factors characterizing economies of the EU and the competitiveness they enjoy. Selected for the research were parameters linked with such features as financial markets, digital communication technologies and education, and thus with those linked with knowledge-based economies (KBEs). Individual EU states are admittedly characterized by a differing degree of development in the electronic economy, outlays on education and level of development of financial markets, yet it should be observed that economic growth is based on innovation in almost all.

2. Competitiveness of economies and its measurement

From the point of view of the economic sciences and development of economies the notion of competition is of key importance, and above all determination of factors affecting the competitiveness of economic entities and economies, as well as determination of the function of competition in an economy and its effects. In the

literature on the subject much attention is dedicated to the issue of competition from both the static and dynamic perspectives, as they are known [1], [2].

Deserving of attention among the number of definitions of the phenomenon of competitiveness [4] provided by the specialist literature is that contained in the *Annual Competitiveness Report 2003*[1]. It is simple in comprehension and simultaneously features the key elements which describe a competitive economy: "Competitiveness is the ability to achieve success in markets leading to better standards of living for all. It stems from a number of factors, notably firm level competitiveness and a supportive business environment that encourages innovation and investment, which combined lead to strong productivity growth, real income gains and sustainable development".

Used in the paper for measurement and comparison of the competitiveness of economies was the Global Competitiveness Index, which is published annually in *The Global Competitiveness Report* by the Word Economic Forum. Since 1979 the method by which the Index is calculated has changed several times[2]. At present, i.e. since the publication of the report for 2007-2008, the Global Competitiveness Index (GCI) is a comprehensive measure of competitiveness calculated on the basis of 110 indices. The GCI may take a value of 1 to 7, with 1 denoting an economy which is least competitive and 7 an economy of the highest degree of competitiveness.

Among the 27 countries of the EU only five are ranked among the 10 most competitive economies in the world. These are Denmark, Sweden, Finland, Germany and the Netherlands. A majority of these have for years occupied the highest positions in the ranking. For a number of years Finland has held a position at the top of the table of competitiveness, with the country being recognized as being one of the most innovative business environments in the world. It is worth mentioning that in the ranking from 2008-2009, the position of the United Kingdom was down on the previous year, the country dropping from ninth place to 12th.

[1] http://www.wtoconsultation.ie/ncc/reports/ncc_annual_03/webopt/ncc_annual_competitiveness_report_03.pdf

[2] The method by which the index is calculated and the key changes introduced in its aggregation are presented in the publication *Wolność gospodarcza i konkurencyjność* [6].

Table 1. Global Competitiveness Index – countries of the UE

No.	Country	GCI	
		2007	2008
1	Sweden	5.53	5.51
2	Denmark	5.58	5.46
3	Finland	5.5	5.43
4	Germany	5.46	5.37
5	The Netherlands	5.41	5.32
6	The United Kingdom	5.3	5.19
7	Austria	5.23	5.13
8	France	5.22	5.13
9	Belgium	5.14	5.09
10	Luxembourg	4.85	4.96
11	Ireland	4.99	4.84
12	The Czech Republic	4.62	4.67
13	Spain	4.72	4.59
14	Cyprus	4.53	4.57

L.P.	Kraj	GCI	
		2007	2008
15	Estonia	4.67	4.56
16	Portugal	4.47	4.4
17	Poland	4.28	4.33
18	Italy	4.35	4.31
19	Slovakia	4.4	4.31
20	Lithuania	4.45	4.3
21	Malta	4.31	4.3
22	Hungary	4.22	4.22
23	Romania	4.1	4.11
24	Latvia	4.26	4.06
25	Greece	4.11	4.04
27	Bulgaria	4.03	4.02

Source: [7], [8].

On the basis of the data in Table 1 we are able to state that the countries of the 'old EU' are more competitive than the new. However, the most competitive economies among the newly-accepted member states are more competitive than the least competitive economies among the 15. The competitiveness of Estonia, the Czech Republic, Cyprus and Slovenia is greater than that of Greece, Italy and Portugal. In addition, the values of the GCI are characterized by a greater distribution in the new country group than in the group of the old 15, which reflects the greater diversity in respect of competitiveness among the countries of the new EU in comparison with the countries of the old.

3. The *Factbook*

The World Factbook is an annual publication of the Central Intelligence Agency of the United States containing basic information on the various countries of the world. The *Factbook* summarizes over several pages the most important information on a given country, its history, geography, demography, government, economy, telecommunications, transport, military and international issues. Given that *The World Factbook* is prepared by the CIA for the official use of the

government of the USA, the style, format, reports and content are designed above all to meet specific demands. However, this publication is often utilized as a source of information for various non-governmental publications. In resulting from the work of the government of the USA, it is treated as being in the public domain.

4. Competitiveness and features of an economy

The data which the *The World Factbook* contains cover the following ten features of economies: number of main telephone lines; number of domestic Internet hosts available[3]; monetary value (in USD) of reserves of all financial assets available to the central authority[4]; number of main telephone lines in use; average annual interest rate on new loans[5]; total expenditure by entrepreneurs on fixed assets[6]; amount of electricity generated [kWh][7]; public expenditure on education as a share of GDP; value of shares of companies listed on national stock markets[8]; Gini index.

For the purposes of the research selected indices were related to number of inhabitants or to GDP. The relationship between the competitiveness of an economy and the features studied, measured by the coefficient of determination R2, is satisfactory (0.69). However, the influence of the independent variables studied on competitiveness is diversified. Taking into consideration the standardized coefficients BETA (Standard error B, t(12)), which describe the strength of the connection of individual independent variables with the dependent variable, we are able to state that in EU countries competitiveness is shaped largely under the influence of number of domestic Internet hosts available per capita and public expenditure on education as a share of GDP (Figure 1).

[3] Number of domestic Internet hosts available. An Internet host is a computer connected directly to the Internet, a computer of an Internet Service Provider (ISP) usually being a host. Internet users may use either a terminal at an institution with a computer of the mainframe type connected directly to the Internet, or may be connected by the use of a telephone modem, cable or satellite with the ISP computer host. The number of hosts is one of the indices of the development of the Internet.

[4] This quantity is the monetary value (USD) of reserves of all financial assets available the central authority for the purpose of repaying obligations at the end of the date of a specified period. This category comprises not only foreign currency and gold, but also SDRs (Special Drawing Rights) in the International Monetary Fund and their reserves.

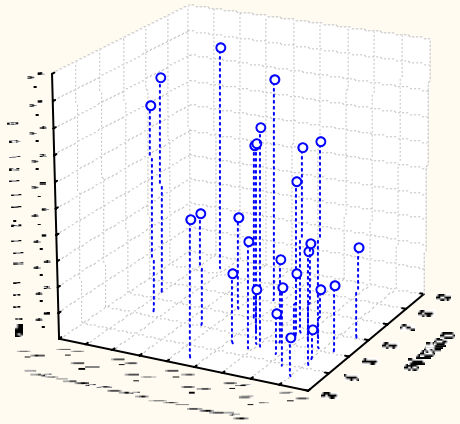
[5] Average annual interest rate on new loans, in the national currency, for the most credible customers.

[6] Total expenditure by entrepreneurs on fixed assets such as buildings, machines, devices, apartments and stocks of raw materials constituting a base for future production. This index takes into consideration gross depreciation of assets, e.g. replacement investments which replace worn out capital.

[7] Total quantity of electricity production plus import and minus export expressed in kWh. The variance between amount of electricity generated and/or imported amount of electricity utilized and/or carried off is taken into account in losses in transmission and distribution.

[8] Value of shares of companies listed on national stock markets on the final day of the period indicated. This is the final price of one share multiplied by the number of shares issued, for all companies listed on a specific stock market.

Rys. 1. Wykr. rozrzutu 3W: GCI indeks wzg education wzg internet hosts



5. Summary

The analysis conducted makes it possible to state that a perceptible relationship exists between the competitiveness of a given country in conditions of economy globalization and both level of expenditure on education and number of domestic Internet hosts available.

References:

[1] HAYEK, F.A. *Droga do zniewolenia*, Kraków 1996.

[2] HAYEK, F.A. *The Fatal Conceit. The Errors of Socialism*, University of Chicago Press, Chicago 1988.

[3] LOPEZ-CLAROS, A. Executive Summary, in *The Global Competitiveness Report* 2006-2007, World Economic Forum 2007.

[4] PANGSY-KANIA, S. *Konkurencyjność Polskiej Gospodark i Przez Pryzmat Międzynarodowych Rankingów*, Instytut Handlu Zagranicznego Uniwersytet Gdański. http://www.konferencja.edu.pl/ref8/pdf/pl/pangsy-kania-gdansk.pdf

[5] ROPUSZYŃŚKA-SURMA. E., WILCZEWSKI, W., Konkurencyjność państw starej i nowej Unii Europejskiej, *Hradecké ekonomické dny 2009 : ekonomický rozvoj a management regionu* : vědecká konference : sborník příspěvku, Hradec Králové, 3. a 4. února 2009. Díl 2 Hradec Králové : Gaudeamus, 2009.

[6] WILCZEWSKI, W.,¨ROPUSZYŃŚKA-SURMA, E. Wolność gospodarcza i konkurencyjność, in *Teoria i praktyka regulacji gospodarczych*, Część I, Z Szalbierza and J. Rudek (eds.), Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2009.

[7] World Economic Forum, The Global Competitiveness Report 2008-2009, 2008, http://www.weforum.org

[8] World Economic Forum, The Global Competitiveness Report 2009-2010, 2009, http://www.weforum.org

ASSUMPTIONS LEADING TO THE EFFECT OF INNOVATION

Žaneta Rylková
Slezská univerzita v Opavě
rylkova@opf.slu.cz

Key words:
innovation – process – management – assumptions – effect
Abstract:
Successful management of innovation requires attention to various elements and factors which positively or negatively influence the conditions for implementation and subsequent evaluation of innovative activities. Increasing workers' skills, improving relationships with customers, engaging and seeking other forms of development are among the factors which support enterprise development. The aim of this paper is to state assumptions which lead to the innovation effect and influence the innovation effect.

1. Innovation Process in Companies

We can innovation process identify as a set of innovative activities. It is the transformation of innovative inputs on innovative outputs. If company wants to create a functioning innovation process, it is necessary to address four key areas as: [3, 63]

1. innovation culture (diversity of views, networking, market of ideas, time and space for innovation, open space for communication);
2. innovative techniques and methods (innovation practices - diversity, change in paradigms, defining and solving contradictions, revealing unseen trends, understanding the unspoken customer requirements);
3. development of talent and people (the development of key skills and innovative talents, learning, management of ideas, multifunctional teams, the incentive to innovations);
4. organization of the innovation process (generating and evaluating ideas, links ideas, talents and capital, innovative projects and their organization and management).

Ross, Kleingeld and Lorenzen (2004) present four main factors, the areas that affect innovation processes in organizations. These areas are also strategic importance for the organization. It is a process of change, which includes such areas as **vision, strategy, leadership,** etc. Another important factor is the organization's **employees**, their intellectual capital. In this context are emphasizing attributes such as **knowledge, skills,** competencies, etc. The third area is a **source of organization** when it is not only capital but also information, infrastructure, etc. The last factor presents operations of organization, **organizational processes** and

systems that coordinate and manage all resources of the organization. They include various areas of hard and soft management. In other words, innovation processes affect mainly employees of the organization, their personal potential, competence, creativity, and management, as it not only decides the strategy, but also manages all processes within the organization, stimulating factors, etc.

For businesses, it is important to understand the innovation process, because this understanding influences the way of innovation, trying to implement and manage. Different circumstances will lead to many different solutions: for example, large companies depended on the research will tend to create solutions that will be based on robust activity in research and development, patent search, etc. While small businesses will be focused on the ability to rapidly implement innovations. Companies engaged in trade will be addressed to a lesser extent formal research or development, but will place emphasis on monitoring the environment to capture new consumer trends, and focus their activities in marketing. For manufacturers of consumer goods, there will be an important capacity for the rapid development and marketing of products, then the work shifts and variations of the basic concepts of products. Engineering and construction companies are largely dependent on the design work and project management, thus the overall aspects of system integration in the implementation phase. Public sector organizations have to turn in the management of innovation, expect strong external political and regulatory influences.

2. Factors Affecting the Business Model in the Czech Conditions

From the results of own research conducted in 2009, it was possible to create a "model" company for the Czech Republic. Summary of the main factors affecting the "business model" in Czech conditions includes the following table 1, where in the model company prevail small business.

TAB. 1: Factors Affecting the "Business Model"

Size of enterprise	Small
Character of innovation activity	Occasional activity
Innovation strategy	More than 60 % have not prepared
Year of latest innovation	2007 – 2008 (product or process innovation)
Cooperation with other subjects	More than 60 % SME´s don´t cooperate
Cooperation in the future	Competition, innovation centers
Use of EU funds	More than 70 % SME´s don´t use
Informatins on support from Operation programme Enterprise and Innovation	Rather uninformed (reported over 40 %)
Sources of information for innovation activities	Emploees, customers
Main obstacle to innovation activities	Lack of funds
Measurement of innovation activities	60 % SME´s do not pursue and measure any indicator

Source: own

3 Conclusions

Innovation is a key source of competitive advantage, especially in today's highly dynamic, competitive environment, the economic success is highly dependent primarily on the enterprise's ability to successful development and implementation of innovations. This is true in general for any company, whatever its parameters, including size. However it should be noted, that the real management of the innovation process in business is a challenging task, and that innovation success can never be predicted with one hundred percent certainty. It is important to highlight the factors that need to be monitored and developed if companies want to be successful.

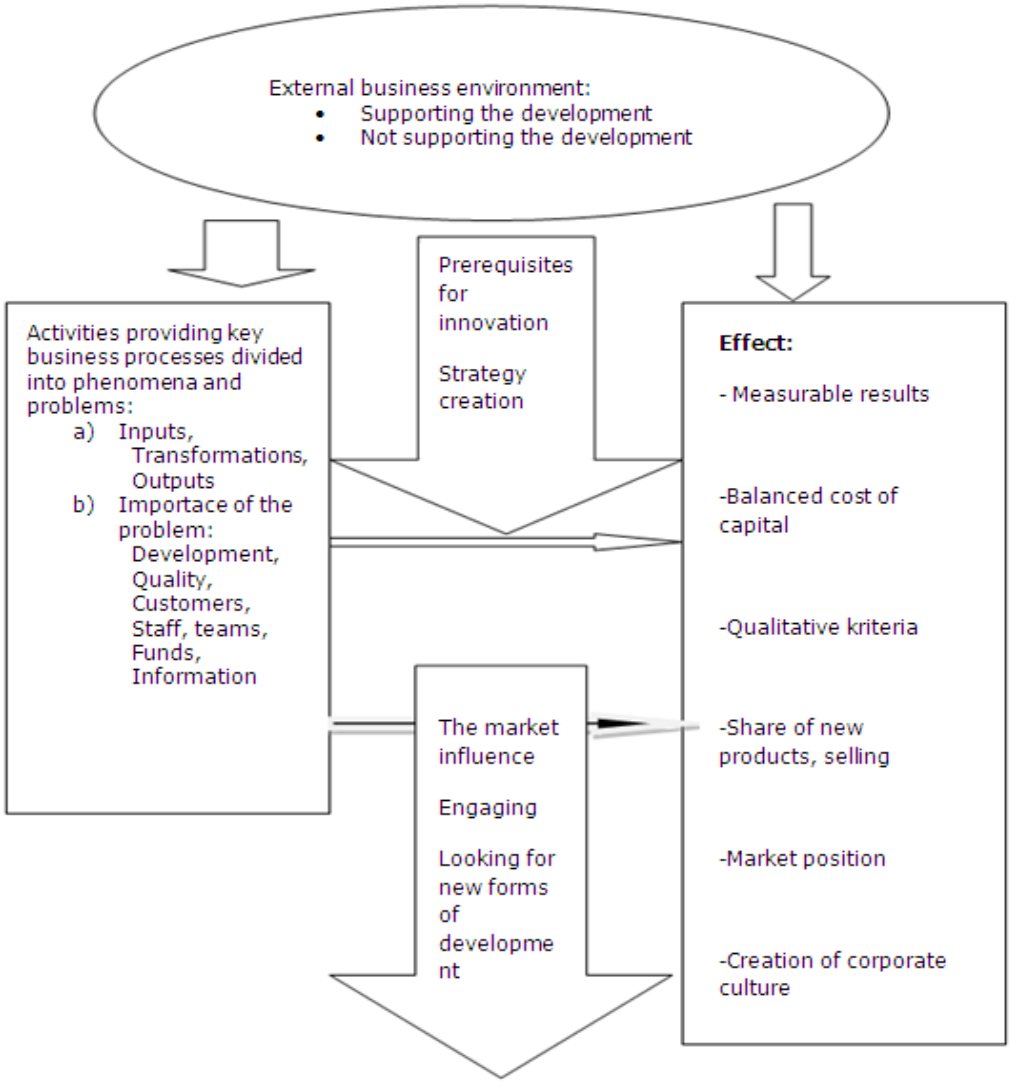
Moreover, companies themselves must increasingly begin to realize that innovation in product, process, and thinking is a key weapon in the struggle with the competition and with copying. It is necessary to emphasize that most of today's successful innovations are combinated innovations, which are products of the combined outcomes of joint innovation activities undertaken by individual members of the network together. Therefore there should be measured and evaluated companies abilities to innovate, to change their internal environment and to engage in cooperation and monitoring of performance of their innovation.

To ensure that innovation management has been successful, it is necessary to pay attention to a variety of factors, those conditions positively and negatively affect.

- The first group consists of elements influencing the development in the business environment where an organization is directed output of innovative activities. There are the factors, which the organization is not able to influence, but the organization have to be able properly estimated their impact on the entrepreneurial behavior of the organization.
- The second consists of elements whose action on the contrary the organization's management can clearly influence. However, they must know the causality of their influence on the development of the internal environment of the organization and thus to make changes in its business conduct.

The following figure 1 shows assumptions leading to the effect of innovation. The figure 1 shows that the company is operating in the external environment which encourages and supports development. The firm itself produces products or services and addresses issues such as where to obtain funding, information. Their behavior affects the market. Influence of the market is becoming increasingly difficult, therefore it is necessary to establish new forms of cooperation. Moreover, all this have to be taken into account in its development strategy, which is necessary to formulate and implement. Development strategies should include prerequisites for innovation and should lead to achieving the effect. The effect should be connected with measurability, it is necessary to collect qualitative criteria, to monitor its market position and build its innovative culture.

FIG. 1: Assumptions Leading to the Effect of Innovation



Source: own

References:

[1] DVOŘÁK, J., TUREK, L. *České průmyslové podniky a inovace*. In: Teoretické, metodologické a empirické aspekty podnikání v mezinárodním prostředí. (p. 62-65). Praha: VŠE, 2003. ISBN 80-245-0419-7.

[2] JÁČ, I., RYDVALOVÁ, P., ŽIŽKA, M. *Inovace v malém a středním podnikání.* Brno: Computer Press, 2005. ISBN 80-251-0853-8.

[3] KOŠTURIAK, J., CHAL´, J. *Inovace vaše konkurenční výhoda!* Brno: Computer Press, 2008. 164 s. ISBN 978-80-251-1929-7.

[4] PITRA, Z. *Management inovačních aktivit.* 1. vyd. Praha: Professional Publishing, 2006, 438 s. ISBN 80-8694-610-X.

[5] RYLKOVÁ, Ž. Faktory ovlivňující inovační proces v MSP. In *CD příspěvků X. ročníku mezinárodní konference Ekonomické fakulty VŠB-TU Ostrava.* Mekon Ostrava 2008. ISBN 978-80-248-1704-0.

[6] ŠEBESTOVÁ, J., WAGNEROVÁ, E. *Co ovlivňuje malé a střední podnikatele?* In Research Paper, Vědecké listy (ročník II. Č.02 (04) 2006, p. 128-139). Bratislava: Katedra manažmentu FCHPT STU. ISSN 1336-815X.

[7] ŠÚBERTOVÁ, E. *Enterpreneurship and Cooperation in SMES in Slovakia*, ročník IX. 2005. Nr.1 ISSN 1822-3133.

[8] TIDD, J., BESSANT, J., PAVITT, K. *Řízení inovací.* Brno: Computer Press, 2007. ISBN 978-80-251-1466-7.

[9] WAGNEROVÁ, E., RYLKOVÁ, Ž. Management of Innovation. In: Inovácie – faktor konkurenceschopnosti malých a stredných podnikov v globálnom ekonomickom prostredí. Poprad 2009. ISBN 978-80-8083-792-1. s. 410.

[10] WOKOUN, R., MALINOVSKÝ, J. a kol. *Regionální rozvoj.* Praha: Linde, 2008, 475 s. ISBN 978-80-7201-699-0.

THE FINANCIAL POSITION OF THE ENTERPRISE

Alexandra-Daniela Socea
Univeristy Alexandru Ioan Cuza, Iaşi
alexandra.socea@yahoo.com

Key words:
financial position – balance sheet – financial position analyze – users

Abstract:
Because of trade barriers disappearance and intensifying international economic competition, macroeconomic data and general information are not sufficient to substantiate the decisions. The attention is directed to specific information about enterprises, in the interest zone of investors. In this context, the balance sheet has a major role as a tool that reflects the company's financial position. Through analysis and interpretation, the balance sheet values get their real meaning, able to provide relevant information about the company's financial position. The dynamic analysis of several successive balance sheets can be a basis for designing the forecast balance sheets, thus contributing to the financial decision and conduct of business in the future.

Introduction

The paper envisages the appreciation of the company's financial position, based on the balance sheet as a synthesis and accounting reporting document. Our approach takes into account issues relating to annual financial statements and provided accounting information, the different views of users of accounting information on the financial position, possibilities and limits of the financial position. The approach is based on consulting the literature and formulating personal opinions rigorously substantiated.

It is obvious that each user wants to have information that would reduce uncertainty and give him the opportunity to make the best decisions. In fact, these requirements designate the need of accounting to produce quality information. Some studies suggest that higher quality financial reporting should increase investment efficiency. [1, 112]

Considerations on the financial position of the enterprise

The balance sheet reflects the company's ability to adapt to environmental changes using controlled economic resources, financing structure and economic and financial indicators of liquidity and chargeability. The information about controlled assets are useful for anticipating the enterprise's ability to generate cash flows. Those about the financial structure have a role in anticipating the future lending needs and sharing of future cash flows between business partners. Thus, *the*

financial position represents the relationship between the assets, liabilities and shareholders equity of an enterprise, as reflected in the balance sheet.

The balance sheet reflects the company's financial position at a time. We also consider the recent changes to IAS 1 "Presentation of financial statements", which states that the the balance sheet term is replaced by the financial position statement. The balance sheet's values will get their real meaning only through an analysis and interpretation that will face the past, will make them live in the present and will assess them in the likely future. [4, 362]

Every enterprise, regardless of size, sector or form of ownership, is facing a number of issues concerning the environment's needs in which it operates the improvement of financial performances and the competitive ability relative to other firms. In achieving these objectives, an important role has the economic and financial analysis. Through its methods and techniques, it contributes to the knowledge of the enterprise's financial position and performance, identifying the factors and causes that arouse disruptions, as well as establishing the proper measures to control and optimize the entity's economic and financial results.

The balance sheet's information are used in economic and financial analysis to appreciate the solvency of the organization, for the preliminary assessment of an entity prior to liquidation or sale, to identify its financial structure, to determine the rate of return etc. This document allows the formulation of value judgments on the risk a company is taking and assessment of future cash movements. In this sense, considering the balance sheet, there are analyzed the liquidity and financial flexibility that the company is facing. The liquidity is an important factor for a company's financial position and the actual content of the balance sheet does not provide complete information in this regard. A high liquidity indicates the stability of the enterprise's activity even in conditions of economic recession.

The analysis of financial position of the company involves a comprehensive study, static and dynamic, on the assets, liabilities and shareholders equity and, in particular, on the correlations established among these elements. The sustainable existence of the company depends on their management. [6, 74] The basic equation of the financial position is: Shareholders Equity = Total Assets - Total Liabilities. A company's financial position is positive if the shareholders equity is higher or at least equal to the debts of economic value. This condition indicates that the organization, as a matter of law, is able to pay its obligations to third parties, both during its business, as well as its liquidation. The analysis of the financial position is important for assessing the ability of an entity to generate cash, to anticipate the needs and opportunities of lending and distribution of profits, as well as to honor outstanding financial commitments. The ultimate goal of such an approach is the substantiation of the economic decisions of users.

Different meanings of the company's financial position

The different categories of users of accounting information have different views regarding the company's financial position.

The creditors are interested in recovery of granted loans, in their extension and the

information on their coverage. In this respect, the time element must be matched with debts to obtain a long term/short term classification, while the amount of the loan should be compared with the amount of capital or other liabilities of the company. However, the financial position does not reflect the same information for all creditors.

Thus, the commercial lenders are interested in short-term situation that warrants the use of a present value in detriment of historical cost. For the evaluation of balance sheet's elements, the liquidation values seem to be the relevant values, because they are the only that provide short-term recovery of unsecured loans.

For financial creditors, on the other hand, the financial position is reflected through information about the solvency and future previsions on company's ability to generate cash flows. In this context, we mention the concept of continuity and the reconsideration of the importance of the elements presented in the balance sheet, in both value and structure.

Up to a point, the financial creditors' interests coincide with those of investors about the company's financial position. Information about the total assets is important for creditors, as elements that ensure the recover of the investment.

Unlike them, *the investors* are interested in the size and structure of the capital, as value that generates the future earnings of investment or as a value that can be recovered in case of breaking off of investment.

The managers are another important category of users seeking information about the company's financial position. The balance sheet does not entirely meet the need for information of the management. He is however a bridge between internal and external environment of the organization through the structure of the information provided and by the assessment of the components, according to management strategy. Time is a vital coordinate in decision making process and the management needs timely and detailed information about the company's financial position. If the management considers the information obtained from the balance sheet as obsolete, as resulting from the processing of past data, one solution would be to draw up a forecast balance sheet.

Conclusions

Accurate information, held at the appropriate time is a true power factor. The accounting information result from processing and interpretation through accounting logic of the values movements generated by economic activities. They must be real, understandable, relevant, complete, useful, consistent and verifiable. The qualitative features are attributes that determine the usefulness of accounting information. They influence the economic decisions of users, helping them evaluate past, present or future events, to confirm or correct their previous evaluations. [7, 16] Like other resources, the information could have an immediately strategic usefulness or it can be a fundamental responsibility to expand the field of enterprises opportunities. [2, 16]

Looking ahead, the balance sheet should ensure the transparency and quality of the

information about the company's financial position. In this respect, Deloitte and Touche argues in an article published in the series Integrity & Quality that the term of financial position extends far beyond the balance sheet reporting and includes more detailed reports about the economic resources, the obligations and the shareholders equity.

Some authors have identified *sources of difficulties in analyzing the financial position* of which synthesize: [3, 63]

- the differences in assessing the significance of the financial position, according to the accounting practices in different countries. An asset in French accounting could be expenditure in American accounting. A liability in the British or American accounting can be considered shareholders capital in French accounting. For example, the development costs were dealt by the accounting practices from France, Italy, Netherlands, Spain as an asset, while in Germany were treated as expenses.
- the valences in the financial analysis of the balance sheet. To meet the financial analysis requirements it was reached in time to the recognition of several schemes of balance sheet, two of which can be considered as source: the balance sheet in table form and the balance sheet in list.
- the rigid or flexible nature of the balance sheet items. Thus, in a rigid model of balance sheet there can be hide durable elements in the category of those on short terms and vice versa, and a flexible balance sheet model may contain certain trends of manipulation of the image about company's financial position.

Despite all these limits, the dynamic analysis of several successive balance sheets can be a basis for designing the forecast balances, thus contributing to the financial decision and the enterprise's future behavior. In this respect, the balance sheet will be processed in financial and functional balance sheet to obtain a true and fair view of the enterprise.

Acknowledgements

This work was supported by the the European Social Fund in Romania, under the responsibility of the Managing Authority for the Sectoral Operational Programme for Human Resources Development 2007-2013 [grant POSDRU/88/1.5/S/47646]

References:

[1] BIDDLE, G.C., HILARY, G., VERDY, R.S. "How does financial reporting quality relate to investment efficiency?", *Journal of Accounting and Economics,* volume 48, issue 2-3, December 2009, pages 112-131, www.sciencedirect.com accessed on 18 September 2010

[2] BOUQUIN, H. *Contabilitate de gestiune,* Translation and introductory study N. Tabără, TipoMoldova Publishing House, Iaşi, 2004

[3] BUNEA, S. *Monocromie şi policromie în proiectarea politicilor contabile ale întreprinderilor,* Economica Publishing House, Bucureşti, 2006

[4] HOROMNEA, E., TABĂRĂ, N., BUDUGAN, D. *Bazele contabilității. Concepte, modele, aplicații,* Sedcom Libris Publishing House, Iaşi, 2006

[5] IATRIDIS, G. "International Financial Reporting Standards and the quality of financial statement information", *International Review of Financial Analysis,* volume 19, issue 3, pages 193-201, 2010, www.sciencedirect.com accessed on 18 September 2010

[6] NOBES, A. *An European Introduction to Financial Accounting,* Prentice Hall International, London, 1994

[7] OMFP 3055/2009 from 29 october 2009 for approval of accounting standards with European directives

[8] The Supreme Council of CECCAR, *The national code of ethics for professional accountants* from 25.05.2007, published in the Official Gazette no. 429/27.06.2007

DEVELOPMENT OF INSTITUTIONAL OWNERSHIP IN POLAND

Alina Szewc-Rogalska
University of Rzeszów
aszewc@univ.rzeszow.pl

Key words:
institutional investor – shareholder – ownership structure

Abstract:
This study aims to present the development of institutional investment in Poland. It has been found that the ratio of institutional investors' market development is at a low level (only 28% of the Gross Domestic Product). Investment funds have major shares in ownership structures of 39% of the companies listed on the Warsaw Stock Exchange. The pension funds are major shareholders of 26% of the surveyed companies. These investors most often prefer construction companies.

Introduction

For a few years now, a very strong increase in institutional investors' assets and an increasing commitment of these investors to the capital market have been observed. Development of investment funds and pension funds seems to be particularly dynamic. More and more frequently, they become significant shareholders of the companies listed on the Warsaw Stock Exchange. The corporate supervision they exercise depends on the formal and effective shares in ownership structures of stock exchange listed companies [6, 1445].

This study aims at an attempt to present the development of institutional ownership in Poland. Therefore, a concept of "institutional investors" has been defined, a level of development of the corporate investors' market has been determined and the results of research pertaining to the involvement of various groups of institutional investors in the shareholding structure of stock exchange listed companies have been presented.

Concept and types of institutional investors

Institutional investors are companies and organisations investing significant amounts of the capital entrusted to them in the form of deposits, insurance premiums, purchases of pensions, etc. into securities. These investors include: banks (commercial, investment), insurance institutions, pension and investment funds [2, 550].

Institutional investors are universal in the sense that they invest in various companies in all branches of industry. They are often focused on long-term investments, and moreover, they are interrelated with the public to a great extent as citizens are their beneficiaries [3, 20-27]. Investment funds are managed by

professional management companies; due to the professional personnel and the experience gained in the market, they should ensure proper management of their joint resources. These funds aim for diversification of risk and reduction of transaction costs [1, 90]. Insurance and pension companies are public institutions and due to a necessity of maintaining their adequate financial standing, they feature limited investing liberty in the capital market. It involves an obligation of depositing a significant amount of funds in possession into safe securities, a necessity of a major diversification of investments into shares of the companies and a ban on investments into financial instruments featuring a high level of speculation [5, 62].

Some authors do not include banks in institutional investors. Banks are different from conventional institutional investors, among other reasons because, in relation to companies in which they invest, they exercise not only corporate supervision, but also creditor supervision. In contrast to real investment funds, banks cannot transfer the entire investment risk onto their clients [4].

Assets of institutional investors in Poland

Investment funds appeared in Poland in 1992. At the end of December 2008, a total of 503 funds of which 322 were open-ended and 181 were-closed ended were in operation in Poland. Pioneer Pekao Investment Funds Company (TFI) has the largest share of the market that belongs to the same capital group as Bank Pekao S.A. Pioneer Pekao Investment Funds Company's large share of the market is a success due not only to considerable investment performance of funds but first of all to the aggressive sales strategy of Bank Pekao S.A. in which investment funds played a major role. The establishment of pension funds in Poland was initiated by the reform of the pension system in 1998. Currently, there are 14 PTE's [Comprehensive Pension Companies] managing 14 pension funds.

TAB. 1: Assets of institutional investors in Poland in % GDP

Institutional investors	Share of assets in GDP (in %)					
	2000	2002	2004	2006	2007	2008
Pension funds	1.3	3.9	6.8	11.0	11.9	11.2
Investment funds	0.8	2.4	4.1	9.3	11.4	6.0
Insurance companies	5.1	7.1	8.4	10.2	10.8	11.2
Total	7.2	13.4	19.3	30.6	34.1	28.4

Source: own study based on the Financial Supervision Commission and the Central Statistical Office data.

One of the basic measures of institutional investor market development is the ratio of assets of institutional investors to the Gross Domestic Product (GDP). This ratio increased consistently in 2000-2007 as the asset growth rate of institutional investors was considerably higher than the economic growth rate measured by

means of the GDP growth. Reduction of the asset value of those investors due to adverse trends in the financial market 2008 was reflected in the drop of the analysed ratio level. In 2007, the share of institutional investors' assets in the GDP was more than 34%, and in the subsequent year, it dropped to 28.4% (TAB. 1). The rate of institutional investors' market development in Poland is significantly lower in the countries with a developed capital market such as the US and the UK. Institutional investors' assets in these countries were almost twice as high as the GDP in 2007.

Share of institutional investors in ownership structures of the companies listed on the Warsaw Stock Exchange

Table 2 presents the companies listed on the Warsaw Stock Exchange which have Open Pension Funds (OFT) and Investment Funds Companies (TFI) as significant shareholders (a stock portfolio of more than 5%). In the event of 26% stock exchange listed companies, Open Pension Funds play a role of major shareholders, whereas Investment Funds Companies appear in the structure of shareholding of approximately 39% companies. Both the pension funds and investment funds also occur in the ownership structures of approximately two-thirds of the companies from the chemical industry. Relatively frequently, Open Pension Funds are the shareholders of companies in a different industry. In the case of the second company belonging to the wood and paper, electro-engineering, IT, retail commerce or media industries, investment funds play the role of major shareholders. Open Pension Funds select mainly the following for their investment portfolio: construction companies (16%) and companies involved in wholesale (12%), retail sale (9.3%) and mainly performing business operations in chemical industry (9.3%). The Investment Funds Companies clearly prefer the shares of construction companies (15.2%), IT (13.4%) and the ones that operate in the electro-engineering industry (13.4%) in their investments.

Open Pension Funds and Investment Funds Companies are usually the holders of 5-10% of shares of the surveyed companies and the share packages held by the funds are generally higher than in the case of pension funds. It results from the investment constraints imposed statutorily on Open Pension Funds to ensure the safety of assets earmarked for disbursement of retirement benefits.

TAB. 2: Percentage of companies in which Open Pension Funds and Investment Funds Companys are major shareholders (at the end of 2008)

Sectors and industries	Percentage of companies of which the following are shareholders		Percentage of surveyed investors by sectors and industries	
	Open Pension Funds	Investment Funds Companies	Open Pension Funds	Investment Funds Companies
Wood and paper industry	37.5	50.0	4.0	3.6
Construction materials industry	12.5	31.3	2.7	4.5
Electro-engineering industry	20.0	60.0	6.7	13.4
Chemical industry	63.6	63.6	9.3	6.3
Metals industry	21.1	26.3	5.3	4.5
Food industry	21.1	36.8	5.3	6.3
Light industry	30.0	30.0	4.0	2.7
Fuels industry	33.3	16.7	2.7	0.9
Other industries	66.7	33.3	2.7	0.9
Construction	32.4	45.9	16.0	15.2
IT	20.0	50.0	8.0	13.4
Retail	36.8	52.6	9.3	8.9
Wholesale	33.3	14.8	12.0	3.6
Telecom	10.0	30.0	1.3	2.7
Banks	26.7	20.0	5.3	2.7
Media	12.5	56.3	2.7	8.0
Other services	11.1	16.7	2.7	2.7
Total	26.0	38.8	100.0	100.0

Source: own development.

Conclusion

The following findings and conclusions arise from the undertaken attempt to present the development of institutional ownership in Poland:

- Currently, discussions are held in the references pertaining to a definition of the concept of institutional investors;
- Investment funds and pension funds account for the newest and simultaneously most dynamically developing groups of institutional investors in Poland;

– Assets of institutional investors in Poland account for only 28% of the Gross Domestic Product, and in the countries featuring a developed capital market (e.g. the US and the UK), they are almost twice as high as the GDP;
– Investment funds play the role of major shareholders in 39% of the surveyed companies, and pension funds are major shareholders in 26% of the companies listed on the Warsaw Stock Exchange.

This scientific study has been financed from the funds allocated for science in 2010-2011 as a research project no. N N113 552638.

References:

[1] BOJAŃCZYK, M. Rola funduszy inwestycyjnych w warunkach globalizacji. *Opracowania i Monografie*, SGH, Warszawa 2007, No. 546 p. 90, ISSN 0867-7727

[2] DĘBSKI, W. *Rynek finansowy i jego mechanizmy. Podstawy teorii i praktyki*, PWN, Warszawa 2008, p. 550, ISBN 978-83-01-14893-5

[3] MONKS, R. What will be the impact of active shareholders? A practical recipe for constructive change, *Long Range Planning*, 1999, No 32, p. 20-27, ISSN 0024-6301

[4] SŁAWIŃSKI, A. *Rola inwestorów instytucjonalnych, banków i funduszy arbitrażowych w rozwoju globalnego rynku finansowego*, http://www.nbp.pl/publikacje/wyklady/slawinski112006.pdf, as of 22.02.2009

[5] SOPOĆKO, A. *Rynkowe instrumenty finansowe.* PWN, Warszawa 2005, p. 62, ISBN 83-01-14440-8

[6] SZEWC-ROGALSKA, A. Official and actual proprietary rights of shareholders. *Ekonomika: probliemi teorii ta praktiki.* Dniepropietrowski Narodowy (Ukraine) 2007, No. 231, v. 7, s. 1445-1451, ISSN 1561-6908

SPECIALIZATION: THE CHANGING STRUCTURE OF THE SOWN AREA IN POLAND IN 2000-2009 PERIOD (BY VOIVODSHIPS)

Mirosława Szewczyk
Opole University of Technology
m.szewczyk@po.opole.pl

Key words:
Poland – specialization – structure of sown area

Abstract:
The purpose of this study is to identify changes which have occurred in the structure of sowings in Poland (at voivodships). The desired outcome of the study is a better understanding of the changes in agriculture. In this report, specialization methodology (location quotient) is used to define the structural changes the voivodship are undergoing. The method is based on regional structural comparisons that reveal the degree of specialization that the region has developed, and compares it to the specialization in other regions to identify the sectors with growth potential.

Introduction

The reform of the state structure, effective January 1, 1999, introduced a three-tier system of administration and local self-government in Poland. The largest units, at the regional level, are *województwa* (voivodships), which were consolidated and reduced in number from 49 to 16 in 1999. Poland remains one of the world's leading producers of rye and potatoes. Other principal crops include wheat and sugar beets.

The degree to which regions and countries specialise in the production of goods and services has concerned economists for a considerable time. The spatial concentration and dispersion of sown area is a commonly observed phenomenon. The purpose of this study is to provide a profile of the voivodships. Publication includes information on structure of sown area1 in 2009 in comparison with 2000-2008. Used in the study data from the Central Statistics Office [1] are presented by voivodships. In order to establish profile of the voivodships an extensive array of data for 2000-2009 period was analysed. The specialisation analysis is based on a technique which allows a region's structure, and changes in structure, to be compared to those of other regions and the State. The specialization analysis is based on the changes in the region's location quotients [2, 289-3013; 3, 343-355] over time.

[1] Structure of sown area (as of June): cereals, potatoes, sugar beets, rape and turning rape. Other crops not included.

Location Quotient Analysis - Measure of Specialisation

The location quotient method compares activity at the regional level (voivodship) to the national level for various periods of time. In order to identify leading activities, location quotients are calculated by sector, allowing a comparison of the level of sectoral activity across geographic areas. The traditional calculation compares sectoral shares in a local area, such as a voivodship, to sectoral shares in a larger area, usually the nation (Poland).

The location quotient r is defined as:

$$LQ = \left(E_{ib}^{t} / E_{b}^{t}\right) / \left(E_{ir}^{t} / E_{r}^{t}\right)$$

where:

E_{ib}^{t} – the sown area of crop *i*, in region *b*, in year *t*,

E_{b}^{t} – the total sown area, in region *b*, in year *t*,

E_{ir}^{t} – the sown area of crop *i*, in Poland, in year *t*,

E_{r}^{t} – the total sown area in Poland in year *t*.

The location quotient is simply the comparison between the percentage of the region's sown area by a given crop to the percentage of the State sown area by the same crop. The ratio indicates a relative level of concentration in the region. For example, if a region has a location quotient over 1.0, it has a degree of concentration or specialization in that sector. If its location quotient is lower than 1.0, then it has a relative deficiency in that sector.

Conclusions

The location quotient provides us with an index of relative regional specialisation for a single crop in a single region. In this paper, using data for Poland, we wish to examine the relationship between the degree of specialisation of the region. The tables below show the concentration of sown area of cereals, potatoes, sugar beets, rape and turning rap relative to the concentration in Poland.

TAB. 1: Location Quotients: sown area of cereals (2000-2009).

Voivodship	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Łódzkie	0.97	0.97	1.00	1.01	1.04	1.04	1.04	1.05	1.04	1.06
Mazowieckie	0.99	0.99	1.02	1.02	1.03	1.04	1.03	1.06	1.05	1.05
Małopolskie	0.93	0.92	0.94	0.94	0.96	0.97	0.99	0.98	0.99	0.99
Śląskie	0.99	1.00	1.00	1.01	1.01	0.99	1.01	1.01	1.02	1.02
Lubelskie	1.01	1.01	1.01	1.02	1.03	1.02	1.04	1.04	1.05	1.05
Podkarpackie	0.91	0.91	0.91	0.91	0.93	0.94	0.95	0.94	0.96	0.96
Podlaskie	1.07	1.08	1.05	1.06	1.08	1.08	1.09	1.12	1.12	1.12
Świętokrzyskie	0.96	0.95	0.98	0.98	0.99	1.01	1.02	1.03	1.03	1.03
Lubuskie	1.06	1.06	1.04	1.03	1.04	1.03	1.03	1.02	1.02	0.99

Voivodship	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Wielkopolskie	1.03	1.02	1.02	1.01	1.01	1.00	1.01	1.00	1.00	0.99
Zachodniopomorskie	1.00	1.00	0.97	0.96	0.94	0.95	0.95	0.93	0.93	0.93
Dolnośląskie	0.97	0.98	0.98	0.98	0.97	0.95	0.94	0.92	0.90	0.92
Opolskie	0.96	0.96	0.97	0.98	0.94	0.94	0.92	0.90	0.92	0.92
Kujawsko-Pomorskie	1.00	1.01	0.98	0.99	0.97	0.96	0.95	0.94	0.95	0.92
Pomorskie	1.03	1.02	1.00	0.99	0.97	0.97	0.96	0.97	0.97	0.97
Warmińsko-Mazurskie	1.05	1.05	1.02	1.02	1.01	1.02	1.01	1.00	1.00	1.01

Source: own calculations.

The change in location quotients over a period of time gives insight into the changing specialization of a region. For example, if a region has a location quotient of 1.0 for sugar beets in 2000 and 1.20 in 2009, the degree of specialization in this sector has increased 20 percent over the period. Sometimes there are no important differences between the voivodships in the crop structure (cereals). Sometimes there are important differences between the voivodships in the crop structure (potatoes, sugar beets, rape and turnip rape). Tables 1-4 show measures of the region's areas of specialization and their change over selected time periods.

TAB. 2: Location Quotients: sown area of potatoes (2000-2009).

Voivodship	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Łódzkie	1.67	1.69	1.61	1.53	1.39	1.42	1.38	1.52	1.54	1.36
Mazowieckie	1.42	1.44	1.27	1.33	1.15	1.15	1.39	1.23	1.29	1.41
Małopolskie	2.04	2.14	2.39	2.40	2.48	2.63	2.45	2.77	2.62	2.77
Śląskie	1.27	1.23	1.29	1.27	1.32	1.46	1.18	1.15	1.07	1.05
Lubelskie	1.07	1.04	0.97	0.93	0.90	0.87	0.84	0.80	0.77	0.78
Podkarpackie	1.94	2.01	2.35	2.35	2.26	2.49	2.49	2.66	2.56	2.62
Podlaskie	1.01	0.96	1.20	1.12	1.02	1.00	0.94	0.84	0.80	0.80
Świętokrzyskie	1.59	1.66	1.70	1.69	1.82	1.58	1.54	1.56	1.65	1.62
Lubuskie	0.53	0.54	0.57	0.68	0.69	0.78	0.73	0.79	0.75	0.81
Wielkopolskie	0.66	0.66	0.66	0.69	0.76	0.76	0.69	0.66	0.64	0.65
Zachodniopomorskie	0.45	0.46	0.50	0.56	0.59	0.63	0.67	0.66	0.72	0.77
Dolnośląskie	0.66	0.67	0.65	0.64	0.70	0.69	0.70	0.76	0.75	0.64
Opolskie	0.51	0.44	0.44	0.41	0.53	0.41	0.47	0.48	0.55	0.59
Kujawsko-Pomorskie	0.54	0.48	0.57	0.54	0.59	0.58	0.58	0.55	0.59	0.56
Pomorskie	0.65	0.67	0.77	0.80	0.92	0.98	1.00	1.07	1.05	1.01
Warmińsko-Mazurskie	0.49	0.49	0.51	0.53	0.53	0.48	0.47	0.47	0.45	0.46

Source: own calculations.

TAB. 3: Location Quotients: sown area of sugar beets (2000-2009).

Voivodship	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Łódzkie	0.54	0.53	0.54	0.48	0.51	0.47	0.53	0.48	0.48	0.48
Mazowieckie	0.72	0.71	0.70	0.63	0.63	0.74	0.66	0.75	0.75	0.74
Małopolskie	0.17	0.15	0.16	0.18	0.22	0.20	0.19	0.18	0.15	0.17
Śląskie	0.36	0.36	0.38	0.37	0.32	0.39	0.38	0.32	0.31	0.31
Lubelskie	1.51	1.42	1.46	1.51	1.46	1.39	1.57	1.51	1.37	1.52
Podkarpackie	0.62	0.67	0.64	0.64	0.59	0.64	0.71	0.52	0.63	0.59
Podlaskie	0.35	0.27	0.32	0.37	0.41	0.41	0.36	0.34	0.34	0.00
Świętokrzyskie	0.85	0.89	0.97	0.95	1.04	1.01	0.98	1.02	0.88	0.92
Lubuskie	0.51	0.42	0.41	0.33	0.32	0.42	0.44	0.45	0.46	0.26
Wielkopolskie	1.39	1.44	1.48	1.32	1.38	1.37	1.40	1.45	1.46	1.58
Zachodniopomorskie	0.68	0.71	0.74	0.77	0.79	0.76	0.67	0.65	0.69	0.73
Dolnośląskie	1.48	1.40	1.27	1.43	1.37	1.38	1.33	1.45	1.40	1.53
Opolskie	1.74	1.76	1.68	1.75	1.68	1.69	1.52	1.64	1.62	1.27
Kujawsko-Pomorskie	2.14	2.22	2.15	2.12	2.09	2.08	2.11	2.01	2.11	1.99
Pomorskie	0.87	0.95	0.95	0.88	0.94	0.90	0.86	0.79	0.84	0.91
Warmińsko-Mazurskie	0.33	0.34	0.34	0.31	0.27	0.33	0.26	0.31	0.31	0.30

Source: own calculations.

TAB. 4: Location Quotients: sown area of rape and turnip rape (2000-2009).

Voivodship	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Łódzkie	0.15	0.14	0.19	0.18	0.20	0.22	0.25	0.29	0.27	0.29
Mazowieckie	0.15	0.15	0.31	0.30	0.53	0.36	0.28	0.27	0.32	0.30
Małopolskie	0.15	0.15	0.16	0.11	0.13	0.16	0.16	0.16	0.18	0.19
Śląskie	0.96	0.92	0.96	0.77	0.83	0.91	0.94	0.98	0.93	0.93
Lubelskie	0.32	0.26	0.43	0.41	0.44	0.53	0.47	0.58	0.53	0.47
Podkarpackie	0.31	0.29	0.44	0.49	0.59	0.51	0.50	0.60	0.41	0.45
Podlaskie	0.04	0.05	0.07	0.09	0.07	0.08	0.11	0.10	0.08	0.11
Świętokrzyskie	0.16	0.19	0.18	0.08	0.13	0.19	0.20	0.31	0.24	0.32
Lubuskie	1.64	1.39	1.47	1.42	1.18	1.09	1.08	1.14	1.18	1.38
Wielkopolskie	1.08	1.16	1.09	1.16	0.95	0.99	1.01	1.05	1.09	1.15
Zachodniopomorskie	2.88	2.70	2.59	2.70	2.54	2.28	2.10	2.02	2.01	1.97
Dolnośląskie	2.34	2.17	1.79	1.83	1.59	1.92	1.92	1.90	2.12	1.95
Opolskie	2.53	2.83	2.08	1.96	2.13	2.26	2.27	2.23	2.12	1.98
Kujawsko-Pomorskie	1.28	1.45	1.39	1.28	1.46	1.47	1.62	1.64	1.65	1.81
Pomorskie	1.47	1.55	1.53	1.51	1.66	1.54	1.57	1.34	1.35	1.31
Warmińsko-Mazurskie	1.95	1.77	1.96	1.98	1.79	1.60	1.68	1.59	1.51	1.43

Source: own calculations.

Table 5 has highlighted some important differences between the regions with respect to sown area. In sixteen of Poland's voivodships concentration of cereals sown area is the same than the Poland average (table 1-5). There are important differences between the voivodships in the crop structure for potatoes, sugar beets, rape and turnip rape2.

TAB. 5: Sectors with High Concentrations as measured by the Location Quotient (LQ≥1.25)

Specification	Voivodship
Sown area of cereals	-
Sown area of potatoes	łódzkie (2002-2009), małopolskie (2000-2009), mazowieckie (2000-2003, 2006, 2008-2009), podkarpackie (2000-2009), śląskie (2000, 2002-2005), świętokrzyskie(2000-2009)
Sown area of sugar beets	dolnośląskie (2000-2009), lubelskie (2000-2009), opolskie (2000-2009), wielkopolskie (2000-2009), zachodniopomorskie (2000-2009)
Sown area of rape and turnip rape	Lubuskie (2000-2003, 2009), zachodniopomorskie (2000-2009), dolnośląskie (2000-2009), opolskie (2000-2009), kujawsko pomorskie (2000-2009), pomorskie (2000-2009), warmińsko-mazurskie (2000-2009)

Source: own calculations.

References:

[1] Central Statistical Office, http://www.stat.gov.pl

[2] ISARD, W., KUENNE, R.E. *The Impact of Steel upon the Greater New York-Philadelphia Region*, Review of Economics and Statistics, No 35, 1953.

[3] MAYER, W., PLEETER, S., *A Theoretical Justification for the Use of Location Quotients*, Regional Science and Urban Economics, No 5, 1975.

[2] In this paper: coefficient larger than 1.25 indicates a higher concentration and a coefficient below 0.75 a lower concentration.

INFLUENCE OF PROMOTION ACTIONS ON DEVELOPMENT OF A REGION (ON THE BASIS OF THE PROVINCE OF PODKARPACKIE)

Wiesław Szopiński
University of Rzeszów
wszopin@univ.rzeszow.pl

Key words:
territorial marketing – promotion – region – activity of authorities

Abstract:
The study presents an influence of promotion actions on development of the region of Podkarpacie in Poland. On the basis of theoretical considerations regarding territorial marketing in the context of promotion actions, the author depicted basic forms of promotion assigned for the region of Podkarpacie. Previous actions connected with promotion of the region are not sufficient. The province of podkarpackie should create its promotion image based on attractiveness of the region, rich tradition, friendly atmosphere as well as a great economic potential.

Introduction

Each product or service requires broadly understood promotion actions. It is essential to realise that a region also requires similar actions. The promotion of a region is a multifaceted issue which requires defining a strategic goal, preparing a long term programme of actions based on cooperation of culture sphere, economy, education, media and self-government authorities. A region functions as a company which acts in the market. The most important element in managing a region is caring for the interest and satisfying individual and collective needs of all residents.

A region must be treated as a specific marketing product having its own concrete properties, features and image. In order to sell a product, certain promotion actions must be defined. Creating a positive image of a given region is a key to success.

Promotion of a region must be one of the management priorities of a given territorial government unit. Being one of the elements of marketing mix, it effectively relies on attracting potential investors and tourists as well as it focuses their attention on a region. It also affects residents, by increasing their awareness of positive influence of investments and tourist traffic on an increase of a living standard.

Promotion in territorial marketing

Promotion is one of the elements of marketing mix. It cannot be implemented separately. In territorial marketing, promotion must be comprehended as the entirety of undertakings connected with communication of a territorial unit with its

environment, encompassing informing about a region, persuading of its attractiveness as well as encouraging consuming territorial sub products.

The most popular tools of promotion include: advertising, sales promotion, personal promotion, public relations. The classical set is currently enriched by new tools i.e. marketing events, participation in fair and promotion tools on the internet.

Advertising, according to the British Institute of Practitioners in Advertising, is passing, in the most persuasive manner, information regarding sales of a product or service at the lowest costs. The aims of advertising is: creating needs, presenting and recalling usable values of a given product, shaping preferences and providing the set of arguments opting for a choice of a given brand, providing a positive image about the advertising broadcaster [1,287]. Advertising shall be adjusted to the goals which are to be achieved by a province and to the situation in which it functions so as to optimally use their financial means.

Another tool is promotion of sales, i.e. the set of instruments creating additional and extraordinary stimulants of an economic and psychological character, increasing the level of attractiveness of a product towards the purchaser and increasing their susceptibility to purchasing [3,148]. Sales promotion is used in a short period of time. In long term period, additional benefits would have lost its significance and it would have become something subordinate to a given product. The additional offered benefits may include e.g. free visiting of a building, wining prizes.

Another element of promotion mix is personal promotion. It is a personal, direct form of marketing communication which relies on presenting an offer of an enterprise and activating sales by means of direct contacts of company employees with potential purchasers, aiming at concluding a transaction [4,209]. In territorial marketing, this instrument plays a very significant role in the process of gaining investors who may expect discussing contract provisions. Personal promotion plays also a significant role in relations with residents. As a result, authorities may acquire the opinions and suggestions regarding the region and persuade to their ideas, gaining support.

Another element of promotion strategy relies on public relations (PR). According to W. Budzyński PR is a planned, constant and conducted with consideration of systematic research results, relying on passing properly prepared information by a given entity, in order to create a desired image within the environment, allowing for greater integration with the environment and making it easier to implement its basic goals [2,11]. Particularly important in case of public relations of a territorial unit is maintaining contact with local, national and international media which reach various groups of recipients. Their task is mostly informing about the activity of a region and emphasising important (positive) events e.g. visits of known people, wining prizes, places in rankings [3,148].

Relatively new tools are marketing events. These undertakings may be considered as a specific kind of public relations that have many features of sponsorship. In case

of territorial marketing it may be stated that marketing events are any forms of activity regarding organisation of events or actions of an economic, sports, politic, scientific or cultural character, and their specificity relies on its interactive character. The aim of these actions is to create and improve awareness of the region.

Another form of promotion is participation in fair. The main advantage of this tool renders an opportunity of spatial presentation, concurrent influence on sight, hearing and smell (tasting of regional products) as well as direct contact with a customer.

At the times of great significance of knowledge and information, another significant instrument of promotion is the internet which, by means of combining images, sound and text, is far more attractive form of promotion than other.

Possibilities of applying communication instruments as well as promotion in territorial units are practically endless. Barriers in this capacity may result from low financial means, assigned for the overall marketing activity.

Characteristics of the province of podkarpackie

The province of podkarpackie is located in the south-west part of Poland and with the area of 17.9 K km2, which constitutes 5.7% of the total area of the country. The province borders with Ukraine in the east, Slovakia in the south, the province of małopolska in the west, the province of świętokrzyskie in the north west and the province of lubelskie in the north east. There are about 2.1 m residents in the area of the province. They live in 47 cities, 2164 rural locations creating 1530 of the smallest administrative units, 159 communes and 4 district towns [5,80].

The province of podkarpackie belongs to the ecologically clearest regions of Poland, which provides favourable conditions for healthy food production and development of agricultural and food processing industry. Forests, which are the natural resources of the region, cover 36.3 % of its total area (with average 28.4 in Poland). Huge and compact forest complexes are located in southern and eastern part of the province (Beskin Niski, Bieszczady) and in the south (fragment of Solska and Sandomierska Primeval Forests).

Basic promotion actions in the province of podkarpackie

Promotion policy of the province of podkarpackie is implemented by the Marshal Office of the Province of Podkarpackie. In 2004, the Promotion Programme for the Province of Podkarpackie was prepared, which constitutes a conception of actions presented in form of a document aiming at effective promotion of the region.

The aim of promotion actions of the province of podkarpackie is to support its economic development based on creating the future of new generations. The province promotes this which is the best by means of various tools.

The most popular means may encompass promotion actions within the framework of organised cultural and sports events. The most important, cyclically organised events are: World Festival of Folklore Bands, Highland Baloon Contest in Krosno, Carpathia Festival or Bread Feast. Organising competitions of a regional character also plays a crucial role in promotion the province. Such competitions as: "Tasty because Polish", "Polish Food Producer", "Quality Award of Podkarpackie", or "Innovator of Podkarpacie" and other, which are aimed at rewarding the greatest regional companies or products of Podkarpacie.

The significant role in promoting this region is played by organisation and participation in national and international fairs. In November 2010 was held 13th International Fair of Business Food Medicine, which are cyclically organised. The province of podkarpackie has also taken active part in national fairs (i.a. INVESTCITY Polish Cities Investment Fair, Poznan International Fair) and international fairs (e.g. International Tourism Fair in Berlin, Holiday and Region Fair in Ostrava).

The significant promotional function is also performed by placing advertising materials in local and national magazines as well as in media. Materials about the province of podkarpackie has been placed in such magazines as "Polish Business Magazine – Gold Towns of Poland", "Gazeta Wyborcza" - supplement "Brand of Podkarpacie" and in the publishing house "White Eagle" and in local press. A promoting film was also performed regarding the province of podkarpackie - "Europe Gates of Podkarpackie" as well as multimedia presentation relying on the greatest attractions of the province of podkarpackie in 3D format. Another popular means of promotion are printing publishing houses. They encompass folders such as: "Folklore art, handcraft, tradition", "and Active tourism", "Regional Inspirations", "Spas of Podkarpackie and Thematic Routes in the Province of Podkarpackie". Other forms include catalogues, leaflets and calendars.

At present, the most significant role is played by the internet. The province of podkarpackie has its own website - www.si.podkarpackie.pl, by means of which, they pass information both to residents as tourists or investors.

For promotional purposes, especially to mark promoting materials, a logo was established, which is a verbal and graphical sign presenting the symbol of a bird, which reads: "Podkarpackie". This stylish bird with colourful wings harmonises with emphasised values of the province of podkarpackie such as e.g. ecology, unblemished areas, healthy food and tourism.

Summary

The aim of promotion actions of the province of podkarpackie is to rationally support its economic development. This activity has to contribute to improvement of residents' identification with the region, its development and maintenance of intellectual potential of the province of podkarpackie as well generating interest in the region by investors and tourists.

Regional authorities are forced to seek original, interesting and effective manners of promoting the province. It is important that the promotion actions conducted by the Marshall Office for the Province of Podkarpackie have a constant character. Promotion of the province will be more effective only if it is implemented in the planned and coordinated manner, along with provincial authorities, district and commune government units as well as other regional institutions.

The province of podkarpackie should create its promotion image basing on attractiveness of the region, rich tradition, friendly atmosphere as well as a great economic potential. The actions performed in order to promote the region economically are still insufficient, that is why their intensification is indispensible. Creating a new image of the province of podkarpackie as a modern and economically developed region in which it is possible to live in peace, invest effectively and relax nicely, will contribute to revival and economic development of the region of Podkarpacie.

References:

[1] ALTKORN, J. *Marketing Basics*. Published by Marketing Institute, Kraków 2004, p. 287

[2] BUDZYŃSKI, W. *Public Relations*. Published by Poltext, Warszawa 2000, p. 11

[3] FLOREK, M. *Basics of territorial marketing*. Published by Poznan University of Economics, Poznań 2006, p.148

[4] MRUK, H., PILARCZYK, B., SZULCE, H. *Marketing – determinants and instruments*. Published by Poznan University of Economics, Poznań 2005, p. 209

[5] Statistical Annual Report of the Main Statistical Office 2009. Population. State and structure in the view of territory. Published by Main Statistical Office 2009, Warsaw, p. 80

[6] SZULCE, H., FLOREK, M. *Territorial marketing. Opportunities of application, development directions.* Published by Poznan University of Economics, Poznań 2005, p. 262

SELECTED PROBLEMS OF ENVIRONMENTAL PROTECTION IN DOLNOŚLĄSKIE VOIVODSHIP

Joanna Szymańska
Wroclaw University of Economics
joanna.szymanska@ue.wroc.pl

Keywords:
Dolnośląskie voivodship – environmental protection – atmospheric air

Abstract:
The study is devoted to selected problems connected with dust and gas emissions from the industrial plants in Dolnośląskie voivodship, which were most noxious for the natural environment in the period of 1998-2008. Changes in the total volume of such emissions in the investigated period were highlighted. In some cases, the study refers to the period before 1998. Major effects obtained in Dolnośląskie voivodship thanks to the ecology-oriented actions taken by the main contributors to dust and gas emissions were presented.

Introduction

Even not so long ago, Dolnośląskie voivodship took one of first places in the country in terms of the volume of dust and gas pollution introduced into the atmospheric air. This resulted mainly from industrial nature of this territorial unit. The following industrial districts are located in the area of Dolnośląskie voivodship: LGOM (Legnica-Głogów Copper District), Wałbrzych Industrial District, Wrocław Industrial District and Turoszów Industrial District. The period of system transformation of the Polish economy contributed to restructuring and modernization of some economic operators, while brought the others to bankruptcy and liquidation. In Dolnośląskie voivodship, first of all, mining of hard coal in Wałbrzych Coal Basin was discontinued. Moreover, like in general in Poland, many companies of different type, including those of the food industry, were closed. At the same time, industrial plants in other industries were opened, often basing on a foreign capital. Accession of Poland to the European Union accelerated the transformation in this scope and was also associated with the necessity to comply with the specified legal regulations, including those concerning environmental protection. All these factors had a significant impact on the changes in the quality of atmospheric air in Dolnośląskie voivodship in the investigated period (1998 - 2008).

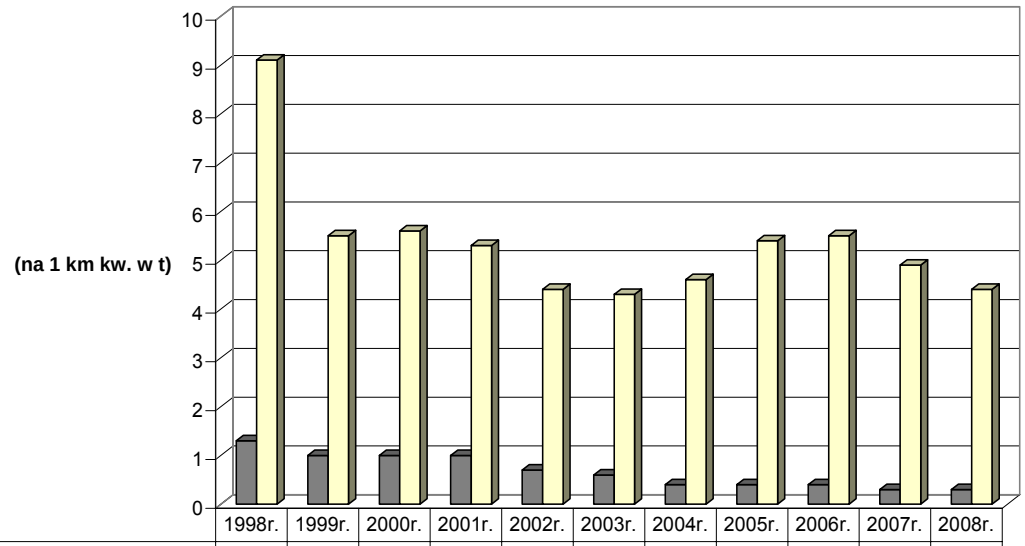
The factors determining the changes in the quality of atmospheric air

Until the end of 1990s, the largest share in the total dust and gas emissions in the area of Dolnośląskie voivodship had power companies, especially "Turów" Power

Plant, as well as combined heat and power plants located in Wrocław, Jelenia Góra, Legnica, and Lubin, and plants belonging to KGHM "Polska Miedź" SA in Lubin. As highlighted in the *Reports on the environmental state in Dolnośląskie voivodship*: "The effect of ecology-oriented actions taken in (...) plants [note: most noxious to the surrounding environment] since 1990, and especially in recent years [note: in the late 1990s and later] is a significant reduction in the emissions of pollutants into the air" [3]. In 1999, as compared with 1990, the total dust emission in this voivodship decreased by 80%, the emission of sulphur dioxide, which had the largest share among the emitted gases (excluding carbon dioxide), dropped by 45%, while the emission of nitrogen oxides decreased by 31%. Less favourable changes in the case of nitrogen oxides were caused by an increase in the level of their concentrations in atmospheric air. A similar effect occurred with respect to carbon monoxide and benzene. As it appears from the study of the Dolnośląskie Voivodship Inspectorate for Environmental Protection in Wrocław, this concerned the areas of roads with the highest traffic density. Whereas, monitoring of the precipitation chemistry showed, according to the measurements done by the Institute of Meteorology and Water Management, Division in Wrocław, that: "(...) the degree of environmental load caused by deposition of pollutants from the atmosphere continues to decrease [note: data as at the end of 2003]. The amount of pollutants released into the air decreases, but their level is still high [note: the following city and land counties were mentioned: Jeleniogórski, Lwówecki, Wołowski, Lubiński, Jelenia Góra]". The inflow of pollutants from outside Dolnośląskie voivodship was mentioned as the main reason of this situation. At the same time, attention was drawn to the fact that: "(...) currently, air pollution is more and more caused not by the industry, but by the increasing individual consumption of energy ("low" emission) [note: especially during the heating season, mainly from old inefficient municipal boiler houses and individual household furnaces] and the development of motorization" [3]. Improvement in the quality of atmospheric air in Dolnośląskie voivodship was associated also in that period with reduction in the inflow of cross-border pollution, especially from the industrialized regions of Germany and the Czech Republic (in the wind rose, there predominate the west and south-west directions). As stated by W. Michna, according to the data of the Institute for Ecology of Industrial Areas in Katowice, in early 1990s in Poland, there were 600-800 thousand hectares of soils located in different zones of pollution with metal-bearing dust. At the same time, in these areas there was conducted intensive cultivation of vegetables: "(...), which are characterized by a tendency to absorb toxic chemical compounds from the air polluted with heavy metals" [1, p. 21]. Such proceedings should be assessed very critically. In 2008, as compared with the situation in 1998, in Dolnośląskie voivodship there took place noticeable changes in reduction of dust and gas emissions (excluding carbon dioxide) from the most noxious industrial plants [4,5,6,7]. The dust emissions decreased from 1.3 t/km^2 to 0.3 t/km^2, while the emissions of gases decreased from 9.1 t/km^2 to 4.4 t/km^2 - Fig. 1. In each of the investigated years (1998 - 2008), the total gas emissions (excluding carbon dioxide)

from the most noxious industrial plants in Dolnośląskie voivodship were substantially higher than the total dust emissions. However, while dust emissions were characterized by a downward trend, gas emissions (excluding CO_2) showed multi-directional fluctuations: decrease - increase - decrease. An increase in gas emissions (excluding CO_2) occurred in 2004-2006, i.e. at the beginning of our presence in the EU structures. This can be associated with appearance of new economic operators on the market and/or with increased emissions from those operators, who had already been present on the market. The reduction in gas emissions (excluding CO_2) that was recorded later (after 2006) could result from various reasons. As it seems, the major reasons may include: a higher level of air-tight sealing of manufacturing processes, reduction of production volume, or complete discontinuation of production and liquidation of a factory.

FIG. 1. The total emissions of dust and gases (excluding carbon dioxide) from the most noxious industrial plants per 1 km^2 in Dolnośląskie voivodship for the period of 1998-2008 (t)



	1998r.	1999r.	2000r.	2001r.	2002r.	2003r.	2004r.	2005r.	2006r.	2007r.	2008r.
Pyły ogółem	1,3	1	1	1	0,7	0,6	0,4	0,4	0,4	0,3	0,3
Gazy ogółem (bez dwutlenku węgla)	9,1	5,5	5,6	5,3	4,4	4,3	4,6	5,4	5,5	4,9	4,4

Source: own study based on Statistical Yearbooks of Dolnośląskie voivodship for the period of 2000-2008. Wrocław Statistical Office and Environmental Protection for the period of 2000-2009. Central Statistical Office (GUS) Warszawa

Throughout the entire investigated period (1998 - 2008) the degree of reduction in dust and gas pollution produced by the most noxious industrial plants kept growing in Dolnośląskie voivodship. In 2008, as compared with 1998, the degree of reduction increased from 98.9% to 99.7% in the case of dust, while for the gases, excluding carbon dioxide, it increased from 78.7% to 90.4%. This was caused by

ecology-oriented actions taken in the industrial plants that were most noxious for the surrounding environment. Such actions have been carried out especially since the late 1990s. For example, in the period from 1990 to early 2003, KGHM "Polska Miedź" S.A. spent approx. PLN 300 million on protection of the environment. Construction of a flue gas desulphurization plant, which resulted in reduction of sulphur dioxide emissions by approx. 94%, as well as modernization and expansion of the Lead Shop in the "Głogów I" Copper Smelter (processing of lead-bearing dusts and sludge in all copper smelter divisions of KGHM) are among the most important projects of this period. This caused a reduction in the emissions of lead dust from the entire KGHM industrial complex by about 70%. In 1991-2003, thanks to substantial expenditures on protection of the atmospheric air, harmful gas and dust emissions from the "Turów" Brown Coal Mine, especially from the "Turów" Power Plant, decreased as much as 10 times. This was a reason that these two plants were removed from so-called "The 80 List" — the Power Plant in November 2000, and the Mine in April 2001. At the end of 2005, the "Turów" Power Plant was responsible for only 1/3 of the total sulphur dioxide emissions, less than 30% of the total emissions of nitrogen oxides, and ¼ of the total dust emissions in Dolnośląskie voivodship. In earlier years it was much more [3]. The activities in the analysed scope were supported by the national financial assistance from the National Fund for Environmental Protection and Water Management, as well as from the Voivodship Fund for Environmental Protection and Water Management of Dolnośląskie voivodship. Additional assistance came also from PHARE pre-accession funds, inter alia, from the "Black Triangle" Regional Program. In addition, a significant effect on the improvement in the atmospheric air quality had the economic crisis connected with the system transformation at the turn of 1980s and 1990s. It caused a reduction in the emissions of pollutants by approx. 30% [2]. It is worth noting that since 1998 the Voivodship Inspectorate for Environmental Protection in Wrocław has been conducting measurements of chemical composition of wet precipitation in the Polish part of the border triangle between Poland, the Czech Republic and Germany (former "Black Triangle") with the use of an air monitoring system. As it results from these measurements, in the initial period after Poland's accession to the EU: "As compared with 1998, a significant reduction in the annual wet deposition of sulphur (by 51%) was observed in this area" [3]. This is a very favourable phenomenon, because in the earlier period there were occurred an environmental disaster in Karkonosze forests, which was caused by excessive sulphur emissions.

Summary

The changes that occurred in Dolnośląskie voivodship in respect of reduction in dust and gas emissions from the most noxious industrial plants released into the atmospheric air should be evaluated as very advantageous. This is important from the socio-economic point of view. Emissions from KGHM "Polska Miedź S.A., particularly the emissions of heavy metals, posed in earlier years a threat to the health, and even life of the population living in these areas, especially children.

They had also a very adverse impact on flora and fauna. In turn, excessive emissions of sulphur dioxide and nitrogen oxides caused occurrence of very harmful acidic precipitation. Thus they contributed to socio-economic losses of various kinds. Currently, according to experts, the main factors harmfully affecting the quality of the atmospheric air are the low emissions (household furnaces) and motorization, which develops very quickly in Poland. However a certain improvement is observed also in this respect. It is important not only from the environmental (ecological) point of view, but also from the socio - economic one. Quality of the natural environment may have a significant effect on decisions concerning location of a new investment, but also bring about various derivative benefits like creation of new jobs, development of widely understood infrastructure, and inflow of new investors. All this factors contribute to improvement in the socio-economic situation of a given region.

References:

[1] MICHNA, W. (red.). *Program proekologicznego rozwoju wsi, rolnictwa i gospodarki żywnościowej do 2015 roku*. IERiGŻ Warszawa 1998 ISBN 83-86815-49-3

[2] OBRĘBALSKI, M. (red.). *Marketingowa strategia rozwoju przestrzeni.* Wyd. AE we Wrocławiu. Wrocław 1998 ISBN 83-7011-361-3

[3] Raporty o stanie środowiska woj. dolnośląskiego za lata 1999 – 2008. WIOŚ we Wrocławiu za lata 1999 - 2008

[4] Ochrona środowiska i leśnictwo w województwie dolnośląskim w latach 1999-2000. US we Wrocławiu. Wrocław 2001 ISBN 83-88634-16-X

[5] Ochrona środowiska w województwie dolnośląskim w latach 2003-2004. US we Wrocławiu. Wrocław 2004 ISBN 83-88634-16-X

[6] Ochrona środowiska w województwie dolnośląskim w latach 2005-2008. US we Wrocławiu. Wrocław 2009 ISBN 83-88634-16-X

[7] Roczniki statystyczne woj. dolnośląskiego za lata 2000-2008. US we Wrocławiu za lata 2000-2008 ISSN 1732-9671

COMPETITIVE ADVANTAGE BASED ON SHARED-KNOWLEDGE NETWORK BUILDING

Jarmila Šebestová
Silesian university in Opava
sebestova@opf.slu.cz

Key words:
cooperation – knowledge – network – interactions – structure

Abstract:
Many companies redesign their point of view on the future strategy as a result of changes on the market conditions. Business innovations, crisis environment, pressure on the cost saving would open the structure, based on knowledge sharing, to do activities better, more safe and with higher value added. Members of the network should be more flexible in decision-making process, because they should analyze their problem more in details or they avoid duplication of their activities under new instrument –"Emergency knowledge network" using. The idea is based on own research carried out in firms providing health services. The paper presents own model, based on research, to suggest the knowledge network platform and also benefits from this cooperation.

Introduction

Entrepreneurs as individual entities in the market, require resources such as labour, information, skills and capital for their businesses. They often use friends or informal contacts to acquire these and to contribute to knowledge generation. During a period of economic crisis, the role of the entrepreneur has changed. Entrepreneurship is based on decision making in an environment full of uncertainty whilst pushing businesses into an innovative but risky strategy application and finally acquiring new knowledge [4, 401].

The potential benefits of this knowledge network may be high, but network creation and knowledge storage bring other costs.

Dynamic Knowledge and Emergency Knowledge Network

SOETE and WEEL [7, 298] said: „.. *the production of knowledge will not take the form of a physical piece of equipment, but is generally embedded in some specific blueprint form ...or in human beings or even in organisations. Knowledge is, from this perspective, a non-rival good. It can be shared by many people without diminishing in any way the amount available to any one of them. ... "*

Knowledge in this type of connection has its base in "...*an output of the human spirit, transmitted by language*" [6, 391]. The concept of an integrated and dynamic model of knowledge building is based on a defining process that involves (1) the

creation of knowledge (2) the ability to share knowledge between entities. This positive knowledge based network and positive feedback between network members creates an environment full of energy for permanent innovation, which is also typical for the knowledge system [2, 99]. RAMAN et al. [5, 2] also define Emergency Knowledge as a system of knowledge, which could be helpful in making quick decisions or used for better adapting to new conditions in an uncertain environment. Emergency knowledge is defined as an output of effective knowledge network building, good communication between network members with the main goal of reaching a good level of knowledge in a short time in order to solve a critical situation, mostly in the sphere of business. Good informational sources, first rate team work among network members and confidence in each member may bring additional benefits to the *emergency knowledge base*, which will encourage competitiveness and vitality of the network in the future. Emergency knowledge, as an output of the knowledge network, may reduce the difference between the environment, type and size of business or the experience of the emergency knowledge user, this is the reason, why emergency knowledge must be standardized, based on rules of the network and simplified so as to be understandable for everybody from the hierarchy of the network. As we compare literary sources, for emergency knowledge management we mainly need two things - knowledge networks and entrepreneurial spirit for connections. Clear access to a well set up knowledge network should bring about good partnerships, new venture possibilities and ultimately helpful knowledge in emergency situations. Main reason for building this network is to learn from past mistakes and problems and reach another level so as to benefit from long term cooperation. It is not only about saving costs, but creating knowledge for business survival or being systematic and making other improvements in the management system. Create the rule: *"To learn from failures members need to be able to talk about and have safe network environment..."* [1, 67]

Case study – Emergency Knowledge model in the Health Care Business

Health care businesses are of course like normal business providing services and they share many characteristics with them. But some significant differences do exist, which is why it is important to study them. If a typical example of the information flow is: professional provider of service (general practitioner-GP) and patient as a receiver of the service, then the GP has weak linkage with the receiver of the service and payer of the service (when the service is paid from insurance) and the GP does not have a feedback about service satisfaction in this tripartite [3,14]. In these types of organizations there are well positioned highly skilled people, but the outcome of learning by innovation or knowledge activities is very limited [1, 67]

In order to understand the behaviour of physicians as entrepreneurs we must prepare a questionnaire as a primary data source to describe the integrating behaviour in general for hospitals, physicians, pharmacies and other business units, which were in the sector of health care service in 2009 with two basic hypotheses in area of 160 active respondents in the Moravia-Silesian Region. We

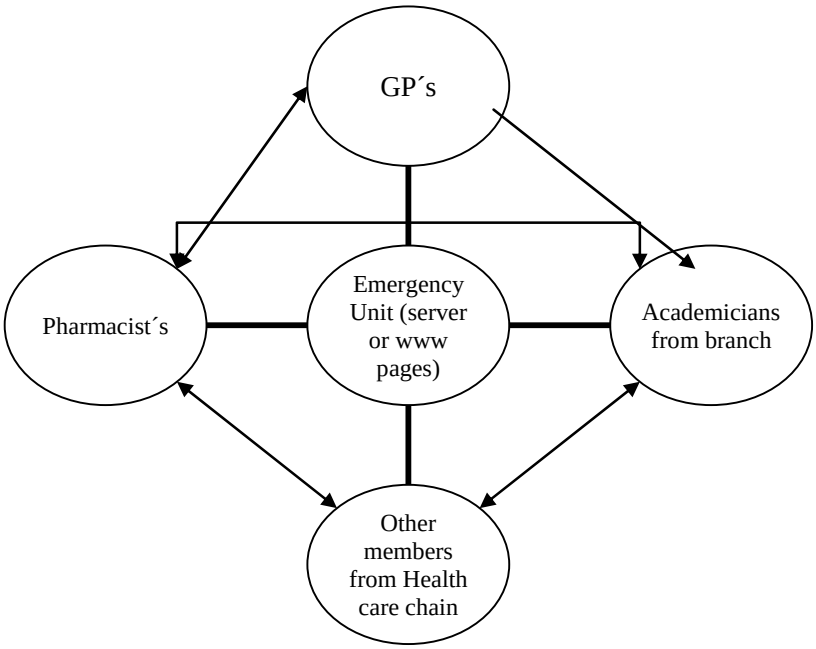
work with 2 hypothesis - **Hypothesis H1 "*Cooperation will be based mainly on informal relationships and knowledge networking will be a useful output of cooperation*".** This hypothesis is valid only for businesses of up to 100 employees. After that the situation changes, the relationship is mainly formal, the stakeholders and managers do not concentrate on cooperation in knowledge sharing and emergency knowledge network building. **Hypothesis H2 "*Cooperation is considered to be primary in the clinical chain*".** This hypothesis was not verified. Every business unit is primarily concerned with cutting costs, so the first stage of cooperation is in the health care supply chain. Because of this there is now room for recommendations about cooperation in knowledge management in small businesses.

For the integration model McDaniel's [3, 22] suggestion was used and it was accommodated in the conditions of the local environment. If we want to integrate these special types of organizations, we have to accept that in emergency situations they may need a different type of knowledge. Some of them need knowledge about business, some about nursing, some about new drugs or helpful information about problems and diseases of patients. Market forces provide an ideal environment for creating vertical cooperation structures with virtual (IT) support. There are multiple strategies and ways how to coordinate health services to provide managed care in a multidimensional business environment.

We must count on the following main parts of the system: (1) **E***lements* - benefits: practical on any level, could help assessments, enhance behaviour, could be one GP unit, or a department as a part of the Emergency Knowledge Network. (2) **I***nteractions* - dynamic, maximizing potential shows that the system is still generating new ideas, creates added value. (3) **S***elf organization* - independently creates an informal relationship between members and could help to develop some other "part" of the network. (4) **E***mergency unit* – help line or practice cases suggests more focus on decisions, running continuous learning, this is an output of cooperation, it is fundamental, not just a powerful analytical technique.

This model is based on two types of knowledge chains in these organizations (1) *Clinical chain* based on highly educated people and experience, because this work requires a high level of cognitive knowledge (2) *Health care supply chain* which covers the relationship with suppliers like laboratories, pharmacies and other suppliers of services, equipment covered by the full service (mainly outsourced service).

Fig. 1: Suggestion of emergency network based on primary research (EISE model)



Source: own research

All of the network members must believe in common values for emergency knowledge management in this field to make this network competitive: (1) Everything we do must make sense – in an emergency situation it is important to support a collective mindset and pay attention to business survival, we must also interpret the events around the situation. (2) Continuous learning-dynamic model to prevent errors or failing to provide the service. (3) Thinking about the future – generating knowledge about processes, opportunities, payers, interactions. (4) Being active and dealing with unforeseen events, because is it based on a community of practice – work in the same branch, learn faster, conversation, new introduction. (5) Effective cooperation in training, competency development.

Conclusion

This type of network is not only based on a cost saving process, but works effectively with social, well educated human capital in the business sphere and may be used as a source of innovation for medicament developers, building patient relationships and care or other types of knowledge use. The primary impulse is to be a beneficiary of networking and survive in the chosen branch or avoid making errors in decision making in care or business and competitiveness growth.

References:

[1] EDMONDSON, A. C., TUCKER, A. L. *Why hospitals don't learn from failures: organizational and psychological dynamics that inhibit system change. In* California Management Review, 2003 Vol. 45, No. 2. p.55-72.

[2] MARACINE, V., SCARLAT, E. *Dynamic Knowledge and Healthcare Knowledge Ecosystems. In* The Electronic Journal of Knowledge Management. Vol. 7, No.1 2009, pp. 99 – 110.

[3] McDANIEL, R.R., DRIEBE, D. J. *Complexity Science and Health Care Management. In* Blair, J. D., Fottler, M. D. , Savage, G. T. (eds.) Advances in Health Care Management, Stamford, CN: JAI Press, 2001, vol. 2, pp. 11-36.

[4] NIJKAMP, P. *Entrepreneurship in a modern network economy. In* Regional Studies, 37, p. 395-404, 2003.

[5] RAMAN, M., RYAN, T., OLFMAN, L. *Knowledge Management System for Emergency Preparedness: An Action Research Study. In* Proceedings of the 39th Annual Hawaii International Conference on System Sciences, 2006. HICSS '06.

[6] SIGEL, A. *Topic Maps in Knowledge Organization. In* Park, J., Hunting, S. (eds.): XML Topic Maps: Creating and Using Topic Maps for the Web. Addison-Wesley Professional, Boston, 2002. pp. 383-476.

[7] SOETE, L.L.G., WEEL, B.J. *Innovation, Knowledge Creation and Technology Policy: The Case of the Netherlands. In* De Economist, Springer ,Vol. 147, No.3 p.293 – 310, 1999.

METHODS OF FORECASTING THE PRICES ON THE CROPS MARKET IN CZECH REPUBLIC-WINTER'S MODEL

Agnieszka Tłuczak
Opole University
atluczak@uni.opole.pl

Key words:
agricultural prices – adaptation models – forecast

Abstract:
Prices and factors which influence them are measurable thus it is appropriate to apply in this case a method of time series analysis for predicting the agricultural prices in the purchasing centre. This paper presents the possibility of using the adaptation models to prediction the prices on cereals market in Czech Republic. The factor of determination and an average ex post errors of the bygone forecast has been used to verification the precision of models.

Introduction

The agricultural production, by far, is determined by bio-technological conditions as well as climate conditions which results in agricultural variations. Seasonality of production in agriculture influences many spheres of agricultural market such as the farmers' income or capital expenditure. The analysis of agricultural prices in time and the measurement of the level of seasonal variations, the ability to predict them enables the making of effective economic decisions.

Winters' adaptative model

Winter's model is used in case of time series including developing tendency, seasonal variations and accidental variations. Due to the over fitting of seasonal variations there are two types of winters model: additive model and multiplicative model. This models are presented in literature [2, 302-305; 3, 123-125;]. The estimation of $\alpha^*, \beta^*, \gamma^*$ parameters is based on experiments dealing with the minimization of the average error in the past forecast: $s(\alpha^*, \beta^*, \gamma^*) = \min s(\alpha, \beta, \gamma)$, where $s(\alpha, \beta, \gamma) = \sqrt{\frac{1}{n}\sum_{t=1}^{n}\left(y - y^*(\alpha, \beta, \gamma)\right)^2}$ and $y_t^*(\alpha, \beta, \gamma)$ is given by formula: $y_t^*(\alpha, \beta, \gamma) = F_T(\alpha, \beta, \gamma) + (t - T)S_T(\alpha, \beta, \gamma) + C_{t-r}(\alpha, \beta, \gamma)$ for additive model and $y_t^*(\alpha, \beta, \gamma) = \left(F_T(\alpha, \beta, \gamma) + (t - T)S_T(\alpha, \beta, \gamma)\right)C_{t-r}(\alpha, \beta, \gamma)$ for multiplicative model, for the forecast with one-cycle advance (where F_T – smoothened value of the variable predicted in moment *T,* S_T – evaluation of the trend growth for moment *T,* C_T – evaluation of the seasonality factor for moment *T,* r – the length of season cycle (the number of cycle phases), α – constant of the smoothness of the trend level, β – con-

stant of the smoothness for trend changes, γ – constant of the smoothness for seasonal variation).

The quality of forecast is linked to the forecast accuracy on the basis of ex post errors. Among many forecast precision measurements presented in literature the most appropriate seems to be the use of the following measurements: ME – Mean Error, RMSE - Root Mean Squared Error, MAPE - Mean Absolute Percentage Error and I^2 - Theil's index [4, 370-371; 5, 283-296].

Adaptative models and forecasts of the crops prices in Czech Republic

This paper includes the study of configuration of prices on the crops market in Czech Republic the range of research involves the time period from January 2002 to October 2010 which gives a total of 106 observations for every variable analyzed. All data comes from the Czech Statistical Office[1].

To forecast the prices of the crops the Winter's additive and multiplicative models have been used. Model parameters α, β, γ were chosen by the method which deals with the minimisation of the value of the $\sqrt{\frac{\sum_{t=1}^{n}\left(y_t - y_t^*\right)^2}{n}}$. The values of model's parameters as well as determination factor (which was used as a tool of evaluation of the quality of model's adjustment) are presented in table 1. On the basis of the value of the determination factor is has been observed that all of the models describe well the configuration of the forecasted variable in time-its value is not less than 0,950. In the case of all models the values of these factors vary slightly thus it is difficult to show a model which describes the changes of agricultural prices in time in the best manner.

TAB. 1: The parameters of winter's model[2]

		α	β	γ	$\sqrt{\frac{\sum_{t=1}^{n}\left(y_t - y_t^*\right)^2}{n}}$	R^2
Wheat	(a)	1	0,018	0,257	46056	0,954
Wheat	(m)	1	0	0,223	42861	0,957
Rye	(a)	0,985	0	0,341	43789	0,95
Rye	(m)	0,985	0	0,345	39671	0,953

a – additive y, m – multiplicative

Source: Own calculations.

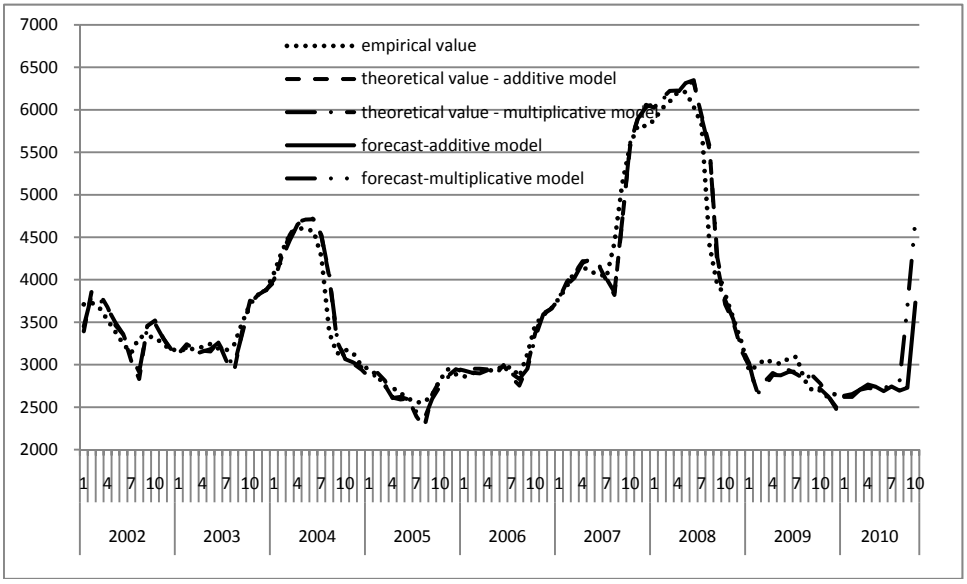
[1] http://www.czso.cz/eng/redakce.nsf/i/czech_statistical_office_rs1m

[2] All calculations were made in Statistica software.

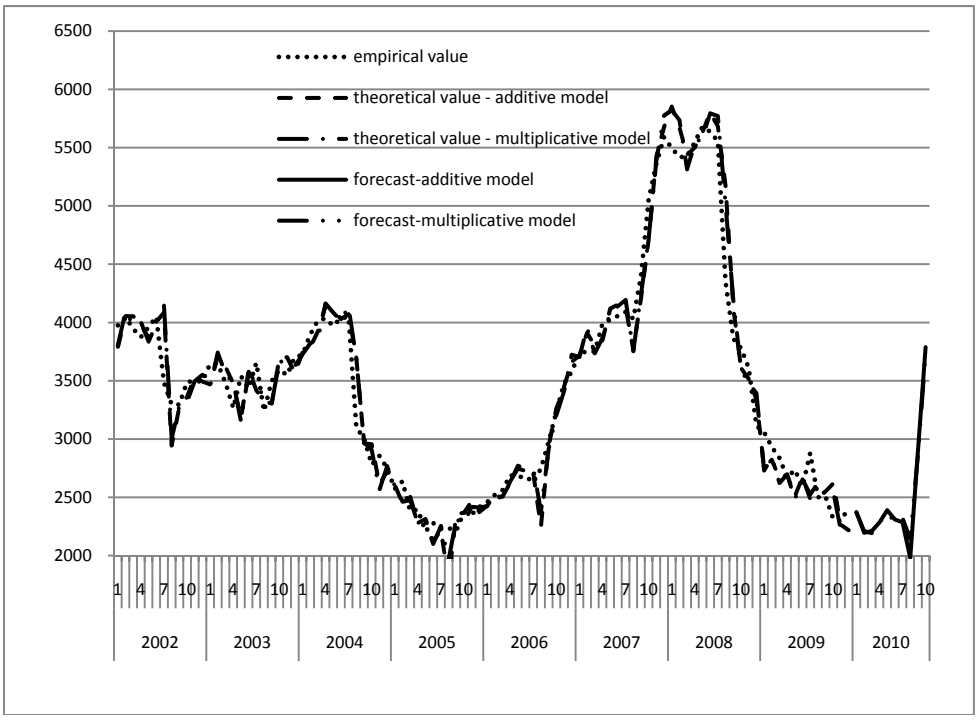
The estimated models allow for the determination of theoretical values and their comparison with their actual values pictures 1.

Picture 1. The actual and forecasted prices of wheat (a) and rye (b) based on the winter's method of equalization (CZK/t)

a)



b)



Source: own calculation.

To determine the quality of forecasts ME – Mean Error, RMSE - Root Mean Squared Error, MAPE - Mean Absolute Percentage Error and I^2 - Theil's index has been calculated. The results for each model are presented in table 3.

Forecasts designated for the variable were underestimated (a positive value of the parameter ME). Theil coefficient indicates that the overall relative error of prediction in the empirical verification period is 9-10% for the variable price of rye and 9% for the variable price of wheat. This suggests that these estimates may be regarded as accurate. The value of the relative prediction error fluctuates (MAPE) is around 5% - for both variable.

Tab. 3: The measurements of the forecast accuracy according to winter's model

		ME	RMSE	MAPE	I^2	I
wheat	(a)	174,99	294,95	5%	0,009	0,097
wheat	(m)	141,42	276,87	5%	0,009	0,095
re	(a)	117,89	258,16	6%	0,012	0,109
rye	(m)	111,09	224,56	5%	0,009	0,095

Source: own calculation.

The forecasts of both variable price of wheat and price of rye can be said to be of moderate accuracy - the value of RMSE was around 263. These values indicate that the realizations of variable differ an average is by approximately 263 CZK from calculated forecasts.

References:

[1] CZECH STATISTICAL OFFICE, http://www.czso.cz/eng /redakce .nsf /i/czech_statistical_office_rs1m

[2] BOX, G., JENKINS, G. *Time series analysis: Forecasting and control,* San Francisco: Holden-Day, 1970

[3] HOLT. C. C. Forecasting trends and seasonals by exponentially weighted moving averages, *Journal of Economic and Social Measurement,* Vol.29, No 1-3/2004, 2004

[4] WALLIS, K. *Time series analysis and macroeconometric modeling,* Edward Elgar Publishing Company, 1990

[5] SZEWCZYK, M., TŁUCZAK, A. Wykorzystanie modelu Wintersa do prognozowania jakości powietrza w powiatu Kędzierzyńsko-Kozielskiego, In: Water-Environment-Rural Areas, Vol. 10, No 3, 2010

THE DEVELOPMENT OF THE CATERING INDUSTRY IN POLAND

Stanisław Urban
Wrocław University of Economics
stanisław.urban@ue.wroc.pl

Keywords:
catering – restaurants – bars – canteens – catering outlets

Abstract:
The paper presents the development of the catering industry in Poland in the period of 1980-2009. The factors stimulating the development of the catering industry were indicated. The structure of the catering industry was also analysed. Catering in tourist facilities and the development of large catering establishments were also discussed.

Introduction

Catering is a very specific type of business activity. It is classified among food trade services and provides consumers with specific services of high economic and social importance (4, 200-211).

The development of the catering industry is a sort of a barometer of the economic situation and social mood. This is connected with the fact that mainly well-off people who are in good mood use the services of catering establishments. The economic prosperity has always be conducive to the development of the catering industry, while recession causes a drop in the interest in catering services and a decrease in their sales, which leads to bankruptcy of some catering establishments, but not always the weakest ones (3,41).

The analysis of development of the catering industry in Poland was made using the data of the Central Statistical Office. The analysis covered the period of 1980-2009.

Changes in the Polish catering industry in 1980-2009

The catering industry in Poland underwent profound changes in the last thirty years. They were caused by the transformations in the political system, which took place in Poland at that time. Also the marketization of the Polish economy contributed to speeding up the development of the catering industry. Besides, the accession of Poland to the European Union and the related period of dynamic economic development and cultural changes contributed to increased demand for catering services, which stimulated the development of the catering industry. The development of domestic and international tourism as well as increased activity of Poles and their tendency to take over the western nutrition models (1,5-16) played an important role in this case.

Table 1 presents the number of catering establishments in Poland in 1980-2009. Catering establishments include catering facilities and outlets, both permanent and seasonal, the activity of which consists in preparing and selling meals and drinks to be consumed on-site or taken away. In 1980 their total number was 25,048, and was increasing in the subsequent years to reach in 2005 the highest number of 92,072. In the next years the number of catering establishments was decreasing to reach in 2009 the number of 75,378. This drop was caused mainly by insufficient demand for catering services, which resulted from low incomes of the population and from the lack of the habit of using catering services.

TAB. 1: The number of catering establishments (as of 31.12)

Specification	1980	1995	2000	2005	2007	2008	2009
Total	25048	60845	84342	92072	86975	81131	75378
Public Sector	21004	2864	3320	2398	2237	1863	1616
Private sector	4044	57981	81022	89674	84736	79238	73762
Restaurants	3968	4857	8519	9716	12119	13731	13501
Bars	7023	23493	36436	40834	36947	33151	30519
Canteens	3227	3815	7010	6950	6128	5207	4373
Catering outlets	10830	28680	32377	34572	31779	29042	26985

Source: Statistical Yearbooks of the Republic of Poland - 1983, 2009, 2010. GUS (Central Statistical Office), Warszawa.

In the analysed period, the number of catering establishments belonging to the public sector decreased drastically. At the same time, the number of private catering establishments increased many times. In 1980 the share of the public sector in the catering industry was 82.4%, while in 2009 - only 2.1%. Thus there took place privatisation of the catering industry, the intensification of which fell to the period of 1980-1995. It should be noted that the number of catering establishments belonging to the public sector continues to decrease. On the other hand, private catering is developing dynamically.

In the period of 1980-2009 the number of restaurants in Poland increased. At present, the most frequently occurring form of catering establishments in Poland are bars. Their number increased in the period in question. Canteens are the least popular form of catering. Their number increased, but to a relatively small extent. The trends to liquidate canteens are connected with reduction of company outlays on social purposes and replacement of canteens by bars, catering outlets and internal shops in companies. The number of catering outlets was growing rapidly.

The presented changes in the number of different forms of catering establishments substantially modified the internal structure of the catering industry in Poland. In 1980 it was as follows: restaurants 15.8%, bars 28.9%, canteens 12.9%, and catering outlets 43.3%. In 2009, the following structure of the catering industry was

formed: restaurants 17.9%, bars 40.5%, canteens 5.8%, and catering outlets 35.8%. So the share of bars and restaurants in the structure of the Polish catering industry increased. On the other hand, the role of canteens and catering outlets decreased. This means that the development occurred mainly in establishments of a higher category, which were well furnished both with kitchen facilities and places for consumption. The presented figures confirm both the quantitative and qualitative development of the catering industry in Poland.

Catering in tourist establishments

Catering establishments in tourist collective accommodation establishments (table 2) are a specific category. Their number increased in 1995-2008 and was the highest in 2000. The number of restaurants kept increasing to reach 2375 establishments in 2008. The number of bars increased and decreased to reach 2382 establishments in 2008. The number of canteens fluctuated to reach 1951 establishments in 2008. There were 811 catering outlets in 1995, while in 2008 there were 809 such establishments - similarly as in 1995.

TAB. 2: Catering establishments in collective tourist accommodation establishments

Specification	Total	Restaur.	Bars	Canteens	Catering outlets
Total 1995	6320	986	2184	2339	811
2000	8486	1788	2734	2814	1150
2005	6873	1951	2266	1910	746
2007	7196	2233	2344	1925	694
2008	7517	2375	2382	1951	809
Hotel establishments	4021	2004	1417	311	289
including: hotels	2673	1451	996	88	138
motels	165	89	45	2	29
boarding houses	322	79	94	128	21
other hotel establish.	861	385	282	93	101
Other establishments	3496	371	965	1640	520
excursion hostels	62	18	22	16	6
shelters	61	4	12	14	31
youth hostels	108	3	5	88	12
including school youth hostels	86	1	3	74	8
camping sites	131	10	47	11	63
tent camp sites	73	5	7	16	45
holiday centres	1181	71	329	666	115
training and recreational centres	644	81	213	295	55
creative arts centres	33	6	7	17	3
holiday dwellings	220	24	70	39	87

Specification	Total	Restaur.	Bars	Canteens	Catering outlets
overnight accommodation facilities in weekend and holiday recreational centres	16	1	7	4	4
other establishments	967	148	246	474	99

Source: Statistical Yearbooks of the Republic of Poland. 1983, 2009, 2010. GUS (Central Statistical Office), Warszawa.

The predominating form of catering in hotels, motels and other hotel establishments constituted restaurants. Bars were the second most popular form followed by catering outlets, while canteens were the least popular. On the other hand, in boarding houses, there predominated canteens, followed by bars, restaurants and catering outlets.

There are different structures of internal catering in various types of tourist collective accommodation establishments. Very large differences occur in this respect. For example, in excursion hostels there predominate bars, followed by restaurants, canteens and catering outlets. The most frequently occurring form of catering establishments in shelters are catering outlets and then, in descending order, canteens, bars and restaurants. In holiday centres there predominate canteens, followed by bars, catering outlets and restaurants. In creative arts centres the most common are canteens, and then bars, restaurants and catering outlets. The most popular catering establishments in tent camp sites are catering outlets, followed by canteens, bars, and restaurants.

The following factors decide about the structure of internal catering in tourist establishments: wealth of customers, eating habits, historical determinants, the time assigned for meals, and conditions in the premises.

Large catering establishments

There was the total number of catering establishments employing over 9 people in 2005 and 2008, countrywide and in individual voivodships, broken down into different forms of catering establishments analysed. The total number of such establishments in Poland increased. The increase in the number of companies concerned mainly restaurants and catering outlets, whereas the growth in the number of large bars was inconsiderable. The number of canteens decreased considerably. Bars were the most popular form of large catering establishments in 2005, while in 2008 restaurants took the first place. The least popular in 2005 were catering outlets, while in 2008 - canteens. The highest number of large catering establishments operated in the following voivodships: Mazowieckie, Ślaskie, Wielkopolskie and Dolnośląskie. These are the most urbanized voivodships, which are also attractive for tourists. The voivodships with the lowest number of large catering establishments are Świętokrzyskie, Lubuskie and Opolskie.

In 2005-2008 the biggest increase in the number of large catering establishments took place in the following voivodships: Zachodniopomorskie, Mazowieckie, and Małopolskie. However, the number of such establishments decreased in the Lubuskie, Opolskie, Podlaskie and Śląskie voivodships. This means that the catering industry develops mainly in the regions abundant in catering establishments, whereas in the regions poorly covered with catering establishments there were trends to liquidate large catering facilities.

Conclusion

In the last twenty years a dynamic development of the catering industry took place in Poland, which is proved by the increase in the number of catering establishments. At the same time, the structure of the catering industry was changed. First of all, the catering industry was privatised. Bars are the main form of catering establishments. In the analysed period, the share of bars and restaurants in the total number of catering establishments increased, while the share of canteens and catering outlets decreased. However the development of catering establishments in tourist establishment should be emphasized, as it has a considerable impact on raising the tourist attractiveness of individual regions and places. In Poland in the recent period there was also observed a development of large catering establishments employing over 9 people.

The coverage of Poland with catering establishments is differentiated. The dynamics of catering development also differs in individual voivodships, which is caused by many factors. Major factors affecting the development of the catering industry include consumer incomes, social & economic profile of a region, eating habits, tourist values of a region, entrepreneurship of the population, the existing state of the catering industry, etc.

References:

[1] HASIK, J., GAWĘCKI, J. *Żywienie człowieka.* Vol. 2. Żywienie człowieka zdrowego i chorego. PWN, Warszawa 2007, p. 5-16, ISBN 978-83-01-13-948-3

[2] Statistical Yearbook of the Republic of Poland. GUS Warszawa 1982-2009, ISSN 1506-0632

[3] SALA, J*. Marketing w gastronomii*. PWE Warszawa 2004. p. 412. ISBN, 83-208-1500-2

[4] URBAN, S., SZLACHTA, K. *Ekonomika i organizacja handlu żywnością*. Publishing House of Wrocław University of Economics, Wrocław 2009, p. 200-211, ISBN 83-7011-393-1

DETERMINANTS OF INTERNAL COMPETITIVENESS IN ENTERPRISES BASED ON FOOD INDUSTRY IN PODLASKIE VOIVODSHIP IN POLAND

Urszula Widelska, Grażyna Michalczuk
University of Finance and Management in Bialystok, University of Bialystok
widelaskau@poczta.onet.pl, michal149@vp.pl

Key words:
internal competitiveness – food industry – quality of food – brand of food – relations with customers

Abstract:
The paper undertakes an issue of strengthening competitiveness of enterprises in food industry based on internal potential. The role and scope of internal potential is evolving. At present, its specificity is not limited to personnel and technical equipment only, but is focused on creating long-lasting relationships with target markets and using innovative capabilities to a larger extent. The paper is based on the results of research concerning the analysis of food industry enterprises in Podlaskie Voivodship.

Introduction

The paper discusses a problem of strengthening enterprises' competitiveness of food industry based on internal potential. The role and scope of internal potential is evolving.

At present, its specificity is not limited to personnel and technical equipment only, but is focused on creating long-lasting relationships with target markets and using innovative capabilities to a larger extent.

Internal competitiveness is related to internal potential of an enterprise. It refers to using the potential to increase the ability to compete. Internal potential can be developed through:

- the relationships with customers and suppliers,
- the quality of products,
- the brand,
- the level of investments and innovative potential.

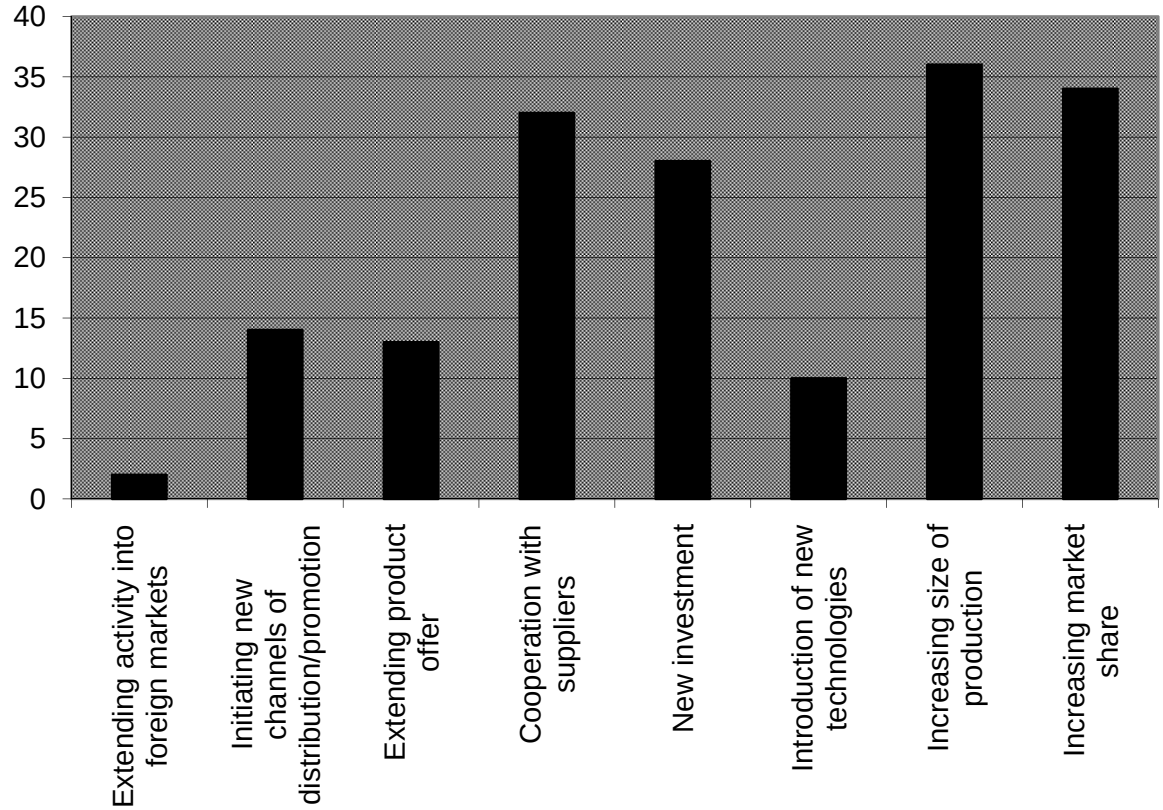
The aim of the study is to present the essence of internal competitiveness in companies of food industry. Conclusions are supported by the results of research conducted within the analysis of key sectors of Podlaskie Voivodship.[1]

[1] The aim of conducted research was to present in detail the role and importance of food industry in Podlaskie Voivodship. The object of the research were enterprises of the following sectors: meat processing and preservation and production of meat products (PKD 2007 10.1), vegetable and fruit processing and preservation (PKD 2007 10.3), beverage production (PKD 2007 11). The report was prepared on the basis of already existing data

The quality and brand as factors of internal competitiveness of enterprises in Podlaskie Voivodship

As the research has shown, enterprises of food industry in Podlasie attribute the highest importance to the quality of their products and quality of customer service in the sphere of using internal potential. It may indicate that these two components are not treated separately, because high quality of service affects the quality of product reception on more than one occasion. The quality is treated as the main condition for development (Graph 1).[2]

Graph 1: Strategic development directions of enterprises in the opinion of respondents



Source: [4].

and as well questionnaire surveys on the sample of 100 enterprises of the sector. The complete report on research results can be found in: [4].

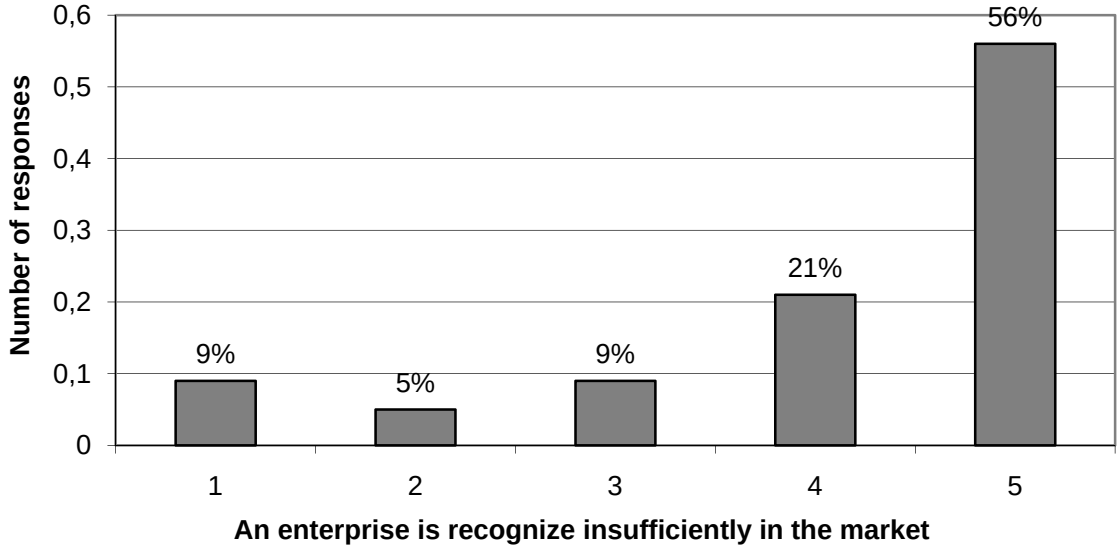
[2] The quality of food product is a broad category. It concerns not only physical characteristics, but also benefits resulting from its usage. As it turned out, customers are interested in those products which are good for health, shaping a figure, improving appearance and quality of life. Changes of packaging and appearance of product itself is also important, what has an influence how food product is perceived by a customer from the quality point of view [2, 38–40]. Attention should also be paid to processes of standardization of product quality in relation to globalization processes (more can be fund in: [6, 239 – 247).

An important source of an enterprise is its brand. Examined companies emphasized the significance of already owned product and company brands, which are main determinants of loyalty attitudes of their customers in dynamic market. They also pointed out the necessity to increase marketing abilities of a company, particularly those ones connected with creating product brands. A good brand is less sensitive to price fluctuations, and brand products are easier to notice by customers. Brands help in creating long-lasting relationships with purchasers as well, and as a consequence in building their loyalty attitudes, and thus affect positively sales profitability.

Relationships with customers and suppliers as factors of internal competitiveness of enterprises in Podlaskie Voivodship

A vital element of relation capital is developing relationships with the environment, what is reflected by the importance of a company recognition in the market. For 56% examined enterprises of food industry it is the most important factor. A high importance of this factor, assessed its importance at 4, was indicated by 21% examined enterprises. It seems alarming that for 23% examined companies an issue of a company recognition in the market environment is not significant. It might prove unsatisfactory level of knowledge on the importance of relation capital in their development (Graph 2).

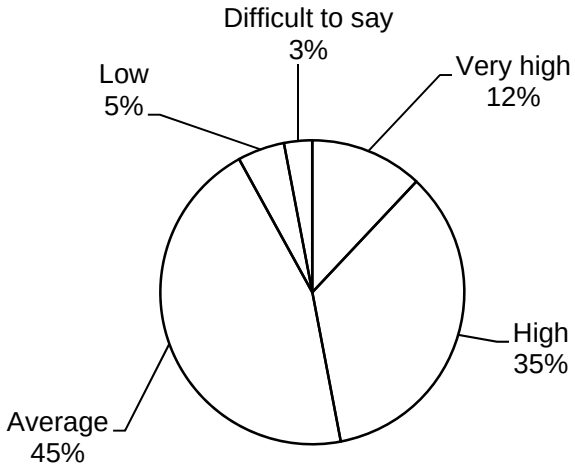
Graph 2: Assessment of the influence of company recognition in the market on development of food industry in the opinion of enterprises in Podlasie



Source: [4].

The assessment how companies in food industry perceive the importance of their dependence on suppliers' market is also significant from the perspective of the analysis (Graph 3). About 47 % examined enterprises of food industry indicated on high degree of dependence from their suppliers. It undoubtedly proves their awareness of the importance of the impact connections with suppliers have on functioning of companies in the examined sector. At the same time, they also indicate that the main barrier in creating close relationships with suppliers is their dispersion and high shipping costs. Such opinion is presented by 59% examined enterprises.

Graph 3: Assessment of a degree of dependence on suppliers' market in the opinion of examined enterprises



Source: [4].

Level of investments and innovative potential as factors of internal competitiveness of enterprises in Podlaskie Voivodship

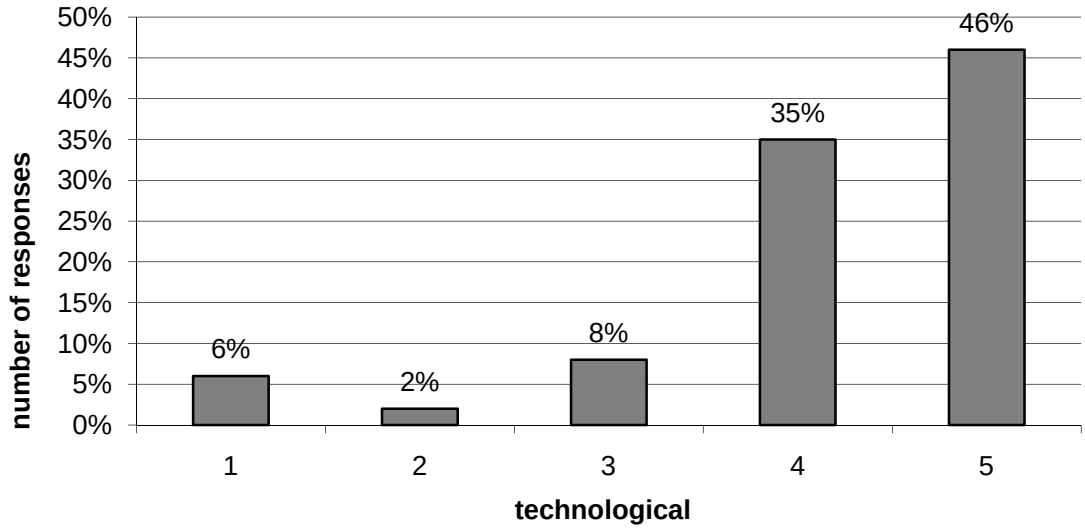
The research also shows that attribution of investments to improve manufactured products and modernize machines for their production plays an important role as well. It is reflected in the most important directions of companies' development in the perspective of immediate 2-3 years. Most obtained responses indicate increasing size of production, increasing market share, cooperation with suppliers and new investments.

Another important factor influencing internal competitiveness are investments, and thus the level of expenses on investments and development.[3] A significant group of

[3] Outlays on innovative activities in enterprises producing food and beverages in Poland in years were diversified. The main barrier in development of innovations are insufficient own resources of companies

examined enterprises, i.e. 81%, recognized this factor as a barrier which restricts development of analyzed sector to a very large extent. For 19% enterprises this barrier to influence the sector is of lower importance. Entrepreneurs emphasize that technological factors also have influence on development and competitiveness of a company. According to 83% examined enterprises insufficient degree of technological development may be a significant (35% responses) and even a very significant barrier (48% responses) to development and competitiveness of entities. The remaining group believe that this factor is not an important restriction in development (Graph 4).

Graph 4: Assessment of technological factors as barriers hindering appearance and development of competitive enterprises in food industry



Source: [4]

The research confirms the importance of a technological factor, which may decide on the quality of food products on one hand, and on the other hand on the level of expenses in an enterprise.

Innovations, not only with reference to food industry, are a significant factor which determines the ability of enterprises to compete in the market. In the analysed sector they are usually come down to creating new product variants or being a result of an implemented imitation strategy.[3, 12] According to many experts the second solution is characteristic for domestic food industry.[7, 11] It turns out that companies that represent this sector perceive themselves as innovative, however this innovative character is very rarely conditioned by cooperation with external institutions, such as e.g. universities.[5, 84-85]

in this sector. The highest level of expenses on innovations was observed in 2006. At that time enterprises offood industry, employing more than 49 people, spent on innovations a little more than 2.5 billion złotys (by over 40% more than in 2003 [1, 86].

Summary

As the analysis has shown, enterprises of food industry in Podlaskie Voivodship treat internal potential as an important source of developing competitive advantage. The quality, brand and innovative capabilities decide about product recognition by target markets. However, the research describes rather enterprises' preferences, not entirely their real activities. The enterprises' attitude however allows to believe that the importance of marketing as a source of market advantage is increasing, but marketing rather in a traditional dimension. It should be admitted that the role of connections with customers treated as a resource of a company, not only as an element of the environment, is increasing.

References:

[1] GRZBOWSKA, B. Nakłady na działalność innowacyjną w przemyśle spożywczym w Polsce. *Zeszyty Naukowe Uniwersytetu Szczecińskiego*, 2009, nr 28, 86 s., ISSN 1640 – 6818

[2] MRUK, H. Strategie konkurowania na rynku produktów spożywczych. *Przemysł Spożywczy*, 2008, nr 8, 38 – 40 s., ISSN 0033-250X

[3] PENCONEK, M. W Polsce jest mało istotnych innowacj*i. Fresh&Cool Market*, 2009, nr 4, 12 s., ISSN 1898-0864

[4] PRZYGODZKA, R., KOZŁOWSKA-BURDZIAK, M., DĘBKOWSKA, K., SADOWSKI, A., WIDELSKA, U. *Analysis of Key Sectors Of Podlaskie Voivodship, Food Industry*. Wyd. WUP in Białystok, Białystok, 2009, ISBN 978-83-62258-01-7

[5] SZUBIGA, K., PRYMON, K. Konkurencyjność i innowacyjność przedsiębiorstw przemysłu mięsnego. *Żywność. Nauka. Technologia. Jakość*, 2009, nr 3(64), 84 – 94, s., ISBN 978-83-7242-504-1

[6] WYSOKIŃSKA-SENKUS, M. Ewolucja standaryzacji i zarządzania jakością w sektorze gospodarki żywnościowej na świecie a proces globalizacji. *Roczniki Akademii Rolniczej w Poznaniu* , 2006, nr CCCLXXVII, 239 – 247 s., ISBN 83-7160-426-2

[7] ZIENTEK-VARGA, W. Innowacyjność – warunek konkurencyjności. *Fresh&Cool Market*, 2009, nr 4, 11 s., ISSN 1898-0864

MARKETING CONDITIONINGS OF SERVICE MICRO-ENTERPRISES COMPETITIVENESS (BASED ON PODKARPACKIE VOIVODESHIP)

Bogdan Wierzbinski
University of Rzeszow
bowie@univ.rzeszow.pl

Key words:
marketing activities – competitiveness – micro-enterprises

Abstract:
The study presents approach to increasing competitive activities based on micro-firms from service sector in Podkarpacie province. Successful micro, small and also medium firms is one of the most important factors of Podkarpacie region (where more than 2 mln people live) development with fast growing capital of that region. Fast changing external circumstances and conditions of delivering right product and services to right customers demands marketing management approach to obtain defined goals.

Introduction

Increasing competition makes companies strive to achieve competitive advantage. The effectiveness of marketing activities in a company depends mainly on the well recognized customer needs and wants and its behavior in the market. The market defined as set of actual and potential customers and its behavior determining the set of economic processes and appropriate tools of marketing - mix. Nowadays firms especially micro and small need to meet requirements of the market and adjust their strategy to high level of competition on the way of adaptation to the expectations of target markets. Proper marketing strategy gives an opportunity to develop in a competitive world which changes rapidly and still demands new competitive advantages which can be transformed into effective demand. It is necessary to know all external and internal factors which take advantages on the local market and try to transform goals and activities into wilder global context.

Marketing management process in the context of competitiveness increase

Marketing is the study of exchange processes especially those with goods and services associated, marketing is the human activity directed at satisfied needs and wants, can be also defined as management process in which it is possible to identify and anticipate satisfaction of customers. Based on the literature it is possible to define these activities as a managerial process about obtaining goals through creating and exchanging value on the market place [1,2-3].

The starting point for the marketing management process should be the corporate strategy. Defining that process we should take into consideration many approaches

to explaining that activity on the market, a marketing strategy is a fundamental model of present and planned objectives we need to obtain and resources related with them which are available, interactions of an organization with markets, competitors and other environmental factors.

"This definition suggests that a strategy should specify what (objectives to be accomplished), where (on which industries and product markets to focus) and how (which resources and activities to allocate to each product/market to meet environmental opportunities and threats) in order to gain a competitive advantage".

We can recognize three major levels of strategy (corporate strategy, business-level strategy, functional strategies) but in small, single-product companies, corporate and business-level strategies issues merge [2,2].

The company undertakes many different activities to meet the needs of buyers. These activities lead to the creation and development of the marketing mix tools, which will effectively move products to customers, and company profit. Define the marketing mix tools, there is need to take under consideration business factors that are combined together in order to meet the needs and wants of buyers. It includes the concept of product produced and distributed to places where is possible to buy it, promoted in order to inform potential buyers about it and offered at acceptable price to buyers and to ensure reimbursement of costs and profit [3,33]. Classical conception of marketing-mix as a set of 4P (product, price, place, promotion) is most recognizable but really important in real market activities.

Price can give consumers information about the product and service to reduce the risk of purchase, pay more attention to the brand, which is known on the market, and which is associated with high quality, so in this case are willing to pay more [4,141]. Next one really important element we have to put into strategic approach is distribution, for marketing-oriented companies to have a product represents only a starting point for further action, because even the best product, sold at reasonable prices and well promoted will not bring expected profit company if it is not offered to the consumer in accordance with its needs and the appropriate time and place [5,240]. Describing process of communication (promotion-mix: advertising, personal selling, additional promotion; public relations and publicity; visual promotion) there is need to create and reinforce attitudes among buyers, which leads to a favorable reception of the products and trying to change indifferent attitude as to product into positive reaction [6,299].

The essence of marketing is in the fact that enterprises, organizations, institutions, people are guided in their activity primarily market premises. Verifier and the main basis for decision-making is the market and the customer. The company examines the needs and preferences of buyers and only on this basis, decide on the manufacture of a product or the provision of certain services.

Competitiveness Concept of activities of micro and small enterprises;

To better understand the processes which increase competitiveness of micro-companies empirical research was conducted in the spring of 2010 on the sample of 69 micro enterprises (which employ less than 10 people) in the services sector of south-eastern Poland. Analyzing the available secondary sources, a questionnaire was designed which helped to obtain information on the factors associated with implemented marketing activities and their impact on improving competitiveness.

The dynamic development of the market, forces companies to operate in highly competitive environment. In a market economy it is no longer sufficient just to examine and understand the needs of the buyer, to produce products to meet their requirements and establish a competitive price. There is a need to reach the consumer with information about product or service and convince him to buy it, especially since customers increasingly do not buy the product, but the value and lifestyle. There is possible to recognize unification of advertising messages on a global scale and increasing consumers' education in that field with process of decreasing their loyalty to the company. In order to effectively operate in these conditions, the company should stand out among the other participants in the market, create its own image in the minds of buyers [7,7].

Table 1 shows activities, which were recognized by entrepreneurs as really important marketing activities in the process of delivering products and services.

TAB. 1: Importance of marketing activities which increase competitiveness amongst micro-firms (1-least, 10 most)

Variable	Mean	Median	Variance	Standard deviation
Reputation	8,03	8,00	3,12	1,77
Efficiency of marketing activities	7,29	8,00	4,50	2,12
Corporate culture	7,67	8,00	2,73	1,65
Brand and its awareness by consumers	7,41	8,00	4,51	2,12
Complex system of distribution of products / services	7,19	7,00	6,48	2,55
Customer loyalty	7,83	8,00	3,29	1,81
Innovation	7,42	8,00	4,63	2,15

Source: Own calculations based on survey data.

Analyzing questioners gathered during empirical study it is necessary to draw attention to the field of marketing activities, which in the opinion of business owners have a significant impact on raising the capacity to compete in the services sector of micro-enterprises in Podkarpacie voivodeship. Main attention should be

paid to the fact that the reputation of companies turns out to be the best-rated factor in raising the competitiveness of enterprises in the environment (the average score was 8.03, while the standard deviation of 1.77 - suggests that the respondents did not differ). A very important part of improving business position on the competitive market is how to increase customer loyalty (mean 7.83). Companies try to identify their clients by using mainly loyalty programs (eg. being a formal member of a club, additional benefits they have chance to obtain after buying process, etc.). Influence the pro-active customer relationship between firms is related with some kind of corporate social responsibility strategy of the firms. Working on that, firms obtaining competitive advantage and establishing interaction between organization and the community (taking into account social and environmental impacts, valuable employees as well as enhancing the company image and reputation). Very detailed analysis was carried out to identify the reasons why consumers do not return to the company after purchasing process; problems experienced in the initial period of cooperation - if a problem arises between firm and customer during 3 - 6 months of work with the company, it may result in forming contacts and provoke the customer to leave [8,157]. One of the main causes of loss of customers is the lack of a formal customer service system and lack of strategies for best customers. Not so important among the respondents is complex distribution system of products and services (mean 7.19, standard deviation 2.55). That shows business owners, however, that despite the high rating it does not seem to be the most important element of marketing strategies relating to the distribution of products and services. However, it appears that this is a very important element of building competitive advantage based on a well organized marketing channel, and the participating firms in the frame of distribution system. Many of micro entrepreneurs build marketing system across the border especially with Slovakia, good neighborhood seems to be good solution for increasing market and a way to achieve firms' goals.

Summary

All marketing activities among micro-firms in hyper-competitive world are focused on creating and maintaining main competitive advantages (resource, position, skills, etc.). Firms in Podkarpacie province pay attention to really important factors related with long term relations with their customers which are based on building corporate culture and reputation of businesses. Significant factors like innovation and customer loyalty have influence on marketing strategy and planning long term development in the wider social context.

References:

[1] ADCOCK D., HALBORG A., ROSS C. *Marketing: principles and practice* (fourth edition). Prentice Hall, Essex, p. 2-3.

[2] HOLLENSEN, S. *Marketing management, relationship approach*. Prentice Hall, second edition, Essex, 2010, p. 2-3.

[3] MICHALSKI, E. Marketing. *Podręcznik akademicki. PWN*, Warszawa, 2003, s.33

[4] ZAWADZKA, A. M. *Orientacja cenowa nabywcy i przywiązanie do marki produktu*, Nauka, PAN,2007, Nr1,s.149

[5] LIMAŃSKI, A., ŚLIWIŃSKA, K. Marketing. *Zasady funkcjonowania przedsiębiorstwa na rynku*, Difin, Warszawa, 2002, s. 240

[6] MICHALSKI, E. *Marketing. Podręcznik europejski*, PWN, Warszawa, 2003, s.299

[7] DATKO, M. *Sponsoring: strategia, promocja, komunikacja*, Wyższa Szkoła Komunikacji i Zarządzania, Poznań, 2003, s. 7

[8] BELK, J. *Situational Variables and Consumer Behaviour*, Journal of Consumer Research, 1975, nr 12, s. 157

THE REGIONAL INNOVATION PARADOX IMPLICATIONS FOR POLISH ECONOMY

Anna Wildowicz-Giegiel
University of Białystok
awildowicz@interia.pl

Key words:
regional innovation paradox – innovativeness of Polish economy

Abstract:
The development of the innovation concept, as well as the literature on endogenous growth theory and competitive advantage, has led to the emergence of a consensus on the impact of innovation on economic prosperity and competitiveness. Growing international competition and integration strengthens at the same time the importance of the regional dimension. In accordance with this perspective results obtained in innovation activity significantly depend on the institutional framework, the nature of firm relationships, learning capability or R&D intensity. Undoubtedly, regional differences are observed in case of majority of the factors discussed above. They are closely associated with the phenomenon of regional innovation paradox. This paper presents the regional innovation paradox in the context of Polish economy as one of the basic hindrances which impede a real convergence across regions.

The nature of innovation in a contemporary economy

One of the most known definitions of innovation was brought into economic literature by Schumpeter who in „Theory of Economic Development" regarded innovation as the commercial or industrial application of something new – a new product, process or method of production; a new market or sources of supply; a new form of commercial business or financial organization [11]. The conception of innovation has evolved over the last forty years. During the 1950s, innovation was most often considered as a discrete event resulting from knowledge developed by isolated inventors and isolated researchers. However, currently innovation is perceived as the result of the process which success rests upon the interactions and exchanges of knowledge involving a large diversity of entities in situations of interdependence. It seems to be obvious that innovation involves the application of knowledge in creative activities. What is more, the open innovation model assumes that companies use internal and external sources for innovation opportunities. The external knowledge comes from customers, suppliers, competitors, universities or research and development units, while the source of the internal knowledge is connected with own ideas and activity undertaken on one's own. Among many changes in companies' innovation processes which have been observed in recent years, particularly worth stressing are [7]:

- Companies exist in a more open model of innovation that makes more extensive use of research results from external sources in public or private sector.
- Innovation is perceived as a result of cooperation of users of products and services, both firms and individual consumers that are increasingly able to innovate themselves.
- The globalization of R&D and innovation lead in consequence to the process of extending innovation beyond national boundaries and make R&D become more internationally mobile, while industry-science relationships are globalizing and new global players emerge.
- R&D and innovation are increasingly linked to business strategy, thanks to which firms actively seek financial returns from their R&D investments.
- It is widely accepted that propensity to innovation analyzed at micro-, mezo- or macroeconomic level is closely tied to intellectual capital. It means that human, organizational and social capital and their interrelationships selectively influence incremental and radical innovation capabilities.

On the basis of undertaken characteristics of innovation it can be underlined that innovation is not a simple linear combination of component factors or limited within the boundaries of firms, as it may happen within an entire supply chain network or even be entirely outsourced. It is also emphasized that the role of institutions in innovation processes is getting more important. This way of thinking has only recently entered mainstream research. The concept of institutions includes not only 'hard' institutions such as individual and corporate actors or public R&D labs but also 'soft' more intangible institutions. The second group is represented by trust, habits and customs, along with norms and values. Taking it into account, it can be said that at the mezoeconomic or regional level an economic and institutional environment which permits the creation, dissemination and adoption of knowledge, either in codified form or tacitly, is viewed as an essential means of increasing the competitiveness of regional economy. Institutional framework shapes the innovation system at regional level. Its efficiency determines the results obtained in innovation activity. More favorable innovation environment increases the chance to accelerate and reduce regional discrepancy in economic growth.

The occurrence of the Regional Innovation Paradox

Innovation identified with technological knowledge, has always been recognized as a key factor of economic growth and community development. The regional context in economic analysis began with Kaldor's research, (1970) in which there was no knowledge diffusion, with innovation limited to specific clusters of economic activity. The observation of imperfect knowledge diffusion led to arguments of how long it would take for a nation or region to catch-up. Of course, in economic literature there has been a large body of research which has formulated a series of theoretical concepts used effectively in order to understand the regional differences in innovation. Kaldor as one of the first researchers specified the principle of cumulative causation with more realistic assumptions of imperfect mobility and

slow knowledge-based diffusion of technology. In 1991 Krugman pointed out the significance of geographical space determining the technology clusters in large urban regions. Other researchers, in turn, have undertaken the problem of knowledge spillovers that operate at different rates of diffusion because of technology gaps. It is commonly known that knowledge spillovers are very limited when regional disadvantages abound, creating isolated small technological systems that do not reach critical mass. It is also worth mentioning that the first regional evolutionary perspective came from Allen and Sanglier (1978). According to them, innovation was perceived as a dynamic change creating fundamental uncertainty [1]. Next step in the process of innovation theory development was made by economists who adopted systems approach to innovation. In accordance with such point of view, the idea of National and Regional Innovation Systems appeared. As a result of the development of the regional innovation systems literature there is a growing consensus about the importance of government-industry-university relationships. Their mutual relationships and ability to effective cooperation in the context of regional innovation systems is seen as central to resolving the regional innovation paradox [8].

What does the regional innovation paradox mean? First of all, it can be said that the concept of regional innovation paradox refers to the apparent contradiction between the comparatively greater need to spend on innovation in lagging regions and their relatively lower capacity to absorb public funds earmarked for the promotion of innovation and to invest in innovation related activities compared to more advanced regions. Its explanation lies in the nature of the regional innovation system and the institutional attributes of these regions. Business sector in lagging regions often articulate little demand for R&D. In addition, a tradition of cooperation and trust both among firms and with other regional actors, such as universities, public R&D units or regional authorities seems to be relatively poor. At the same time, the regional research and technological infrastructure does not meet regional needs. To sum up, there is a lack of integration between regional supply (of innovation services) and demand for innovation which are responsible for the problem of the regional innovation paradox [8]. Less developed regions face particular challenges in promoting and developing innovation potential. Getting at the root of innovation processes in lagging regions at least some of their serious weaknesses can be distinguished [1]:

- Weak learning capabilities – expression of which are e.g. a low level of education, a low skill base, poor mobility in labor, a limited worldview, an aversion to knowledge sharing.
- Low density of institutions – not only formal concerning poorly developed financial systems or lack of dynamic business services sector offering services to promote the dissemination of technology, but also informal which, for example, have an adverse influence on entrepreneurship, a propensity to risk, a knowledge transfer between business, government and education sector.
- Large technology gaps caused by regional disadvantages seriously hamper knowledge spillovers.

- Low intensity of innovation- sectored specialization in traditional industries with little inclination for innovation, dependence on small firms without the symbiotic links with large entities, little participation in international R&D networks.

Diagnose of innovativeness of Polish economy

From much research undertaken by different academic institutions, government agendas or international organizations appears that innovativeness of Polish economy is relatively poor. Even though Poland in year 2009 belonged to moderate innovators with such countries as the Czech Republic, Greece, Hungary, Italy, Lithuania, Slovakia, Portugal or Spain majority of indicators considering innovation activity of Polish economy was unfortunately still below the EU-27 average. Taking into account innovation performance per dimension in Poland the best results (above the EU average) are obtained just in the field of human resources. The analysis of the other dimensions such as finance & support, firm investments or linkages & entrepreneurship shows that Polish economy position is far below the EU average [3]. Serious problems are particularly a low quality of the intersectoral collaboration, an issue of intellectual rights protection or low innovativeness of Polish enterprises. In 2006, some 38,9% of the EU-27 enterprises were considered as innovative. The highest propensity to innovate was recorded in Germany, Belgium, Finland and Austria, while the lowest propensity to innovate took place in Latvia, Hungary, Bulgaria, Romania, Lithuania or Poland [5].

One of the basic weaknesses in Poland seems to be low gross domestic expenditure on R&D. In 2007, R&D intensity in the UE-27 stood at 1,85% but in Poland it was only 0,57% GDP. It is worth stressing that among the EU Member States, only Sweden and Finland exceeded the EU goal of channeling 3% of GDP into R&D, with 3,60% and 3,47% respectively [9]. The financial structure of R&D in Poland is also inappropriate. In the EU-27 R&D expenditure was mainly financed by business enterprise sector, while in Poland a participation of business sector in financing R&D is relatively low at the level of 30% [6].

As a rule, the low R&D investment determines effects obtained in innovation activity in a form of patents or trademarks. Among the Member States, Germany had by far the highest number of patent applications to the EPO in 2006. In relative terms, Germany had also the highest number of patent applications per million inhabitants (223), followed by Finland (223) and Luxemburg (189). In case of Poland it was one of the lowest results which were observed during the analyzed period of time - only 2,8 number of patent applicants per million inhabitants [4].

Next sign of innovativeness and technological progress of a given economy is world market shares of high-tech export. It can be said that within the EU-27, countries like Germany, the United Kingdom or France had the highest results regarding their turnover or value added in high-tech manufacturing sector. It is worth adding that Poland ranks relatively low compared to Hungary (0,75%) and the Czech Republic (0,60%), but it is undoubtedly better than Romania or even Portugal.

However, the statistics presented above confirm that high-tech sector in Poland is of little importance which especially worries [10].

One of the serious hindrances to innovation processes in Poland is a low level of trust and a lack of the intersectoral collaboration ability which are central elements of social capital. However, it can be suggested that cooperation is one of the necessary, but not sufficient prerequisite for efficiency growth in innovation processes. Little participation in international R&D networks is also the next consequence of low ability to cooperation in Poland. Looking at the international differences in the process of internalization of higher education, it is worth noticing that Poland still belongs to the group of countries which are lagging behind and its engagement in the process of creation and knowledge diffusion at the international level does not seem to be satisfying. A relatively low mobility of Polish scientists constitutes a proof of that. There was observed twice less than the average EU-27 foreign visiting scientists under the Erasmus Program in 2008. The highest mobility was recorded in Finland (6,5%), Spain (4,9%), Belgium (3,2%) or the Czech Republic (3%), whereas in Poland it was only 1,5% [2].

Conclusions

The serious problem of lagging regions is, as a rule, smaller innovation capacity of these areas which is called "innovation paradox". Countries such as Poland, with GDP per capita far below the UE-27 (in year 2008 it was exactly 58% of the EU average) are eager for innovations because they give them a real chance for rapid and sustained growth. Thanks to innovation less developed regions not only can accomplish the process of modernization of their economies but also significantly improve living standard of their inhabitants. Unfortunately, they face many obstacles in innovation processes which are identified with innovation paradox. To some of the biggest hindrances in Poland belong: low efficient innovation policy at the national level, relatively low innovation capacity of firms in the regions, insufficient activity of the public and private institutions supporting innovation processes and weak cooperation between partners which are engaged in innovation activity.

In order to overcome these difficulties the institutional changes are required. First of all, there needs to be greater alignment between national and regional innovation policy. The facilitation of cooperation and coherence between different agents and policies may improve the systematic capacity of a region to absorb investment. Resolving the innovation paradox depends on the changes in the institutional framework, including formal and informal institutions. Interfirm relationships, learning capability, R&D intensity and innovation activity are determined, to some extent, by cultural factors such as social capital, rooted in social structure, and social system incorporating general principle, norm, obligation, mutual understanding, trust and common value. Shortcomings in this field in poorer regions impede undoubtedly the process of modern and competitive economy building.

References:

[1] OURVISANO, J. *Innovation for Regional Communities. A research framework,* CRIS, Ballarat 2003, p 2-8.

[2] *Diagnoza stanu szkolnictwa wyższego w Polsce*, Ernst&Young oraz Instytut Badań nad Gospodarką Rynkową, Warszawa 2009, p 94-114.

[3] *European Innovation Scoreboard (EIS) 2009*, European Commission 2010, p 6.

[4] *Europe in Figures,* Eurostat Yearbook, Luxemburg 2009, p 493.

[5] *Europe in Figures,* Eurostat Yearbook, Luxemburg 2010, p 602.

[6] *Nauka i technika w Polsce w 2008 roku*, GUS, Warszawa 2010, p 69.

[7] *Open Innovation in Global Network, OECD 2008, p 15.*

[8] OUGHTON, Ch., LANDABASO, M., MORGAN, K. *The Regional Innovation Paradox: Innovation Policy and Industrial Policy.* Journal of Technology Transfer, 2002, Vol.27, p 97-101.

[9] *R&D Expenditure in the EU27 Stable at 1,85% of GDP*, Eurostat Newsrelease, 2009, No. 127, p 23.

[10] *Science, Technology and Innovation in Europe,* Eurostat Pocketbooks, Luxemburg 2009, p 99.

[11] STONE, A., ROSE, S., LAL, B., SHIPP, S*., Measuring Innovation and Intangibles: A Business Perspective,* Science&Technology Policy Institute, Washington 2008, p 2.

THE INFLUENCE OF GLOBALIZATION ON MANAGEMENT OF INTERNATIONALIZATION PROCESS OF CZECH ENTREPRENEURIAL SUBJECTS

Šárka Zapletalová
Silesian univerzity in Opava
zapletalova@opf.slu.cz

Key words:
globalization – internationalization – stage approach – global approach – born global firms

Abstract:
Globalization is a process leading to the mutual integration of society on global level. The process of has been viewed as one of the most significant processes typical of modern world economy. The internationalization of entrepreneurial activities is represented by geographic expansion of entrepreneurial activities cross national borders. Internationalization theory subsumes to two diverse approaches – stage approach and global approach. The objective of this paper is to present an overview of the internationalization process of the selected Czech firms in the Moravian-Silesian Region.

Introduction

Internationalization is a phenomenon researched intensively over the last few decades from a variety of viewpoints. Issues such as the development of international activities, and factors favoring or disfavoring internationalization have been studied for both large as well as small and medium enterprises.

The entrance of a company on the market itself allows for a significant opportunity, so long as said company possesses the proper readiness which grants it the chance to develop entrepreneurial activities (business) in the international markets. To take advantage of the opportunities requires sufficient preparation and information about the specifics and particularities of the market.

The focus of this study is on small and medium enterprises and their internationalization process. The objective of this paper is to present an overview of the internationalization process of the selected Czech firms in the Moravian-Silesian Region.

Globalization Process

Majority of firms' field of activity operates on local, regional, or domestic level, these firms are a part of the global economic environment. It means that they will necessarily be influenced by all the consequent changes not only in national but also in global environment. Changing conditions and market structures demand

that many companies devise new strategies, as they search for a competitive place in their home markets and take advantage of emergent market opportunities.

Globalization is a process leading to the mutual integration of society on global level. International Monetary fund defines globalization as the growing economic interdependence of countries on global scale brought about by the increasing volume and variety of cross-border transaction in goods and services and of international factor flows, and also through the more rapid and widespread diffusion of technology.[3]

Globalization is very significant external factor that drive companies to internationalization of entrepreneurial activities.

Internationalization of Entrepreneurial Activities

The internationalization of entrepreneurial activities is represented by geographic expansion of entrepreneurial activities cross national borders. [7]

The problems of the internationalization of entrepreneurial activities have seen a considerable interest among a number of significant economists such as Johanson [4,5,6], Andersen [1], Ruzzier [9] and Lopez [7] who have fundamentally contributed to the rethinking of the concept of internationalization theory. [2] Internationalization theory subsumes to two diverse approaches – stage approach and global approach.

According to the stage approach, companies start selling products in their home markets and then they sequentially look at new countries. [2] Three main models can be identified within the stage approach: the Product Life Cycle Theory by Raymond Vernon [10], the Uppsala Internationalization Model (U-model) and the Innovation-Related Internationalization Models (I-models).

According to Vernon [10] the internationalization process of the firm follows the development of the product Life Cycle: companies usually introduce new products only in their home market and then they eventually go abroad in the product maturity phase.

The stage approach of internationalization process of the individual firms is mostly associated with the research of Johanson and Wiedersheim-Paul and Johanson and Vahlne. Johanson and Wiedersheim-Paul distinguish between four different modes of entering an international market, where the successive stages represent higher degrees of international involvement [4,5,6]:

1. No regular export activities
2. Export via independent representatives
3. Establishment of an overseas sales subsidiary
4. Overseas manufacturing units

Work of Johanson and Widersheim-Paul has probably also been the inspiration for the development of the Innovation-Related Internationalization Models. The Innovation-Related Internationalization Models explaining the internationalization process from an innovation-related perspective. The internationalization decision is

considered as an innovation for the firms. The models are derived from Roger´s stages of the adoption process. [1]

Many small and medium enterprises do not follow incremental stage approach but is often reported that they start their international activities from their birth: they enter different country at once, approaching new markets for both exporting and sourcing. [2] Literature on internationalization defines them as born global firms. The born global firms are defined as "the firms that view the world as their marketplace from the outset and see the domestic market as a support for their international business" (McKinsey & Co., 1993) [8]. The born global firms are successfully competing with larger multinational companies and their subsidiaries established in different geographic area. Companies approach international markets from start up due to new external conditions, as advances in technology regarding production, transportation and communication and due to entrepreneurs with more international experience and foreign market knowledge. [2]

Research

The objective of this paper is to present an overview of the internationalization process of the selected Czech firms in the Moravian-Silesian Region.

The internationalization of the entrepreneurial subjects has been researched using the method of questioning. The entrepreneurial subjects included in this research were 67 from a wide range of industries. The research runs between January 2010 and February 2010 in the Moravian-Silesian Region. The research method was mouth questioning and main instrument was questionnaire.

Findings and discussion

The primary incentive for most firms to initiate entrepreneurial activities on international markets is the firm's expansion. Among other factors that significantly contribute to and influence the process of entering international markets are the target foreign market knowledge and the level of costs connected with the realization of foreign entrepreneurial activities.

Conclusion

With the global integration of economic environments and different factors driving globalization and internationalization of companies with small and medium enterprises is becoming the pillars of economic growth and change. Start up firms has no choice but to enter foreign markets from their inception, given the market globalization in demand and supply.

The entrance and activities of entrepreneurial subjects on the markets can be complicated owing to a number of factors that are given by the environment on one hand and the position and situation of the entrepreneurial subject itself on the other hand. The primary incentive for most firms to initiate entrepreneurial activities on international markets is the firm's expansion.

References:

[1] ANDERSEN, O. On the Internationalization Process of Firms: a Critical Analysis. In *Journal of International Business Studies, 1993,* vol. 24., num. 2, p. 209 – 231. ISSN 0047-2506.

[2] BARONCHELLI, G. – CASSIA, F. Internationalization of the Firm: Stage Approach vs. Global Approach. In *Proceeding Global Conference on Business & Economics*, 2008, Florence, Italy: ABER, p. 1 - 33. ISBN 978-0-9742114-5-9.

[3] International Monetary Fund (1997). „Opportunities and Challenges", In *World Economic Outlook*, Washington DC, International Monetary Fund.

[4] JOHANSON, J. – VAHLNE, J.-E. The Uppsala Internationalization Process Model Revisited: From Liability of Foreignness to Liability of Outsidership. In *Journal of Internatinal Business Studies 2009,* vol. 40, num. 9, p. 1411 – 1431. ISSN 0047-2506.

[5] JOHANSON, J. – VAHLNE, J.-E. The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments. In *Journal of International Business Studies 1977*, vol. 8, num. 1, p. 23 – 32. ISSN 0047-2506.

[6] JOHANSON, J. – WIDERSHEIM-PAUL, F. The Internationalization of the Firm – Four Swedish Cases. *In Journal of Management Studies 1975,* vol. 12, num. 3, p. 305 – 323. ISSN 1467 – 6786.

[7] LOPEZ, L. E. – KUNDU, S. K. – CIRAVEGNA, L. Born Global or Born Regional? Evidence from an Exploratory Study in the Costa Rican Software Industry. In *Journal of International Business Studies 2009,* vol. 40, num. 7, p. 1228 – 1238. ISSN 0047-2506.

[8] MC KINSEY & COMPANY *Emerging Exporters: Australia's High Value-Added Manufacturing Exporters. Melbourne*: McKinsey & Co., Australian Manufacturing Council, 1993.

[9] RUZZIER, M. – HISRICH, R. D. – ANTONCIC, B. SME Internationalization Reserch: Past, Present, and Future. In *Journal of Small Business and Enterprise Development 2006,* vol. 13, num. 4, p. 476 – 497, ISSN 1462-6004.

[10] VERNON, R. International Investment and International Trade in the Product Cycle. In *Quarterly Journal of Economics 1966*, vol. 80, num. 2, p. 190 – 207.

BUILDING THE LEARNING ORGANIZATIONS: THE ROLE OF LEADERS IN THE LEARNING ORGANIZATIONS

Senka Borovac Zekan

University Centre for Professional Studies, Split

sborovac@oss.unist.hr

Key words:

leaders – learning organizations – leadership – competitiveness

Abstract:

The growing demand for managing the knowledge resource and developing learning organizations emanates from the increased competition. In a learning organization, an important source of competitive advantage is individual learning and development, coaching and mentoring support from managers and leaders. High-quality coaching and mentoring can help reflective practice grow and develop. However, both involve skills that cannot be taken for granted and must be consciously developed in the organization.

1. Introduction

In any system growth comes to end when it reaches a saturation level. However, there is no end to learning. Learning is an infinite activity. True leaders never get saturated with their thinking. They always look forward to greater challenges. They are always exploring different options to perform better and better Leaders set examples for others. Leaders must attain an awareness of how they personally influence learning organizations. They must take an introspective look, and achieve an awareness of how they personally lead and influence others, especially as related to fostering learning processes. Specifically, they must know how their individual personalities, their application of power, and beliefs of control affect learning within their organizations. Leaders, who enable teams to be productive even as they are in a continuous learning mode, are the call of the day. They will be the key to productivity in the post-modern business scene. Contemporary organizational and leadership literature suggest creating learning environments is critical to improving organizations over the long term. So the challenge at hand is how to tip the scales towards developing leaders that can foster the climate in their organizations that promotes learning. Learning organizations require and encourage the development of leadership competencies at all levels in the organizational hierarchy, not just at the top. Leadership is viewed as a valuable skill that is based on the possession of expertise and knowledge, not simply positional status.

2. What is a learning organization?

Numerous sources exist that describe learning organizations. Perhaps Peter Senge provides the most concise and relevant to this discussion. In his seminal book *The Fifth Discipline,* Senge describes a learning organization as "...organizations where

people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together."[1, 3] Learning organizations require and encourage the development of leadership competencies at all levels in the organizational hierarchy, not just at the top. Leadership is viewed as a valuable skill that is based on the possession of expertise and knowledge, not simply positional status.

3. Differences between leadership and management

How are leadership and management different? Briefly stated, management is a series of functions that can be distributed to others, such as to members of a team. Leading is a relationship and cannot be distributed to others. By definition, a leader is a person others want to follow. Leaders cannot give their personal qualities to others, nor can they transfer relationships with their followers to surrogates. Leadership is about getting people to abandon their old habits and achieve new things, and therefore largely about change - about inspiring, helping, and sometimes enforcing change in people. "While there can be effective management absent ideas, there can be no true leadership [2, 137].

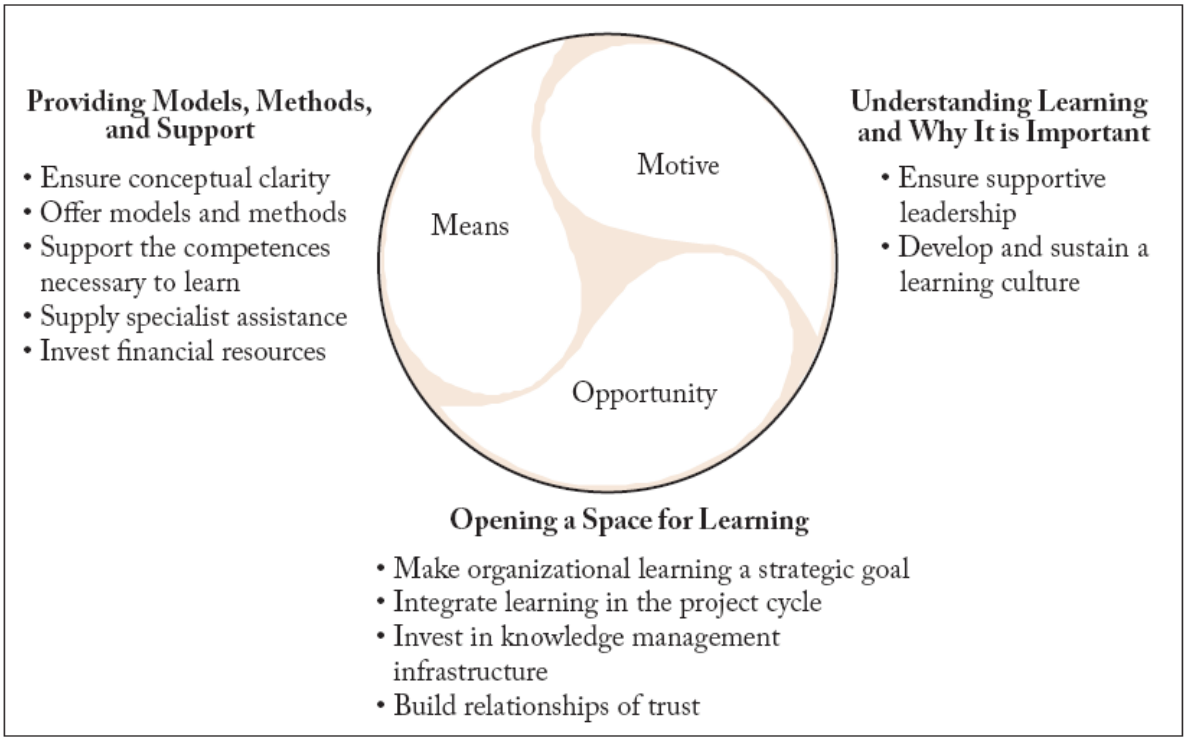
5. The Role of Top Leadership

The role of top leadership is often hard to distinguish in situations of dynamic internal forces and the abiding problem of adjusting to continual change in the external environment. Top leaders must clarify their positions in relation to the organization's internal needs for planning, coordinating, and directing with its external needs for coping with environmental forces. The leadership of a learning organization is committed to the importance of learning and clearly communicates that learning is critical to organizational success. The leadership recognizes the importance of providing the motive, means, and opportunity for learning: (i) the motive being the "why?"—the purpose and reason for learning; (ii) the means being the "how and what?"—the models, methods, and competencies required; and (iii) the opportunity being the "where and when?"- the spaces for learning. Leaders take an exemplary leading role in creating and sustaining. "Individual learning does not guarantee organizational learning. But without it, no organizational learning occurs." [4, 27].

Clearly, leaders who desire to be the role model for learning must first invest in formal education and experiential learning of themselves. However, that is not enough. Senior and Organizational level leaders must attain an awareness of how they personally influence learning organizations. They must take an introspective look, and achieve an awareness of how they personally lead and influence others, especially as related to fostering learning processes. Specifically, they must know how their individual personalities, their application of power, and beliefs of control affect learning within their organizations. Conversely organizational members are more apt to feel motivated to learn and share experiences when leaders encourage

member participation in learning processes. They, by definition, carry the responsibility for leading their organizations to accomplish missions, goals and objectives by providing purpose, direction, and motivation. However, to achieve long lasting change, leaders must embrace a commitment to learning for not just themselves, but also their organizations. More surprises occur as the result of a failure to act than as the result of a failure to see. Organizations have more to fear from not having strong leadership. It is the leader's responsibility to live the values the organization espouses, set the right tone, and lead truly by example. Much as they must visibly promote the right culture by rewarding those who lead by example, leaders must strengthen or challenge patterns and norms that limit learning. Their reactions will be amplified by the position they carry.. It is important that they seek formal and informal feedback on the impact of their gestures and that they be aware that second-order learning, by its very nature, may work against the improvement initiatives they promote. To recap,. Figure A1.1 identifies broad measures that leaders can take to create the motive, means, and opportunity for learning.

1.1 Creating the Motive, Means, and Opportunity



[5, 3] Source: Developed from Britton, B. 2005. Organizational Learning in NGOs: Creating the Motive, Means and Opportunity. *International NGO Training and Research Center Praxis Paper* No. 3. Available: www.intrac.org/docs.php/241/PraxisPaper3%2008%20update.pdf

While people often want the support of top management, they also don't want it telling them what to do. Resolving these dilemmas requires fundamental shifts in our traditional thinking about leadership. In brief, we are coming to believe that

leaders are those people who "walk ahead", people who are genuinely committed to deep change in themselves and in their organizations. They lead through developing new skills, capabilities, and understandings. And they come from many places within an organization.

6. Effective leader's characteristics

A leader's emotional intelligence will influence his or her ability to develop a learning organization. Daniel Goleman [6, 2] describes emotional intelligence as a cluster of personal and social competencies that include self-awareness, self management, social awareness, and social skill. These competencies assist leaders in understanding their personal ability to establish and maintain individual and organizational relationships at all levels essential for an effective learning environment. Moreover, leaders who apply an understanding of the importance of relationships are more apt to foster a positive knowledge building climate within their Organization [7, 56] This understanding of leader personality and emotional intelligence can significantly influence the learning climate within organizations. Effective leaders have several responsibilities. First, they must know and consider the factors and forces of the environment. Second, they must know, consider, and be able to influence their organizations' internal factors and forces. Third, they must be able to reasonably balance, integrate, and harmonize the two while leading their organizations toward productive goals [8, 56] Certain traits are characteristic of effective leadership.

6.1 Inspire a Shared Vision

Every organization is looking for dynamic visionary leaders for its sustained growth and for a competitive advantage over others. A leader should have the ability to inspire his team to share the vision of the organization along with one's own vision and motivate the team to work towards it.

6.2 Motivate the Team

Understanding ones needs and expectations is very important for the motivation of the team and an individual. Expectations will vary from person to person. Interests can be as varied as wanting a path for technical growth or attaining powerful positions in the organization or recognition through financial rewards etc. The leaders should be able to influence and motivate the team to take the organization to the peak of success.

6.3 Innovation

Innovation is the key to carve a good, successful and sustained growth for an organization and of an individual. In a challenging environment, creativity and innovation are the major factors in excelling over the competitors. Individuals with new ideas and the ability to convert them to tangible success stories form the core of every organization that eyes the path of success.

6.4 Celebrating Team's Achievements

Celebration of achievement motivates a team to achieve more. It also ensures the correctness of the process followed by the team in achieving the goals. Successful completion of each milestone by the team should be treated as stepping stones for the final goal.

6.5 Challenging One's Own Status

In any system growth comes to end when it reaches a saturation level. However, there is no end to learning. Learning is an infinite activity. True leaders never get saturated with their thinking. They are always exploring different options to perform better and better.

6.6 Setting an Example

Leaders set examples for others. If a leader wants others to follow a vision, he starts by taking the first step. The team members should not only hear what they are expected to do but also see it in the leader. Leading by example also brings and registers a past successful event in the mind of individuals.

6.7 Communicative Ability

Communication is the intangible channel that connects the leader and his team. The ability of verbal as well as non-verbal communication is a major trait of a leader. A leader should be able to express his thoughts clearly. Communication should not be restricted only to exchange of information but also include building trust and confidence level of the team. A leader should also be a good listener. This heightens the ability of interpersonal communication.

6.8 Succession Planning

Leaders should be able to foresee the future and take steps to ensure the stability of the organization even in the event of non-availability of resources. Building co-leaders, who can take the place of a leader effectively, is very important for the future of the organization. This also provides a growth path for team members.

Concluding thoughts

In order to survive in the current business world, leaders should be an expert in change management in order to become learning organizations Leadership is developed through practice and experience The principal role of leaders is to create the conditions within an organization through which staff learn, and finally internalize the habit of continuous learning. Leaders must be aware that much value exists in communication, which allows leadership skills to show through. The leader in the learning organization no longer sits atop the hierarchy, with the crushing weight of control and dominance, but rather acts through knowledge and the capacity to build organizational systems that enhance learning. For organizations wishing to remain relevant and thrive, learning better and faster is critically important on their way of becoming a learning organization.

References:

[1] SENGE, P. *The Fifth Discipline: The Art and Practice of the Learning Organization*,1990., p.3

[2] OTOOLE, J. *Leading Change*, Jossey-Bass Inc. Publishers, 1996.

[3] SENGE, P. *Leading Learning Organizations: The Bold, the Powerful, and the Invisible. In The Leader of the Future,* Hesselbein, F.M.Goldsmith and R.Bedkhard,. San Francisco: Jossey-Bass. Inc. Publishers, 1996. p.43

[4] SENGE, P. *The Fifth Discipline: The Art and Practice of the Learning Organization*, 1990, p.27

[5] Developed from BRITTON, B. 2005. Organizational Learning in NGOs: Creating the Motive, Means and Opportunity. International NGO Training and Research Center Praxis Paper No. 3. Available: www.intrac.org/docs .php/241/PraxisPaper3%2008%20update.pdf

[6] GOLEMAN, D. *Leadership That Gets Results*, Harvard Business Review, March/April 2000, p.24

[7] FULLAN, M. *Leading in a Culture of Change,* San Francisco: JosseyBass Inc. Publishers, 2001. , 56

[8] ISAACS, W. *The Fifth Discipline Field book*, Currency, Doubleday, 1994, 86

[9] DRUCKER, P. F. *Management Tasks Responsibilities,* New York: Harper and Row, 1947, 807.

The International Conference Hradec Economic Days 2011
Peer-Reviewed Conference Proceedings, Part II.
Edited by Pavel Jedlička
1st edition 2011, 160 copies
Published by Gaudeamus, the University of Hradec Králové, Czech Republic
Publication No 1043

ISBN 978-80-7435-101-3