

UNIVERSITY OF ŽILINA



# TRANSCOM 2013

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OF YOUNG RESEARCHERS AND SCIENTISTS

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**Dušan Čaplovič**

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&

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## SECTION 2

**ECONOMICS AND MANAGEMENT**

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## Econometric model of international intra-industry trade in air transport services

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**Abstract:** The article presents intra-industry trade and review of studies dealing with the determinants of intra-industry trade in different services. There is a theoretical design of econometric model of intra-industry trade in air transport services based on determinants and model used in other studies dealing with this topic

### 1. Intra-industry trade (IIT)

Intra – industry trade consists of exports and imports of same type of goods between two countries or regions. IIT became the subject of economic research at the beginning of the 60<sup>th</sup> of the 20<sup>th</sup> century. The international trade was before considered as simple, when countries traded because of differences on the side of supply. This has led to increasing of production volume and excess of supply over the demand was exported. This resulted into growth of international trade. The greater were differences in availability of production factors, the greater was the volume of trade. Traded goods were from different sectors, so it was a cross-sectoral trade.

IIT has two components – horizontal and vertical intra – industry trade. The segmentation of IIT is important because of better understanding of the nature and factors, which significantly affects this trade.

Horizontal IIT is considered as trade with goods and services of similar quality, but with different characteristics or properties. It could be for example trade with aircraft of same size, but other features such as type of engine, design and so on. The horizontal IIT can be expected to be carried out between geographically close and economically connected, rich and large countries.

Vertical IIT is about exportation and importation of similar goods and services with different price and quality. For example it can be trade with completely different aircraft and their prices. Vertical IIT is most common among countries with different factors of production.

### 2. International intra-industry trade in air transport services: Searching for determinants

International trade in air transport services has big impact on international trade because it includes all air transport services, which are performed by residents of one economy for those of another. The mentioned services include air transportation of passengers, transport of goods, rentals of carriers with crew and related supporting and auxiliary services<sup>1</sup>. Air transportation is a major facilitator of international trade in terms of the value of goods and services involved, and is important to specific industries, such as tourism, that are being developed by many lower income countries.

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<sup>1</sup> freight insurance, goods procured in ports by non-resident carriers and repairs of transportation equipment, repairs of railway facilities, harbours, and airfield facilities and rentals or charters of carriers without crew

It's not easy to identify the determinants of IIT what represents a searching problem. There were compiled econometric models for trade in goods for individual commodities based on determinants. Regarding the IIT in services the problem is less explored. Table 1 presents the examples of studies dealing with finding and analyzing determinants of IIT in different services.

Author	Publication year	Traded commodity	Time period analyzed	Methods	Determinants
Donghui Li, Fabriborz Moshirian, Ah-Boon Sim	2003	Insurance services	1995-1996	GL index <sup>2</sup>	Per capita income Trade intensity Trade imbalance Market size Foreign direct investment Multinational corporations Market openness
Robert C. Shelburne, Jorge G. Gonzales	2004	Services	1992-1998	GL index, MGL index <sup>3</sup>	x
Hyun-Hoon Lee, Peter Lloyd	2002	Services	1992-1996	GL index, MGL index	x
Nuno Carlos Leitao	2011	Tourism services	2008-2009	GL index, MGL index	x
Nuno Carlos Leitao	2012	Tourism services	2002-2009	GL index, MGL index	Per capita income Market size Geographic distance Common border
Donghui Li, Fabriborz Moshirian, Ah-Boon Sim	2005	Financial services	1992-1999	GL index, MGL index	Per capita income Trade intensity Economies of scale

**Tab. 1.** Review of studies dealing with determinants of IIT. *Source: Author*

As it can be seen in Table 1 there are two main research streams aimed at IIT in services. The former is devoted to the measurement of IIT in services itself that is undermined by classification and statistical availability. The latter tries to identify determinants in IIT development specifically to specific services types and categories. This research is still rare in the scientific literature and there are still some types and categories of services out of the research streams mentioned above.

When analyzing IIT in air services determinants the available theoretical and empirical literature on world trade serves as a starting point. The theory of IIT in goods proposed a concept of demand similarity which contributes to similar commodities being imported and exported among countries. Demand similarity is driven by higher per capita incomes of the trading countries because customer demand at higher levels of per capita income is in general higher, more differentiated and more complex. As it was supposed by Balasa and Bauwens (1987) the difference in per-capita income between trading partners represents a difference in the demand structure. As the studies devoted to IIT in services used demand similarity concept for development of IIT determinants, we can also stipulate that the share of intra-industry trade in air services is negatively correlated with per-capita income between two trading partner countries.

Market size (and economies of scale) is further common determinant of IIT in the researched categories of services. This determinant is generally argued by differences in resource endowments in larger countries with larger markets which enable that more differentiated

<sup>2</sup> expresses the share of intra – industry trade volume of the total volume of trade between two countries or regions

<sup>3</sup> quantify the degree of intra-industry symmetry of trade changes

commodities are produced under conditions of economies of scale (Loertscher and Wolter, 1980). Subsequently, less volume of similar commodities traded can be assumed, the trade in air services included. Therefore, a larger difference in size between the countries – trading partners indicates a lower volume of air services traded within the industry. For the country's market size approximation GDP or population can be used as options.

Intra-industry trade in goods has been investigated so far in negative correlation with trade barriers existing. Air services internationally traded are regulated by a complex grid of unique Air Services Agreements bilaterally or plurilaterally agreed between countries (Blašková, 2012). Thus, we can stipulate that if barriers to international trade in air services are being decreased higher IIT in air services will be. Reduction of trade barriers means a more free access to the market due to a more liberal air services agreement between trading partners. To quantify the level of market access protection, air liberalization index<sup>4</sup> can be used. Our approach based on the level of market access protection coincides with a concept of market openness in the studies mentioned above.

As air transportation is generally considered as a driver of globalization, we can assume that a higher integration of countries - trading partners generates higher volumes of air services bilaterally exchanged within the industry. Thus, intra-industry trade is assumed to be positively correlated to a lower divergence between the countries integration within world global economy (Loertscher and Wolter, 1980). For quantification of integration of economies into world global economy, index of globalization<sup>5</sup> can be used.

Based on the previous considerations, a basic structural econometric model for intra-industry trade in air services can be constructed:

$$IIT = f(DPI, DGL, DMM, KOF)$$

Where DPI is the difference in per capita income between the trading partners; DGL is the market openness between trading partners based on air liberalization index; DMM is the difference in market size between trading partners based on population size and KOF is the divergence in integration of the trading partners in world economy derived from their globalization indexes and IIT is IIT in air services measured as follows:

$$IIT_{ij} = 1 - \frac{|X_{ij} - M_{ij}|}{K_{ij} + M_{ij}}$$

Where  $IIT_{ij}$  is the level of IIT with country  $j$  in industry  $i$ 's goods;  $X_{ij}$  is the home country's exports of industry  $i$ 's goods to country  $j$ ; and  $M_{ij}$  is the home country's imports of industry  $i$ 's goods to country  $j$ .

Thus, the econometric model suggested works with four determinants and it can be expressed as:

$$IIT = \beta_0 + \beta_1 DPI + \beta_2 DGL + \beta_3 DMM + \beta_4 KOF$$

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<sup>4</sup> The Air Liberalization Index (ALI) constructed by the WTO Secretariat (WTO, 2006) is an expert based index. The weights assigned to the different provisions of air agreements were defined in consultation with a group of experts on aviation industry with the view to capture the relative importance of each provision in liberalizing the sector. The ALI ranges between 0 and 50, where 0 is associated with the most restrictive agreement and 50 denotes the most liberal agreement.

<sup>5</sup> measures the three main dimensions of globalization: economic; social; and political

Where the following signs are expected:

$$\beta_1 < 0, \beta_2 > 0, \beta_3 < 0, \beta_4 > 0$$

### 3. Conclusions

We will apply econometric model for IIT in air transport services to the trade between USA and its trading partners, which represents almost 30% of world's exports and imports of air transport services. This will be the first empirical study aimed at measurement of IIT in services and investigation of its determinants based on the model presented here.

This suggested econometric model will be the subject of our further research such as the determinants of intra-industry trade in air transport services and related hypothesis. First we will test determinants in terms of econometric model for IIT in air transport services, and then we can expand the model or also change it considering opening concept of this model.

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# Historical Development of Leadership

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**Abstract.** Leadership is one of the most studied subjects in management literature. Many studies, articles and books were published about this subject which refers to its importance. At the beginning of this paper I focused to distinguish leaders from managers. Then the paper examines historical changes at leaders' approaches and leadership theories development.

**Keywords:** Management, leadership, trait theory, project GLOBE, managerial grid, contingency theory, path-goal theory, situational approach, transformational leadership.

## 1. Introduction

In current global and turbulent environment, it might seem to view the past as a waste of time. To acquaint with the development of leadership and leadership theories is important to understand why and where we are currently, and also to learn from the past. As an historical example we can mention Socrates. 2400 years ago, Socrates [1] identified six key activities important for leaders:

- choose right person for the right job
- obtain the subordinates trust
- attract allies and helpers
- know how to keep already obtained
- work eagerly and to be demanding to his self

A parallel between Socrates and the present leaders can be found at Collins' Good to Great study, where he identified the factors that created from good business the great one. One of these factors is the level 5 leaders [2], who are characteristics by:

- "combination of deep personal humility with intense professional will" [2]
- ambition in the interest of the company, directing supersede to the success and not his own (short-term) benefits
- unyielding determination to do what is necessary
- get right people on the bus and wrong off
- windows and mirrors- credit for the success attributes to their colleagues, failure to themselves
- technology accelerators
- culture of discipline

### 1.1. Management vs. Leadership

Often we meet with confusing terms and meaning of the words management and leadership but they should be distinguished:

"Management is concerned with achieving results by effectively obtaining, deploying, utilizing and controlling all the resources required, namely people, money, facilities, plant and equipment, information and knowledge." [3]

"Leadership focused on the most important resources, people. It is the process of developing and communicating a vision for the future, motivating people and gaining their commitment and engagement." [3]

Leaders carry the vision, new goals, they are not afraid of change. Their approach is proactive rather than reactive. They focus more on long-term vision, for example visions that despite short-term losses can bring long-lasting success. Leaders can encourage the enthusiasm of their colleagues for a new target and what is more important they are able to inspire colleagues, energize, activate, and draw them into work. Also they are interested in how the new strategy will affect employees and try to empathize. The relationship in the workplace is important for them prevent defeat the target.

Of course, neither the manager's function is negligible. Even when managers do not like too much risky targets and their approach is more reactive, are necessary to ensure that all production factors ensure implementation of the strategy, and take care of running business when the leader's head is in the clouds. Bennis absolutely represented the difference by simple statement "Managers do things right and leaders do the right thing"[4]

In the absence of clear definition of leadership ("The only definition of a leader is someone who has followers."[4] "Leadership is a function of knowing yourself, having a vision that is well communicated, building trust among colleagues, and taking effective action to realize your own leadership potential."[4] "Leadership is inspiring individuals to give of their best to achieve a desire result, gaining their commitment and motivating them to achieve defined goals"[3]), as well as each individual assessing leaders from their perspective, therefore I will not give an specific examples of leadership personalities. Who is the leader and who is not is on an individual decision of the individual.

## **2. Historical Development of Leadership**

### **2.1. Early History (Hunter gatherers, agriculture)**

The nature of period and the evolution of humankind fundamentally defined leadership style. In times of hunter gatherers, from the leaders depended survival of the tribe, therefore leaders were elected on the basis of their knowledge, experience, skills, strength, agility. Their probable leadership style was directive, focused on the task accomplishment, the coordination of activities, and they used fear and coercion. Tribes were comprised of families, where leaders were probably older women whose targets were to take care of group members, creating safe base, to create social relationships and linkages, which has lasted to the present day when leaders encourage and support their colleagues.

In later times (agriculture), leadership style did not differ so much from the times of hunter gatherers. Continuously leadership and persuading people based on fear, but this fear had changed and based on religion and power of monarchs. Main leaders were considered monarchs, and thus leaders were born and mainly held by men. Monarchs were creators of policy and had unlimited power and to implement it helped them nobility and army. Directive leadership dominated, and leaders' power was enforced by fear, if citizen disobeyed, occurred to social exclusion or punishment.

### **2.2. Manufacture, mentofacture, spiroculture**

A major change occurred with the emergence of the industrial revolution which can be dated since the middle of the 19th century. Since the beginning of the industrial revolution, the development of leadership (his perception) several times exceeded changes made in the previous period. However, the most significant changes took place in the 20th century. The leadership approaches changed along with approaches to subordinates, changes in organizational structures and changes in business environment. For example, at the beginning of the 20th century, employers believed that the employees were naturally lazy and did not want to work. In order to ensure the production and increase it, leaders used authoritarian leadership style. On the other hand, the 70<sup>th</sup>

were characterized by increased competition, volatility, new trends, technological advances, and thus to ensure the competitiveness of the company, transformational leaders were necessary.

**1900 - Trait theory** identifies leaders by personal traits that distinguish them from others, such as personal, social, or physical traits.[5] Explicitness of traits have not been proven, as well as traits that determine a leader in one situation will be different in another one. Various studies (Stogdill, Mann, Lord, Kirkpatrick, and Zaccaria) have identified various traits characteristic for leaders. A common feature of these studies and thus traits which can determine leaders are: intelligence (but not too high, it can lead to confusion and misunderstanding), confidence (confidence in their own skills and knowledge), purposefulness (initiative, the ability to be a dominant leader when necessary), credibility and sociability (friendliness, courtesy, respect, diplomacy).

**Project GLOBE** [6] confirmed and extended the trait theory, identified 22 general characteristics, which are accepted in all surveyed countries, defined outstanding leaders: credibility, fairness, honesty, caution (foresight), the ability to plan ahead, encourage, positive, dynamic, are the driving force, build confidence, motivate, strong, consistent, reliable, intelligent, effective negotiate, solves problems at mutual satisfaction, good administrative skills, communicative, informed, coordinators, team builders. It also identified the characteristics that hinder individuals to become outstanding leaders: reclusive, asocial, indirect, uncooperative, irritating, egocentric, inconsiderate, insensitive, and dictatorial.

**1940- Managerial (Leadership) Grid** focused on the leaders' behaviour. Their behaviour is influenced by the level of their aim of satisfying the needs and relationships with subordinates, or focusing on implementation of the task, the goal (focus on productivity). At mutual combination of these two variables arise following 5 leadership styles [7]: country-club management, team management, middle-of-the-road management, impoverished management, authority-compliance management.

**Ohio State and University of Michigan studies** also, as in previous managerial grid, focused on the leaders' behaviour which is affected, either focusing on subordinates, or focus on productivity. These theories did not address to design ways how can leader operate, but focused on the description of the components that affect leaders' behaviour. At the same time, depending on the situation, leaders should be oriented either more to subordinate or to complete a task.

**1950-Contingency theory** focuses on the adaptation of leadership style to correct situation (circumstances), because leader is effective only if the leadership style fit into the context. Fiedler [8] divided leaders into those who are motivated by performing task (task-motivated leaders) and those who are motivated by the development of interpersonal relationships (relationship-motivated leaders). The situation is defined in terms of: the relationship between leader and subordinates, task structure, leaders' authority.

**1970s-Path-Goal theory** tried to define the relationship between leaders' behaviour and subordinate performance, based on their characteristics and properties of the tasks. Theory identified the following leadership styles [8]: directive leader, supportive leader, participative leader, and achievement oriented leader.

**Situational approach** [5] assumes, that each situation requires a different way of leadership style, to be an effective leader, he should adapt the leadership style to the requirements of the situation. Situational approach emphasizes the flexibility of leader. Situational approach emphasizes that leadership consists of mandatory and supporting components that must be appropriately applied to the situation. At the same time, leader must evaluate the competence and commitment of his subordinates (development level), and to adapt leadership style. Based on a combination of directive behaviour and supportive behaviour and their development levels, the following leadership styles can be defined: directive leadership, coaching leadership, supportive leadership, delegating leadership. Leader should adapt leadership style to development level of subordinates. Subordinate with the low level of development (such as the newly recruited staff) should use directive leadership style, with increasing levels of development, should pass to coaching and later to support leadership style. For employees with a high level of development (such as skilled workers) should use

delegating leadership style. The leader should be flexible in using different styles, because the level of development of employees is changing.

**1980 - Transformational leadership** is a process through which leader seeks to change and transform subordinates, and this transformation does not only produce the expected output, but to overcome expectations. Emphasis on intrinsic motivation and development of subordinates, and subordinates are equal partner for leaders.

**Transformational leadership** [9] seeks to establish a relationship between leader and subordinates on a basis which increase motivation on both sides. Transformational leader is attentive to the needs of subordinates and try to help them realize their potential and to carry out the task. Transformational leader does not assign the tasks, but comes with a vision, communicates ideas with subordinates and try to get them to his side. He does this through enthusiasm, passion and energy which he put into everything.

Conversely **transactional leadership** [9] is based on an exchange between leader and subordinates. This is a very typical and frequent way of leadership style, because it is based on the reward and punishment. Subordinate carried assigned tasks based on expectations of obtaining rewards or avoiding punishment. Transactional leader manages processes, divide tasks, and subordinates are fully responsible for their implementation. However to enhance performance it is necessary to increase the rewards.

**Charismatic leadership** is sometimes regarded as synonymous or as part of transformational leadership, because as well transformational leader should be charismatic. For charismatic leader is characteristic charisma, inspiring personality, confidence, credibility and strong moral values, and therefore subordinates also admire, follow and trust him. Leader is the model, creator of ideas, focuses on success and is also willing to accept some degree of risk. He is enthusiastic, energetic, confidence in abilities of subordinates, encourage subordinates to improve performance, realize targets, increasing their involvement.

### 3. Conclusion

In the current turbulent times, it is necessary to ensure the quality and capable leaders are in management positions. By studying history, leaders can take an example and hindsight as well as set goals for leadership in the 21st century: creating a supportive, ethical environment for employees enabling cooperation, developing the potential, satisfaction, able to adapt to changing conditions, and ensure the sustainability of resources for the future generations.

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## Evaluation head of hospital department in coach aspect

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**Abstract.** Innovative methodology examinations was presented in the paper, elaboration and results' analysis, resulting from the BOST method. 29 respondents were taken into consideration. They were diversified because of the gender, education, age, the seniority, mobility, the mode of employment. The results and their analysis showed that the head of hospital has coach features.

**Key words:** BOST questionnaire, client/patient, head of hospital department.

### 1. Introduction

Today, the success of the organization depends primarily on the human resources management. Since then, in which level employees engaged in the company are involved in the implementation its mission and the daily tasks depends the position of the company on today's competitive market. Liberate and give everything the company, that employees have the best, namely: intelligence, knowledge, skills, belief in success, can those of superiors, which led bestow boundless confidence. Such a confidence reached leader in the state organizations, private industry, the government, services, companies small, medium and large. Polish leaders wishing to operate on the Polish and international market and relate them successful, they must adapt their methods and management systems to the global trends of modernity, showing the competitiveness in the production of quality products and services. Quality of work leadership-leader is integral element to the modern management of any organization. Managing people is today the great art requires multilateral own knowledge not only manager, but also the knowledge of employees, which can be effectively used in the organization, knowledge that allows both partners to actively participate in planning and implementation of projects, in its continuous modernization. Managing people must be closely linked to the way of the strategy realization, and it must take into account the increased capacity for learning, collaboration and management skills in terms of diversity and uncertainty the environment, especially the market that want to be reached. Companies that want to attract new customers, must develop new products, need to be more innovative and creative, they must take care about the free development of information, learning skills of employees, their thinking in objectives terms and the organization results [1].

The English word coach (trans. coach, tutor) is used in the sport and it is identified with the concept of a coach, helping the team sports / athletes achieve the best results in competition. The purpose of coach is using the person potential who is involved in coaching, exploring the internal and external potential participant in coaching which in turn has affected the results of his work. Coach:

- helps the client in defining its objectives,
- determine what needs to be done to achieve the desired results of the work,
- gives feedback to the degree of the objectives achievement.

Health care service are companies that need to operate on a commercial basis. To cope with the competition there is the fight for the client / patient. Companies seek to meet customer needs, their desires, habits, they tend to increase the satisfaction of their services.

## Presentation test object and methodology of examinations

The study involved head of hospital department [2, 3] of public hospital functioning in Silesia province. The study was conducted by questionnaire BOST, which is affiliated with Toyota's management principles, which are based on TOYOTARITY [4, 5]. BOST survey was conducted among 29 respondents diversified because of age, education, gender, mode of employment, mobility and seniority [1, 6]. Among 29 respondents 16 were male and 13 female.

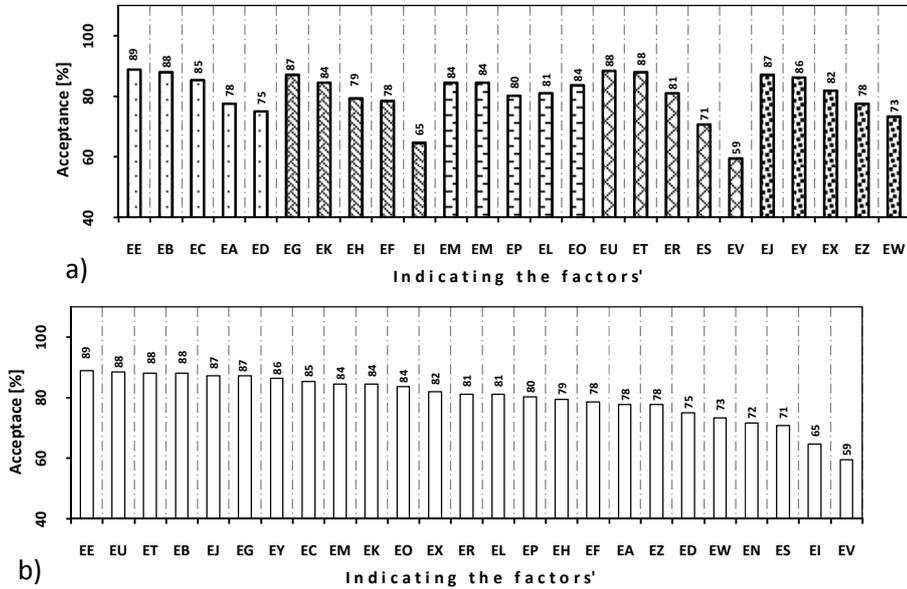
## Evaluation head of hospital department

The analyzed company's workers thanks to the BOST questionnaire carried out expressed their opinion about the head of hospital department. Estimations were situated in the interval from 2, 1,5, 1, 0,5 to 0, where 0 it is the lowest estimation, and 2 highest. Factors which were subjected to the analysis the one:

Honest	1 A	2	3	4	5	6	Dishonest
Straightforward	EB	7	8	9	10	11	Secretive
Consistent	EC	12	13	14	15	16	Inconsistent
Solid	ED	17	18	19	20	21	Unreliable
Assertive	EE	22	23	24	25	26	Submissive
Helpful	EF	27	28	29	30	31	Ineffective assistance
With clear objectives	EG	32	33	34	35	36	Not having a clear goal
Useful	EH	37	38	39	40	41	Helpless
Doubt	EI	42	43	44	45	46	Selling confusion
Supportive people	EK	47	48	49	50	51	Unfair
Cheerful	EL	52	53	54	55	56	Gloomy
Optimistic	EM	57	58	59	60	61	Cynical
Respecting others	EN	62	63	64	65	66	Manipulator
Funny	EO	67	68	69	70	71	Without a sense of humor
Mobilizing	EP	72	73	74	75	76	Depressing
Perceptive	ER	77	78	79	80	81	Inattentive
Flexible	ES	82	83	84	85	86	Formalist
It gives and takes	ET	87	88	89	90	91	Only takes
Forgiving	EU	92	93	94	95	96	Selfish
Modest	EV	97	98	99	100	101	Dominant
Resistant	EX	102	103	104	105	106	Hypersensitive
Sensitive	EY	107	108	109	110	111	Callous
Reasonable	EJ	112	113	114	115	116	Claim
Independent	EW	117	118	119	120	121	Self-reliant
Calm	EZ	122	123	124	125	126	Overwhelming

**Figure 1** presents Pareto diagrams for each head of hospital department features. The series of validity to presented feature are as follows:

$$EE > EU > ET > EB > EJ > EG > EY > EC > EM > EK > EO > EX > ER > EL > EP > EH > EF > EA > EZ > ED > EW > EN > ES > EI > EV \quad (1)$$



**Fig. 1.** Structure of director influence. It concerns hospital.  
Source: own study

Table 1 shows the structure and the head of the impact rate in Table 2 shows the percentage level in the evaluation of the impact head of the medical staff.

Name	Appointment and number ratios						
Integrity	U	A	B	C	D	E	0,70
		8,71	1,21	0,58	8,09	1,41	
Usefulness	V	F	G	H	I	K	9,67
		9,91	2,10	0,13	6,41	1,44	
Kindness	X	L	M	N	O	P	0,01
		0,22	1,08	7,85	0,86	0,00	
Reciprocity	Y	R	S	T	U	V	9,35
		0,91	8,24	2,69	2,81	5,35	
Relation'ssupport	Z	X	Y	J	W	Z	0,27
		0,17	1,23	1,44	8,05	9,11	

**Table 1.** Director influence. Structure [%] of influence  
Source: own study

From the presented tables 1 and 1 it can be seen that the series of validity are as follows [7]:

$$\text{Integrity (NU); } EE > EB > EC > EA > AD \quad (2)$$

$$\text{Usefulness (NV); } EG > EK > EH > EF > EI \quad (3)$$

$$\text{Kindness (NX); } EM > EO > EL > EP > EN \quad (4)$$

*Reciprocity (NY); EU > ET > ER > ES > EV* (5)

*Relation's support (NZ); EJ > EY > EX > EZ > EW* (6)

Name	Appointment and number ratios						
Integrity	NU	EA	EB	EC	ED	EE	82,93
		77,59	87,93	85,34	75,00	88,79	
Usefulness	NV	EF	EG	EH	EI	EK	78,79
		78,45	87,07	79,31	64,66	84,48	
Kindness	NX	EL	EM	EN	EO	EP	80,17
		81,03	84,48	71,55	83,62	80,17	
Reciprocity	NY	ER	ES	ET	EU	EV	77,51
		81,03	70,69	87,93	88,39	59,48	
Relation's support	NZ	EX	EY	EJ	EW	EZ	81,21
		81,90	86,21	87,07	73,28	77,59	

**Table 2.** Director influence. Level [%] of using influence

Source: own study

## Summary

Innovative methodology examinations was presented, elaboration and results' analysis, resulting from the BOST method that is the base on the scientific research of the Czestochowa University of Technology, Institute of Production Engineering. Respondents were the interesting research object since they possessed all variations characteristics, determined in the BOST questionnaire. Respondents were diversified of the gender, education, age, the seniority, mobility, the mode of employment.

A set of 25 factors divided into groups was taken into consideration. The groups names are as follows: Integrity (NU), Usefulness (NV), Kindness (NX), Reciprocity (NY), Relation's support (NZ). Each group is divided into five factors. The results and their analysis showed that the head of hospital has department the following characteristics: he is assertive, understanding, give and take, he is straightforward, reasonable, no clear objectives, he is sensitive, consistent, optimistic, promotes people is funny, tough, perceptive, hilarious, mobilizing, useful, helpful, honest, quiet, reliable, self, respect for others is flexible. It has been found from research that head of hospital department has coach features.

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## Use of correlation analysis to examine relationship between tax burden and business environment in selected EU countries

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**Abstract.** The aim of the article is to examine the relationship between tax burden and business environment in Slovakia, Czech Republic and France. The examination is carried out using correlation analysis to identify the level of dependence between selected indicators of tax burden and number of business entities in selected countries. The article contains also analysis and comparison of found facts.

**Keywords:** Tax burden, corporate income tax, tax rate, CIT-to-GDP-ratio, tax-to-GDP-ratio, direct taxes-to-GDP-ratio, implicit tax rate on corporate income, business entities, correlation analysis, correlation coefficient.

### 1. Introduction

In general, tax burden is considered an important factor in decision making about the business activity of enterprises in particular country. Taxes affect many areas of the business sector, particularly economic behaviour and subsequent financial decisions of business units. Among the applicable taxes, direct taxes have more impact on cost-effectiveness or profits of enterprises as indirect ones. In the paper the relationship between tax burden and business environment in selected EU countries is examined using correlation analysis.

### 2. Data and methodology

For the purpose of examining the relationship between tax burden and business environment we selected specific indicators representing tax burden on the macroeconomic level, namely nominal tax rate on corporate income (CIT rate), tax-to-GDP-ratio, implicit tax rate (ITR) on corporate income, share of direct taxes to GDP (direct taxes-to-GDP-ratio) and share of corporate income taxes to GDP (CIT-to-GDP-ratio). Tax rate is used to determine the actual level of business taxes from the tax base. Tax-to-GDP-ratio (namely the aggregate tax-to-GDP-ratio) is commonly used for international comparison of tax burden and is defined as a share of all taxes, levies, duties and non-tax payments to the GDP of a country. Implicit tax rate on corporate income is defined as a share of taxes on income or profits of businesses on their total income. The share of direct taxes to GDP and the share of corporate income tax to GDP is an expression of the tax burden of these taxes. These indicators were selected because of their expected impact on the business environment, as well as their availability on international statistics, in particular on Eurostat, the statistical office of the European Union. The business environment is represented by number of business entities, particularly entities that are potential taxpayers of corporate income tax. In this analysis we abstract away from other influences affecting the business environment, and the attention is focused only on the impact of tax burden.

Number of business entities – legal persons, was considered the variable  $y$  and the individual indicators of tax burden were identified as  $x_1$  (tax rate on corporate income),  $x_2$  (tax-to-GDP-ratio),

$x_3$  (implicit tax rate),  $x_4$  (share of direct taxes to GDP) and  $x_5$  (share of corporate income taxes to GDP). Gradually, we investigated linear dependence between the variable  $y$  and  $x_1$ ,  $x_2$ ,  $x_3$ ,  $x_4$  and  $x_5$  using the method of correlation analysis, and therefore the correlation coefficients reflecting the degree of the dependence, were calculated. [1]

The input data are values of selected indicators for the years 2003 to 2010 in Slovakia, Czech Republic and France.

### 3. Relationship between indicators of tax burden and business environment in Slovakia, Czech Republic and France

In table 1 we can see the indicators of tax burden and business environment for Slovakia that were used in correlation analysis.

Indicator/year	2003	2004	2005	2006	2007	2008	2009	2010
Number of business entities ( $y$ )	101412	114285	126777	139240	149772	169960	179352	197089
CIT rate [%] ( $x_1$ )	25	19	19	19	19	19	19	19
Tax-to-GDP-ratio [%] ( $x_2$ )	33	31.7	31.5	29.4	29.5	29.4	29.1	28.3
ITR on corporate income [%] ( $x_3$ )	34.8	22.6	23.3	20.3	19.8	21.7	22.5	19.2
Direct taxes-to-GDP-ratio [%] ( $x_4$ )	7.1	6.1	6.0	6.1	6.2	6.5	5.5	5.4
CIT-to-GDP-ratio [%] ( $x_5$ )	2.8	2.6	2.7	2.9	3.0	3.1	2.5	2.5

**Tab. 1.** Values of selected indicators of business environment and tax burden in Slovakia for the years 2003 to 2010. (Source: Own elaboration by using data from Slovak Statistical Office and Eurostat) [2], [3]

The indicators of tax burden and business environment for Czech Republic used in correlation analysis are in table 2.

Indicator/year	2003	2004	2005	2006	2007	2008	2009	2010
Number of business entities ( $y$ )	246181	258674	271242	285943	305707	327173	345156	363801
CIT rate [%] ( $x_1$ )	31	28	26	24	24	21	20	19
Tax-to-GDP-ratio [%] ( $x_2$ )	35.5	35.9	35.7	35.4	35.9	34.5	33.4	33.5
ITR on corporate income [%] ( $x_3$ )	29.0	27.5	24.7	24.3	23.7	22.0	20.2	19.6
Direct taxes-to-GDP-ratio [%] ( $x_4$ )	9.2	9.2	8.9	8.9	9.0	8.0	7.3	7.0
CIT-to-GDP-ratio [%] ( $x_5$ )	4.4	4.4	4.3	4.6	4.7	4.2	3.5	3.4

**Tab. 2.** Values of selected indicators of business environment and tax burden in the Czech Republic for the years 2003 to 2010. (Source: Own elaboration by using data from Czech Statistical Office and Eurostat) [4]

In table 3 indicators of tax burden and business environment for France used in correlation analysis are listed.

Indicator/year	2003	2004	2005	2006	2007	2008	2009	2010
Number of business entities ( $y$ )	2579672	2636229	2690796	2728256	2949233	3022176	3107578	3318976
CIT rate** [%] ( $x_1$ )	35.4	35.4	35	34.4	34.4	34.4	34.4	34.4
Tax-to-GDP-ratio [%] ( $x_2$ )	44.9	45.1	45.6	45.9	45.2	45	44.1	44.5
ITR on corporate income [%] ( $x_3$ )	24.0	25.4	24.3	30.0	27.7	25.9	14.7	21.6
Direct taxes-to-GDP-ratio [%] ( $x_4$ )	11.4	11.7	11.9	12.2	12.0	12.0	10.3	11.0
CIT-to-GDP-ratio [%] ( $x_5$ )	2.1	2.4	2.3	2.9	2.9	2.7	1.3	1.9

\*\* Top statutory CIT rate

**Tab. 3.** Values of selected indicators of business environment and tax burden in France for the years 2003 to 2010. (Source: Own elaboration by using data from French Statistical Office and Eurostat) [5]

The values of correlation coefficients of selected indicators for selected countries are shown in Tab. 4.

Indicators / country	Slovakia	Czech Republic	France
y, x <sub>1</sub>	-0,558	-0,969	-0,770
y, x <sub>2</sub>	-0,925	-0,865	-0,627
y, x <sub>3</sub>	-0,653	-0,972	-0,473
y, x <sub>4</sub>	-0,709	-0,934	-0,502
y, x <sub>5</sub>	-0,179	-0,752	-0,360

**Tab. 4.** Correlation coefficients for the examination of dependence between selected indicators in Slovakia, Czech Republic and France.

Source: Author's calculation

The values of correlation coefficients in Tab. 2 show that in Slovakia the strongest dependence is between number of business entities and the overall tax burden, measured by tax-to-GDP-ratio. The correlation coefficient in this case has the value of -0.925, and thus it is a negative linear correlation. Between the other examined indicators and number of business entities is only medium or low dependence. Therefore, we can conclude that in Slovakia among the selected indicators the most important for business activity is tax-to-GDP-ratio and the reduction of its level is accompanied by an increase in number of business entities.

As seen from the data in Table 1, during the monitored period the number of business entities in Slovakia was increasing, with the largest increase in 2008 (20 188 companies more than in 2007). Conversely, the lowest increase in number of business entities was recorded in 2009 (by 9 392), which should be considered a result of the financial crisis. Tax-to-GDP-ratio was decreasing during the period, except of 2007, when a slight increase by 0.10% was recorded. Its most significant decrease was in 2006 (by -2.10%). This can be considered the effect of the tax reform adopted in previous two years, in which besides the introduction of the flat tax rate for income tax and VAT, the method of income taxation in Slovakia had changed (including increased basic personal allowance to 19.2 x minimum subsistence level), the preferential treatment of taxation of business activities of legal persons applying the linear tax rate compared to natural persons had been abolished, the terms of quantifying the income tax base, which was obtained from the activities of the same nature (in particular, income of business) had been unified, and the application of deductible expenses from taxable income and the application of business losses from previous years had been introduced. In 2006, the reduced VAT rate of 10% was introduced for selected commodities. Other examined indicators of tax burden were developing variously and their values had not significant influence on number of business entities. The worthy of notice is corporate income tax rate, which declined markedly in 2004 (by 6%) after the above mentioned tax reform related with the introduction of flat tax rate of 19%, which was also reflected in considerable decrease of implicit tax rate on corporate income (by 12.19%). [6]

In Czech Republic four indicators of tax burden have strong correlation with number of business entities. The strongest dependence is between number of business entities and implicit tax rate on corporate income. In this case the value of the correlation coefficient is -0.972. Due to its minus sign the decrease of implicit tax rate on corporate income reflects an increase in number of business entities. Similar situation is in the case of corporate income tax rate (the correlation coefficient is equal to -0.969), and the share of direct taxes to GDP (-0.934). Slightly smaller, but still strong dependence is between number of business entities and overall tax-to-GDP-ratio. Between number of business entities and share of income tax to GDP is only medium correlation, so we could conclude that the affect of this variable to number of business entities – legal persons in the country is the least.

Throughout the monitored period tax rate on corporate income, as well as implicit tax rate on corporate income, decreased or remained unchanged, while the downward trend of these two parameters was among monitored indicators the most notable. The course of values of the other studied indicators was variable and there were only slight changes in values. Number of business entities was increasing every year. The largest increase in number of business entities was in 2008 (by 21 466), at the same year as there was the greatest reduction in corporate income tax rate (by 3%, as well as in 2004) and the second largest decrease in implicit tax rate on corporate income (by 1.75%, the largest decrease of the indicator was in 2005, by 2.50%). These decreases in values of the indicators were due to implementation of tax reforms in Czech tax system in 2004 and 2008.

As for France, we can see that none of the selected indicators of tax burden has significant impact on the evolution of number of business entities, since the values of correlation coefficients indicate only medium or low dependence between monitored indicators. Number of business entities was throughout the period increasing, while the value of tax burden indicators have evolved variously, but there were usually only slight changes. The most significant changes were observed in the case of implicit tax rate on corporate income. Its greatest change occurred in 2009, when it decreased compared with the previous year by 11.24% and was at the level of just 14.7%. This change can be considered a result of anti-crisis measures adopted within the fiscal policy in 2008, in which more favourable taxation of SMEs with tax rate of 25%, monthly and quarterly withholding tax of 13% for the income from the sale of goods and 23% of income from services for micro enterprises, as well as several new tax exemptions were introduced. [7]

Based on these findings, we conclude that the business environment in France is affected more by factors different from tax burden. France is a developed country with a developed infrastructure, high levels of health care and education system, with a good legal system and advanced use of modern technologies, so business entities are willing to do business in this country in spite of higher tax burden.

#### **4. Conclusion**

Based on the findings from the analysis we can conclude that in creating favourable conditions for business activity in Slovakia, attention should be focused primarily on reducing the overall tax burden, so various measures in tax policy to reduce the tax burden should be implemented. In Czech Republic business entities have responded favourably primarily on decrease of corporate income tax rates, as well as implicit tax rate on corporate income, so it is appropriate to focus on other items affecting the tax base, too. One possibility to make business environment more attractive is to support small and medium enterprises with preferential taxation, as it is in France.

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## Calculation methods for VaR<sup>1</sup>

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**Abstract.** The models of Value at Risk (VaR) have occurred in the 80's in the U.S. market with the development of the market of derivatives, when the origination of new derivatives, allow new possibilities in the risk management. The VaR models calculate economic losses on a portfolio basis; measure the overall market risk. These models belong to most widely used approaches in financial risk management. Mathematically, VaR is defined as one-sided percentile of the statistical distribution for a given holding period, determined on the basis of a historical horizon. It is the level of loss, which with a specific likelihood will not be exceeded. VaR method is specified by particular factors that must be predetermined. These factors are time horizon, reliability, frequency of observation, distribution function and value of financial position.

**Keywords:** risk, loss, portfolio, VaR

### 1. Introduction

The method Value at Risk represents the worst potential loss that can occur with a prescribed likelihood (reliability) in specified future horizon. Its results can be used in many different ways, for example for:

- determining of the capital assumptions,
- allocation of investment funds,
- evaluation of individual traders,
- more effective and operational information,
- financial risks management,
- integration of different types of risk into a single value.

The time period specifies for how long is a possible loss considered. The choice of time horizon is affected by various circumstances, for example: market liquidity, the permanency of the portfolio, the verifiability of the results. Reliability represents how is the likelihood with which will the actual loss exceeds the expected loss. It also affected by the circumstances, for example: for ease of verifiability it is recommended a lower reliability.

The likelihood that the profit ( $\Delta\Pi$ ) from a portfolio of assets will gain lower value than the predetermined level of profit ( $PL$ ) should be set to the equal confidence level  $\alpha$ . The profit means that the value is positive and can be expressed as a negative loss.

$$(\Delta\Pi \leq +PL) = \alpha \quad (1)$$

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There is a risk level expressed as a loss in the method of VaR, hence VaR represents the value of this loss. If we mean the profit as a negative loss, it could be described as:

$$(\Delta IT \leq -VaR) = \alpha \quad (2)$$

The minus sign is used of positive value of VaR in practice. Such defined value is called the absolute value of VaR. The relative VaR is even use, which is related to the mean of a random variable.

## 2. Methods for Value at Risk calculation

There are various methods for estimating VaR, and institutions have great flexibility in selections of specific models. The VaR methods differ in methods of simulation of changes in risk factors and in methods of transformation of change risk factors for change in the portfolio. The mostly used methods of determining VaR in practice include:

- Variance and covariance method
- Historical simulation method
- Monte Carlo simulation

### 2.1 Variance and covariance method

The method of variations (dispersion) and covariance is a parametric method. In practice it is used to calculate the VaR of a portfolio or a single instrument, which position is by the mapping decomposed into individual cash flows. The method is based on the dispersions and covariance that were for individual cash flows estimated from historical data. The appropriate cash flows, for which we have a variance and covariance are called *the basic financial flows*. The method VaR derives the portfolio changes of the statistical distribution of risk factors. It is based on a particular distribution and an expected correlation between them. It is relatively easy to implement the variance and covariance method, under the following assumptions:

1. The losses and profits are normally distributed.
2. The decomposition of analyzed position into the basic financial flows is linear.

This model has a huge information requirement and in addition, the use of only the historical data excludes the use of important available information that can be taken into account by random index correction or using random scales in the estimation of these coefficients. Historical data can be assigned by the same scales or there are assigned higher scales to further details, which will weaken the major changes in volatility and correlation.

#### 2.1.1 Assessment

The strength of the variance-covariance approach is that the VaR is simple to compute after we have made an assumption about the distribution of returns and inputted the means, variances, and covariances of returns. In the estimation process, though, lie the three key weaknesses of the approach.

**Wrong distributional assumption** - If conditional returns are not normally distributed, the computed VaR will understate the true VaR. In other words, if there are far more outliers in the actual return distribution than would be expected given the normality assumption, the actual VaR will be much higher than the computed VaR.

**Input error** - Even if the standardized return distribution assumption holds up, the VaR can still be wrong if the variances and covariances that are used to estimate it are incorrect. To the extent that these numbers are estimated using historical data, there is a standard error associated with each of the estimates. In other words, the variance-covariance matrix that is input to the VaR measure is a collection of estimates, some of which have large error terms.

**Nonstationary variables** - A related problem occurs when the variances and covariances across assets change over time. This nonstationarity in values is common because the fundamentals driving these numbers do change over time.

## 2.2 Historical simulation method

Historical simulation method uses the last values of the profit rates of individual instruments in analyzed portfolio to simulate the VaR of this portfolio. There must be an assumption that the representation of individual instruments in the portfolio considered to be the same as its current composition in all particular periods. Historical simulation method is a nonparametric method, which calculates the potential future loss based on the losses that would have occurred in the portfolio without any assumptions on the distribution.

The most useful advantages of this method are, for example: best describes the VaR of nonlinear instruments and it is conceptually simple method. There is no need to estimate volatility and correlations, because they are already directly included in the used data. We do not need to distinguish between types of risk and this method can provide additional useful features, for example: coefficients of skewness and kurtosis, value at risk for alternative reliability and so on. The biggest disadvantages are:

- the result of the method depends very much on what the historical data were used,
- it is necessary to choose an adequate length of the historical period, while taking into account that the very short length of this period does not take into account the sophisticated structure of the heavy ends. On the other hand, too great length of the historical period may adversely affect some time changes.

## 2.3 Historical simulation method

This method is able to take into account the various types of risks and belongs to one of the most effective approach of VaR calculating. The structured Monte Carlo method is uses to calculate the VaR a large number of simulations of the price development portfolio, which is based on mathematical and statistical models simulating the stochastic processes, by which is managed the price development of tools that create a portfolio. Simulations are described by a large number of randomly generated risk factors for which there is a known distribution. This simulation can generate very likely estimates. It can contains the latest information, we can use the historical data as input data for simulation. This method is flexible and particularly useful for instruments with non-linear course value. Monte Carlo models the stochastic process that simulates the random numbers generation.

The Monte Carlo simulation is divided into some steps:

1. Choosing the appropriate models to describe the behavior of individual instruments in the portfolio and estimate their parameters.
2. In the case of several correlated instruments in the portfolio, it is necessary to estimate their correlation structure.
3. Simulating the distribution of prices of portfolio by using the histogram we find the risk value. It is reached by multiple repeated and independent using of the appropriate random number generator and selected model.

### 3. Conclusion

Value at risk (VaR) has developed as a risk assessment tool at banks and other financial service firms in the past decade. Its usage in these firms has been driven by the failure of the risk tracking systems used until the early 1990s to detect dangerous risk taking on the part of traders. VaR offered a key benefit: a measure of capital at risk under extreme conditions in trading portfolios that could be updated on a regular basis. Although the notion of VaR is simple - the maximum amount that we can lose on an investment over a particular period with a specified probability - there are three ways to measure VaR. In the first, we assume that the returns generated by exposure to multiple market risks are normally distributed. We use a variance-covariance matrix of all standardized instruments representing various market risks to estimate the standard deviation in portfolio returns and compute the VaR from this standard deviation. In the second approach, we run a portfolio through historical data - a historical simulation - and estimate the probability that the losses exceed specified values. In the third approach, we assume return distributions for each of the market risks and run Monte Carlo simulations to arrive at the VaR. Each measure comes with its own pluses and minuses. The variance-covariance approach is simple to implement, but the normality assumption can be tough to sustain. Historical simulations assume that the past time periods used are representative of the future, and Monte Carlo simulations are time and computation intensive. All three yield VaR measures that are estimates and subject to judgment.

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## Methodology for carrying out the merger

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**Abstract.** The complexity of the merger makes it difficult to create a single universally applicable model. The complexity of the issues described highlights the fact that mergers and acquisitions, both effects cause microeconomic and macroeconomic. On the one hand affect the situation of the merging firms, on the other hand the consumers, the development of the sector and the overall economy. M & A transactions are of a different feeling, because on the one hand, there is a kind of boom in mergers and acquisitions, on the other hand, a large part of them fails. Why such a large number of bad decisions about acquisitions? As experts point out, it is crucial phase of integration the companies after the transaction. A large number of factors influencing the success of this process indicates the centrality of this issue in all of M & A.

**Keywords:** Merger, merging firms, M & A transactions.

### 1. Introduction

Economic, technological, social development as never before offers unique business opportunities. At the same time as never before business organizations were not exposed to such a risk, as it is now. Shortening life cycles, increased customer demands, technological progress, political turmoil, mean that companies are increasingly forced to look for alternative ways of doing business. More and more you will see that the requirements of the modern economy calls into question existing ways of managing organizations. Therefore, there was need for fundamental changes, which seek to ensure the sustainable development of companies. One approach towards this goal is to use the collaboration strategy. The cooperation of enterprises has become a hallmark of the turn of the twentieth and twenty-first century. It is a special form of M & A transactions.

### 2. The main idea

Convincing the current manager of the organization need to have a strategy seems pointless task. Maintaining the sustainability of a business is a priority for all employees regardless of the length or latitude. To this aim could be achieved need is the ability to forward thinking, categories of tomorrow, not just through the prism of the present. What are the tangible benefits of having a strategy for the average business owner? The answer seems obvious - a chance to survive in the market. Citing sources in detail Richard Koch distinguished academic advantage offered by having a strategy that primarily [1]:

- helps to identify the different areas of activity in which success depends on other factors,
- helps to identify areas of activity to ensure the most profitable and provide the greatest amount of cash, and explain why they are so beneficial to the company,
- easy to understand why different initiatives in different areas of a success or failure,
- indicates what skills are missing managers and staff,
- identify areas for business, product ranges, which have to resign or to be sold to other companies,
- indicates the client group, which most need to take care of and ways of increasing their loyalty,
- indicates the importance of international expansion and the most appropriate directions,

- facilitates the development of a culture of the company and its competence, that it is in a better position than its competitors to meet the needs of customers,
- helps lead tight financial control.

The need for a strategy for organizations is the result of economic globalization. What was enough several years ago in the form of specific management methods at the moment is no longer sufficient for the proper functioning. Organizations that have so far acted in a particular area or structured market now faced directly unrestricted geographical field of activity. Despite this obvious truth in Poland, many organizations still do not pay due attention too to the problem of developing and implementing strategies. Which can lead to negligence in the area of strategy, discovers the many companies in different industries, different sizes and different ownership structure. Specific areas of crisis management often leads to the collapse of the company. This in turn has a direct impact on the social consequences, the increase in unemployment.

The company with business strategy	The company without a strategy
Pursuing the goal and reap the benefits in the long term	Sufficiency ad hoc successes
Ordered organizational structure	Organizing chaos
Adjusting the level of resources to the objectives pursued	Imbalance in the structure of resources leading to their economically unjustified shortages or surpluses
A higher level of knowledge of the managers of the external environment and the company	Impaired communication system leading to the possession of a limited state of reality
The strengthening of unity and common purpose among employees various levels of management	Isolation of the different levels of management employees, which leads to difficulty or inability to implement the objectives
Trust of other market participants: customers, suppliers, financial institutions, suppliers	The difficulty in convincing other actors to the way of doing business
More likely to maintain the sustainability of the existence	High probability of economic decline

**Tab. 1.** Differences in business activities with and without a strategy.

One consequence of such a situation in the market are mergers between companies. Companies that are not able to function alone in the market see the merger possibility of expansion in the market. The merger has become one of the organization's development strategy, external growth. External development is an attempt to use foreign resources of other companies. The complexity of the merger by the number of failed transactions. The consulting firm Watson Wyatt has developed a model-transaction consolidation companies.

Formulatoion	Identifying and analyzing	Negotiation	Integration
The definition of the strategy and the integration phase	Stage before the transaction: assessment, analysis, assessment of the value	Determining the value (price) of the transaction	Stage at the end of the transaction - the implementation guidelines

**Tab. 1.** Watson-Wyatta's model [2].

The authors of the model assumed that for each of the five stages of the business model can create their own tools and measures to facilitate the implementation of the adopted strategy. At the stage of formulating a business owner must determine the strategic objectives. These goals should include measurable, so that it was possible to verify them after the merger transaction. The next step - identification - a search for companies that could carry out a merger. Selection of potential

partners is made for specific benefits that the company wants to achieve. Phase analysis is based mainly on the so-called. due diligence (a study with due diligence). Allows you to specify the stage of negotiating the final terms of the transaction. After this step is integration. It is a combination of individual assets and processes in consolidating companies. Management of companies participating in the merger process should take decisions on the pace of activities, ways to eliminate barriers to the success of the transaction. In the presented model, the focus is clearly on the stage before the transaction, assuming that the success of the merger is primarily determined by the diagnostic part. Assessment of the market, predict the business-purpose fusion, analysis of profit and loss are the main areas of interest of the organization.

The author proposes the following process of merger transactions (Tab. 3). The fusion consists of three clearly outlined steps. The preparatory phase determines the choice of which is to be a merger. Analysis of the market allows you to define a potential company-goals. Selection criteria include not only companies economic categories, but also irrational (organizational culture). This will allow you to predict the effects of the merger on the market. Prior to negotiations, the acquiring institution should carry out performance evaluation procedure of the transaction. This is achieved due diligence, which begins the operational phase. Due diligence is to examine the legal and economic status of the entity acquired. Due diligence study focuses on three elements of the acquired entity:

- the structure of assets and liabilities, the nature of the sources of their funding,
- the nature of the resource&es of intangible assets,
- human resources.

The next step is to make a valuation of the merging firms. Please make two valuations: one - of the value of each company in accordance with the current terms of their performance and economic potential, and the other - for, assess the benefits that can be achieved after a merger or acquisition. After completion of the due diligence time to negotiate. Not all mergers, despite correctly identified the strategic objectives of the investment, successful negotiations finalized the signing of the relevant agreement, are successful. At this stage, the merger is committed many errors that prevent the achievement of synergies.

Preparatory phase	Market research Selection for the group of companies Establish contact
Operation phase	Due dliligence Determine of boundary conditions Calendar of negotiations Protocol differences Contract The legal of the organisation formed
Integration phase	Establishment of the working group on integration Restructuring of the two organisms to create one Monitoring of changes

**Tab. 3.** The structure of the merger.

### 3. Conclusion

Participants company mergers are usually different in terms of management style and organizational culture, so it is necessary to organize the structure of the merger (integration phase).

This operation requires a reconciliation of the differences in the functioning of combined business and take into account the cost of leveling.

Merger as part of the company's strategy is certainly a great example of pro-development. The search for a partner with whom we might call is usually to expand in different areas of the company. The merger enables the implementation of these projects, the organization alone would not be able to realize. The main risk is the fact that the body is not connected would generate synergies. Therefore, the key issue is proper identification of the target. Mistake made at this stage can lead to the situation of the companies participating in the merger process can be significantly degraded. The main factors to consider when choosing the right candidate for the merger include:

- size, past performance, current market position,
- main products and strategies,
- geographical location and market share,
- customer base,
- operating costs and financial,
- the quality of management,
- ownership structure
- legal status,
- structure of the workforce,
- organizational culture and decision-making processes [3].

In the ongoing evaluation companies should pay attention to items such as: an assessment of the evolution of management based on historical data and present, the main types of activities and location of offices, warehouses and manufacturing facilities, benchmarked the basic financial parameters, SWOT analysis, information on possible previous mergers the company and the experience from them. The next part is to evaluate the current strategy of the company. This task can be carried out from the perspective of the effectiveness of placing on the market, the overall profitability of the business and market share. The market share of the company as a criterion for selection is a very important element, not only in terms of economic benefits, but also because building a positive image. Therefore, the analysis is subject to the customer base through their segmentation, identification of customer needs for services from the company and the expected changes in this area, the company's brand and its prestige in the eyes of customers and assess the impact of a possible merger on relationships with customers. Another issue to be assessed are the organizational and legal issue.

The last group of factors to be assessed concerns the broader organizational culture, including the assessment of the human resource of the company. It is widely known that there is a close relationship between organizational culture and the efficiency of the company. Although many people lift its irrational nature, and therefore very difficult to correct interpretation of its impact on the functioning of the various components of the company. Values and norms, especially those visible, are often essential criteria for selecting the company, its products or services. Therefore, we should make every effort to ensure that the organizational culture was perceived positively and effectively shaped the image. Therefore, the assessment should be the following:

knowledge, experience and skills,

the employment structure,

incentive system,

communication system,

management style used in the company,

the degree of centralization of power,

assessment of potential candidate views the merger of the proposed transaction, and whether they are consistent with the view of seeking a merger partner.

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## **Analysis of possibilities of detect an On-line reputation of selected Subjects functioning on Slovak virtual market**

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**Abstract.** The aim of this paper in the first place is to analyze the theoretical possibilities of detection an On-Line reputation of selected subjects functioning on Slovak virtual market. The purpose of paper is also to present selected method of measuring on-line reputation of selected subjects based on newest knowledge in the field of managerial sciences. For purposes of this paper, subjects are represented by on-line presence of Slovak towns on virtual market. In particular, cultural and anthropological context, and the resulting specificities and peculiarities typical of the post-communist block of countries will be taken into account in relation to the chosen market. The target group is narrowed to top 20 Slovak towns as the best representation of subjects which officially presented themselves to internet users on the specific type of market.

**Keywords:** Reputation, On-Line reputation, SME, Image, Market, Entrepreneurship, Internet, Social Networks, Virtual Social Networks, Competition.

### **1. Introduction**

The issue of the use of Internet tools in marketing is in itself still very young. However, we may definitely conclude that any new techniques and media used within the portfolio of marketing tools can help distinguish an entity from the competition [1]. The competition is huge for both commercial and non-commercial entities. Times when the "only" thing necessary for market prosperity was a quality product are long gone. [2] It is becoming increasingly difficult to reach the target audience. Overcapacity of advertising messages on the market is a problem the marketing managers worldwide must deal with on a daily basis [3]. Thanks to its nature the Internet allows for easy sharing and transfer of information and creates space for entities whose motives may not always be ethical [4]. The issue of reputation is therefore highly relevant issue in the context of virtual identity of entities using the Internet to communicate. Undoubtedly, companies with high reputation have at present a competitive advantage in terms of customer acquisition [5]. It has been shown that 80% of customers prefer the company with high reputation rather than an average company or a company with a dubious reputation. In Slovakia, this area has been examined to some extent in relation to banking entities [6]. Such factors have been analyzed as value, quality of products or social activities of companies. Subsequently, it has been examined how these factors are perceived and evaluated by the consumers, customers, business partners, public and so on.

### **2. The issue of reputation in the times of the Internet and modern technology**

New technologies, forms of communication, as well as the Internet itself, are on one hand positive aspects of this age but on the other, they entail a risk. Dissemination of negative information, rumors or false information through these media is very quick and uncontrollable. Based on the above arguments a study has been carried out in Washington [7], which has examined the relationship of reputation management and current social media. A similar survey regarding online communication has been conducted at the University of Singapore [8] and it has provided a clear view of the relationship between these poles. In the context of scientific literature focusing on

e-marketing, specifically on the field of online reputation, conceptual or rather empirical studies are available in limited quantities. The claim in question is referred to by the author [9] who states that despite the lack of analyses many authors believe that reputation is much more important in online than in offline context because factors determining trust in offline context are absent and are not yet known [10].

## 2.1 Reputation and the possibility of its measurement, various methodologies used in determining reputation

Worldwide research in the area of reputation which has been conducted at the University of Oxford [11] shows that reputation is made up of two elements: customer opinion of the respective company and the real truth about the company and its commercial policy, procedures, management system and financial performance. Authors [12] have concluded that a company has a good reputation if it always meets or exceeds the expectations of its customers and vice versa, a company has a bad reputation if it does not meet these expectations. Consequently, they proposed the following formula for reputation: Reputation = experience - expectations. At any moment, customers measure reputation by comparing current experience in contrast to their expectations [13].

## 3. Analysis of reputation of selected entities on Slovak virtual market

For the purpose of this analysis online reputation of twenty largest Slovak towns as the best representatives of entities officially presenting themselves directly to target customers and Internet users in the environment of specific virtual market has been established by a selected methodology. The used methodology is called "sentiment analysis" [14]. The sequence of the process of measuring reputation begins by defining the representatives of investigated segment, in this case, we have chosen specific Slovak towns. Consequently, virtual identity of these entities is investigated by means of Google search. When analyzing sentiment, the first 10 search results are taken into consideration. To ensure the objectivity of results, which may be distorted by the tendency of search engines to personalize the search based on the history of Internet activity, proxy anonymizers have been used in order to ensure the greatest possible relevance of the findings. Only organic results have been included in the survey. The search phrase was always a well known and well established town name, regardless of the homepage. One of the main factors in the evaluation process is the sentiment of results. It may be broadly defined as a nature of found result after entering key words. The results may include positive, neutral, as well as negative feedback. These sentiments, as well as the position in which they appear, provide a picture of researched entity, and thus ultimately determine its online reputation. Sentiment of individual results in Top 10 is shown in the table below with a brief commentary. At the same time, each position is assigned a score based on the sentiment according to the following table:

Sentiment/ Position of the result	1	2	3	4	5	6	7	8	9	10
Positive sentiment +	20	19	18	17	16	15	14	13	12	11
Own Website of the town x	10	9	8	7	6	5	4	3	2	1
Neutral sentiment ±	2	2	2	2	2	2	2	2	2	2
Negative sentiment -	-20	-19	-18	-17	-16	-15	-14	-13	-12	-11

Tab. 1. Sentiment of results / position of results

The table shows chronological sequence of awarding points to the analyzed entities. Positive response or sentiment results in the increase of the score. The higher the position of this sentiment in the search result, the more points are awarded. Similarly, but with the opposite effect it works in

identifying the negative sentiment. Points are deducted, the higher the position of the display, the bigger the deduction of points, and this significantly deteriorates reputation. Next, individual sentiments are counted as a part of the overall evaluation and the resulting number indicates the strength of the sentiment of all ten search results for the town / entity. The resulting number of sentiments stands for the overall level (power) of online reputation. The entities are then listed for comparison in ascending order based on their overall level of online reputation in a virtual environment of Slovak Internet. The table of the overall evaluation of sentiments of twenty largest Slovak towns (and therefore the overall level of their online reputation) looks as follows:

Town / Sentiment result position	1	2	3	4	5	6	7	8	9	10	Result
Komárno	x	x	±	+	±	+	±	x	±	+	73
Bardejov	x	±	+	+	±	x	±	+	±	x	72
Nitra	x	±	±	+	+	+	±	±	±	±	70
Michalovce	x	x	x	±	±	±	+	+	±	±	64
Košice	x	+	±	±	±	+	+	±	±	±	60
Martin	x	±	±	±	+	+	±	±	±	±	55
Trenčín	x	±	±	±	+	±	+	±	±	±	54
Poprad	x	±	+	±	±	±	±	±	+	±	54
Prievidza	x	±	±	±	+	±	±	±	±	±	42
Spišská Nová Ves	x	±	±	±	+	±	±	±	±	±	42
Zvolen	x	±	±	±	±	+	±	±	±	±	41
Bratislava	x	±	±	±	±	±	+	±	±	±	40
Prešov	x	±	±	±	±	±	+	±	±	±	40
Levice	x	x	±	±	±	±	±	±	±	±	35
Nové Zámky	x	±	±	±	x	±	±	±	±	±	32
Humenné	x	±	±	±	x	±	±	±	±	±	32
Žilina	x	±	±	±	±	±	±	±	±	±	28
Banská Bystrica	x	±	±	±	±	±	±	±	±	±	28
Trnava	x	±	±	±	±	±	±	±	±	±	28
Považská Bystrica	x	±	-	±	±	±	±	-	±	±	-7

Tab. 2. Overall rating of sentiments of twenty largest Slovak towns

#### 4. Evaluation of the analysis and discussion

It clearly appears from the analysis that in respect of the virtual identity of researched entities - twenty largest Slovak towns – the first ranks of the search are dominated by the web sites that belong directly to the towns or are managed by the towns. Dominant group of sentiments has been comprised of search results of neutral sentiment. A negative sentiment has been recorded twice with only one entity, on the third and eighth place in the search results (town of Považská Bystrica has recorded negative evaluation regarding, in particular, the transport infrastructure of the town). Entities which have occupied leading positions have in terms of virtual reputation among Internet users an advantage in the form of more positive perception of their complex virtual identity. In case the user is searching for information on a particular town, and he/she comes across some negative reference, this may ultimately affect the overall perception of the destination. Especially if the user is a tourist who has not personally visited the town or the area and forms his/her view only on the basis of information from the virtual environment. The same applies to potential investors. Towns should therefore make sure that the necessary information available to potential visitors is as clear as possible. It is in their interest to eliminate negative publicity (and enhance positive publicity), at least at the first ten places in the search results. This can be achieved by an active Internet communication policy in the form of spreading positive information on renowned Internet portals, such as electronic forms of major Slovak newspapers, or through virtual social networks. The best way how to eliminate negative or neutral publicity on the first ten places of the search engines results is literally a displacement of such publicity by active work (in the form of a coherent

marketing communication policy) on the Internet. As mentioned above, the presented methodology is one of many methodologies used for the determination and measurement of online reputation. However, its complexity, transparency and the fact that it is less time consuming, predisposes this methodology to be used for the purpose of establishing online reputation of different entities, such as SMEs, public institutions and even individuals using the Internet for their personal branding.

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## Tasks categorisation for the needs of performance measurement in the public administration organisations

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**Abstract.** One of the essential conditions of performance management is the determination of target values of key indicators which constitute a basis of performance measurement. An effective way of setting common indicators and their target values should be identified for organisations with the prevailing project work. Possible options consist in the search of similar interpretation of the nature and difficulty of tasks performance. The article deals with the approaches towards the determination of tasks categories for the needs of performance measurement in organisations with the prevailing project work.

**Key words:** performance management, individual performance, organizational performance

### 1. Performance management

Performance management can be defined as a strategic and integrated approach to achieving sustainable success of an organisation through the improvement of performance of people and processes by developing their competences both at individual and team levels [1]. Performance measurement is an important aspect of performance management where a set of definite parameters and targets is used to evaluate individual and organisational performance.

Performance measurement is quite well managed as regards its definition, approaches, methodology and instruments. However, a detailed examination shows that the interpretation of performance measurement available from theory and practice is applicable in particular to the organisations where the core work is based upon standardized, .i.e. routine processes repeated under identical conditions. Performance measurement can use there in full the evaluation of processes capabilities, statistical management based upon six sigma approaches, as well as control activities, including corrective and preventive measures following the results of performance measurement.

However, managers of organisations with the prevailing work of project nature also need to measure performance for the purpose of effective management. The project nature of work expresses the uniqueness and complexity of repeatability of a particular set of work (process). Designing offices, IT development organisations, consultancy firms, as well as the prevailing number of public administration institutions rank among those organisations characterized by such type of work. In such organisations, there is also a need to manage the preparation, implementation and use of the system of performance measurement so that a manager is able to take decisions concerning the use of capacities available within the organisation provably and on the basis of facts.

### 2. Performance management system within the organisation

From the viewpoint of the relationship between an employee and organisation management, performance management represents a proactive partnership helping employees to achieve best performance and harmonize their contribution with the values, objectives and initiatives of the organisation [3].

Performance within the organisation is measured primarily in order to highlight the results of the organisation and a share of individual organisational units in their achievement. As regards the measurement of individual performance, performance measurement of individual employees also

improves employees' knowledge of products of the organisation in the creation of which they participate.

Performance management system within the organisation consists of the following:

- a set of performance standards for which the indicators and target values have been defined in accordance with objectives of the organisation;
- evaluation procedures constituting a process of performance measurement for which the evaluation guidance and records have been worked out;
- a process of performance improvement containing a set of measures of corrective and preventive nature, as well as procedures to review the system of performance management.

The above process components must exist in mutual interconnection which can be simply expressed as a cycle consisting of three parts – identification of measurement areas, implementation of the processes of performance measurement and processes of performance improvement.

## **2.1. Identification of measurement areas**

Each organisation should clearly identify the areas where performance measurement can achieve the highest effect on the improvement of performance. Strategic objectives and goals of the organisation, as well as various managerial models, methodologies and instruments may help to select evaluation areas (Balanced Scorecard, Model of contemporary management, Model of Excellence - EFQM).

One of especially important tasks concerning the measurement of individual performance is the area of determination of performance standards. In particular the organisations dealing with the tasks of project nature are in a very difficult situation when determining performance standards. It is understandable that also in such organisations the tasks are solved by classical procedural approaches; however, the development in public administration can serve as an example to point out that in particular the tasks to be solved procedurally are often the subject of outsourcing. On the other hand, the tasks requiring the solution of project nature remain an incontestable domain of public administration institutions. The attempts to measure performance in such organisations fail because of job description which is considered specific, unique, incomparable where the time necessary to solve the task assigned cannot be exactly estimated.

One of the possible ways of replacing the well-known approaches of performance measurement in private sector consists of tasks categorisation, i.e. their classification into groups which shall have assigned a specific evaluation serving as a base for the measurement and evaluation of performance.

The categorisation of tasks (activities) of public administration organisations can be approached by top-down or bottom-up method. The top-down approach requires directive categorisation of tasks and the corresponding activities into groups according to their difficulty. The bottom-up approach requires longer examination of the nature and complexity of tasks where the examined characteristics of tasks, factors following from their fulfilment and consequently also the consumption of capacities necessary for their implementation are specified first.

Categorisation of tasks represents one of the possibilities to overcome barriers occurring in performance measurement (both individual and organisational) in organisations with project nature of work. It consists in the creation of acceptable categories of tasks solved by individuals and teams. Such tasks can be assigned the determined evaluation which can be reflected in comparable values (e.g. consumption of resources, costs). The problem of tasks categorisation lies in the determination of the method of tasks categorisation and the number of groups.

The sequence of addressing this problem consists of the following steps:

- generating a set of the most frequently occurring tasks;
- determining criteria for the evaluation of tasks difficulty;
- assigning criteria values to individual tasks;
- determining groups of tasks using cluster analysis;
- determining average value for a group (category) of tasks.

## **Generating a set of the most frequently occurring tasks and criteria determining**

This task can be best solved by a team of experienced senior managers able to name and specify typical tasks occurring within the organisation. Tasks should be briefly described and apt denomination should be found for them. Tasks overlapping should be avoided in their specification, i.e. individual tasks should not have a common intersection.

The task to determine criteria for their evaluation, which shall form a basis for the subsequent categorisation, is essential for the proper categorisation of tasks into groups. This task should be dealt with by the management which sets organisational performance targets and monitors their fulfilment.

The only one criterion can be determined, which shall express time expenditure of a task fulfilment. However, such solution is often insufficient because of high misrepresentation. The author of such categorisation would be in fact forced to solve each task separately not allowing, however, distinguishing between the required competences of employees. This would thus result not in the categories of tasks, but in a set of tasks evaluated by time dispositions. In this article, we focus on a more appropriate approach which would lead to the creation of categories requiring, however, the use of several criteria. Such approach allows achieving a better result in tasks categorisation, although with higher demands on the initial processing. The appropriate criteria for categorisation can include for example the following:

- time expenditure of the task processing – starting from the tasks which can be solved in an hour up to the tasks requiring tens of hours or respectively days of work;
- the required specific knowledge and skills - starting from the tasks which can be solved using conventional knowledge (e.g. obtained by study) up to the tasks requiring experience, a combination of knowledge from several disciplines and a certain level of invention to be solved;
- the required team work - starting from the tasks solved in sequence where the cooperation in the form of handing down outcomes is sufficient up to the need of developing a common outcome created in close interaction of several specialists.

Each of the tasks generated should be specified according to the determined criteria, i.e. expressed in units according to the defined value interval. This phase is rather demanding as regards the assurance of objectiveness and impartiality of evaluators when assigning values to individual tasks.

## **Determining groups of tasks using cluster analysis**

The tasks specified can be classified into groups using cluster analysis. This involves in fact a comparison of the distance of objects in n-dimensional space, where n represents the number of criteria. In this case, objects are the tasks characterized by criteria values. The purpose of the comparison of objects is to form from the set of all objects such groups where the objects within a group are as homogenous as possible, i.e. objects within a group should have the highest possible number of similar features and groups with respect to each other should be as heterogeneous as possible. When solving this task, the contemporary software tools (e.g. Statistical Analysis System – SAS) allow obtaining natural clusters, forming a specified number of clusters, characterizing the most important criterion causing differentiation, or characterizing a typical representative of a cluster respectively.

Categorisation of tasks makes sense only if each task assigned and implemented within the organisation can be categorized in the corresponding category. Similarly, if the aim of categorisation is to help in performance measuring within the organisation, the value expressing e.g. the average time of the task fulfilment must be determined for each task.

## 2.2. The system of performance improvement

Performance measurement should lead both to performance improvement within the organisation and to the improvement of the approaches to performance management.

The accuracy of performance measurement is in direct proportion to the number of tasks which are the subject of performance measurement. If an employee of the organisation carries out activities which can be expressed in tens even hundreds of tasks, the accuracy of performance measurement will be rather high. In such a case, employees holding similar posts can be compared with respect to their performance and the solutions for performance improvement of the employees achieving lower performance can be found.

## 3. Conclusion

The purpose of performance management does not consist in the criticism of previous performance, concentration on short-term results, but rather in the communication of the findings of what and how has been done, in the setting of goals for the future and in the mapping of the development of the organisation and individuals. For this reason, the management of performance should be systematically focused on the improvement of the organisation's results by developing competences of teams and individuals within the approved framework representing the planned goals, standards and requirements for competences.

The tasks solved within the organisation of public administration have in fact to a certain extent a unique, unrepeatable nature, but such feature should not prevent the application of the principles of performance measurement and the setting of target values of the monitored indicators. Tasks categorisation should represent a supporting instrument for the system of performance measurement and evaluation within the public administration organisations.

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## Flexibility as a part of the value of investment project

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**Abstract.** Flexibility is an important element in the valuation of investment projects by real options methods. Flexibility reflects the ability of management to adapt their decisions to the future conditions, which increases the value of the project. The problem is to appreciate the value of these future decisions. In real options it is expressed by volatility. The object of this work is to establish the possibility of setting the volatility of projects.

**Keywords:** flexibility, volatility, cash flows

### 1. Introduction

Project valuation is the most important part of the selection process. The project value is the net difference between the project revenues and costs over its life cycle and the result also shows how the value of business will increase as a result of the implementation of the investment. Investment activity is associated with many risks. Therefore it is necessary to base the investment decision on a reliable method of assessing the effectiveness of investments which takes account of all known risks and translate them into the evaluation of investments. For the evaluation of effectiveness of investment projects can be used several methods, that take into accounts a lot of parameters. Important factors are currently:

- **Cash flow streams** (investment costs and production phase costs and net revenues) through the entire project life cycle. Investment costs are expenditures for the construction of the project and production phase capital costs. Net revenues or project payoff is the difference between the revenues and the costs associated with the production phase of the project.
- **Discount rate** is used to discount the future cash flows to account for their uncertainty. It is also used to convert the future value of the project cash flows streams to today's value. We can say, that the role of the discount rate is mainly to convert future revenue to their present value, to express the expected profitability of the investment in time and to take into account the level of risk associated with investment. The discount rate therefore reflects not only the time factor, but also the risk that is associated with a particular investment.
- **Flexibility** or availability of management's contingent strategic decisions to change the course of the project.
- **Risk-free rate**

### 2. Flexibility and volatility

Prerequisite for the use of real options in evaluation of investment projects is the existence of flexibility. Flexibility can be compared to rare goods that have significant value. Scholleová defines flexibility in the context of strategic investment as the ability to change decisions about investment and in real-time to contract, expand, or abandon an ongoing project in order to

maximize the benefits from the investment [4]. Flexibility according to Kislingerová can be seen as the right to the adaptation to the current situation in the future and the right to collect future cash flows arising from the implementation of the project [3]. Fair value of the option is then strongly dependent on the degree of flexibility of investment project and on the level of risk of future revenues from the project [6].

From a practical perspective the market environment without risk does not exist. The reason is the uncertainty that is a part of every decision-making process. Because decision is set in the present, but its impact can be seen, respectively evaluated in the future, it is accompanied by uncertainty.

In the context of real options it is used to reflect the uncertainty term volatility. Input parameters for evaluation of real options are variables of the DCF calculation (present value, capital expenditures, service life and discount rate) and volatility. Volatility is part of the option price, which consequently increases the net present value of project. The quantification of volatility is also the dominant issue of real options.

The volatility of the underlying asset is in case of real options expressed by volatility of expected future cash flows of the project using statistical characteristics - variance or standard deviation. By financial options where the underlying financial asset is traded on financial markets, volatility is typically derived from historical values, which can be altered by human judgment. By real option can be volatility derived from historical values only in cases when the future cash flows depend only on prices of world traded commodities (oil, coffee...).

The increasing volatility leads to growth of option value. This is a significant difference against traditional methods for evaluation of effectiveness of investment. In the traditional methods the growth of risk decreased value of the project. The problem is that the volatility is not constant over time, so it is very difficult to quantify volatility and to estimate it for new projects. Volatility can be expressed as a historical, implied and predicted.

## **2.1. The types of volatility<sup>1</sup>**

### **1. Historical volatility**

Historical volatility is defined as the rate of past fluctuations in the value of the underlying assets and can serve as a basis for determining future volatility. The most commonly used method for determining the historical volatility is a statistical standard deviation. The result is called static volatility.

### **2. Implied volatility**

Implied volatility is a measure of market expectations. It concerns the future volatility of the underlying asset. In this case, the volatility is derived from current option price through option valuation model (Black-Scholes). The option price is known parameter and volatility parameter is unknown parameter. It is therefore a theoretical volatility.

### **3. Predicted volatility**

The predicted volatility is used as an input parameter for the calculation of the option value, which is very sensitive to changes in volatility indicator. Because it is a predicted parameter, it is not easy to determine it, and it is not universal method for its calculation. Black-Scholes model also assumes constant volatility. It means that if the market will provide new information that affects the price of the underlying asset and the volatility will change, it is necessary to review the entire process of option pricing and repeat it with the new volatility.

## **2.2. Input parameters for the determination of variability**

For the investment opportunity we can define the following parameters:

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1 [www.ivolatility.com](http://www.ivolatility.com)

- Present value of future cash flows from the investment project -  $S$
- Investment costs (costs to acquire the asset) -  $X$ ,
- Lifetime of the project -  $T$ ,
- Risk-free rate of return -  $r$ ,
- Riskiness of the asset, variance of the best and worst case scenario -  $s$ .

The parameters of the investment we will use as input variables for different types of real options are shown in following table:

Real option	Type of option	Value of Underlying Asset (Spot price - $S$ )	Exercise or Strike Price ( $X$ )	Volatility of Underlying Asset's Value
To abandon	American put	The present value of the CF from the abandoned assets	The exit or salvage value	Standard deviation of expected cash flows
To abandon during construction	Compound option	The present value of the completed project's CF	The investment outlay necessary for the next stage	Standard deviation of the completed project's CF
To defer an investment	American call	The PV of completed project's net operating CF	The deferred investment outlay	Standard deviation of completed project's net operating CF
To switch inputs or outputs	American put	The present value of the incremental CF from the best alternative use	The cost of retooling production or distribution	Standard deviation of CF from the best alternative use
Option to wait	Call option	Present value (PV) of future cash flow (CF) of investment	Investment costs	Standard deviation of future cash flows
To expand	European call	The present value of incremental net operating cash flows	The additional investment outlay	Standard deviation of underlying asset
To contract the scale of a project	European put	The present value of potential cost savings	The costs of rescaling the project	Standard deviation of potential cost savings
Option to switch	American put option on asset A	PV cash flow with asset A	Variable costs with asset A	Standard deviation of cash flow
	American call option on asset B	PV cash flow with asset B	Variable costs with asset B	

**Tab. 1:** Overview of the types of real options and input parameters [1], [2], [5]

The table 1 shows that for the determination of volatility is most often recommended to use the standard deviation of the value of underlying assets - future cash flows. It can be used more ways and methods. The selection of a particular method depends on the user, because there are numerous approaches, but it is not possible to tell which one is the best.

The value of volatility can be determined by the following methods [4], which are shown in figure 1:

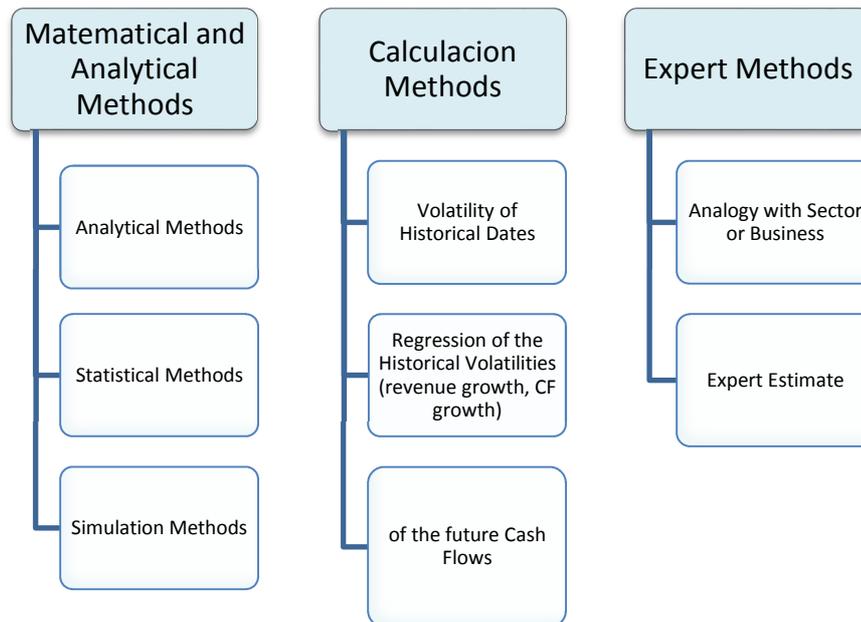


Fig. 1: How to determine the value of volatility

### 3. Checklist of items to be sent to TRANSCOM 2013 organizing committee

1. A final MS Word 2007

### 4. Conclusion

Real options extend the traditional methods of assessment of investment with a positive value of risk - the value of Strategic Flexibility. From this perspective, investment is seen as a set of possible decisions that can be implemented in the future in relation to underlying assets of this investment. Real options methods extend traditional methods with value of future strategic decisions. The valuation of strategic flexibility is also a key issue determining the value of real options. Similar to the financial options also real options should have an underlying asset. Underlying assets are in case of real options the future cash flows (CF), which can the companies influence in the future by their strategic decisions. The volatility of the underlying asset is then defined as the expected future volatility of the CF of the project. To reflect the volatility can be applied statistical concepts variance and standard deviation. The disadvantage of the real options compared to the financial options is the fact that the underlying assets of the real options are not generally traded on financial markets and consequently the financial markets do not provide necessary information on the historical prices of underlying assets. In this case, it is possible to estimate the volatility of the volatility of analogous projects, or volatility typical for the industry of historical data [4]. Determination of volatility is a key element of the real options because

significantly affects value of the option. It is therefore necessary to determine the value of volatility as precisely as possible.

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## THE EFFICIENCY OF POSTAL LOGISTICS PROCESSES

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**Abstract:** The postal logistics system has been the subject of constant analysis with respect to improving the efficiency of processes performed and has its place in the history of the postal service operation. From the point of view of improving the efficiency, one should note the scale of processes performed and number of logistics operations as well as their scope, which, given its complexity, is incomparable with the processes performed by other logistics operators functioning on the Polish market. One of the areas that needs to be improved in terms of efficiency is the performance of logistics services by Poczta Polska S.A. on the TSL market. This area precisely is the subject of this article.

**Key words:** post, logistics process, postal logistics, supply chain

### 1. Introduction

The aspect of improving the efficiency of the postal logistics system ought to be analysed in the context of integrating two areas, namely the postal cargo service and, recently, the carriage of pallet cargos for external clients. There is competition in both these areas. As far as the postal service market is concerned, an indicator of competition were particular stages of the postal market liberalisation in the territory of the European Union and quality indicators applying to the performance of postal services within this scope [1, 191]. On the other hand, the entry of the postal service to the highly competitive TSL market was possible as a result of implementing the recommendations contained in the corrective programmes prepared by the Postal Logistics Centre. The new service introduced in 2009 as a result of those recommendations, called *the Pallet Post*, made it possible to carry general and full truck cargo for the needs of external clients with the use of postal logistics infrastructure [2].

An analysis of the performance of logistics services by the postal service shows certain general tendencies connected with a relatively weak position on the general cargo market that arises from a fierce competition, short-term presence and lack of experience on the TSL market. One ought to take into account the context in which the postal service entered the TSL market and the grounds for such decision. The initial intention of the postal service authorities was to reduce the fixed costs of the postal logistics system operation by introducing external cargos to the postal circulation without bearing any additional investment costs. The improvement was to take place, first and foremost, as a result of soliciting external clients and thus limiting vehicle stops, the filling of cargo cases and areas available for storage and manipulation. The actions presented were aimed at improving the efficiency through management of and change in the work organisation with the use of infrastructure and staff possessed. That stage came to an end in 2012 and currently further works are being undertaken as the presence of Poczta Polska S.A. on the TSL market has been written in the strategy of the postal service as **an alternative to obtaining profit from diminishing volume of traditional postal services**. The implementation of the Poczta Polska S.A. strategy provisions within this scope requires further improvement in the efficiency of using and introducing constant

changes within the postal logistics system with respect to the integration of services performed for the needs of the postal service and the TSL market, with emphasis being placed on the latter [3, p. 313].

The current experience arising from the presence of the postal service on the TSL market points to certain tendencies within this scope and, at the same time, to the failure to use the so-far full possibilities of the logistics infrastructure possessed. One of the reasons for the current position of the postal service on the TSL market, which shall be presented in a greater detail in the further part of this article, is the structure of clients served from the B2C (Business-to-Consumer) segment. An analysis of the orders performed for that client segment indicates that the performance costs, i.e. the costs of the so-called last mile may comprise about 60% costs of an entire order. The result of such a cost structure is that the key to success lies in developing a postal carriage performance management model at the first and the last mile in order to achieve the effect of scale and indicator of synergy through the added value in the postal and pallet cargo carriage in the territory of operation of certain postal service organisational units. A target alternative for this variant shall be the transformation of the wallet of clients serviced into a B2B (Business-to-Business) segment and switching to the platform logistics model, where the costs of the first and the last mile do not appear or make up a small part of costs of a received order performance.

One of significant elements of the target TSL market service model ought to be the control of pallet and postal carriage performance costs as well as the efficiency improvement in the use of resources possessed (fleet, point infrastructure). In the present study, one possible way to achieve this goal, connected with the service of the current B2C client segment, is indicated.

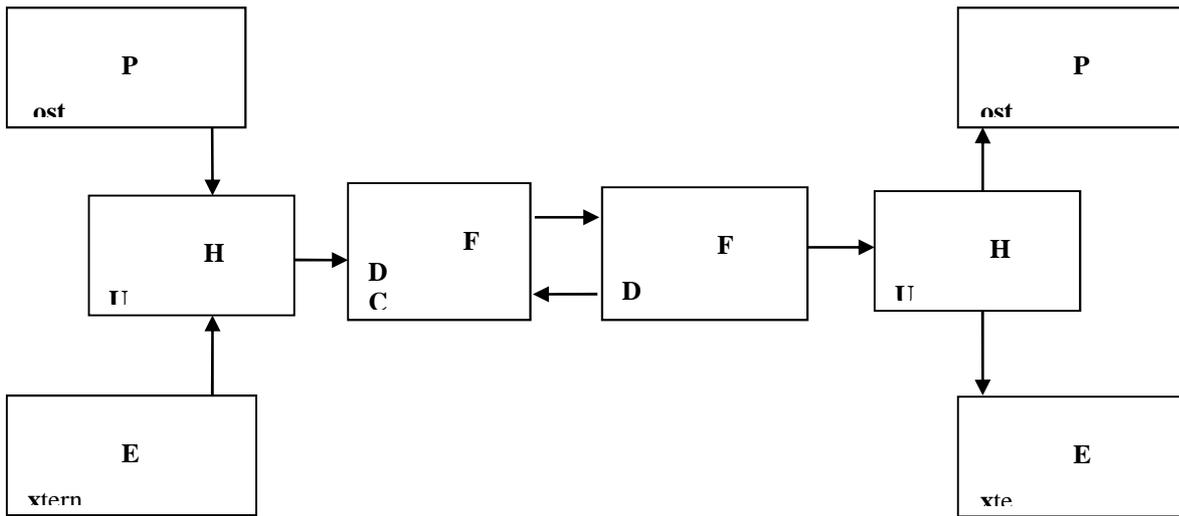
An initial assumption, arising from the conditions of order service for the needs of external clients presented, was the formation or allocation of Postal Hubs (a hub), Postal Reload Points (PRP), with the use of point infrastructure possessed, namely real estates operated by the Area Branches of the Logistics Centre, the use of the current hub/PRP locations operated by the Network Regions, lease of new locations with taking into account pre-determined, consolidated criteria upon selection [4, p. 225]. Based on the experience gained upon the performance of the postal logistics process and the presence on the TSL market, main criteria determining the requirements which target locations of hubs/PRP should meet were established. The main criteria include the following: a convenient location<sup>1</sup>, manoeuvre area<sup>2</sup>, a hall for storage and re-loading, enabling logistics activities related to the postal and pallet cargos. The target postal logistics model assumes the transfer of the postal forwarding and allocation of the CFP market service, parcel warehouses along with the possibility to use the means of transport of all fleet categories to new hub/PRP locations. The new hub/PRP locations ought to be optimally communicated with the FDH.

The model of an integrated chain supply of the public postal service operator in Poland shows figure 1.

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<sup>1</sup> a convenient location ought to take into account the needs of the Network Regions in terms of the delivery of the material to the distribution centre of the city, letter/parcel/CFP warehouses, communications of the supply and distribution runs, optionally a CFP-oriented magazine and the performance of the first and the last mile, service of the clients from the TSL market, the access to the location should not be limited due to the tonnage of the vehicles used, the location ought to take into account the layout of national roads and motorways.

<sup>2</sup> the manoeuvre area should enable the access and stop to all-category fleet.



**FDC** - the Forwarding and Distribution Centre  
**FDH** – Forwarding and Distribution Hubs  
**PRP** – the Postal Re-loading Point

**Fig. 1** Scheme of the supply chain of the Poczta Polska S.A.

The criteria determining the choice of hub/PRP location ought to take into account the economic calculation, the location that ensures access to the national roads and motorways, manoeuvring the fleet of all categories as well as storing and processing the postal and pallet cargos regardless of the weather conditions. The fulfilment of all these criteria will result in the synergy effect for the service of the TSL market with the use of the postal infrastructure. The target model of the postal logistics chain should provide for such process performance that would facilitate the integration of functions and the logistics operations performed for the needs of the TSL market and the postal cargos. The integration “around” the postal logistics chain ought to ensure the performance of the Poczta Polska S.A. strategy adopted within the scope of the presence of the postal service on the TSL market with the use of the strategy performed, the logistics service outsourcing project using transportation framework agreements and the service of the CFP market.

Given the failure of the infrastructure of the currently located hub/PRP to meet the logistics service requirements and the lack of possibility to extend it (the location of points in city centres, too little serviceable space, the lack of development possibility), the services rendered for the needs of the pallet carriage are performed based on an auxiliary model. The auxiliary model allows for relieving the above-mentioned locations in the performance and execution of forwarding tasks or taking over such tasks completely. The currently employed auxiliary model makes use of, inter alia, the existing bases of the Logistics Centre Area Branches that boast a convenient location. The branches can be found outside city centres, which thus eliminates the necessity to limit the tonnage of runs and the drive through the crowded agglomeration centres. This, in turn, translates into wider possibilities of an efficient and cost-saving service of clients upon the performance of pallet and postal cargo carriage.

Owing to the nature of the current activity, the point infrastructure of area branches makes it possible to manoeuvre vehicles of different dimensions and load-carrying capacity. The modernisation or development of the existing halls (presently used by technical divisions by limiting the facilities for the quick repair station) or, if need be, construction of additional warehousing areas and equipment in the internal means of transport will allow for the implementation of logistics tasks for the needs of the postal service and the TSL market as far as designated locations are concerned.

In order to ensure a full and economically justified performance of the pallet distribution along with the postal cargo, and with the use of the auxiliary model assumed, one ought to adjust the communications plan whose task will be the use of the synergy effect possibilities within the scope

of combining the postal and pallet cargos as well as the fleet for the performance of the first and the last mile during technological breaks between the postal connections planned. The presented concept of hubs/PRP allocation in the area of the real estates possessed by Poczta Polska S.A. that, however, are used by the Logistics Centre, complies with the requirements for the needs of the postal and pallet cargo service. In order to use the locations presented, certain adaptation activities are carried out for the needs of servicing re-loads and storage of the postal and pallet cargos. In order to achieve the synergy effect, one ought to change the organisation of the postal communications by ultimately using the designated locations for the needs of the new postal logistics model. To this end, one ought to arrive at a common stand with the representatives of the Network Regions in order to gradually implement the new organisation of the postal cargo service by transferring the postal forwarding to new locations.

In the premises of the Poczta Polska S.A. strategy, the plan for the carriage of pallet shipments provides for a dynamic peak in the service for the years 2013-2017. An analysis of the performance of orders for the needs of the so-called first and the last mile shows that 30-50% of them are performed via dedicated carriage. The delivery usually takes place via dedicated runs from the FDH, hubs, PRP and the Logistics Centre level, which generates increased distribution costs. The increase in the above-mentioned volume results in the necessity to secure the possibility of re-load and storage in the newly formed hubs/PRP locations or to lease other locations that are not property of Poczta Polska S.A. In connection with the foregoing, one ought to also organise reload and storage places outside the range of the above-mentioned, gradually adjusted points - PRP.

The consequence of such a solution will be the necessity to modify communications plans according to the new conditions along with the increase in the load-carrying capacity of vehicles used to perform the planned postal connections for the needs of the postal and pallet cargos. What is significant about the new postal logistics organisation system is arriving, in common with the Network Regions, at a decision in the scope of new, optimal hubs/PRP locations and the establishment of the scope of tasks performed for the needs of forwarding, postal carriage and CFP services.

Another, significant element to achieve the synergy effect are the postal runs. When analysing the possibility to perform the pallet shipment carriage in combination with the exchange of the postal cargo in postal facilities, as well as with the use of postal-car runs planned, such an idea seems possible in a limited scope. It was found that the requirements of the pallet shipment delivery and receipt with maintaining, at the same time, all aspects of postal facilities service requires an individual approach due to:

1. Meeting the times of dispatch made with the facilities, border times of effecting the shipments, times of processing the shipments in hub offices. Determining the time of a planned run along with the delivery to the client at the first or the last mile of the pallet shipment is impossible in practice. This is caused by the fact that the pallet shipment is directed to different clients and the delivery and receipt times may be different for every single one of them. Potential client service as part of the pallet shipment will be possible for contractual clients with time windows determined and the location of the service spot.
2. An obligation to secure the vehicle cargo cases with seals during inter-hub runs, which obligation is met in accordance with the rules of monitoring and making reports for units involved in the Immediate Repair Programme.
3. The specifics of the pallet shipment, i.e. its dimensions, weight, exclude the possibility to perform the service upon the performance of the run.

In order to combine the performance of the runs with the pallet shipment, an indirect synergy model will be introduced, which model will consist in incorporating a vehicle servicing the planned run (inter- or inner-hub one) into the service of the first and/or the last mile in a pre-determined time window. The planned breaks included in the working schedule of a vehicle will be used for the performance of the Pallet Shipment at the stage of the first and the last mile.

Summing up, in the present study regarding the management model of the performance of runs on the first and the last mile in order to achieve the synergy effect and indicator by the value added in the postal and pallet cargo carriage in the territory of operation of Poczta Polska S.A. organisational units, the following should be taken into account: an alternative allocation and/or modernisation of the hubs/PRP with keeping in mind the number of orders performed at the first and the last mile. The proposal to make use of vehicles in time windows that do not generate additional costs ought to be implemented. Also, the cooperation with the Network Regions ought to be initiated for the purpose of developing an optimal location of the common model of the point logistics infrastructure operation for the needs of the new hubs/PRP.

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## Debt as part of firm's capital structure

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**Abstract.** Each company uses particular combination of equity and debt for financing its activities. To choose an optimal capital structure is one of the most important problems of companies. Sometimes it is more advantageous for firm to finance its activities using debt because interest payments can reduce corporate tax base. But a key question for businesses is how to assess the amount of debt that can be supported, and the optimal mix between debt and equity financing. This paper focuses on debt as source of financing business activities. It provides theoretical background of debt and way of estimating the cost of debt.

**Keywords:** Debt, cost of debt, capital structure, financing.

### 1. Introduction

Financial performance of company is influenced by many factors. One of them is also the capital structure (the structure of sources for financing the business activities). Each company should focus on management of capital structure and consider basic rules of financing based on economic theory and practice. Firms always use some combination of debt and equity for financing their activities. The real problem is to create an optimal proportion of these forms of capital.

### 2. Optimal capital structure

There are many criteria that can affect the decision of choosing debt or equity (for example type of business entity, size and profitability of enterprise, business sector of company, macroeconomic environment, management of company etc.). When making this decision it is very important to know the real cost of capital. For debt, this cost is defined in terms of payments the company must honor contractually. For equity, the business must offer other opportunities – and over time it must achieve these returns. The overall cost of capital of a business is simply the weighted average of the cost of debt and the cost of equity, where the two costs are weighted by the relative proportions of the business which are financed by debt and equity. This forms the basis for the formula for the weighted average cost of capital – WACC [12].

$$WACC = K_e * \frac{E}{V} + K_d * (1 - T) * \frac{D}{V} \quad (1)$$

Where:

$K_e$  – Cost of equity

$E$  – Market value of equity

$V$  – Market value of equity plus market value of debt

$K_d$  – Cost of debt

$T$  – Corporate tax rate

$D$  – Market value of debt

An issue of capital structure and its optimization has become an important topic of discussions of experts and economists since when Modigliani and Miller wrote „The Cost of Capital, Corporation Finance and the Theory of Investment“ (1958). One of the most discussed questions is, if there is such a combination of debt and equity, which would maximize the value of the company.

Generally, we can divide the capital structure theories into two basic groups - static theories and dynamic theories. Static theories seek an answer to the question whether there exist an optimal amount of debt and if so, how to describe it. We include into this group: Classical theory, Traditional approach (the U-Curve theory), Trade off model. The representatives of dynamic theories say that there doesn't exist any uniform methodology to define an optimal capital structure because every company operates in different conditions. This group includes Pecking Order Theory and Incentive-signalling model.

### 3. Debt and cost of debt

When calculating the cost of capital there has been generally paid more attention to the cost of equity than to the cost of debt. But sometime it is more advantageous to finance activities using debt because interest payments can reduce corporate tax base. The real problem is how to find an optimal proportion of debt and equity. The most important factor influencing this process is probably cost of capital (cost of debt and cost of equity).

In many ways the cost of debt is considered to be more transparent than the cost of equity. While the cost of equity is purely an opportunity cost concept, and is usually estimated using models of equity investor behavior, debt finance costs are visible in terms of promised interest payments and redemption yields on bonds. Even so, the calculation of the cost of debt is not entirely straightforward.

Debt can be in form of bonds, loans or overdrafts. All of these forms have some common characteristics. First, in each case the company in receipt of finance is contractually committed to repayment of the original finance (principal) at some later date, together with additional payments in the meantime (interest or coupon payments). Secondly, payments by a company to honor its contractual obligations to the providers of such finance have a priority call over shareholder dividends. Thirdly, investors who provide these types of finance have no right to any other payments over these contractually committed payments. Providers of debt, unlike equity investors, do not benefit in the event that a business performs well.

The difference between the yield of debt provider and of equity investor can be described by following simple example. We will ignore tax effects for simplicity. Suppose that the firm's operating cash flow is expected to be 200€, but because of business risk may actually be 20% higher or lower: 160€ in bad times and 240€ in good Also suppose that the firm has interest payments on debt of 110€.

Business Outcome	Operating Cash Flow	Interest	Cash to shareholders
Bad	160€	110€	50€
Expected	200€	110€	90€
Good	240€	110€	130€

**Table 1** Illustration of difference between the yields of equity investors and debt provider

Looking at the last two columns, we see that debt providers have always the same yield no matter how good or bad is the firm's outcome. But the yield of shareholders varies from 130€ (in good times) to 50€ (in bad times).

Providers of debt therefore face a different risk than investors to equity. Interest payments are paid out of corporate incomes before taxation, and take priority over dividends. Moreover, interest

costs are determined at the outset of the borrowing and are more likely to be paid than payments to equity investors. On the other hand, debt holders don't share in the potential upside of value of the company, as the equity shareholders are the residual owners of the firm. In the case that an enterprise to which an investor has lent money is successful due to specific risk factors the debt investor simply receives the contracted interest payments and the repayment of the principal. This is referred to as the 'promised yield' on debt. In the event that a business is unsuccessful, the debt investor faces a downside – interest payments might be delayed or reduced, and the principal might not be repaid. This is referred to as the risk of default on a bond or loan. Combining the promised yield and the probability of default enables the debt investor to calculate the 'expected yield' on debt (or expected return on debt) which is the true cost of debt.

The most common way of estimating the cost of debt is to use the promised yield on debt of the firm which is not correct. The expected return on debt takes into account the possibility of default whereas the promised yield doesn't. An alternative to using the promised yields as the cost of debt is to assume that the debt has zero risk premium, which is impossible, because there must be some chance of default. The debt risk premium must be therefore greater than zero unless the default risk is entirely diversifiable (which is also unlikely).

The problem with determining the expected return on debt arises because the spread between the promised yield and a riskless interest rate with the same maturity, liquidity and tax characteristics consists of two parts: part reflecting the chance of default and part defining expected return premium. And the expected return premium is just that part of the yield spread that should be included in the cost of debt. If the whole spread were an expected return premium then it would be correct to use the promised yield. However, this is impossible because there must be some chance of default. The real cost of debt therefore lies between the two extremes: between promised yield and the riskless rate.

There exist some theories and approaches to estimating the expected return on debt when the promised yield is not used as the cost of debt [3]:

1. *Empirically estimate the debt beta and use the Capital Asset Pricing Model to estimate the expected return on debt.*

This approach is often inapplicable because there aren't relevant data available. And also debt betas vary over time because of changes in interest rates and different debt maturities. It is also very difficult to estimate the market risk premium.

2. *Empirically estimate the frequency of defaults and the size of write-downs and adjust the promised yield to give the expected return.*

This method is problematic because ex-post default frequencies may be very different from ex-ante probabilities.

3. *Use a model to impute the required rate of return on debt from the standard inputs to the WACC.*

To implement this approach we can use Merton model. It helps us to decompose the promised yield spread into the part that is compensation for expected default and the part that is an expected return premium. The Merton model is the simplest equilibrium model of the relationship between corporate interest rates and the inputs to the WACC.

## 4. Conclusion

The paper was focused on characteristic of debt as part of firm's capital structure and on ways of estimating the cost of debt. The most commonly used methods for valuation the cost of debt are promised yield and riskless interest rate. Both of them biased results and cause errors. Other estimating methods are Capital Asset Pricing Model or adjusting the promised yield for the expected frequency of default, but are also very hard to implement. The practical way of valuation

the cost of debt is to split the promised yield spread into the part of expected default and the part of expected return premium. The inputs required are the standard inputs to the Weighted Average Cost of Capital and the volatility of equity, all of which are easily observable. These inputs can be used to impute the parameters of the Merton risky debt model and to compute the expected return on debt. Although the Merton model is a stylized version of real debt structures, it should pick up the first order effects that are relevant to the cost of debt. Thus it can be used to estimate the expected return relative to the promised yield.

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# Value Management as an Element of Modern Management Methods

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**Abstract.** Organizations functioning in a changing competitive environment face many difficulties, whose overcoming is a key aspect of their further functioning. The impact of external and internal factors, therefore, necessitates a continuing adjustment to the character of the surroundings and current respond to emerging problems. Among these difficulties there are, among others:

- not adjusting the organizations strategies to trends in the economy,
- a growing spiral of costs causing loss,
- difficulties in linking the mission and strategies of an enterprise activity with its current activity,
- inadequate human resources management resulting in a low connection of the staff skills with the profile of a business activity,
- lack of continual development of skills of employees' skills,
- not identifying the staff with the organization, which may be due to the exclusion from certain employees in the formulation of key organizational objectives.

**Keywords:** value management, benchmarking, reengineering, strategic reflection.

## 1. Introduction

'T. Kotarbinski as a method understands the way used systematically, where the way means a deliberate course of action, and thus the composition and arrangement of its stages.'<sup>1</sup> By nature methods have two main features which characterize them. The former is a continual development along with the changes of an environment. The latter attribute of methods is moving some general assumptions used in different situations, to the specific actions having an executive character.

One of the more frequently used methods of management is management by value. 'It results from the previously set objectives and their specified metrics. Managers facing the growing power of customers and shareholders (or their representatives) more often active and demanding, should take into account the changes in the environment, introducing the management by value. This requires, above all, basing the strategies, an organizational system and a management model on the question whether they constitute an additional value for customers and shareholders of the company, and for employees and the whole society.'<sup>2</sup>

Value management is undeniably linked to the market value of a given organization, measured most often by shareholders with the size of the generated profit, which affects the stock price. 'Profitability of the invested capital is thus equal to the product of the operating margin and capital turnover. The formula was often forgotten, looking only at the amount of profit, while ignoring the necessary capital. Referring the profit to the employed capital is the signal of serious treating the finances management.'<sup>3</sup>

An extremely important aspect influencing the increase in value of a company is generating by it its economic value added (Economic Value Added - EVA). 'The indicator EVA is the difference

<sup>1</sup> T. Kotarbiński, *Elementy teorii poznania, logiki formalnej i metodologii nauk*. Ossolineum, Wrocław –Warsaw - Cracow 1961, p. 524 [in]: M. Lisiński, *Metody planowania strategicznego*. PWE Warsaw 2004, p. 48.

<sup>2</sup> J. Brillman, *Nowoczesne koncepcje i metody zarządzania*. PWE, Warsaw, 2002, p. 57.

<sup>3</sup> Ibid, p. 44.

between profitability of net assets, i.e., the operating income minus taxes, and the cost of all capital involved in the company (including equity capital) calculated taking into account the risk ratio associated with a given business sector, and the activity of the company.<sup>4</sup> If the index of the shown above ratio is positive then the company generates economic value added and the value of its assets listed on the stock market also increases.

Another measure, apart from the above mentioned ratio, which represents the increase in the value of an enterprise is market value added (Market Value Added - MVA). It is presented as the difference between the market value of the capital involved, and the value of investments made previously. The measure presented here is not, however, perceived as a key value in the value management, because shareholders are usually interested in the increase in shares value of a company.

Value management is also a 'peculiar variety of strategic management, where the primary strategic objective is the maximization of value for owners.'<sup>5</sup> The actual value of the company is expressed by certain values minus appropriate interest of the achieved income, which a given operator is able to generate in the future for the good of its investors not only in the case of continuation of the activity in a changed ownership structure, but also in the case of liquidation.

'Considering some of the concepts and approaches to the issue of value, especially the market value of a company, it is not possible not to mention a set of terms referring to more or less formal interpretation of the value of a company. There are, in particular:

- book value,
- replacement value,
- liquidation value,
- value resulting from the indicators (multipliers) of the capital market.<sup>6</sup>

The source of value for each company is the attractiveness of the market in which the entity operates, its relative market position and strength of its influence on the competitive environment, and its development strategy. The first of these factors consists of the size of the market and the intensity of competitive forces. The next aspect consists of the relative market share, and also the balance of relative competitive advantages and weaknesses. The development strategy consists of such elements as the substantive quality of the aims making up the strategy, and the consistency and effectiveness of their implementation in practice.

In addition to the potential sources of value for the company, we can distinguish the areas of values, which could include a predictable operating activity, capital structure and real options. The first of these areas involves innovation of activity in a changing environment. Important here is the ability to adapt to the conditions of operation, as well as the ability to predict upcoming phenomena. The capital structure allows for efficient management of entities. In the contemporary world dominates the conviction that the best functioning entities are fully private, therefore, it is important that in the given economy function a limited model of state ownership. The last area of value, that is real options, is made up of the company's current business activity, and the ability to seize opportunities.

'Managing the value of the company means looking for a combination of tangible and intangible assets which create the greatest economic value, and avoiding a combination destroying this value. Proper use of assets, defined broadly as a source of future value, requires business models closer the contemporary socio-economic reality.'<sup>7</sup>

To raise the value of the company, there may be used modern management techniques such as reengineering (Business Process Reengineering - BPR) and benchmarking.

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<sup>4</sup> Ibid, p. 45.

<sup>5</sup> M. Michalski, *Zarządzanie przez wartość. Firma z perspektywy interesów właścicielskich*. WIG-Press, Warsaw, 2001, p. 15.

<sup>6</sup> C. Suszyński, *Restrukturyzacja, konsolidacja, globalizacja przedsiębiorstw*. PWE, Warsaw, 2003, p. 278.

<sup>7</sup> C. Suszyński, *Restrukturyzacja, konsolidacja, globalizacja przedsiębiorstw*. PWE, Warsaw, 2003, p. 295.

The first of these terms means a radical change in the concept of the organization functioning through improving its efficiency of operating. A company should be treated as a whole of processes which are aimed at the increase in value for the customer. 'When it comes to reengineering - basing on the opportunities offered by new information technologies - it is necessary to invent a new mode of action which would replace, at least partly, management based on functions and professional specializations (B+R, production, sale, distribution, etc.) with the sectional process of management.<sup>8</sup>

The presented process tends to break up with old ways of designing production and management processes occurring in organizations. Taking so understood attempts of reorganization of various processes taking place in enterprises one should take into account any new solutions offered by modern technology from the scope of acquisition, processing and transmitting information. In designing this kind of solutions one should focus on the whole of taking issues, because the whole process cannot be carried out in small steps. This creates a high risk of a positive implementation of the planned, new solutions.

Along with the term of reengineering there are connected the following concepts:

- a radical change,
- innovation,
- processual approach.

'Reengineering is a method of improving efficiency. The most important thing in this method is the level of goals to achieve. The point is whether the improvement is to be radical or incremental (progressive). The progressive improvement is not the purpose of reengineering, but rather TQM.'<sup>9</sup> The basic premise of this modern management concept is to set ambitious goals, which will assume an increase in efficiency of the organization activity by at least 25%. American experiences in this field show that achieving the measurable outcomes, using this method on less demanding assumptions, is not possible, but highly placed goals were realized to an even bigger than planned extent.

Redesigning processes taking place in organizations is one of the ways to carry out restructuring. Introducing it causes a radical change in the aspect of efficiency and effectiveness of the company operation, the costs of operating drop, the quality of offered services or products improves, and the time needed to carry out the tasks being in the range of operational activity of the company decreases. The organizational structure becomes flatter due to the reduction of management positions. Below in a tabular combination, the subsequent steps to carry out re-engineering are presented.

'Reengineering requires everything to be changed simultaneously. It is a true revolution, in which the most difficult thing is not the innovative making up new processes, but changing the mentality of people accompanying the new processes.'<sup>10</sup>

Despite criticism of this method, studies on the implementation of reengineering demonstrated that its implementation in companies resulted in several positive effects such as: the grow of the importance of advanced information technology, flattening the hierarchy in the organizational structure, or the integration of organizational units.<sup>11</sup>

Another new current of thought, which recently appeared in the theory of management, is benchmarking. This method involves comparing performance of a company taking into account its own achievements in the organization management with the best one in the given industry, and use their experience for learning. Apart from this, it is important to confront with other self-created solutions in order to continuously improve own business.

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<sup>8</sup> J. Brilman, *Nowoczesne koncepcje i metody zarządzania*. PWE, Warsaw, 2002, p. 271.

<sup>9</sup> Ibid, p. 274

<sup>10</sup> J. Brilman, *Nowoczesne koncepcje i metody zarządzania*. PWE, Warsaw, 2002, p. 278.

<sup>11</sup> E. Załoga (ed.), *Dylematy w zarządzaniu przedsiębiorstwem samochodowego transportu pasażerskiego wobec wyzwań konkurencyjnego otoczenia*, [in:] *Nowoczesne technologie w transporcie*, Ed. Uniwersytet Szczeciński, Szczecin, 2002, p. 29-38.

According to the definition used by J. Brillman, 'Benchmarking is a process of improving the efficiency of own organization through identifying, analyzing, adapting and implementing solutions used by the most efficient organizations in the world (..) Benchmarking is not just a simple identification of the best solutions. It goes much further, because it assumes a deepened analysis of own achievements, followed by a similar analysis of the achievements of the partner, and then implementation at own company the observed solution.'<sup>12</sup>

This term is used in connection with the concept of a learning organization. It encourages to compare own achievements with the achievements of others. This method gained many supporters in economically developed countries.

'Benchmarking allows to:

- putting ambitious goals,
- accelerating the pace of changes,
- overcoming the reluctance to the ideas generated outside the company, going outside,
- identifying the main processes,
- increasing the customer's satisfaction and competitive advantage,
- better recognizing own strengths and weaknesses through proper self-assessment,
- basing the climate of agreement on facts and coming to a consensus,
- improving the skills of using relevant instruments in management.

Generally speaking, benchmarking creates value.'<sup>13</sup>

In the literature of the subject, we distinguish four basic types of this issue. It is benchmarking:

- internal,
- competitive,
- functional,
- generic.

The first of these types concerns comparison of own operations with other already done inside of the same organization (in other branches in the country and abroad). According to the assumed theory, each company should benefit from this solution. However, introduction of such a solution leads to an encounter of many problems of psychological nature, because it is usually very difficult to specialize in a certain area, and at the same time contribute to the overall progress.

'Competitive benchmarking involves specific comparing with competitors in terms of the quality of product, method or process. Thus, it is possible to lead to an increase in orders by 20%. Competitive benchmarking is difficult to use because it cannot rely on economic espionage, but it must be realized with the knowledge and consent of both parties. Competitive benchmarking is something different than an analysis of competition done on the basis of market research, and an analysis of products falling into decline (reverse engineering), as well as interviews with customers and suppliers.<sup>14</sup>

Competing companies are not eager to share information about their achievements in various fields of their basic activity. It is possible to compare the data in the so-called neutral areas, which can include human resource management, the overall efficiency of processes not having great strategic significance.

Another type of benchmarking is functional. It means comparing similar functions with companies which are not direct competitors in the given industry. Such action can result in the discovery of innovative solutions which can significantly improve the way of the organization functioning.

Generic benchmarking is used by companies from different sectors of the economy and concerns the comparison of processes and working methods. This is the most effective method which can bring the growth of profit by at least 35%.

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<sup>12</sup> J. Brillman, *Nowoczesne koncepcje i metody zarządzania*. PWE, Warsaw, 2002, p. 262, 263.

<sup>13</sup> Ibid., p. 263

<sup>14</sup> J. Brillman, *Nowoczesne koncepcje i metody zarządzania*. PWE, Warsaw, 2002, p. 264.

Summarizing the description of benchmarking it should be noted that it is not mere imitation, and it is not observing the way of others' work, so that the same or similar solutions will be implemented in the functioning of the organization. It is more a discovery of factors which make the analyzed process can be efficiently executed, and then identification of similar opportunities in own company. It is learning and creative adapting the best practices.

Another of the modern ways of managing an enterprise is a strategic method of reflection which is a variety of a strategic analysis. The great advantage of this method is its universality. It can be used to analyze the purposes and past, present and future activities. Another its advantage is a considerable degree of systematization which not only facilitates its use, but also creates the possibility of comparing the results obtained by different teams. The strategic reflection method requires teamwork because it is labour intensive.

The strategy has four basic steps:

1. Knowing your own business and the initial situation: the environment, type of activities, organization, strengths and weaknesses, resources of knowledge and skills, material, financial and human resources, competition and basic strategic strengths.
2. Deciding where the company wants to go: what types of activity it intends to carry out (continuation, concentration, 'swarming' or diversification), which chances can see (new products, services, improvements), how defines its customers (faithful, new, chosen), what values wants to offer (product features, prices), which competitive advantages intends to use, what self-image create (current or new), in which countries operate.
3. Making up and choosing the way of implementation of certain policy objectives: technology, innovation, marketing methods, system of sale organization, funds, investments, time, talents, knowledge, partnerships, mergers and seizing, an organizational form, the level of risk.
4. Implementation of strategies: how to go from a decision to a collective action, what method to adopt during developing and implementing the strategy?'<sup>15</sup>

In addition, in the strategic reflection method there are mentioned three main types of strategies:

- *preparatory strategies* characterized by an attempt to level the negative impact of weaknesses in the company, and emphasize strong aspects,
- *offensive strategies* involving the necessary use of an opportunity with a maximum use of one of the strengths, or a simultaneous use of each type of the advantages occurring in the organization,
- *defensive strategies* which focus on defending the current position and eliminating losses caused by weaknesses in the enterprise functioning.

The method of strategic reflection, in contrast to other methods of this group, is characterized by versatility and a wide range of research. A high degree of systematization, simple construction, and a team character of realized actions are its main advantages. The method of strategic reflection is one of few simple and communicative, and also integrated tools of strategic management. This is because it takes into account the different surfaces of analysing the enterprise and its environment, team work, a holistic approach to business, creativity of an approach, and finally formulating a comprehensive strategy for the company, and determining its impact on different elements of the organization.

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<sup>15</sup> J. Brillman, *Nowoczesne koncepcje i metody zarządzania*. PWE, Warsaw 2002, p. 121.

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## The management capabilities are learned, not born

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**Abstract.** Firms are only as successful as their managers. In the ever-changing world it is essential that managers actively build their management capabilities. Our goal was to determine the level of management capabilities of the manager. If self-reflection starts, methods, programs, education and trainings will have an impact that the manager as human being changes himself positively and thus his thinking, system approach and management capabilities. Additional research is needed in the area to determine how to best recruit and train managers in these skills to move forward.

**Keywords:** firm, manager, management capabilities, self-reflection, research

### 1. Introduction

Currently, the idea that for a manager to be competent he needs for performance of his function various up-to-date manager competences on various levels of organization is wide-spread among managers. To manage a business appropriately is to manage it effectively, respecting and taking advantage of knowledge of management, marketing, law, economic and technical standards, knowledge of technology, foreign languages and other disciplines (psychology, sociology, etc.). To be a real asset to the organization managers must have management skills developed in three categories: (1) Performance management; (2) Managing people; (3) Relationship management [1]. Therefore, in order to carry out their work successfully, they should have power, influence and authority, which can be achieved in four different ways: a) the resources – a manager is responsible for the allocation of resources for members of the group managed; b) the position – in the control hierarchy a manager occupies the higher position than the subordinate ones; c) personality – his personal qualities are at higher level than personal qualities of other group members; d) qualifications – the manager's knowledge should be broader than those of other members of the group [2]. Many theoretical papers and books [3], [4], [5] and global surveys [6], [7], [8] of trends in new corporate management note the strong need to increase involvement and other soft skills of managers at all levels of management.

### 2. Research and Results

Basic overview about capabilities of managers is important material which enables to orientate in analysed environment and to develop complex picture about self-reflection of managers in structured form. *Goal:* To determine the nature of the personality profile of a manager in terms of management capabilities in the form of self-reflection. *Problem:* What the nature of the personality profile of a manager is in terms of management capabilities. *Method:* To obtain empirical data the research Methodology OP – 1 was used, structured with respect to the intended purpose. Methodology included identification (demographic) data – gender, age, education. The research methodology was structured according to the level of management skills (15 items). Questions to test the profile of the manager at this level were constructed as a battery (files) items measured

using the 7-point scale (1=definitely yes, and 7=definitely not). The role of the respondents was to use this range to make their evaluation or self-assessment with regard to the questions included. Methods used were: descriptive statistics, simple analysis of ONEWAY variance. When processing the primary data and transformed data – averaged scores were used.

The research group consisted of a group of employees at various management positions in various companies, without specifying the character of selection (although, results showed that respondents were employees of banks, social services, travel agencies, insurance companies, municipalities and various companies). Empirical data were collected in Kosice in May 2011.

**The description of the research sample.**

*The structure of research sample in relation to gender and age.*

The research sample consisted of the total of 190 respondents – managing staff. According to the data listed in Tab. 1 a set of research is divided by sex ratio into 80 % of women and 20 % of men (the real percentage number of people in the companies). Age categories are represented differently. The largest age group is 31-40 years (31.58 %) less occupied is the group of 26-30 (21.05 %) and 41-50 years (21.05 %). Significantly underrepresented are the categories of 25 years and over 60 years. In the group of men age categories of 18-20 and three categories between 31 and over 60 years - by 25 % are equally represented. Women are most numerous in the category 31-40 years (33.33 %).

*The analysis of the management capabilities of managers – an overview.*

Personality profile and image of the guide has been studied at one level. The information mentioned in the research are the basic for this essential part, more detailed information will be published later.

Managing capabilities	Average score
I am always able to analyze the situation and solve problems	2,26
I always solve every problem with regard to other possible aspects	2,16
I have always decided correctly	2,63
When solving the problem I can successfully estimate how the things are going to develop	2,58
When solving even the main problems I always take it in a professional way	2,21
I am perfectly oriented in using managing methods and techniques	2,58
I always perfectly handle the plan strategy of solving problem	2,47
When solving the problem I always have needed information	2,53
I have perfect ability of solving problems of material and financial character	2,68
I am always able to persuade people	2,53
I perfectly know the way how to influence attitude of people	2,53
My abilities to communicate are appreciated by every partner, whenever and wherever	2,05
Harmonizing the activities of several people has never been a problem for me	2,47
I always seem to be the person that people like to follow	2,21
Until now I have always managed to lead the people to cooperate in solving the problem	2,21

**Tab. 1.** Average measured score for managing capabilities.

Management capabilities are essential part of the work of managers, constantly updated in a very dynamic and rapidly changing environment. According to the average measured level of self-assessment score ranges from M=2.05 to 2.68. Spectrum of evaluation at management level is more in the positive range of 7-point scale (score ranges measured in degrees 1,2,3). The best self-assessment is represented by the "ability to communicate" (M=2.05), in the lower position, with the same average score - M=2.21 items that show significant leadership skills of people and rational solutions to the problems "to solve the most serious problems has always maintained in a professional way", "always working as one that people like to follow "and" so far I have managed to lead people to work together to solve the problem" can be traced. Less positive assessed items include the ability "to solve the problems of decision-making capacity, observed in "yet I was physical and financial character" (M=2.68), but also "always making the right choice"

(M=2.63). Very slight doubt in this respect is confirmed by the scores for other items that have led to an assessment decision: "... *The report estimates how things develop,*" and "*I am very knowledgeable in the use of management practices*" (M for both total = 2.58).

### 3. Discussion and recommendations

Presented results of the analysis indicate overall not a very favorable rate of a self-reflection of managers at the appropriate level. The average score usually moves in the average (middle) spectrum of 7-point scale (degree 4). This evaluation at the managerial capabilities is the least significant. Identified and presented results are in accordance with the assumption expressed in the main hypothesis and correspond with the results of other surveys. Some Slovak companies use a closed style of management, managers are not prepared for criticism and ideas, they are afraid of under appreciation of their position in society [9]; managers are reluctant to come into confrontation, fear of confrontation [10] and avoid conflicts [11]; managers are not prepared to risk and still do not pay sufficient attention to identifying and managing (if possible) the risks in business [12]; managers risk less, are less empathetic and sometimes they ignore specifics of the local market and management style [13]; managers are indeed flexible, but it is difficult to determine the unique characteristics of their management style. This condition is characterized by the fact that changes in thought and action managers are very slow and technocratic management have been exhausted [14]. Then no wonder that, according to a survey from early 2010 the main drivers of the Slovak economy have led the vast majority of ex patriots, managers from outside [15].

The analysis of management capabilities enables managers to create an overall picture in the form of self-reflection. We can make some *conclusions*: (1) at the level of management capabilities the lack of decision-making skills, ability to estimate, overall dynamics of the decision, a lower rate of positive evaluation of knowledge management methods and techniques suggests a need for further intensive development of potential managers in this field; (2) most cases lacked the apparent ability to solve legal problems, economic and personal or financial and material problems, so it seems desirable to encourage the development of management skills.

In order to improve and enhance the company's managerial competencies, various approaches are inevitable:

Firstly, the focus needs to be put on the economic, legal, social and financial aspects of the leading job of a manager in order to improve its quality.

Do one's utmost (1) to improve the quality of the managerial potential. Growth must be part of not only the scientific knowledge, but especially experiential equipment based on an assumption of lifetime learning for managers (soft skills and hard skills) and (2) to steer change management processes on managerial positions by planning various trainings, courses, practical studies, progressive forms of education, i.e. experiential learning.

Formalized forms of broadening of manager qualifications should be suitably complemented with motivation, control and evaluation network supporting self-educational practices and personal initiative managers to monitor their development and build a desirable effect in that ambition. The focus of interest would be to create a situational decision-making framework manager who will reflect the typical, most common situations in which a manager has to decide and handle these situations. Establishing the main causes (lack of information, reluctance, indifference, lack of experience...) is important as well as their diagnosis and targeted "treatment".

Create the space for creativity, knowledge, research, a space to look for new possibilities and management tools, methods and techniques for improving the business management processes.

To know exactly what the current level of managerial competencies is, i.e. characteristics, personal attitude, personal ideas, types of communication, CV based management, passed educational trainings, feedback forms, work results.

Develop enhanced self-awareness, critical self-reflection, a commitment and capability for continuous learning.

Last but not least, we do recommend to build on the Deming circle (plan, do, check an act) and employ the ADDA principle, i.e. for a manager in order to develop his personal skills, he should be able to: A assess his current level of hard skills exactly, D (design) choose a priority from the development possibilities and take full responsibility for its growth, D (develop) use the personal development tool effectively, A (assist) implement the lessons learned into everyday business as soon as possible.

## 4. Conclusion

Slovak managers can be navigated in three directions: either the so-called top - top management direction, which is in connection with the international and European policy to support the strategic objectives and priorities of the resulting economic reform in Slovakia or Western-orientated type of the management and applied at all levels of the management, or prefer amateur management style, which is to stabilize the economy, but only the vision of the greatest profit.

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# The education of Financial Administration employees as a tool of its performance enhancement

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**Abstract.** A modern Financial Administration of the Slovak republic which reflects the foreign trends of today is associated not only with the technological innovation. To meet the expectations of competence and professional approach, it is necessary to pay attention to the development of human resources. Financial Administration employees dealing with the clients, should act in a professional manner and provide consistent guidance. This paper focuses on the system of education of Financial Administration employees in the context of organizational changes associated with its client orientation.

**Keywords:** Client orientation, employee education system, Financial Administration of the Slovak Republic, organizational development.

## 1. Introduction

Tax revenues are the dominant source of public finance in the Slovak Republic. Businesses spend a lot of funds every year to fulfill their tax obligations to the state. The paper focuses on selected issues related to the organization development of the Financial Administration – focusing on changes in the education of its employees in the tax section. A key change in the new system of management and organization of state income through the Financial Administration of the Slovak Republic should be its client orientation which presents a new perspective on the relationship of Financial Administration and taxpayers.

This relationship should no longer be based only on the duties of one party to the other, but on the mutual cooperation of both parties. If the Financial Administration of SR should be the client-oriented institution which fulfills expectations of competence and professional approach, it must pay attention to the human resources development.

## 2. Results and Discussion

To be a successful company in the market, it must focus on customer satisfaction through quality products. This client approach from the perspective of Financial Administration as the public institution reflects in the form of administrative burdens reduction of the taxpayers' duties. Such an approach should lead to an increase in their satisfaction with the Financial Administration services. Guarantee of the quality of services provided by the Financial Administration should create a sophisticated system of employees' education. According to this should evolve career growth and also salaries and employees' compensation.

Independent Gallup Organization study showed that employees who have an above-average positive attitude toward their work, create a 38% higher customer satisfaction, 22% higher productivity and 27% higher profits for their companies. Therefore, organizations should try to increase the satisfaction of their employees. According to a survey conducted by the American Management Association (AMA), the most important factor of employee satisfaction at work is the possibility of development. Therefore, one way how to increase job satisfaction, is to create a space within the organization for career and personal growth.

The education system should not only guarantee the quality of services, but it should also be a tool for increasing employee satisfaction, and a tool for reducing their turnover at the same time.

### **2.1. The Survey of organization and human resources in tax section of the Financial Administration**

From November 2012 to January 2013 we conducted a questionnaire survey which focused on the efficiency of the Tax Administration and the entire Financial Administration of the Slovak Republic. Statistical sample was 209 respondents. Statistical population represents employees of enterprises in the Slovak Republic, administering tax agenda in these enterprises or small entrepreneurs who manage this agenda for themselves.

In one part of the questionnaire, we focused on the Financial Administration employees, their level of professional knowledge required in performing their work and access to clients when dealing with them. Approach and the willingness of employees were evaluated as "more good" by majority of respondents (74 %), even 14 % tagged the reply "very good". Therefore, we may conclude that in the client-orientation of employees the Financial Administration achieved some progress in recent years.

Also, 89 % of respondents reported that in their opinion the Financial Administration employees need more education activities.

### **2.2. The survey focused on educational system of employees in tax section of the Financial Administration**

The second survey was conducted on February 2013 and was focused on detecting the current level of employee education in Financial Administration of the Slovak republic. Questionnaire was answered by 192 respondents. In the questionnaire we investigated whether the employees think that employers motivate them sufficiently to education activities. Answer "yes" tagged 21 % of respondents, answer "no" tagged 25 % of them. Most respondents (54 %) answered "partially".

To determine the motives which are important for Financial Administration employees in education, the most tagged answer was "greater independence in performing work." The financial rewards were in the third place in sequence - after personal growth, and achieve the same rating as the self-realization – 17 %. This result agrees with the results of similar surveys carried out in the world. Various sociological and psychological studies indicated that it is the opportunity for development and growth creating one of the three strongest factors in reducing turnover in the organization. A study of the Chartered Institute of Personnel and Development (CIPD) indicated in 2007 that 41 % of former employees of British companies stated as reason for leaving the organizations lack of career opportunities, professional and personal growth.

In one of the survey questions, we examined how often employees get into situations that they cannot solve the problem alone, because of the lack of necessary skills which they could acquire by education. Such problems "sometimes" meet 52 % of respondents, for 15 % it is even "very often." With this problem do not meet only 2 % of the employees, other (31 %) meet with it occasionally.

The survey has also found that except the education which is directly related to the classification of employees to particular departments of Financial Administration, they are also interested in such education which is not directly related to their work. Further education the employees are interested in, is communication with people, how to cope with stress or assertive communication techniques.

### **2.3. Changes in the system of employees' education in tax section of Financial Administration**

Based on the information obtained by analysis of both questionnaires we were developed proposals to improve the current education system of the Financial Administration. As the basis we consider so-called "blended learning" consisting of a combination of traditional forms of education

and e-learning. Its advantage is the ability to adapt to the individual needs of the student (employee).

The mass introduction of e-learning as a popular learning method began to create conditions for the elimination of all traditional forms of education programs of organizations. But today it is found that some employees prefer the traditional learning more, because they consider the role of the teacher in the learning process as irreplaceable.

The fact that the blended learning would be an irreplaceable solution for employees of Financial Administration was confirmed also by the results of a study organized by the Comenius University in Bratislava in 2010. The study, Research of needs and possibilities of online learning in the Central Europe context and software prototype solutions development, also focused on training needs research of government employees. The results showed that the blended learning along with the traditional teaching and e-learning is considered the best. [1]

Other proposals of the current system of education changes based on analysis of questionnaire and personal interviews are:

- Operative implementation of educational activities - that means immediately when the law changes. A disadvantage of the current system is that educational activities are realized too late - at a time when the changes in the law have come into force.
- Creating space for education according to the specifics of individual work. Currently, the education of large groups is preferred because of lower cost demands - at the expense of education of narrower target groups according to the professional classification of employees.
- Accepting proposals on topics of courses, lectures or other forms of employees' education, through their feedback on learning.
- Include training in communication to the educational activities of "contact" employees who directly communicate with clients in performing their work which will facilitate them the resolution of conflict situations.
- Allow "self-learning" to the employees by ensuring the availability of recent publications in the field of taxation and other areas related to the work of Financial Administration employees.

### 3. Conclusion

The aim of a modern and reliable working organization is to provide the quality customer service. This also applies to organizations owned by all citizens - Public Administration. Presented proposals are very closely related to the business environment. They are connected with the Tax Administration issues which they come into contact with all business entities. The changes are intended to eliminate bureaucracy and reduce the administrative burden on businesses, to simplify and clarify the process associated with the tax duties, to facilitate obtaining information on the rights and duties of taxpayers.

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## Controlling in construction company

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**Abstract.** The paper deals with the issue of controlling the construction company using management information system building production (RSV). The paper includes a proposal of a new module within the information system RSV. The principle of the new module consists of a comparison of standard and actual costs through the use of technical-economic indicators.

**Keywords:** controlling, variations, construction company, RSV.

### 1. Introduction

At present, the application of the market economic mechanism, the business environment characterized by high growth demands for efficient management. These requirements are very difficult to solve by conventional means. To construction company to successfully manage the increasing demands must introduce new management methods.

Controlling the construction company includes systematic planning, ongoing management of individual processes and effective control, which improves the decision making of officials and reduces uncertainty. The introduction of controlling the construction company can build an effective path to prosperity.

### 2. Information System RSV (Management of construction production)

RSV system allows all workers in the field of building production on-line access to data in other economic and service agendas. Any change you make any employee who has access to the system, see everyone else at that given moment. It should be noted that individual members of the company have access to only some of the data that are of interest to them and relevant. In other words, the site manager to see detailed information such as company director. These data costs and benefits of the contract contained in the books, on the supply and purchase invoices, and material used for construction machinery and enjoyment to the contract [4], [5]. Information sytem RSV provides the possibility of obtaining construction contract to handover and passage of warranty.

#### 2.1. Analysis Information System RSV

Strengths of the information system RSV:

- centralization of ensuring software construction company,
- functional interconnection of software products,
- minimization of paper documents,
- on - line access to information,
- configurability (choice of modules),
- availability (Czech product with representation in Slovakia),
- full building product (from Microsoft have been developed for the logistics sector, and then applied to the construction).

Weaknesses RSV Information System:

- compliance with the periodicity entering information (information bias),
- responsibility of authorized personnel (staff access),
- price (the product itself, training and hardware security).

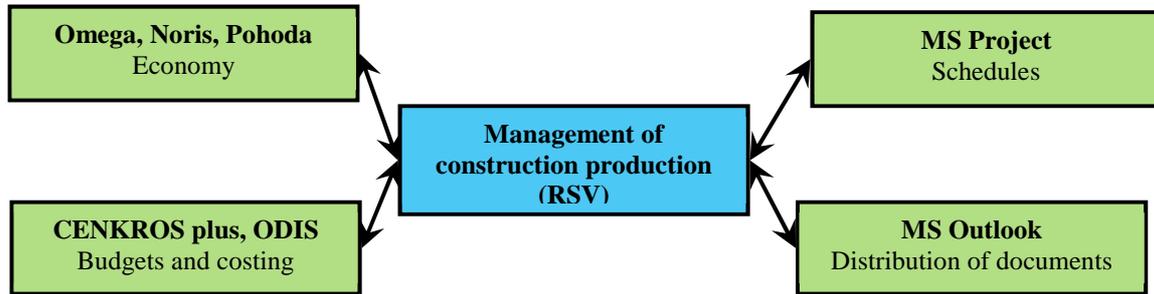


Fig. 2 Information interconnection of RSV

### 2.2. Methodology Information System RSV

The chapter uses an index of RSV throughout their execution. More specifically, the obligations of the individual sections within the RSV. Regarding the frequency of importing current information on individual contracts, construction company remains on what frequency you choose. Shorter periods of entry information (day, week) on the use of cost-benefit from the accumulation of daily consumption of material, machinery and professions. At the end of the month without needing laborious counting and checking the aforementioned variables. The downside is that the site manager must return daily to enter values into the RSV. Longer period (usually of one month) has the advantage that they are not daily Construction Site address information system. Disadvantage is the fact that, for example. in the middle of the month the management of distorted information about the contract. The scheme uses the RSV is shown in Fig.3.

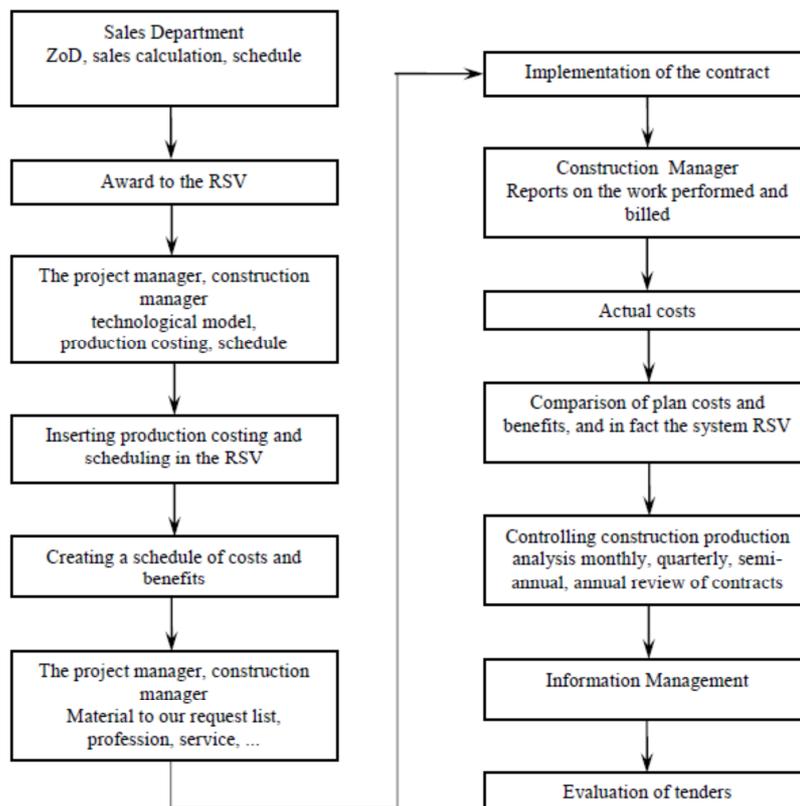
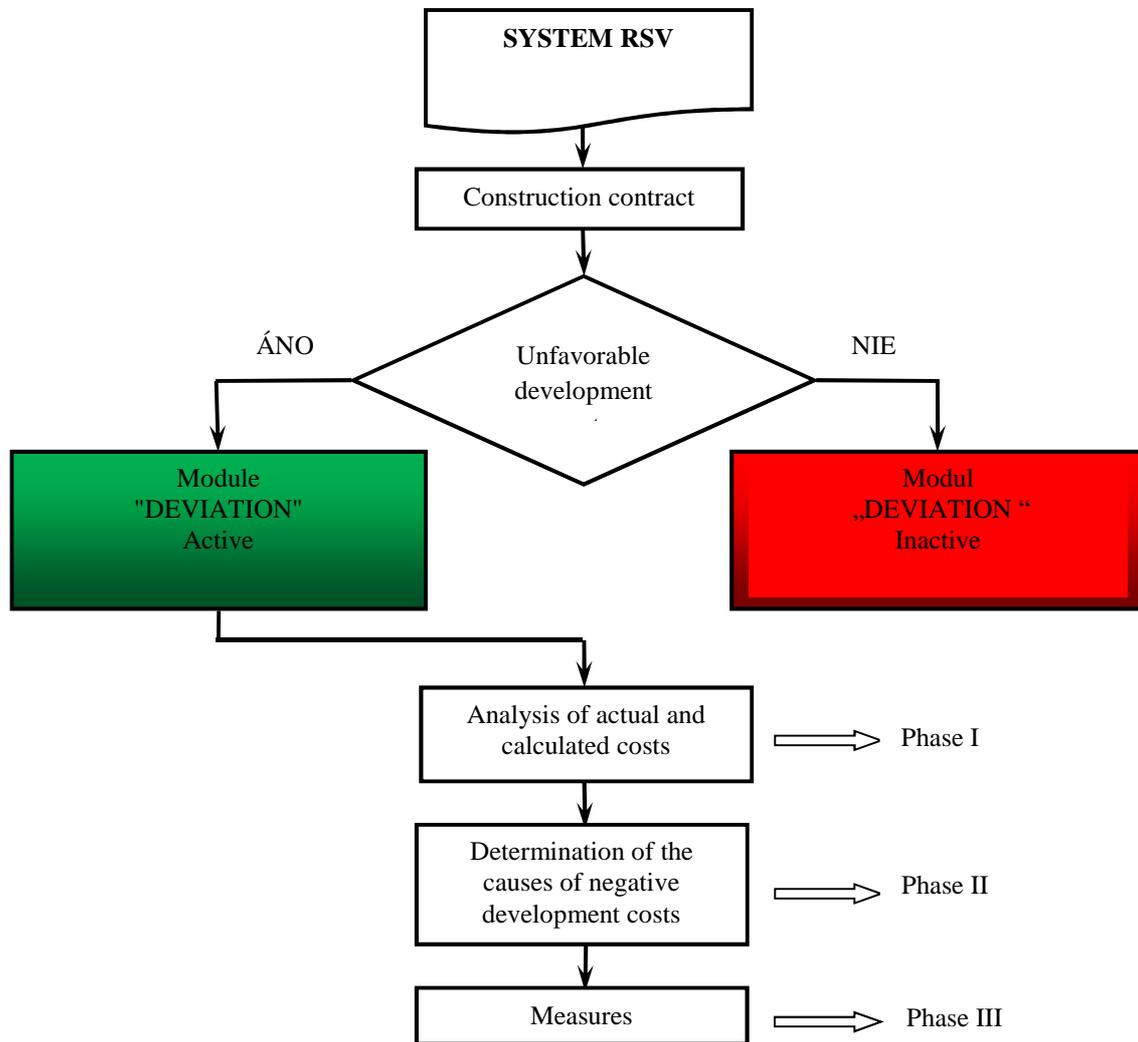


Fig. 3 Scheme of the use of RSV in the implementation of the contract

### 3. Proposal module DEVIATION

DEVIATION module consists of three phases. Different phases with the description are listed in the following section. Diagram of the deviation is shown on Fig. 4.



**Fig. 4** Diagram of the DEVIATION

In the first phase, it is necessary to determine the actual cost of development due to pre-calculated cost. If the development costs as expected, then there is no need for such a construction contract to carry out substantial measures. In the event of adverse developments in the cost of construction contract, the second phase of the proposed module analyzes the cause of this development.

$$U_1 = \frac{N_{\text{real}}}{N_{\text{ocak}}} \quad (1)$$

Kde:  $U_1$  – indicator

$N_{\text{real}}$  – costs for real structural element €

$N_{\text{ocak}}$  – expected cost for structural element €

The principle of the **second phase** is in case the costs necessary to analyze the causes of this development. It is mainly based on the analysis of the items costing formula. More specifically, the content of calculation formula, while analyzing indirect costs.

$$U_{11} = \frac{H_{\text{real}}}{H_{\text{ocak}}} \quad (2)$$

Kde:  $U_{11}$  – indicator at the assembly calculation formula

$H_{\text{real}}$  – actually achieved, the costs of material (like the patterns and legend to wages, machinery, OPN, Rv and Rs), €

$H_{\text{ocak}}$  – estimated cost of direct materials (like wages, equipment, other direct costs, production and administrative overhead), €

**In the third phase (Fig. 4)**, while the most important, it is necessary to propose concrete measures to ensure compliance with expected costs. The third phase indulging created a database of possible events that may arise during their execution. Each event has its own description, the consequences of the contractor and of course the draft measure. The measures are designed to mitigate the adverse development costs respectively. reduce variation. With this database controller will work in collaboration with the cost accountants to direct and indirect costs.

## 4. Conclusion

In today's economically difficult time controlling the modern tool building enterprises and is a future-oriented and production bottlenecks. Information System RSV is one of the ways to ensure the functioning controlling in the construction business. The benefit of the proposal is to improve an existing information system module DEVIATION. Said module is processed and prepared in theory to implementation.

In conclusion it can be stated that the introduction of new management information systems using computer technology is a necessity, not only because of the increased efficiency of the construction company, but also for reasons of transparency of information on the development of individual contracts.

As already stated, it is appropriate use of available budgeting programs that work directly with the information system management. Attention here requires constant updating databases, which must constantly monitor new technologies and related standards. It is necessary to further resolved monitoring of costs and benefits in economic and production sector, the level of components.

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# Industrial Policy of the EU: a Comparative Analysis

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**Abstract.** Our vision of industrial policy were formed at a time when the industry of each country was uniquely determined its competitive advantage in the global market. Today the economy entered a phase of post-industrial development, so services sector, intangible assets, etc. began to play an important role. All this entails a certain terminological confusion. A number of authors claim that industrial policy can no longer be relevant, and that it has exhausted itself. Some of them say that industrial policy is “very inconsistent, suffers from information problems and, ultimately, leads to a distortion of competition, restrict trade and leads to a loss of welfare”. Other authors suggest that government intervention in the market mechanism can not be effective at all. However, this view does not seem quite correct.

**Keywords:** economic policy, industrial policy, innovation, choice of innovative strategy.

## 1. Introduction

Our vision of industrial policy were formed at a time when the industry of each country was uniquely determined its competitive advantage in the global market. Today the economy entered a phase of post-industrial development, so services sector, intangible assets, etc. began to play an important role. All this entails a certain terminological confusion. A number of authors claim that industrial policy can no longer be relevant, and that it has exhausted itself. Some of them say that industrial policy is “very inconsistent, suffers from information problems and, ultimately, leads to a distortion of competition, restrict trade and leads to a loss of welfare” [4]. Other authors suggest that government intervention in the market mechanism can not be effective at all [9]. However, this view does not seem quite correct.

The fact is that in the process of mass production and the creation of a modern market economy, industrial policy has played a major role [10]. We can say that the industry has formed a modern economy, and still the industry has a determining influence on the development of the global economy. Attempts to deny this fact, in particular, led to the global financial crisis of 2008-2010. In the second half of the 20th century a changes in the principles of production location were occurred, increased geographic dispersion of companies, creating the illusion of a low contribution of industry to the economic well-being.

## 2. Industry in EU countries

The high value of industrial policy is supported by the fact that the most stable position in the European Union took by two groups of countries: first it is a country with a high share of industrial production in GDP (eg. Germany, France, Norway), and secondly it micro countries (eg. Monaco and Liechtenstein), mainly thriving by attracting foreign capital and the implementation of various types of financial transactions, including not quite legitimate. Hope that this kind of micro-countries can be used as a model for the effective development of large countries is more than naive. Thus, only the industrialized countries of the European Union are now the core of the Union and determine its further development.

Country	Share of industry in GDP, %	GDP per capita in USD adjusted by purchasing power parities, \$
Norway	33,5	57 909,7
Slovakia	25,9	23 346,6
Germany	23,8	37 723,3
Finland	22,5	36 356,6
Sweden	20,9	39 478,7
Greece	14,4	27 836,2
Cyprus	9,2	30 638,1
Luxembourg	7,4	85 253,8

**Tab. 1.** Share of industry in GDP, % and GDP per capita in USD adjusted by purchasing power parities, \$ in EU countries 2010 [11]

There are illustrative examples of two EU countries: Greece and Slovakia. Prior to joining the European Union Greece had its own industry, shipbuilding cluster, metallurgy and manufacture of agricultural equipment and machinery. After accession to the EU, Greece has refused of it's own production, shifting the focus to the services sector - especially tourism. The share of industry in GDP of Greece in large part is taken by the EU subsidies, which has led to dire consequences for the economy and the huge demotivating effect on the population. In accordance with the decisions of the EU after the accession to the EU steel production in Greece has been reduced by 30%. Dominant sectors of the economy in Greece are, along with tourism is food industry (including processing of olives) and the production of tobacco [2].

In Slovakia, the situation is different. Unlike Greece, Slovakia is an industrial country. The most developed industries - iron and steel industry, power engineering, mechanical engineering, chemistry. However, the entry into the European Union has led to Slovakia multinational companies, that are more competitive in compare with Slovak companies. Therefore, income from industrial development in Slovakia are receiving by nonresidents, and living standards in Slovakia is much lower than in Greece.

## How to develop an industrial policy?

How to develop a strategy for the country in the new economy? Unfortunately, the development of the national economy and its clusters occurs in some degree chaotic and depends on a number of current measurement of economic and social development. Therefore, it is necessary to determine the vector of strategic development, which will form the basis of its industrial policy. For this purpose, the best suited instruments are developed under the concepts of strategic management, naturally modified in some way to solve the current problem.

The most attractive tool for analyzing the country's competitiveness is the modified McKinsey matrix. Using modified McKinsey matrix allows to determine the acceptability a potential strategy for cluster development in the economy, which is able to bring the country comparative competitive advantage.

Matrix McKinsey - a matrix format  $3 \times 3$ , which allows to display and make a comparative analysis of the strategic position of the business processes (products) company. In the matrix axes are constructed as integrated multi-factor evaluation: horizontal axis - the competitive status of a specific business process, and the vertical axis - the attractiveness of the market. Thus, the axis X - based on factors that are independent of the organization (the factors of internal environment), and

the axis Y - on the options that it is almost beyond control (ie factors of its environment). [8, c. 208-211] Let's try to use this matrix for the strategic analysis of competitiveness of industries in the global market.

Let's take as the value axis X - Lafay index (1) - which indicates the presence or absence of the competitive advantages of certain sectors of the country.

$$LFI_j^i = 100 \left( \frac{x_j^i - m_j^i}{x_j^i + m_j^i} - \frac{\sum_{j=1}^N (x_j^i - m_j^i)}{\sum_{j=1}^N (x_j^i + m_j^i)} \right) \times \frac{x_j^i + m_j^i}{\sum_{j=1}^N (x_j^i + m_j^i)} \quad (1)$$

Where  $x_j$  and  $m_j$  - export and import of products  $j$  in country  $i$ .  $N$  - number of products.

Positive values of Lafay index highlight the existence of competitive advantages. The more the coefficient value is, the higher is the level of competitiveness. And negative values give evidence of products incompetitiveness [6]. Thus, the Lafay index assesses the internal countries competitiveness factor, its competitive status.

Let's take the revealed comparative advantage index of B.Balassa (RCAI) as the value of the Y axis of the matrix McKinsey. RCAI shows the intensity degree of export orientation of a certain branch in each country in relation with world economy [1]. RCAI in country  $i$  for branch  $j$  and a period of time  $t$  can be represented in the form:

$$RCAI_{i,t}^j = \frac{x_{i,t}^j}{x_{w,t}^j} \quad (2)$$

It is assumed: if  $RCAI_{ij}$  coefficient value exceeds 1, the country is competitive in production of this product; if it is less than 1, the country has no competitive advantages. One can identify those sectors of economy in which the country has a competitive advantage using RCA coefficient. A competitive advantage involves a quite liberal share that the product takes in the international market and, respectively, the absence of a competitive advantage involves a small share of this product on the export markets. Thus, Balassa index is an external factor of country products competitiveness on the global market. [5]

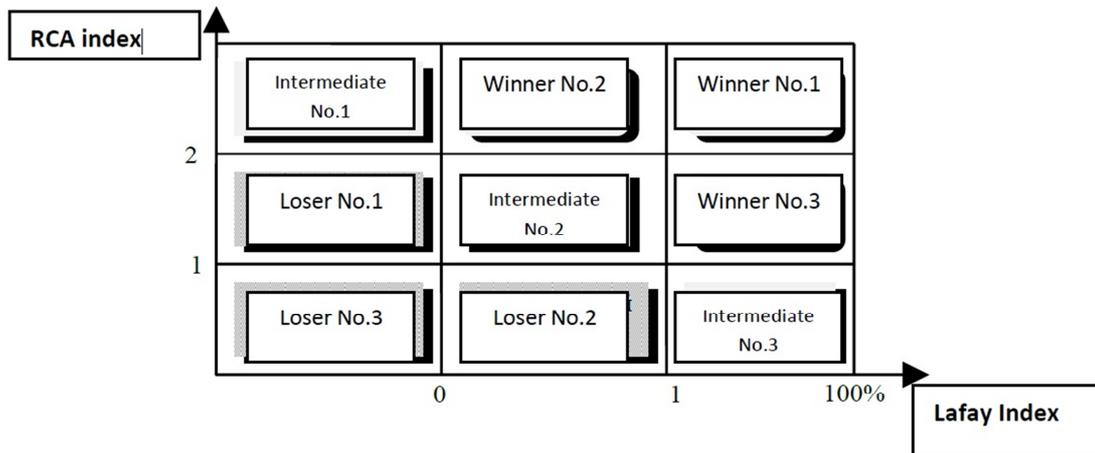


Fig. 1. Modified GE/McKinsey matrix

To identify priorities of development of industrial policy let's consider changes in "winners" branches in the case of Slovakia from 2006 to 2011 [3] (Tab.2).

Branch	Specialization (Lafay Index)	Specialization (Balassa Index/RCA Index)
2006		
Iron and steel	2	2.7
Vehicles for land transport except railway transport and trams	4	2.5
Wood and woodwork, charcoal	1	2.2
Aluminum and aluminum items	1	2
Branch	Specialization (Lafay Index)	Specialization (Balassa Index/RCA Index)
2011		
Vehicles for land transport except railway transport and trams	5	3,1
Iron and steel	1	2,3

**Tab. 2.** Lafay and Balassa Indexes for Slovakia in 2006 and 2010

In Slovakia, for five years the number of the winners branches of the winners reduced, and now country have only two competitive branches of industry. On the other hand, there has been increasing specialization in one of the competitive industries. Slovakia should take measures to restore the competitiveness of earlier existing competitive industries.

## Conclusion

Thus it is assumed that the method of modified matrix McKinsey may be helpful in identifying the competitive sectors of the economy for the direction of industrial policy and its instruments for supporting the most promising and competitive industries.

Expansion and support industrial processes is necessary because exactly countries with a high share of high-tech products with high degree of processing in the GDP, remain the most stable position in the EU.

In general we can conclude, that in spite of huge role of insensible assets in the global economy, the industry continues to play a dominant role in the economic policies of countries. This confirms the earlier conclusion of the high role of industrial policy in the XXI century.

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# The Tool of Prediction of Financial Health of Company - Rating

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**Abstract.** Measurement rating is carried out by using methods, which we call prediction methods. These are methods, which can predict financial health of company and avoid risk from providing credit to research subject. Credit risk assessment is very important, because exposure to this risk are all providing a credit (banks, leasing companies). The main performer of these measurements are the rating agencies, which are increasingly used not only by investors, but also by regulators.

**Keywords:** Financial Health, Rating, Default, Scoring Models, Prediction.

## 1. Introduction

In this article I focused on individual scoring models, namely: linear analysis, discriminant analysis, logistic analysis and analysis based on neural networks. Edward I. Altman was the first, who devoted linear analysis in his publications, for example in the article “*A new model to identify bankruptcy risk of corporations*” [Altman, Hademan, Naranan, 1977]. And what about discriminant analysis, it is necessary to mention W. Beaver, who first tried to use discriminant analysis as the tool for prediction of bankruptcy [Beaver, Parker, Risk Management: Challenges and Solutions].

## 2. Scoring models

Basis of these models are historical financial indicators, same as for financial analysis. From set of these quantitative datas is created mathematical model, from which it can be estimated credit risk. This probabilistic estimate can have dual form, it can be ordinary, it means the subject is classified to the group according to assign score and every group is characterized by probability of failure. Or it can be cardinal, it means the subject is directly assigned its probabilistic failure. This form depends on model, which is used in calculating. It is necessary to mention qualitative assessment of the subject is part of rating process.<sup>1</sup>

### 2.1. Linear analysis

Essence of linear probabilistic models is the same as essence of classical linear regression:

$$Y = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \dots + \alpha_k x_k, \text{ where} \quad (1)$$

Y – scoring mark

$x_k$  – value of the k-th financial indicator

$\alpha_k$  – weights of individual indicators

Variables of scoring function  $x_k$  are selected financial indicators and coefficients of scoring function  $\alpha_k$  are weights of individual variables, which is necessary to estimate on the basis of specimen of companies, whose credit is known. Based on this data is created the model, which allows to create score another companies. This score determines membership of company to group

<sup>1</sup> There are also agencies, which skip qualitative part of process and assessment of the company is only based on quantitative indicators, so it is scoring methods.

of companies, which are known in advance and then it shows probability of default. Result of linear analysis is principally mark (scoring) not directly probability of default. On based of this mark is possible to class studied subject to scoring class, where is probability of default estimated by calibration.<sup>2</sup> Linear analysis can not to assign cardinal probability of default, it only can sort subject into the groups and assigns them ordinary probability.

## 2.2. Discriminant analysis

Task of discriminant analysis is differentiate subjects, which probably default, it means differentiate healthy companies a default companies (unhealthy). This model is very similar to the liner analysis, but linear analysis “discriminate” subjects with high risk and subjects with low risk of default.

$$D = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \dots + \alpha_k x_k \quad (2)$$

At first it is necessary to estimate coefficients  $\alpha_k$  and to specify reference value  $\bar{D}$ , it means cut-off-point. These parameters are determined on based of original specimen of companies, in which is certain what group (default, not default) they are. Newly evaluated subject with given vector of variables  $x_k$ , is classed according to compare its final score and decision rule  $\bar{D}$ . It is ideal state, when every new companies are divided by this method  $\bar{D}$  into the group of healthy and unhealthy companies.

The main disadvantage of this analysis is its ability to distinguish between default and not default companies (in practice, it is necessary to use more steps to distinguish future creditworthiness of subject). Another disadvantage of this model is its restrictive conditions, i.e. specifies that the dependent variables must have a normal distribution, what is an impossible condition in reality (financial ratios of companies in bankruptcy usually do not meet the conditions of normality).

## 2.3. Logistic analysis

Logistic analysis is an extension of a linear model. Improvement over the previous model is mainly in:

- ability to estimate probability of default in range from zero to one and set cardinal value,
- cancellation of the restrictive conditions of normality financial indicators.

Goal of logistic regression is to express the dependence of dimension Y on variables  $x_k$ . It does not use linear dependence. Data is interleaved by logistic curve instead a straight line.

$$P = \frac{e^{\beta_0 + \beta_1 x_1 + \dots + \beta_k x_k}}{1 + e^{\beta_0 + \beta_1 x_1 + \dots + \beta_k x_k}}, \text{ where} \quad (3)$$

P – probability of failure

$X_k$  – value of the k-th financial indicator

$\beta_k$  – coefficients of indicators

Variables of this scoring function  $x_k$  are again selected financial indicators and coefficients  $\beta_k$  is necessary to estimate, i.e. using the method of maximum credibility. In this case, it is possible to say that the coefficients represent the weight of financial indicators. To determine the probability of failure is sufficient to calculate the median of known probabilities of all subjects in the scoring group. Logistic function can be growing but also decreasing in x, but it always moves between zero and one.

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<sup>2</sup> Example of linear analysis is Altman model, which was created at the beginning of the 20<sup>th</sup> century. Model consists of five evaluative indicators.

## 2.4. Neural networks

Artificial neuron networks simulate the physical processes in the brain and is essentially a set of interconnected neurons, which are arranged into layers, where each node in a layer receive signals from nodes in previous layer. Neuron has many inputs and one output and between them is inner, hidden layer and these neural networks learn from the basic data set (creditworthiness of the sample of subject), the results are known. Data, which are intended for learning neural networks available should be divided into learning, testing and validation sample in order to avoid distortion of results, which would be caused by bad sample on which the system is taught.

## 3. Conclusion

In the recent years, the hot topic is impact of financial crisis on all areas of the life. The banking sector is one of the main sectors that have been affected by crisis. In case of severe recession could increase business insolvency, which would be reflected in the growth of risk margins on loans enterprises and financial conditions would be stricter. In response to this stricter conditions could be the wave of business bankruptcies causes growth losses on loans provided financial institutions. This process would be accompanied by an increase of unemployment and limited of available home resources. It would lead to consumer and mortgage default, thereby further deepening losses of financial institutions. It is therefore important that the bank or other institutions tried as much as possible to prevent credit risk, which can be partially reduced by the usage of rating models, i.e. assign to research subject rating mark and based on this inclusion the subject into the rating group and predict financial health of research subject.

## Acknowledgement

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## Quality Policy on the Example of Selected Polish Dairy Cooperatives

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**Abstract.** Constantly changing environment together with the requirements of the customers makes the enterprise has to be more competitive. One way to increase competitiveness is verification and improvement of the organization strategy, and a part of the organization strategy on the issue of quality is the quality policy. The aim of this article is to present and review the quality policy on the basis of the Polish dairy cooperatives. This article presents an analysis of chosen five dairy cooperatives in terms of the objectives of the quality policy that has set itself each of these cooperatives as well as ways of their implementation.

**Keywords:** cooperative, quality, quality policy, quality objectives.

### 1. Introduction

Cooperatives are a special form of business, because they are a combination of companies and associations. Process of management of cooperative is different from other forms of business, because it involves carrying out all activities leading to the optimal conditions to achieve the goal of activity, which includes the meet of the business needs of its members and action in their interests. Cooperatives must therefore act on the basis of economic calculation having regard to social account. New technological and technical advances and market globalization cause that cooperatives, like other enterprises must constantly adapt to new market requirements. Constantly changing environment together with the requirements of the customers make the enterprise has to be more competitive. One way to increase competitiveness is verification and improvement of the organization strategy, and a part of the organization strategy on the issue of quality is the quality policy. The purpose of this article is to present and analyze the quality policy pursued by the Polish dairy cooperatives.

### Quality, quality policy and quality objectives

Today, there is no single universal definition of quality. American Society for Quality writes that quality is a subjective term for which each person or sector has its own definition. In technical usage, quality can have two meanings: 1. the characteristics of a product or service that bear on its ability to satisfy stated or implied needs; 2. a product or service free of deficiencies. According to J. Juran, quality means “fitness for use”; according to P. Crosby, it means “conformance to requirements”[3]. P. Drucker gives such interpretation of quality: “Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for” [1]. The Kodak definition of quality is those products and services that are perceived to meet or exceed the needs and expectations of the customer at a cost that represents outstanding value [5]. Quality can be defined as a set of characteristics constituting that the object is just that, and not another object [2]. Quality in ISO 9000:2000 is defined as the degree to which a set of inherent characteristics fulfils requirements. Quality is relative to what something should be and what it is. The something may be a product, service, decision, document, piece of information or any output from a process [4]. A frequently used definition of quality is “Delighting the customer by fully meeting their needs and expectations”. These may include performance, appearance, availability, delivery, reliability,

maintainability, cost effectiveness and price. It is, therefore, imperative that the organization knows what these needs and expectations are. In addition, having identified them, the organization must understand them, and measure its own ability to meet them [7].

Quality policy is an organization general statement of its beliefs about quality, how quality will come about and its expected result [3]. Top management establishes and maintains a meaningful quality policy that [6]:

- is appropriate to the purpose of the organization;
- commits to comply with requirements;
- commits to continual improvement of the Quality Management System;
- provides a framework for the quality objectives.

Top management must also communicate quality policy throughout the organization and make sure that it is understood and review the quality policy for continued suitability [6].

Quality objectives are separate from the quality policy but consistent with it and established at relevant levels and functions in the organization. Quality objectives are the driver of continual improvement in performance [4]. Quality objectives are established for company performance and customer satisfaction and for meeting product requirements. They must be measurable and must support the quality policy [6]. The quality policy and formulated quality objectives affect the quality management system. Properly defined quality policy and formulated quality objectives help to reduce operating costs, the value of customer complaints, the number of accidents at work, the number of non-compliance of the final product, consumption of materials and help to increase the timeliness of deliveries from suppliers [8].

## Quality policy implemented in selected dairy cooperatives

In order to study the quality policies, was carried out an analysis of five selected dairy cooperatives. Quality policy, based on which the analysis was carried out, was in force in 2011. The main guidelines taken to consider were the quality objectives and ways to achieve these goals in different cooperatives (Tab. 1).

Main objectives of the quality	The implementation of the objectives
<b>Cooperative 1</b>	
<ol style="list-style-type: none"> <li>1. The fulfillment of customers' needs and requirements as well as law;</li> <li>2. Maintaining financing from own resources;</li> <li>3. Sales development and increase of competitiveness of products;</li> <li>4. Manufacture of safe products;</li> <li>5. Specialization in the production of dairy products.</li> </ol>	<ol style="list-style-type: none"> <li>1. Maintaining a quality management system and continuous improvement of its effectiveness in pursuance of the requirements of ISO 9001;</li> <li>2. The application of health safety system HACCP;</li> <li>3. The application of the principles of Good Manufacturing Practice (GMP);</li> <li>4. The assessment of the needs of customers;</li> <li>5. Partnership cooperation and supporting of milk producers;</li> <li>6. Careful selection and cooperation with suppliers;</li> <li>7. Continuous improvement in the products quality;</li> <li>8. The application of raw materials and materials of the standard of quality and hygiene which guarantees fixed quality of products;</li> <li>9. The introduction of technical and technological progress based on the experience of the dairy industry in the country and abroad;</li> <li>10. Continuous training and improvement of the qualifications of the staff and the action behalf employees satisfaction;</li> <li>11. Fulfillment of the requirements of environmental protection.</li> </ol>
<b>Cooperative 2</b>	
<ol style="list-style-type: none"> <li>1. Strengthening the market position;</li> <li>2. Broadening the product range;</li> <li>3. Improving customer service;</li> <li>4. Constant concern for the quality of products.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identification and consequent striving to meet customer requirements while maintaining the interest of the company;</li> <li>2. Ensuring proper environment for producing products (rooms, equipment and facilities);</li> <li>3. Continuous improvement of professional skills and awareness of employees in the responsibility for the quality of the product;</li> <li>4. Production and supply of safety products, of expected quality and meeting the legal standards;</li> </ol>

	<ol style="list-style-type: none"> <li>5. The use of HACCP methods to identify health risks and minimize their occurrence;</li> <li>6. Modernization of machinery park and incorporation of newest technologies to manufacture;</li> <li>7. Continuous improvement and increasing the effectiveness of the Quality Management System.</li> </ol>
Cooperative 3	
<ol style="list-style-type: none"> <li>1. Manufacture of articles of high-quality of health in packaging adapted to the needs of consumers;</li> <li>2. Providing products with high repeatability of in terms of organoleptic characteristics;</li> <li>3. Striving for having the logo, that is located on the packaging, as a synonym for high quality of products.</li> </ol>	<ol style="list-style-type: none"> <li>1. Carrying out repair work, that are providing optimal conditions for the production of high quality products;</li> <li>2. Modernization of possessed and purchase of new equipment needed in the production process;</li> <li>3. Training and improvement of skills of the staff;</li> <li>4. Instructional and training activity for milk producers to obtain high quality raw material;</li> <li>5. Cooperation with customers to receive products guaranteeing the health safety and complete satisfaction in terms of organoleptic characteristics;</li> <li>6. HACCP implementation and execution to ensure the health safety of manufactured products;</li> <li>7. Improving the packaging design for the complete information about the product and the introduction of new forms of packaging according to customer expectations.</li> </ol>
Cooperative 4	
<ol style="list-style-type: none"> <li>1. Meeting the needs of customers in terms of quality;</li> <li>2. An increase of orders from the market for manufactured products.</li> </ol>	<ol style="list-style-type: none"> <li>1. Implementation of HACCP, which guarantees the safety of products;</li> <li>2. Awareness of the benefits of the introduction of the system and a commitment of the staff to hard work to ensure the safety and high quality of products;</li> <li>3. Obtaining adequate raw material and create conditions for the proper processing of the healthy food;</li> <li>4. Ensuring effective HACCP policy through daily compliance in every process of production of good manufacturing practice and hygiene in the workplace and in the whole factory;</li> <li>5. Knowledge and adherence to the principles of GMP and GHP as a guarantee of good quality products, which impacts extremely well on workers awareness and their responsibility for the development of the company.</li> </ol>
Cooperative 5	
<ol style="list-style-type: none"> <li>1. Continuous improvement of products, innovation in the offered assortment and increasing the customer satisfaction;</li> <li>2. Associating the Cooperative with high quality products by consumers;</li> <li>3. Striving to be a reliable supplier and to create a lasting partner relationship with customers, while respecting the interests of both parties, at the same time arousing respect of competitors.</li> </ol>	<ol style="list-style-type: none"> <li>1. Continuous improvement of internal processes and manufactured products;</li> <li>2. Monitoring customer satisfaction;</li> <li>3. Experience and high qualifications of employees;</li> <li>4. Careful selection of raw material suppliers;</li> <li>5. Establishment of appropriate communication processes within the food chain;</li> <li>6. Establishment of appropriate communication processes within the alimentary chain;</li> <li>7. Continuous improvement of the Quality Management System in accordance with ISO 22 000 and HACCP system;</li> <li>8. Full involvement of managers and all employees in the effective application of the Quality Management System and the principles of the HACCP system;</li> <li>9. Systematic training and development of professional skills of all staff having an impact on the quality and health safety of manufactured products;</li> <li>10. Continuous and systematic investment in the latest technical and technological developments.</li> </ol>

**Tab. 1.** Main objectives of the quality and the implementation of the objectives of selected polish diary cooperatives.

The cooperatives are convinced that the only verifiers of quality are clients and to this statement is subordinated the policy of quality of all analyzed cooperatives. In order to achieve customer satisfaction and thus increase sales and maintain existing and attract new customers cooperatives provide safe products with high repeatability in terms of organoleptic, extend an offer, continuously improve products, create innovative products, and improve customer service. The

purpose of the cooperatives is to increase the competitiveness of products and strengthening its position in the market through implemented quality policy. Their striving is also the identification of brand in terms of high quality of produced products. The attainment of quality, however, is determined by actions undertaken by management, employees and members of cooperatives, consisting in the production and delivery of products designed to gain recognition and customer satisfaction. For this purpose, cooperatives are evaluating customer needs, striving to achieve them, and continuously monitor the level of satisfaction. This is done through continual improvement of the quality of manufactured products and the maintenance and continuous improvement of the effectiveness of the quality management system (two cooperatives have mentioned this way of implementation the objectives). They also provide a suitable environment for implementation of products, that is, premises, equipment and facilities. Way to achieve the objectives of quality in four cooperatives is continuous improvement of machinery and the introduction of the latest technology to produce basing on the experience of the dairy industry in the country and abroad. Each of the cooperatives uses raw materials and products of standards guaranteeing appropriate quality of products. In all cooperatives was implemented Hazard Analysis and Critical Control Points (HACCP) system to ensure health safety of its products. In turn in two cooperatives are applied the rules that are guarantee of good quality products, namely the principles of Good Manufacturing Practice (GMP), and in one the Good Hygienic Practices (GHP), which are known and respected by the staff. One way to achieve the objectives of quality is also ongoing training and upgrading skills of workers, particularly those who have an impact on the quality of manufactured products. Such action, which is carried out in four cooperatives is intended to raising the awareness of employees in the responsibility for the quality of products. In addition, two cooperatives indicated that they are cooperating and supporting milk producers to obtain high-quality raw material. Two of the analyzed cooperatives also carefully collect and interact with suppliers of raw materials. Meeting the requirements of environmental protection, however, is listed in one of the cooperatives as a means of achieving the objectives of quality.

## Conclusion

In summary, the quality goals of the analyzed cooperative are similar, because each of them wants to retain existing and acquire new customers by providing them with complete satisfaction with manufactured products. As a result, it has to lead to an increase of market share, increase of revenue and to be a major competitor in the market. Besides each cooperative has developed its own way of achievement of the quality goals, but some components are present in several cooperatives. However, caring in meeting objectives lies with the management, employees and members of the cooperative. Besides, analyzed cooperatives continuously evolve by improving internal processes and manufactured products. Their employees have also ensured development. Any action taken by the cooperatives in this area relate to the implemented policy of quality.

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## The role of creative industries in economy of Zilina region

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**Abstract.** The paper explores the integration of a creative economy in economy of Zilina region. It starts with explaining the concept of creative economy and its role in the regional development. The main part consists of analyzing the role of particular creative industries in Zilina region, the problems and opportunities in this field. The analysis is mainly aimed at economic aspects, such as the number of firms, employment or wages.

**Keywords:** Creative economy, creative industries, Zilina region, regional development.

### 1. Introduction

The creative economy is an emerging concept dealing with the interface between creativity, culture, economics and technology in a contemporary world dominated by images, sounds, texts and symbols. Today, the creative industries are among the most dynamic sectors in the world economy providing new opportunities for developing countries and regions to leapfrog into emerging high-growth areas of the world economy.

The creative industries have been seen to become increasingly important to economic well-being, proponents suggesting that "human creativity is the ultimate economic resource," (Florida, 2002).

#### 1.1. Creative industries

*Creative industries* are those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. They include architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising. John Howkins, an expert on creative economy, has chosen 15 industries "*where creativity is the most important raw resource and the most valuable economic product*", including advertising, architecture, art, crafts, design, fashion, film, music, performing arts, publishing, research & development, software, toys and games, TV and radio and video games (Howkins, 2007). The creative industries are at the crossroads of the arts, culture, business and technology and defined by carrying out economic activities that strongly rest on individual creativity, skill and talent and predominantly produce intellectual property (UNCTAD, 2008).

#### 1.2. Regional development

Creative industries are regarded as one of the most promising economic sectors with high potential to contribute to local and regional wealth and jobs creation. Thus, the settlement of creative industries firms is an important location, image and economic development factor for the competitiveness of a region.

For example, in England, all nine of the Regional Development Agencies made the creative industries a priority sector. Culture has come to be seen as a way of jump-starting economic recovery, boosting tourism and offering new sources of employment. The ideas of several expert on creative economy in combination with the relative strength of British creative industries led

many economic development agencies to see the creative industries as a tool for regional economic revival.

## 2. The role of creative industries in Zilina region

When examining the creative economy in a certain area, it is necessary to know all the aspects, current state, problems and opportunities. The main objective of this part of research was to examine current economic situation of creative sector within the economy of Zilina region with emphasis on number of companies, employment, sales and wages in specific fields.

### 2.1. The creative sector development in Zilina region

In 2012, there was 15 223 companies in total, including 435 firms operating in creative sector. The share of creative industries in the overall economy in the Zilina region is currently around 3%. Over the last 10 years the number of companies in the creative industries more than doubled, while their share in total number of enterprises for the whole period stable at about 3%. The economy in the Zilina region is largely focused on industrial and agricultural production, therefore the creative sector may seem as unimportant, but the opposite can be true.

Among the creative industries in the Zilina region, the largest share is represented by advertising agencies (212 companies), architectural design (89 companies), and other publishing companies (65 companies). Advertising agencies represent half of companies included in creative industries. Some creative industries such as performing arts, artistic creation, publishing of computer games, and other software publishing, film and news agencies have currently no business representation in the region. Abovementioned most represented creative industries are also characterized by dynamic growth in terms of number of enterprises. Two of them were growing continuously. The number of advertising agencies rose from 63 in 2001 to 212 in 2012, more than three times. Number of enterprises in other publishing activities also tripled from 20 to 65. The number of enterprises with architecture activities were growing until 2008, since then there was a rapid reduction in the business for more than half from 128 to 54. This sudden change is the result of transformation of industrial classification of economic activities NACE to SK NACE Rev. 2. In other sectors, the number of firms changed annually on average only about 1-2 companies. The changes in number of creative companies during the period of years 2001-2012 are shown in Fig.1. We can see progressive development within three creative industries (advertising, architecture and other publishing), while the rest of creative sector is stable and the number of companies is close to zero.

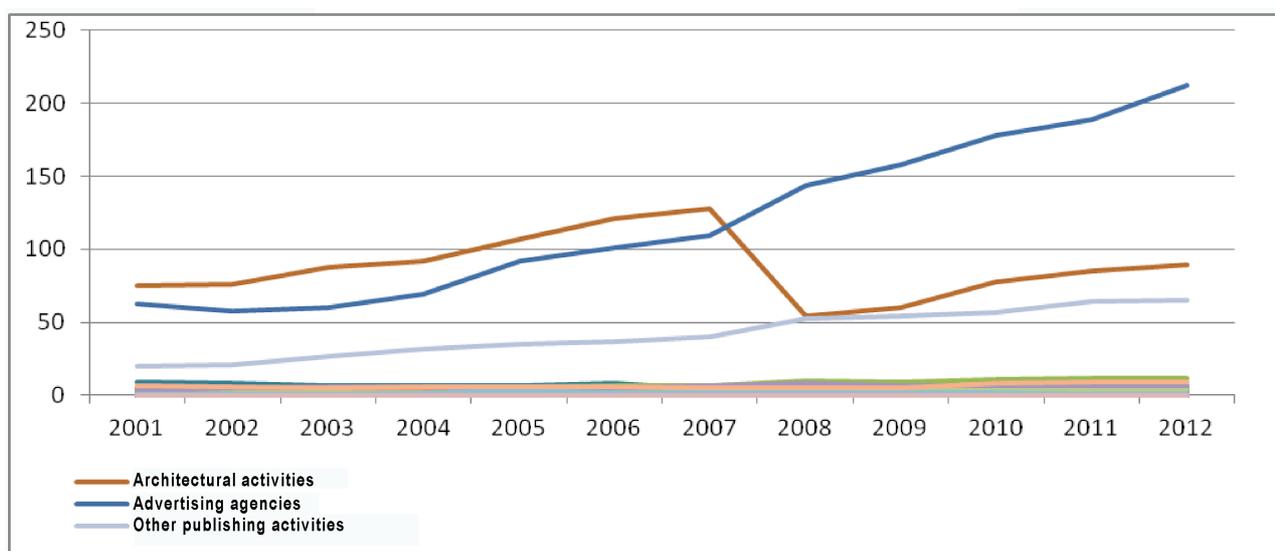


Fig. 1. The creative sector development in Zilina region.

## 2.2. Economic aspects of creative industries in Zilina region

Based on the employment statistical data, three key creative industries have mostly decreasing character, except for the advertising industry. Individual creative industries contribute only with a small part to the total employment of the region. Despite the not very favorable employment statistics, it cannot be concluded that these industries do not contribute significantly to total employment. The reason is that the creative industries are characterized by fact that a large proportion of creative class workers are freelancers. Therefore they are not included in the official statistics on the number of employees of specific companies.

In terms of sales, total sales in Zilina region had continuous upward trend, with the exception of 2009, when there was a significant drop in sales, which has been affected by the economic crisis at this time. In architectural activities we cannot determine the exact trend in sales, due to their strong culmination of each year. The advertising industry sales data are available only for the last three years, where sales move at approximately the same level. The publishing and printing industry sales have slightly upwards. Since the highest proportion of sales is produced by industry (especially automotive and paper) and agriculture, the percentage share of creative industries of overall revenues tends to be very small.

The average monthly wage in the economy of Zilina region was showing steady upward trend. In 2011 it reached the level of 801 EUR. The average wage in the creative industries were all the time above the overall average wage in the region, with the exception of the „printing, reproduction of recorded media“ industry. The highest wages were recorded in advertising industry.

## 3. Conclusion

The paper analyzed the current state of creative economy in Zilina region. Based on the statistical data, creative industries are obviously not the core of regional economy. First reason is that the region is much more industrially and agriculturally oriented. Second reason for such conclusion is problem with statistics. We are not able to measure properly importance of creative sector in the region due to lack of statistical data on creative industries. Therefore the research will be enhanced with the qualitative part in the future, which will bring more insight into the importance of the creative industries in Zilina region.

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# Comparing of corporate income tax in Great Britain and Spain

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**Abstract.** The aim of this paper is to compare corporate income tax in Great Britain and Spain. Although both of them are member states of the European Union, there are different conditions for buying business and taxation. Their tax policies vary in tax rates, methods of tax liability calculation or date of filing tax returns. We focused on corporate income tax in these countries.

**Keywords:** Corporate income tax, tax liability, profit, tax rate.

## 1. Introduction

The investment and business development is impacted by tax burden and tax incentives too. Lower tax burden leads to higher employment and business activity therefore there is a major influence on the development of domestic and foreign business enterprises. The average tax rate is used to the tax burden analysis of business sector. These tax rates take into account the impact of tax relief for investing, tax credits, tax planning, preferential depreciation and other factors which determine the final tax liability.

Taxes affect economic behavior of business enterprises, but also their financial decisions. The impact of taxes on enterprises' economic behavior can be examined in terms of the impact of taxes on labor, but also business activity, the amount of savings and investors' decisions. Higher corporate income taxes lead some businesses to invest and develop business. They purchase new technologies, invest in real estate and new areas of business, increase the cost to evaluate them and thereby they reduce not only profit, but also the actual tax liability.

For enterprises is very important corporate income tax because their profit is taxed at the end of tax period.

## 2. Corporate income tax and its aspects

Companies and enterprises are burdened by corporate income tax therefore the next section we will discuss corporate income tax and its conditions in Great Britain and then in Spain. There are different tax rates, methods of tax liability calculation, systems to eliminate double taxation, tax periods, the date of filing tax returns or the amount and frequency of advances on income tax.

### 2.1. Corporate income tax in Great Britain

Taxpayers of corporate income tax in the United Kingdom are commercial companies, cooperatives, mutual insurance companies, savings banks, state-owned entities, public companies, the Royal Society and nonresident company.

Profit of companies is taxed twice, first at the company level, then at the shareholders' level. Since 1999 the United Kingdom has applied imputation corporate tax system which eliminates the double taxation more or less.

There are applied different income tax rates in the United Kingdom depending on the taxable profits of the companies. Applicable corporate income tax rates are listed in the table.

Taxable profit (GBP)	Income tax rate (%)
up to 300 000	20
300 001 – 1 500 000	28,75
over 1 500 000	26

**Tab. 1.** Corporate income tax rates in Great Britain

The tax period for corporate income tax in Great Britain begins on 1<sup>st</sup> April to 31<sup>st</sup> March of the following year, but there is a possibility to choose a different accounting period of 12 months. The tax return shall be filed within 12 months from the end of the tax year, but companies have to pay taxes within nine months from the end of the tax year. If a company generates profits greater than £ 1.5 million, it is required to pay quarterly advance payments of income tax.

## 2.2. Corporate income tax in Spain

Corporate income tax applies to residents which head office and place of company management is in Spain and legal entities which have established a permanent establishment in Spain. Spain applies classical system of corporate taxation. At first, profit is taxed at the company level and then in the hands of shareholders.

If the recipient of dividends is an individual, gets limited exemption. If dividends are paid to a legal entity, it gets a tax credit in the amount of 50 % or 100 % of the total tax liability.

Corporate income tax rate in Spain is in the amount of 30 %. However, if the company achieves a turnover less than € 10 million, the first € 300 000 of gain is taxed by tax rate in the amount of 25 %, the rest is taxed by tax rate of 30 %. Small and medium-sized enterprises whose annual turnover does not exceed € 300 000, shall apply the tax rate of 20 %.

The tax period is the calendar or financial year. The tax return must be filed within 25 days from the date when the General Meeting approved the financial statements which has to be approved within six months after the end of the tax year. Companies pay advances of income tax three times a year – 20<sup>th</sup> April, 20<sup>th</sup> October and 20<sup>th</sup> December in the amount of 18 % of last known tax liability.

## 3. Comparing of the amount of tax liability in each country

In this section, we give an example how to calculate tax liability of company and shareholder, because there is double taxation of profit in both countries. In the United Kingdom, there try to eliminate the double taxation using imputation credit and in Spain they use tax credit to eliminate double taxation. Assume that the company made a profit € 1.8 million (but turnover was more than € 10 million) and it has only one shareholder - legal entity. In the following tables we see the calculation of tax liability of the company and shareholder in Great Britain and then in Spain.

taxable profit of company	1 524 420 GBP
corporate income tax – 26 %	<i>396 349,20 GBP</i>
profit for distribution to shareholder	1 128 070,80 GBP
imputation credit in the amount 1/9	<i>125 341,20 GBP</i>
taxable profit (dividend before tax)	1 253 412 GBP
income tax of shareholder - 26 %	<b>325 887,12 GBP</b>
shareholder's tax for paying	<b>200 545,92 GBP</b>

**Tab. 2.** Calculation of tax liability from taxable profit in Great Britain

To the tax calculation in Great Britain it was necessary to change € 1.8 million to pounds. We used a rate of the National Bank of Slovakia (1 € = 0,8469 GBP), so company profit was £ 1 524 420. When company earned more than £ 1.5 million, profit is taxed by tax rate in the amount of 26 %. Company pays income tax in the amount of £ 396 349.20 (€ 468 000). Profit after tax is distributed to shareholder. Distributed profit is reduced by imputation credit in the amount of 1/9. Taxable profit of shareholder we calculate when we add together distributed profit and imputation credit and from this we calculate income tax of shareholder. But shareholder does not pay tax in that manner. That manner tax is reduced by imputation credit, so the shareholder has to pay tax only in the amount of £ 200 545,92 (€ 236 800).

taxable profit of company	1 800 000 €
corporate income tax – 30 %	540 000 €
profit for distribution to shareholder	1 260 000 €
withholding tax (19 %)	<b>239 400 €</b>
dividend after tax	1 020 600 €
dividend before tax (1 020 600 + 239 400)	1 260 000 €
income tax of shareholder – 30 %	<b>378 000 €</b>
tax credit – 50 % (from 378 000)	<b>189 000 €</b>
tax overpayment	<b>50 400 €</b>

**Tab. 3.** Calculation of tax liability from taxable profit in Spain

When turnover of a company was more than € 10 million, corporate income tax rate is 30 %. Company pays income tax in the amount of € 540 000. Profit after tax is taxed by withholding tax 19 % and then is distributed to shareholder. So shareholder get dividend after withholding tax in the amount 19 %, but he has to pay income tax in the amount of 30 %. His tax liability in the amount of € 378 000 is reduced by tax credit of 50 %, so he has to pay only € 189 000. But his withholding tax was higher than his tax liability, therefore he has tax overpayment € 50 400. The tax overpayment is not refunded, but it is transferred to the next tax period for up to 7 years.

## 4. Conclusion

After calculation of tax liability of company and shareholder we see some differences between Great Britain and Spain:

- Corporate income tax rate is different in each country. When profit is € 1.8 million and turnover is more than € 10 million, tax rate in Great Britain is 26 % and in Spain 30 %. Therefore tax liability of company is in the amount of € 468 000 in Great Britain and € 540 000 in Spain.
- To eliminate double taxation in Great Britain there is applied imputation credit 1/9 and in Spain there is applied tax credit of 50 %.
- In Spain the profit is distributed to shareholder after withholding tax of 19 %.
- Tax liability of shareholder (legal entity) in Great Britain after imputation credit is in the amount of € 236 800. Tax liability of shareholder in Spain was after tax credit in the amount of € 189 000, but withholding tax was withheld before, so shareholder does not pay tax, because he has tax overpayment € 50 400. This tax overpayment is not refunded, but it is transferred to the next tax period for up to 7 years.

Although both of Great Britain and Spain are member states of the European Union, there are specific conditions in corporate income tax. We showed an example, how much company or shareholder has to pay in taxes in each country. Although corporate income tax rate is higher in Spain, tax liability of shareholder is higher in Great Britain.

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## Evaluation of natural railway monopoly in the conditions of an entry into the stock market

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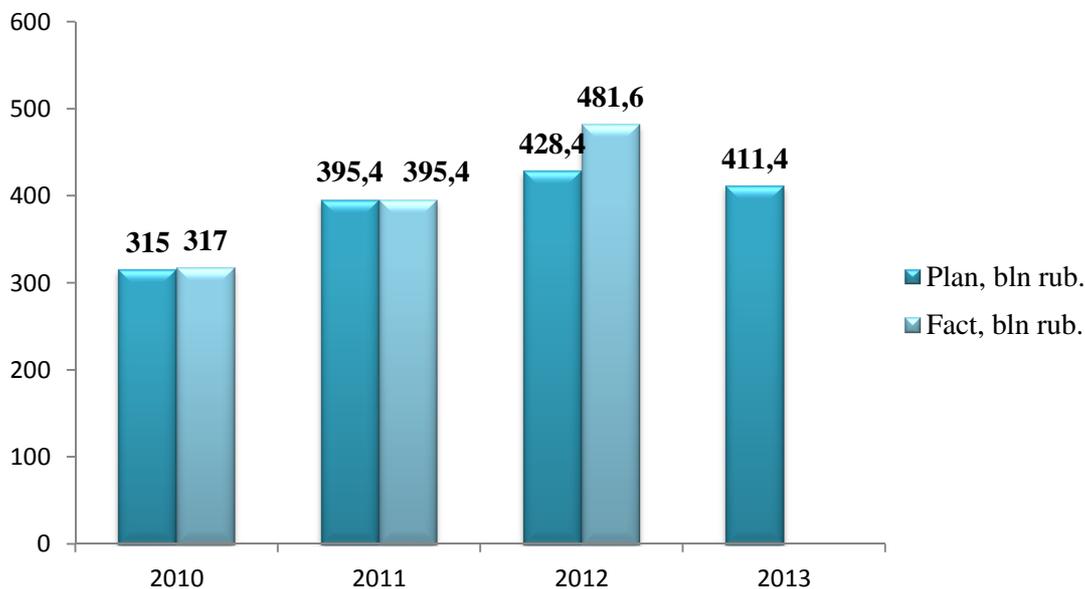
**Abstract.** The reform of the railway industry in The Russian Federation has a long period discussion. The results of this reform are privatization the part of the state assets and decreasing the role in corporate management in the main railway monopoly. There is a great lack of investments in infrastructure complex nowadays.

**Keywords:** Evaluation, investments, railways infrastructure, natural monopoly, IPO (Initial Public Offering)

One of the main reasons for reforming of railway industry is essential aging, physical and an obsolescence of the fixed business assets and locomotive draft, on the one hand, and decrease in influence of public administration, on the other hand.

According to the experts, today the investment hole of railway monopoly of Russia of JSC RZhD (State-owned Joint-Stock Company Russian Railways) till 2020 is 2,1 trillion rub. The total amount of the investment program of monopoly makes 5,7 trillion rub 3,6 trillion from which are planned to finance from own company funds and loan financing.

The investment program of JSC RZhD for the last 3 years looks as follows:



**Fig. 1.** The volume of means directed on financing of investment projects of JSC RZhD, distribution by years.[1]

It is worth noticing that subsidizing of passenger rail transportation happens at the expense of means of regional budgets of subjects of federation. However only 22 regional subjects of the Russian Federation completely compensate the dropping-out income of suburban passenger railway traffic (39 regions – less than 50%, and five regions – at all don't provide compensation of losses of state owned suburban railway company. [3] Expected losses from suburban passenger traffic in 2012 will make 16,3 billion rubles that on 2 billion rubles it is more, than in 2011.

Moreover, the state as the only shareholder of JSC RZhD, brings the funds allocated for financing and realization investment of the program of JSC RZhD in authorized capital. It agrees to the main documents regulating strategic development of branch "Strategy of development of railway transport in the Russian Federation till 2030" and "Transport strategy of the Russian Federation for the period till 2030" the state intends to leave gradually structure of the main investors of branch, and the structure of distribution of investment resources is planned in a proportion 20/80 (the state / private investments).

However, as already it was noted above, the state support and self-financing mechanism don't suffice on complex implementation of the program on updating of fixed assets and implementation of large infrastructure projects. Today there is a sharp problem not only in an integrated approach on attraction of the cheap loan capital, but also in reduction of the state influence in natural monopoly through public placement of part of actions of the state company JSC RZhD at stock exchange.

On the one hand, the state will lower a share of the participation in activity of railway transport, having forced, thus, the company to be guided by market conditions and to become more attractive in the interspecific competition. On the other hand, it will allow raising necessary financial funds for radical updating and rearmament of fixed assets of the company, to realize part of infrastructure projects and to increase appeal to the consumer of transport product.

The problem of financial resources attraction for overcoming of shortage of investment resources can be divided into 2 main directions:

1. problem of attraction of the loan capital in the company;
2. problem of creation the fair market value of the company for its offering in the market.

In this text we consider only the first problem.

In modern economic literature allocate 3 main sources of financing of the company:

Let's consider each of these points in more detail.

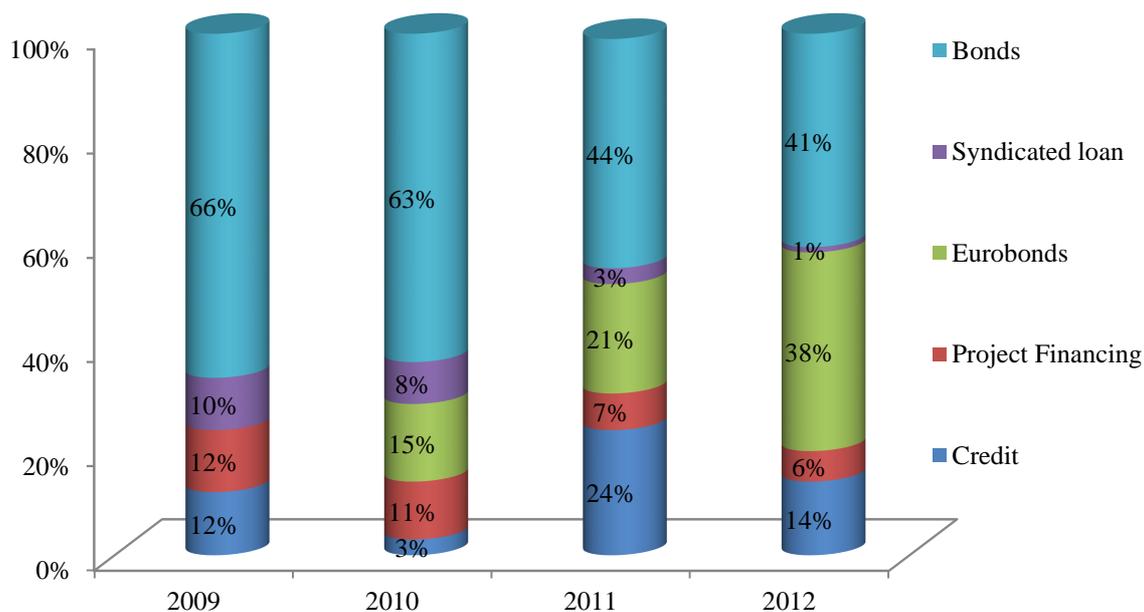
#### 1 . Self-financing

Not a secret that investment projects financing at the expense of own means possibly from net profit and depreciation. However, possibly realization the investment program JSC RZhD from own capital less, than on a half.

#### 2 . Debt financing

According to the annual report of the company for 2011 a ratio of own and loan capital of 65% and 35% respectively. The share of the loan capital is enough big therefore in case of its further increases the company risks to lose the financial stability.

Today for implementation of the JSC RZhD investment program actively uses various instruments of loan, among which syndicated and bilateral loan, ruble bonds, Eurobonds, and also leasing, etc. The structure of the loan capital is given at figure 2.



**Fig. 2** The structure of the loan capital in JSC RZhD [3]

### 3 . Participation financing.

The participation financing consists in decrease in control over the company because of the creditors' admission to management in exchange for financial resources. In a case with additional share issues there can be a problem of washing out of the capital of the company and essential decrease in control over management of the company. Thus, entering stock markets, the company will need to solve 2 main objectives: to raise financial funds, having sold actions at the most favorable price in the fullness of time, and to avoid control loss over company activity.

## Conclusion

Privatization of RZhD has been discussed for many years. Finally the IPO of 25% minus 1 share of the company had originally planned for 2012 – 2013. But it has been delayed primary owing to the political struggles and market situation. One of the main questions to answer is to understand how to attract the cheap debt capital into the industry and not to fail the IPO.

There are 2 major lines in Russian railways: to build a market-oriented business model or to stay partly privatized state-owned business with hardly managing and traditional organization.

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# Differences between Business-to-Business market and Business-to-Customer market

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**Abstract.** The article deals with the fundamental differences between business-to-business (B2B) and business-to-customer (B2C) markets. Depending on specific circumstances, these factors can be present in each company. The most important factor is demand, for business-to-business is typical derived, diversified demand. The companies of B2B market use different tools in promotion, their products is technically complex and customers prefer the high level of services and delivery is very important, too. In spite of the fact that the end customers often do not have any information about B2B market, their existence is very important for them. Successful application of the principles of B2B requires knowledge differences from B2C market.

**Keywords:** customer, company, B2B marketing, B2C marketing

## 1. Introduction

Business market presents different type of opportunities than the customer market. The concepts of relationships, buyer decision making and value is different from B2C market. To appreciate the similarities and differences between B2B and B2C marketing, we must understand the basics of marketing. Business marketing is the process of value creation for business customer, who creates the value for their final customer.

## 2. Business-to-Business and Business-to-Customer market

Depending on the nature of product and participants of purchasing process [6]:

- customer's market
- business's market

Business – to- customer (B2C) market is defined as the market, where the companies produce and sell finished products to final customers. In the market, the final customers are individuals and households, which buy goods for their own use. This group of goods includes goods and services which are selling through direct mail, personal selling, Internet and retail trade. [6]

Business-to-business (B2B) markets are consists of all companies and organizations buying goods and services for use in the manufacture of other products and services. These products are sold, rented or supplied to other companies. In the group of companies includes retail and wholesale, which purchase goods for resale with profit. [2]

### 2.1. Fundamental differences between B2C and B2B market

Each element of the market, starting from primary producers to the customers, must buy products and services. This is the reason that justifies a higher significance of B2B markets compared to B2C markets. Therefore we should give more attention to purchasing process and marketing strategies of B2B markets.

These types of markets are different and similar at the same time. Customer act as purchaser and make the purchasing decisions. Their main aim is satisfaction of their needs. On the other hand, the difference is in how decisions arise.

The main differences between B2C and B2B markets are:

- narrow relationship between supplier and customer - a small number of customers and the greater importance of the supplier makes more willingness to adapt order to their needs, [2]
- the main role is technology – Dayan sees the main reason that the products of the business markets are defined by standards and specified safety requirements, size and so on. In the case, the companies must deliberate technological equipment's wear, therefore the technological predictability and continuous monitoring of trends of the market are very important, [1]
- demand is induced or derived – demand of business goods depend to final customer's good. For business market it is very important to monitor the development of the customer's market. On the other hand marketer do not must forget to monitor the overall development of the country's economy. During the recession business's customers reduce their investments in the equipment and supplies. [2] Derived demand is the demand experienced by the chain of suppliers and producers that contribute to the creation of a total offering. Without initial customer demand, there will not be any demand on the chain of suppliers, [5]
- demand is diversified – in B2B markets, on the side of buyers there can be small companies but also large corporations. Individual markets are often geographically concentrated, because of the location of energy resources and raw materials. “In the industry, we can see a direct relationship between the concentration of producers and users. One consequence of the concentration is strong competition between producers, whose main effort is knowledge the greatest number of potential customers, [1]
- the sale of products must practise by workers who are both engineers as well as experts – purchasing committee is composed of technical experts or sometimes management of companies. They have a clear vision and knowledge of the products. On the part of sellers must be accomplished sellers, who do not know only lead negotiations and make contracts, but they have knowledge of the technical characteristics of the product,
- demand usually do not respond to price flexibility – “For business markets is typically sign reverse elasticity – when prices fall, the companies postpone their purchases in anticipation of future decline.” [4] Especially in the short term it is difficult for producers to respond flexibly to changes prices. Price reduction is not usually an impulse to purchase. “The companies buy when they need some products or services. The purchase is conditional their other activity or way as increase the selling price of their own products,
- direct purchases – customers of business markets buy directly from producers as intermediaries. Especially in the case, when the products are technically complex and expensive, [2]
- demand is fluctuating – the demand of business goods tends more volatile than the customer's goods. Some increase in customer's demand can lead to much more significant percentage increase in demand of business's goods. This phenomenon is called acceleration effect,
- the difference in the size and number of customers - there are less buyers on the business markets than on the customer market. So we can say it has elements of oligopolistic markets. On the other hand, the small number of buyers decides on large amounts of funds than on the customer's market. Specialized companies usually need a large amount of raw material. Typical feature of the B2C markets is Pareto principle 80/20, which means 80 % of customers bring 20 % of profit. The B2B market, this principle is reversed. Therefore the companies on B2B markets are undertaking in risky situations, [2]

- durability – some products may have a very long life – 10, 15, 20 or more years. However, it can happen that technological side suddenly becomes obsolete (for example, advances in technology). [2]

	<i>Characteristic of customer markets(B2C)</i>	<i>Characteristic of business markets (B2B)</i>
<i>Number of customers</i>	large	Small
<i>Purchase initialization</i>	themselves	Others
<i>Evaluation criteria</i>	social, personality, level of usefulness	price, value and degree of usefulness
<i>Find information</i>	usually easy	typically complex
<i>Size of orders</i>	small	Large
<i>Frequency of orders</i>	low	High
<i>Size of the supplier base</i>	can be large	a small number of suppliers
<i>Value of orders</i>	low	High
<i>The importance of supplier's choice</i>	low	High
<i>The degree of detail of the decision</i>	low to average	average to high
<i>Range of information inputs</i>	average	average to high
<i>Price</i>	depend on purchase type	predetermined prices
<i>Products</i>	standardized, service and delivery are sometimes important	technically complex, service and delivery are very important
<i>Promotion</i>	advertising, monologue, companies compete for visibility on customer market	personal selling, dialogue, customer do not realize the importance of brand
<i>Market structure</i>	many customers geographically dispersed	fewer customers geographically concentrated

**Tab. 1** Fundamental differences between B2B and B2C market

## 2.2. The importance of the brand in B2B

The interesting feature of B2B markets is the brand. In the past, brand management associated with companies of customer markets. There were only few prominent brands in B2B market. At present, the importance of brands in B2B markets is increasing and business managers recognize the importance of its implementation and management. The companies of B2B market should pay attention to building a brand for the following reasons:

- marketing is addressed to less customers – companies. The brand helps to build awareness of the companies and its products. The brand provides better customer orientation on the market,
- without brand management, products will have a low level of consistency and sales managers of individual product line will create marketing strategy ad hoc. The result may be used for different corporate logos, scripts and ultimately confused customer.
- building brand awareness in the minds of customers protects their products against cheaper competitors.
- finally, the brand to extend the life cycle of products.

### 3. Conclusion

Despite the increased visibility of marketing activities on the customer market, majority of these activities are taking place between companies on B2B market. The basic principles of the two markets are the same, but there are a lot of differences, whether in products, customer relationships or obtaining information. The most important different feature of B2B market is the demand, which is derived by demand on the B2C market. The important of brand management in B2B increases at present and marketers should pay attention to building of B2B brand.

### Acknowledgement

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# Transfer of National Business Culture from Sweden to Poland – Case Study of Scania

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**Abstract.** The paper takes the issue of globalization impact on management models transfer. Dimensions of national cultures according to G. Hofstede are used to compare business profiles of Poland and Sweden. The results of several in-depth interviews conducted in Polish daughter company of global automotive concern Scania AB are discussed. In conclusions, the good adaptation of Polish company to Swedish management model and shaping a new organizational culture in Poland is accented.

**Keywords:** national business culture, Scandinavian model of management

## 1. Introduction

Globalization and shared presence of countries and regions in the European Union intensifying the process of organizational culture transfer. One of influential business patterns is the Scandinavian model, known also as the Nordic[1]. The purpose of this paper is to check cultural features of Scandinavian management pattern implemented in Polish company: Scania Production Slupsk SA, belonging to Swedish global automotive concern Scania AB. The company, since middle of 90. XX cent. is constantly evolving and increasingly taking root in the socio-economic reality of the region of Pomerania in Poland. Company's success not only confirms efficiency of Scandinavian management model, but also shows how currently are changing patterns of national identity in making business.

## 2. National business culture of Poland and Sweden

### Culture dimensions according to Geert Hofstede

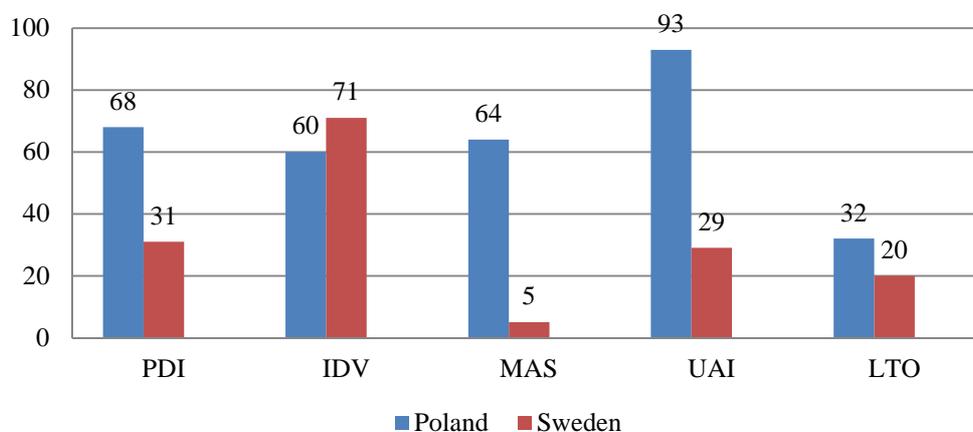
Organizational psychologist Geert Hofstede is an author of multidimensional model describing national business patterns [2]. Each dimension is measured by a specific index and can be easy used to comparisons. Dimensions are defined by Hofstede as follow:

- *Power Distance* (PDI) refers to the acceptance of inequality in the exercise of authority as well as in wealth, status, and privilege.
- *Uncertainty avoidance* (UAI) describes societies in which discomfort is prominently experienced in those settings, situations or contexts that lack clarity or structure.
- *Individualism - collectivism* (INV) - a bipolar dimension. The individualistic end of the continuum describes societies in which social ties are loose and individual strivings and aspirations are considered paramount. In collectivistic societies, integration into family, society, and nation is deemed to be the normal order of existence, and personal goals and preferences are subordinated to those of the larger entity.
- *Masculinity-femininity* (MAS) - pertains to the distribution of emotional roles between the two genders. Male cultures are tough-minded and prize performance; female cultures are marked by tender-mindedness and assign a high value to caring.

- *Long-Term /Short Term Orientation* - based on Confucian dynamism [3]. In societies with long-term orientation, people believe that truth depends very much on situation, context and time. Societies with a short-time orientation are normative in their thinking, exhibit great respect for traditions, a relatively small propensity to save for the future, and a focus on achieving quick results. Described fifth dimensions are popular measure consisting so called 5D Model which is used for comparing national cultures [4]. However, as Geert Hofstede stresses: “culture exists only by comparison”, and the country scores on the dimensions are relative, because societies are comparable only to other societies.

### Comparing national business cultures of Poland and Sweden

Poland and Sweden seem to be a very different countries, with different history of last century, religion, political and social life. However, since Polish presence in European Union, there is strong common interest to cooperate on many areas. Swedish society has its roots in Protestantism – it is orientated to the universality, has tendency to analyze and to the concept of morality as a voluntary agreement. Frequently is emphasized both individual and common satisfaction and the main purpose is to use fruits of own work and energy. Everyone should work and should get the maximum effort to ensure the work of those who do not currently have work, or are incapable of it. Poland represent quite different country – with very strong catholic orientation, pride of hero moments of own national history, with tendency to give primacy to emotional attitudes in compare to rational approaches. Polish people still remember harmful time of communistic regime after II world war, but after entering EU in 2004 they are experiencing fast transformation into mobile and economically active society. Swedish and Polish culture seen through the lens of the 5-D Model give a good overview of their similarities and differences (see Fig.1).



**Fig. 1.** 5-D model comparing national culture of Poland and Sweden. Source: adaptation on basis of Hofstede G, 2010.

Sweden low score on dimension of Power Distance (PDI 31) shows first important difference in compare to Poland (PDI 68), which is strong hierarchically oriented in relation to any ‘power’. Swedish style is quite opposite: being independent, hierarchy respected only for convenience, equal rights, superiors accessible, coaching leader, management facilitates and empowers. Power is decentralized and managers count on the experience of their team members. Employees expect to be consulted. Control is disliked and attitudes towards managers are informal and on first name basis. Communication is direct and participative. The dimension of Individualism (IDV) not differentiate both countries, unless Swedes are little bit more individualistic than Poles. Sweden, with a score of 71 is a pure individualistic society. This means there is a high preference for a

<sup>1</sup> In 2010 a sixth dimension: *Indulgence versus Restraint* has been added, based on Michael Minkov's analysis of the World Values Survey data for 93 countries: Hofstede G., Hofstede G.J., Minkov M., *Cultures and Organizations: Software of the Mind. Revised and expanded 3rd Edition*. New York: McGraw-Hill USA, 2010.

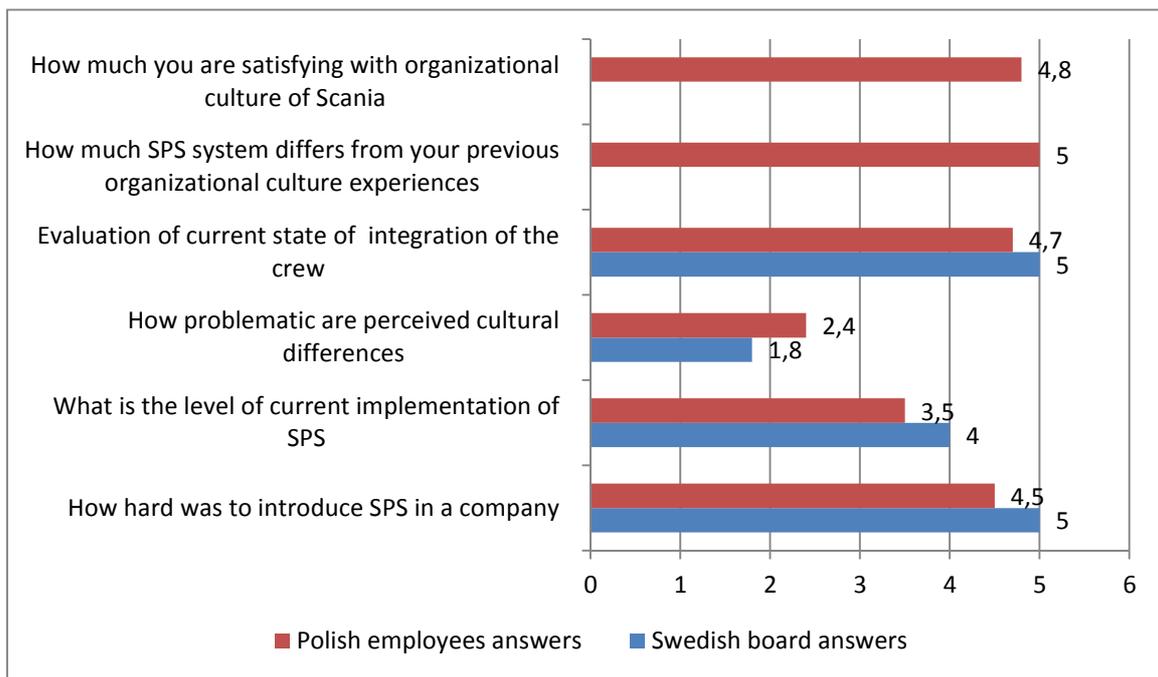
loosely-knit social framework in which individuals are expected to take care of themselves and their immediate families only. In individualistic societies offence causes guilt and a loss of self-esteem, the employer/employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, management is the management of individuals. The third one dimension: Masculinity (MAS) discloses another significant difference: a very low Swedish score (5) indicates totally feminine pool of the dimension, in compare to strong masculine orientation of Poland (64). Feminine pool means that the dominant values in society are caring for others and quality of life. The fundamental issue here is what motivates people, wanting to be the best (masculine), or being orientate to carry and to share achievements with others (feminine). In feminine countries it is also important to keep the life -work balance and to have sure that all are included. An effective manager is supportive to the employees, and decision making is achieved through involvement. Managers strive for consensus and people value equality, solidarity and quality in their working lives. Conflicts are resolved by compromise and negotiation and Swedes are known for their long discussions until consensus has been reached. Incentives such as free time and flexible work hours and place are favored. Poland represent masculine business culture, with strong orientation to rivalry, distant communication of managers and promotion of workaholics.

The dimension of *Uncertainty Avoidance* (UAI) once again discovers extreme disparities: Sweden (29) has a low preference for avoiding uncertainty, Poland (93) - very high. This dimension shows how a society deals with the fact that the future can never be known: *should we try to control the future or just let it happen?* This ambiguity brings anxiety and different cultures have learnt to deal with this anxiety in different ways. Low UAI societies, like Swedish, maintain a more relaxed attitude in which practice counts more than principles and deviance from the norm is more easily tolerated. People believe there should be no more rules than it is necessary and if they are ambiguous or do not work, they should be abandoned or changed. Schedules are flexible, hard work is undertaken when necessary, but not for its own sake, precision and punctuality come naturally, innovation is not seen as threatening. Poland, harmed by former and last history avoids uncertainty extremely and it partly explains often defensive and conservative reactions, both managers as well employees, in confrontation with novelty or innovation. The *Long Term Orientation* (LTO) in both countries is low (Poland 32, Sweden 20) and shows short term orientation. Both societies exhibit great respect for traditions, a relatively small propensity to save, impatience for achieving quick results, and a strong concern with establishing the 'truth' as normative. Summarizing - in three dimensions both countries much differ: in relation to hierarchy (PDI), in style of behavior and communication (MAS) and emotional resistance to ambiguity (UAI). In two dimension both countries are similar: in individualism (IDV) and short perspective of acting (LTO). The question is: if and how strong this differences reflect in business area? As a prospective example, we have a case study of Scania Production Slupsk SA – a Swedish daughter company in Poland.

### **3. Adaptation of Swedish management model in Scania Production Slupsk SA**

The research was conducted in 2012, after over one year from introducing Scania Production System (SPS) - an original Swedish management model elaborated by concern Scania AB and implemented in its all companies [5]. A set of depth interviews were done with the Swedish board (Plant Manager and Finance & Personnel Manager), as well as with several randomly selected Polish line managers and blue collar workers. Majority of interview questions was similar for both groups and the most significant answers of them are presented below (Fig.2). Illustrated opinions are very coherent – both Swedish and Polish company members generally positively (Swedish - little bit more enthusiastic) perceived state of the integration of the crew and not consider cultural differences as specially problematic, although they agree that switching into new work organization system (SPS) was a real challenge. As a cultural features from side of Swedes addressed to Poles were referred for example: “hard to win the trust of them”, “they don’t admit when do mistake and

take opportunity to complain”, “they work well, but sometimes too fast, without holistic view”. From Poles side to Swedes were addressed such observations as: “unnecessary tardiness”, “excessive accuracy”, “totally not oriented to the hierarchy”, “polite, trying to remember polish names and polish phrases“, “Swedish people want to know everything very precisely, to know motives, talk about family, etc., Polish people act more as ‘hurray’, with Swedes is necessary to build informal relations and very often Polish managers don't understand it”. The last remark seems to be well understandable in light of other result: for all of interviewed Poles the philosophy and methods of work covered in SPS were completely different from their previous organizational experiences with other (mostly Polish) companies. However, examined Poles were generally satisfied with new company’s organizational culture and Scania Production System as a variant of Scandinavian management model, oriented into both economic efficiency and human resources satisfaction - has passed the exam in Poland.



**Fig. 2.** Opinions about adaptation of Scania AB organizational culture in Slupsk Scania Production S.A  
 Note: An average evaluation on scale from 1 - minimum value to 5 - maximum value. Source: own research

#### 4. Conclusions

The introduction of Scania Production System in Polish daughter of Swedish concern Scania AB was a very absorbing task, but majority of the Polish crew has well adapted over time to it and Swedish managing board found Poles as a good and effective coworkers. Perceived by both sides non significant cultural differences are treated as a chance to improve the cooperation. Polish members of the company value friendly and partner organizational culture and the possibility to learn from quality management system tested worldwide. Scandinavian model of management proved to be well-typed in Polish cultural reality and influences Polish national business model. The generalized business differences on national level still exist, but they are also changing step by step, together with impact of globalization.

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# Creative Licensing Arrangement Strategy Trends with Focus in Novel Marketplaces

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**Abstract.** The biopharmaceutical industry continues to handle with the challenges of patent expirations, aging portfolios and governmental pricing pressures. Above all the business development stands out as a core strategy for all of the major companies to improve their future prospects. Overall, the industry has become much more open to research collaborations and external innovation – a trend that has accelerated as industry-wide cost cutting has led many companies to scale back internal R&D operations.

**Keywords:** Licensing, Business Development, Innovation, Emerging Markets, Strategy

## 1. Introduction

Since many pressures in the Biologics Pharma Industry are most pronounced in the established pharmaceutical markets, companies are also using arrangements and collaborations as a means of expanding their businesses into new and emerging markets to reach new customers through a variety of branded, generic, OTC and biosimilar products. In this conference paper the leading business development players across the globe and the key arrangement-making trends that are emerging in the current environment will be evaluated.

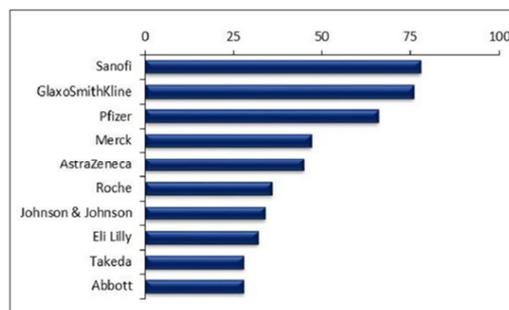
## 2. Arrangement Trends by Company, Therapy Area and Technology Type

Agreements activities of the major companies in the pharmaceutical industry for this analysis were tracked & consolidated with the focus on transactions occurring between January 2009 and the start of October 2012. Table 1 and Figure 1 show the most active arrangement-makers in each of the major geographic regions – Europe, Japan and the US, as well as in their respective leader groups – Large Pharma or Specialty, Regional Pharma.

**Table 1:** Arrangement Leaders by Region from Jan. 2009 – Oct. 2012 based on number of transactions

**Figure 1:** Number of Arrangements by Large Pharma Companies Jan. 2009 – Oct. 2012

	Europe	Japan	US
1	Sanofi	Astellas	Pfizer
2	GlaxoSmithKline	Takeda	Merck
3	AstraZeneca	Eisai	Johnson & Johnson
4	Roche	Mitsubishi Tanabe	Eli Lilly
5	Novartis	Shionogi	Abbott
6	Boehringer Ingelheim	Daiichi-Sankyo	Bristol-Myers Squibb
7	Bayer	Kyowa Hakko Kirin	Endo
8	Merck KGaA	Ono	Watson
9	Lundbeck	Dainippon-Sumitomo	Amgen
10	Recordati	Otsuka	Forest
10	UCB (tie with Recordati)		

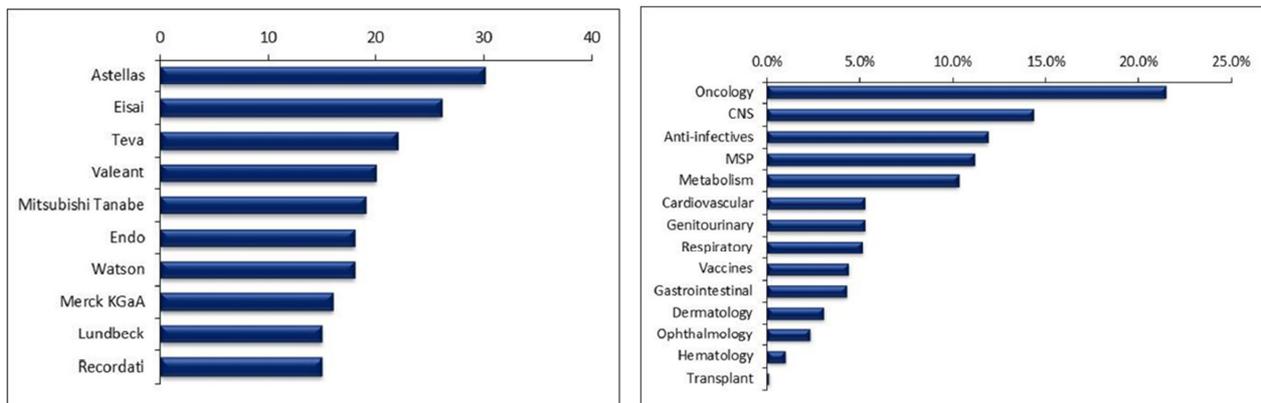


Among the Big Pharma companies as shown in Figure 1, Sanofi, GlaxoSmithKline (GSK), Pfizer, Merck and AstraZeneca (AZ) have been the most active arrangement-makers in terms of licensing, research collaborations, acquisitions, joint-ventures and product acquisitions since 2009. By looking at the year-over-year (YoY) trends noticeable the pace of activity has slowed for the leader Sanofi, since its large acquisition of Genzyme in 2010, while AZ is a company that is increasingly active with an urgent need to rebuild its pipeline. The other large Pharma companies in the Top 10 have shown a fairly consistent level of activity over the past three years. AZ was also involved in one of the industry's more creative arrangement structures in 2012. In order to win a highly competitive bidding process for Amylin<sup>1</sup>, BMS procured the help of AZ through the companies' existing diabetes collaboration in a cost-sharing arrangement structure. Specifically, BMS acquired Amylin for a total cost of \$7.0b, with AZ providing an upfront payment of \$3.4b to BMS in order to equally share in one-half of the sales and profits generated by Amylin's business. In addition, AZ took an option, following the close of the transaction, to pay an additional \$135m in order to have equal governance rights on financial and strategic decisions for this diabetes business. This collaboration allowed BMS to significantly raise its offer from its initial level, while limiting its own financial exposure. As a result, BMS and AZ have improved the position of their diabetes collaboration, and added much-needed top-line growth with only modest earnings dilution in the near-term. Figure 2 show, among the regional and specialty players many of the Japanese companies – including Astellas, Eisai and Mitsubishi-Tanabe – have been very active, as many pharmaceutical companies in Japan seek to build their businesses globally. This trend is also evident at Takeda, which places in the Top 10 among the large Pharma group with its \$12.7b acquisition of Nycomed in 2011 and more recent arrangements in the US URL Pharma and LigoCyte, in emerging markets Multilab in Brazil. Teva has also been very active in the past and may pursue even more branded opportunities in the future following its acquisition of Cephalon in 2011. Over the past year and a half, Valeant has been the most active specialty with the acquisitions of Eyetech, Medicis and a number of smaller emerging market companies. Valeant's heavy arrangement activity is a result of its business model, which primarily relies on external arrangements for product or business acquisitions instead of investing in high-risk R&D to grow its portfolio. This management philosophy led Cephalon to seek a more R&D friendly suitor in Teva after an initial hostile bid from Valeant. Also the destination or focus areas of this arrangement activity were tracked, with clear trends emerging at both the therapeutic level and in terms of technology. The following figures show where the greatest numbers of arrangements have occurred since 2009 by therapy area and technology type.

<sup>1</sup> Islet Amyloid Polypeptide (IAPP) is a 37-residue peptide hormone. It is blessed with insulin from the pancreatic  $\beta$ -cells in the ratio of approximately 100:1. Amylin plays a role in glycemic regulation by slowing gastric emptying and promoting satiety, thereby preventing post-prandial spikes in blood glucose levels.

**Figure 2:** Number of Arrangements by Regional & Specialty Pharma Companies Jan. 2009 – Oct. 2012

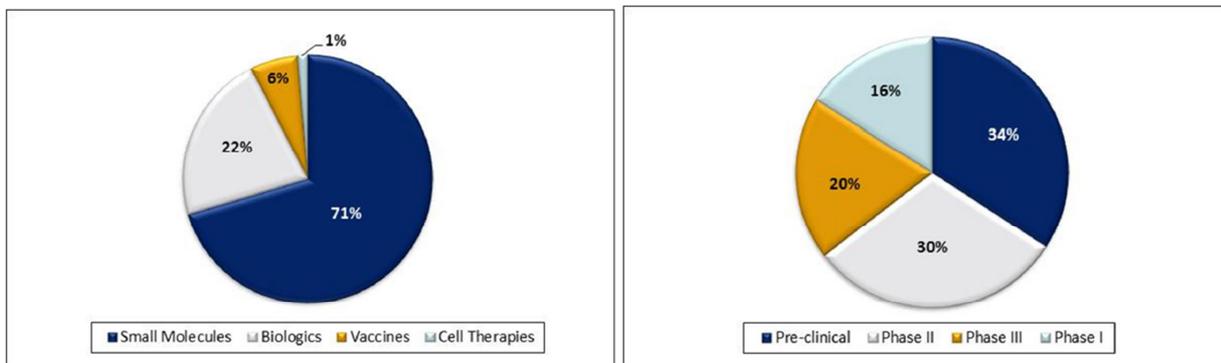
**Figure 3:** Percentage of Arrangements by Therapy Area Jan. 2009 – Oct. 2012



The arrangement breakdown by therapy area in Figure 3 shows a substantial lead for Oncology in terms of number of arrangements since 2009, but what is not obvious is that the interest in the Oncology therapy area has markedly accelerated over the past two years. The other leading therapy areas over the past few years have been CNS, Anti-infectives, and Musculoskeletal / Pain. There has also been a steady increase in the number of Metabolism arrangements in recent years, which reflects the industry’s desire to reach the very large and growing diabetes patient populations in many regions around the world. The concentration in CNS and Anti-infectives shows the industry’s ongoing efforts to develop projects in areas of unmet need – as demonstrated by numerous efforts in Alzheimer’s and Parkinson’s diseases in CNS, Hepatitis C, HIV and fighting resistant bacteria in the Anti-infectives arena. Figure 4 shows a breakdown of the number of arrangements by technology type with the majority of projects still targeting small molecules (71%), but a significant percentage of biologic arrangements (22%) and a smaller but growing representation in vaccines (6%). Overall, these figures largely reflect the fact that the pipelines of many traditional large and mid-sized pharmaceutical companies are transitioning towards biologic and vaccine product development, with a focus on oncology and immunology (reflected in Musculoskeletal / Pain) projects and in areas of ongoing unmet need (CNS, Anti-infectives).

**Figure 4:** Percentage of Arrangements by Technology Type, Jan. 2009 – Oct. 2012

**Figure 5:** Arrangements by Phase of Development in Jan. 2009 – Oct. 2012

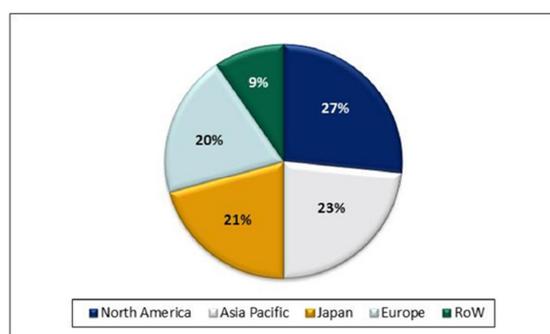


The timing at which a company enters into an arrangement leads to the question of cost, as earlier stage assets are invariably less expensive to license than projects closer to the market with known clinical data points. Aside from this market dynamic, there are several important trends that have been identified developing in terms of upfront payments and total arrangement values. Specifically among licensing arrangements, this includes increasingly flexible arrangement structures and an apparent, but uneven move, toward more back-end loaded arrangement reward structures for the licensor. More flexible arrangement structures have also been widely observed on the M&A front, most notably with Sanofi’s acquisition of Genzyme, which included contingent value rights (CVRs) tied to manufacturing output targets and the success of its multiple sclerosis pipeline project, Lemtrada. Table 2 provides data on the average upfront payments and total values compiled from our database for licensing arrangements from 2009 through October 2012.

**Table 2:** Average Values of Licensing Arrangements in Jan. 2009 – Oct. 2012

**Figure 6:** Arrangements by Geographic Region Jan. 2009 – Oct. 2012

	Upfront Cash (in \$m)	Total Deal Value (in \$m)	% Cash Upfront
2009	73	399	18.3%
2010	48	352	13.7%
2011	55	327	16.8%
Jan.-Oct. 2012	52	395	13.2%



The first column in this table shows a moderating level of upfront payments on licensing arrangements from an average of about \$73m in 2009, down to an average of \$52m between January and October 2012. Since the average of total arrangement values has remained fairly constant over the past four years, upfront payments as a percentage of total arrangement values have also moderated to 13% this year, from over 18% in 2009. Although this trend is somewhat uneven over the past three years, it appears likely to continue in the near-term, as many recent arrangements in 2012 have included even lower upfront payments as a portion of total arrangement values.

### 3. Arrangement Trends by Geography & Emerging Market Arrangements

The final section of the paper is the arrangement trend analysis involves a look at the most highly desired destinations for recent arrangement activity from a geographic perspective. As displayed in Figure 6, the North American market remains the top destination for arrangements executed since 2009, with 27% of the total. Perhaps more surprisingly, the Asia Pacific region has jumped to become the second most popular area, with over 23% of the total arrangement activity. This increase can be attributed to arrangements being struck in China, India, and a number of smaller markets throughout the region. By combining the Asia Pacific region with Rest of World (RoW) markets I get a fairly representative view of the arrangement activity in the major emerging markets. This combination accounts for nearly 33% of the arrangement activity in recent years, which outstrips the pace of arrangements in any of the developed market regions during this time. Another geographic trend has been a steady increase in the number of arrangements in Japan (21%)

over the past few years, as many companies are attempting to leverage their existing portfolios and pipelines in the large Japanese market. The European market captured nearly 20% of arrangements in recent years. Although there have been many emerging market transactions completed over the past several years, there are a few key arrangements that demonstrate the transformation in how management teams view strategic opportunities in the emerging markets. One of the earliest and most surprising moves in the big Pharma arena was Daiichi-Sankyo's 2008 acquisition of a majority stake in Ranbaxy – one of India's leading generic manufacturers. Daiichi-Sankyo invested \$4.6b in this generic drug manufacturer to create what management refers to as a 'hybrid pharmaceutical business model'. This approach had been counter to the conventional big Pharma view that had shunned exposure to the low-margin, commodity-generics business. Daiichi-Sankyo believed that this new model would reduce the company's overall business risk by cutting across the branded and generic pharmaceutical industries, as well as the developed and emerging markets. Abbott's management team has also been very aggressive in its arrangement making in order to diversify the company's pharmaceutical exposure and transition its established product portfolio (branded generics) into fast growing emerging markets. Abbott's first major transaction was for the pharmaceutical business of Solvay. With this arrangement, Abbott tapped into Solvay's emerging market presence, with a strategy to further leverage its own established or genericized brands in these regions. Abbott followed this transaction with the acquisition of the largest generic drug manufacturer in India, Piramal Health Systems. Its acquisition of Piramal's pharmaceutical business in India propelled the company into the leading position in the fast-growing Indian pharmaceutical market with about a 7% market share. This arrangement was an important strategic move by Abbott, as it has established the company as a leading player in emerging markets and prompted the pending split-off of its traditional pharmaceutical business, AbbVie. Lastly, Takeda, the largest pharmaceutical company in Japan, has also taken action to diversify into emerging markets, with its \$12.7b acquisition of Nycomed in 2011. Takeda had an urgent need to obtain new revenue streams, as the patent on its largest product, Actos, was nearing expiration. Nycomed has a significant and growing presence in emerging markets, where it obtains around 40% of its revenues, primarily through its branded generic sales in the Russian, Chinese and Brazilian markets. This represents a significant shift in Takeda's geographic diversification strategy, which has been focused on the established US market, as a way to mitigate the recurring pricing pressures in its domestic, Japanese market. Takeda is a relative newcomer in the emerging markets, but has the potential to make significant gains in a short period of time through its acquisition of Nycomed. This arrangement also provides Takeda with an important opportunity to leverage its aging brands in new markets – assuming Nycomed's strong growth in emerging markets can be sustained.

#### **4. Conclusion**

Technology, Knowledge licensing, Merge and Acquisitions of innovative companies are becoming an influential mean in the strategic thinking options for product development and company growth in any industry. Since Jan 2009 till Sept 2012 42 strategic alliances with expanding, growing intention were built in order to gain on market share, fill the pipeline with a new molecule, enlarge the global rights for certain product group, exposure to the emerging markets. The win-win situation for both partners is to be determined and long term maintained.

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- [AZ] AstraZeneca, [BMS] Bristol-Myers Squibb, [CNS] Central Nervous System, [CVR] Contingent Value Rights [GSK] GlaxoSmithKline, [HIV] Human Immunodeficiency Virus, [J&J] Johnson & Johnson, [OTC] Over the Counter, [R&D] Research & Development, [RoW] Rest of World, [YoY] Year over Year



## The level of use of Direct Marketing in Slovakia

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**Abstract.** The aim of this paper is to define the importance of direct marketing, highlight the role of direct marketing in communications strategy, to explain the importance of database marketing, to characterize the use of direct marketing in Slovakia and abroad and to point to the level of usage of the direct marketing form the point of view of consumers and also from the point of view of the companies. There are also presented the results of international research Direct Marketing Monitor and the international research conducted by the Agency Linea Directa Communications.

**Keywords:** Direct marketing, Role of direct marketing, Research, Use of direct marketing.

### 1. Introduction

The development of new communication media (Internet, mobile phones), the possibility of e-commerce, increase of individual wishes of customers and effort of companies to satisfy these needs, free entry to foreign markets (thus new opportunities abroad as well as the threat of the entry of foreign competitors), fierce competition and companies effort of differentiation-these are just some of the factors that currently facilitate the positive development of direct marketing in the world, as well as in Slovakia.

### 2. Definitions of Direct Marketing

Companies in Slovakia and abroad are becoming increasingly interested in direct marketing. Strong competitive environment, bigger consumer interest, the establishment of new distribution channels, increasing of the cost of communication, new communication media and the possibility of mass data processing using computer technology - these are just some of the facts that according to Váňa caused that companies included the direct marketing in marketing communications, respectively give him a larger space. For effective use of direct marketing to achieve a synergistic effect should direct marketing did not exist only as a complementary tool to other communication tools, as it often is usually in practice, but as an element of the communication mix equivalent to the others.

Here are some of the statements that deal with the definition of direct marketing: According to Kotler [1] the direct marketing is a set of marketing activities, thanks to which are the products offered to certain market segments in one or more media to reach existing or potential customer and obtain immediate response through direct mail, telephone or other media.

Bird [2] understands direct marketing as any advertising activity which creates and reinforces a direct relationship between companies and customers as individuals. Both definitions attributed to direct marketing broader meaning, emphasizing direct relations between buyer and seller.

Except the authors of the field of marketing, associations of direct marketing (for which the direct marketing is object of their activities) try to define this term. The U.S. Direct Marketing Association defines direct marketing as "an interactive system that uses

one or more advertising media to generate a measurable response or commercial transaction in any place."

According to the German Direct Marketing Association (Der Deutsche Direktmarketing Verband) the concept of direct marketing involves all marketing activities, which are deployed in media and communication techniques with a view to creating an interactive relationship with the target person, in order to lead him to an individual, measurable action. Both definitions highlight the measurability of response.

Hornák [3] points out in its definition of direct marketing the communication function and the possibility of feedback. Direct marketing is, according to him, set of marketing- commercial activities based on permanent direct interactive relation, and on contractor's communication with the client in order to effective reaching. A specific feature of direct marketing is the possibility of immediate feedback that is expressed by the communication, respectively sales response.

According to McCorkell [4] direct marketing is based on addressing precisely-selected, specific target group with previously prepared and specific offer with measurable feedback and efficient return on invested funds.

Definitions above focused on: communication and distribution function of direct marketing, on the individual customers and direct addressing, on the possibility for feedback (two way communications) and the measurability of response.

However, the importance of establishing a long-term relationship is missing in these definitions. Definitions of direct marketing should be extended with highlighting the importance of creating the long-term relationships (so-called marketing of direct relationships): Váňa [5] states: "Getting individuals as customer is three to five times more expensive than the cost of maintaining it." An important source of income for the seller is income from repeat purchases from long-term customers. Therefore, it is important to put emphasis on fact that due to the direct marketing can not only get, but also keep customers. Even Brassington in its definition added: "... the creation and development of a long-term relationship between the organization and customers."

Agency DMMS (Direct Marketing Mail Service), which operates in the Czech Republic and Slovakia, in defining direct marketing, also focuses on effort to build strong, stable and effective relationships. In addition, it also points to the importance of the database, as the following definition: "Direct marketing is an interactive method of marketing based on the creation of a database that contains a list of current, past and potential customers, used on specific monitoring and evaluation of the effect of advertising on individual customers, allowing direct communication by mail, telephone or other media between agency and direct marketing customers. Direct marketing facilitates leaflet or visual advertisement to selected group of recipients directly by mail or by private organizations that distribute them. The objective of direct marketing is to unify the process of sale and purchase into one process. "[6]

The concept direct marketing should therefore include [4]:

- identification of target group - to find out who will be interest in the offer and what will be the most appropriate form of addressing,
- interaction - in terms of communicating with customers on the basis of their behavior in the past,
- control - involves setting goals, planning, tactical and strategic decisions, evaluate the effectiveness of actions of direct marketing,
- continuity - building relationships with customers.

### **3. Direct Marketing from a view of consumers in the Slovak Republic**

International research Direct Marketing Monitor in 2004 studied consumer behavior in 18 European countries, including Slovakia. Overall, research involved about 10,000 people, in Slovakia it was 1,000 respondents.

According to realized research, 84% from 1000 Slovak respondents received in the last 12 months at least one direct mail. 50%, thus one of the two Slovaks, who receive direct mail, also reads it, 16% respond to it. Conversion rate- the percentage of potential customers, which have become current customers, so they were buying, or visit the shop as a result of direct mail- is 8%.

The research shows that interest in direct mail in Slovak consumer is not negligible (50%), although the response to them is still relatively low. The majority of the population complies with this direct marketing tool. High quality and funny designs of direct mail most attract the attention of consumers. The preferred communication channel, as for receiving direct mail, as well as for ordering products by mail order, is postal channel. Interestingly, nearly one in three Slovak purchased by mail order.

### **4. Direct Marketing from a view of companies in the Slovak Republic**

From April to June 2008 was carried out international research of direct marketing and customer contact by the Agency Linea Directa Communications. The main finding of research was that direct marketing in Slovakia has huge development potential; however, this potential is not used by companies.

The research was conducted by telephone on a sample of 228 respondents from among marketing and sales managers, executives and managers of marketing communications call center. This is the first research to monitor the use of direct marketing companies in Slovakia.

The level of investment in marketing communication is relatively low in Slovakia and marketing budgets as a whole, including direct marketing in different sectors are not made systematically and mapping out. The situation is most favorable in the financial sector, followed by retail trade and services. These results reflect the situation in the sector in which the research was conducted. Only 2% of respondents invest more than 50% of the total marketing budget in activities of direct marketing.

The research also revealed that most of the budget is invested in traditional advertising. Television advertising has the largest share - 60% of the budget on marketing. Pressure on increase return on investment (which would support the development of direct marketing) is weaker in our market. Companies only need to get a trademark on the market and achieve the certain awareness of it.

Online and telemarketing campaigns in our country do not have strong impact as it is abroad, but it can be expected that increase of e-mail, direct electronic and mobile communication could change it.

According to conducted research, trends in almost all areas of direct marketing in Slovakia are still lagging behind the market development of direct marketing in Western Europe and the U.S., where the share of investment in these areas is almost 50% of total advertising budgets and where it puts great emphasis on the interdependence of all marketing channels. Simultaneously, in efforts to optimize costs, companies focus more on return on investment, and thus invest money mainly into measurable forms of marketing communication. And since the measurability of investment is the prerogative of direct marketing, all activities will be increasingly directed in this direction.

Although the results show a lag of Slovakia in the field of direct marketing behind Western Europe, due to the rapid progress of new communication media and due to growing pressure on the transparency of investments direct marketing should reach the forefront also in Slovakia.

## 5. Conclusion

Use of the possibilities of direct marketing in practice allows companies to keep loyal customers and achieve a positive attitude on their part towards product offerings, the company brand and also allows build customer loyalty in order to consolidate or improve market position.

However necessity is systematic building marketing database, its continuous updating, and also the ability to use it.

Direct marketing, if it is used in an optimal way, provides potential and existing customers relevant information of sufficient quality, quantity and in due times ignificantly reducing the time of buying decisions process, speeding up the sale, and with systematic planning helps to increase the production efficiency, then circulation and final consumption.

Direct marketing also allows the comparison of several competing products to potential customers. Customers not always select objective criteria in decision process and the quality is often perceptive subjectively. Consequently, the companies should build a commitment on the part of customers to the brand or company itself. "Direct marketing is an indirect way to boost the competitive fighting tool and an instrument of protection against competition, which is related to the increase of quality of products and service offerings, improving distribution channels, innovation and new product development and the need to respect their declared properties." [7]

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## The brand valuation

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**Abstract.** Today it's possible to argue that, generally the majority of the business value is derived from intangibles. The attention of management to these assets has definitely increased significantly. The brand is a special intangible and in many businesses the most important asset. This is because of economic effect that brands have. They influence the choices of customers, employees, investors and government authorities. In a world of large choices, such influence is decisive for commercial success and creation of shareholder value.

**Keywords:** brand, brand value, approaches to brand valuation.

### 1. Brand value

For some companies, the brand is the most important asset they have. John Stuart (chairman of Quaker, 1990) illustrated the value of brand:

*“If this business were split up, I would give you the land and bricks and mortar, and I would take the brands and trade marks, and I would fare better than you.”<sup>1</sup>*

Having brand like Coca-Cola, Google, Microsoft or Mercedes Benz almost guarantees business success. Large brand owners have always been aware of value and importance of their brands and have deliberately created a series of brands characteristics that they presented to their buyers. The purchasing of brand also includes an intrinsic experience of a consumer and ever reflects a certain lifestyle. A successful brand has loyal consumers, which ultimately reflects on sales value and brand owner's market value. A continuous increase in the gap between companies' book values and their market value has brought to the recognition that the value of intangibles can be quantified. This gap has become particularly evident in the late 1980s when companies were bought at much higher premiums than their book value.

Brand Finance publishes the ranking of 500 most valuable companies in the world every year. The most valuable brand in the world in 2013 is Apple with \$ 87 billion value. Apple is followed by its main competitor Samsung.

Top Five Most Valuable Brands in the World						
Brand Value Rank 2013	Brand	Domicile	Brand Value 2013 (US\$ bn)	Brand Value 2012 (US\$ bn)	Change (US\$ bn)	Change (%)
1	Apple	US	87.3	70.6	16.7	24%
2	Samsung	South Korea	58.8	38.2	20.6	54%
3	Google	US	52.1	47.5	4.7	10%
4	Microsoft	US	45.5	45.8	-0.3	-1%
5	Walmart	US	42.3	38.3	4	10%

**Tab. 1:** Top five most valuable brands in the world in 2013

Source: [http://brandfinance.com/images/upload/top\\_five\\_most\\_valuable\\_brands\\_in\\_the\\_world\\_2013.png](http://brandfinance.com/images/upload/top_five_most_valuable_brands_in_the_world_2013.png)

<sup>1</sup> CLIFTON, R., SIMMONS, J.: *Brands and Branding*. London: Profile Books Ltd, 2003. Page 27.

Brand Finance is based on specific financial data and data on income in the process of creation of brand value. Otherwise, it is in the evaluation of brand strength, which takes into account the other financial indicators such as net margin, the average revenue per customer, marketing and advertising costs and quality indicators such as impact and brand loyalty. Four of the five most valuable companies in the world are from the technology sector and the Internet sector.

## 2. Approaches to brand valuation

The brand valuation plays the key role in business today, for those concerned with accounting, management, mergers and acquisitions. The financial value has always been attached to brands and to other intangible assets. It was only in the late 1980s that valuation approaches were established that helped to understand and assess the value of brands.

Unlike other assets such as bonds, stock, commodities and real estate, there is active market in brands that would provide comparable values. The numbers of brand valuation approaches have been developed over the last two decades. Basic approaches were divided into three categories: research-based, financially driven and economic approaches.

### 2.1. Research-based approaches

These approaches use the consumer research to assess the performance of brands. They don't put a financial value of brands; instead they measure consumer behavior and attitudes that have an impact on the economic performance of brands. They include a wide range of perceptive measures. These measures are arranged in hierarchic order through different methods of statistical modeling, to show degrees of relationship towards the brand from awareness to preference and purchase.

The disadvantage of these techniques is that they don't differentiate between the effects of the brand on consumers and effects of other factors such as research, development and design. Therefore they don't provide a clear link between the specific marketing indicators and the financial performance of the brand.

### 2.2. Financially driven approaches

Financially driven approaches don't research the consumer behavior as research-based approaches, but are based on financial performance of a certain brand. Financially-driven approaches include<sup>2</sup>:

**Cost-based approaches** – define the value of a brand as the aggregation of all historic costs incurred while bringing the brand to its current state; that is the development, marketing, advertising and other communication costs. These approaches fail because there is no direct correlation between financial investment made and the value added by a brand. Financial investment is an important component of building brand value.

**Comparables** – this approach is used to arrive at a value for a brand on the basis of something comparable. Comparability is difficult in the case of brands as by definition they should be differentiated and thus not comparable. Comparables can provide an interesting cross-check. However, they should never be relied on solely for valuing brands.

**Premium price** – this is price which is paid by a buyer for improved quality of product guaranteed by the certificate and not for product appearance. The premium price in this method is calculated as the net present value of future price premiums that a branded product would command over and unbranded or generic equivalent. This method is flawed because there are rarely generic equivalent to which the premium price of branded product can be compared. Almost everything is

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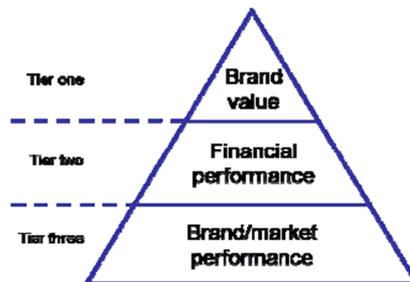
<sup>2</sup> CLIFTON, R., SIMMONS, J.: *Brands and Branding*. London: Profile Books Ltd, 2003. Page 35.

branded today and in some cases store brands can be as strong as producer brands charging the same or similar prices. The price difference between brand a brand and competing products can be an indicator of its strength, but it doesn't represent the only and most important value contribution a brand makes to the underlying business.

### 2.3.Economic approaches

This approach provides the multidimensionality to brand valuation as it combines brand equity with financial measures. Companies such as Brand Finance and Interbrand compile a list of most valuable brands each year. This list is based on economic principles and replies to the fundamental question: How much more valuable is the business because it owns certain brands? This brand valuation includes both a marketing measure that reflects the security and growth prospects of the brand and a financial measure that reflects the earnings potential of brand.

The final value figure which is usually banded about is by itself, largely uninteresting. If we look behind the headline number and the interest and usefulness soon becomes apparent. It hides a number of factors which illustrate the health of the business. The total brand value comprises several tiers which when are putting together resemble a pyramid, the tiers of which are connected by a series of formulae.

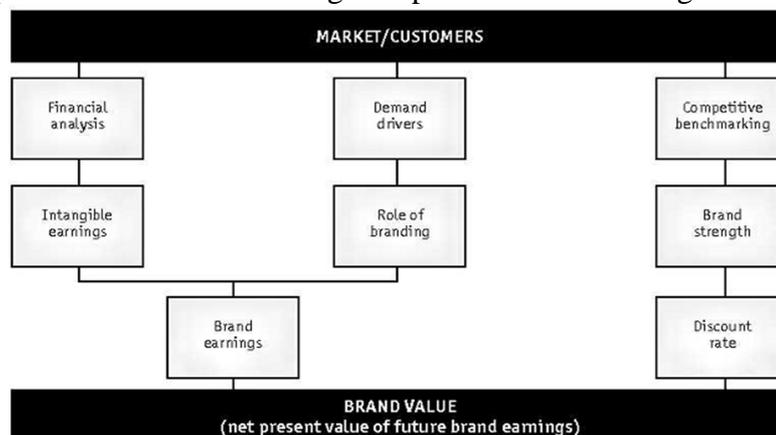


**Fig. 1:** The brand value pyramid

**Source:** [http://www.intangiblebusiness.com/store/data/files/68Brand\\_valuation\\_behind\\_the\\_numbers.pdf](http://www.intangiblebusiness.com/store/data/files/68Brand_valuation_behind_the_numbers.pdf)

The top tier contains only the final figure and is the most visibly attractive element, but that is just the top of pyramid of the overall brand value and largely useless in itself. Tier two contains performance measures such as a brand's profitability, income, tax and discount rates, while tier three contains measures of brand strength and market conditions.

Given this concept of economic worth, the value of a brand reflects not only what earnings it is capable of generating in the future, but also the likelihood of those earnings actually being realized. The brand valuation process takes the following 5 steps and is shown in figure 2.



**Fig. 2:** The brand valuation process

**Source:** CLIFTON, R. – SIMMONS, J.: *Brands and Branding*. London - Profile Books 2003. Page 37.

1. **Market segmentation** - customer's choices are influenced by brands. However that influence varies depending on the market in which the brands operates. This is why market is split into segments, for example brand consumers are divided into non-overlapping and homogeneous groups of consumers according to criteria such as patterns, purchase, behavior, geography, etc. The brand is valued in each segment.
2. **Financial analysis** – includes identification and forecast of revenues and earnings from intangibles for each of the distinct segments.
3. **Demand drivers** – assesses the role that the brand plays in driving demand for products and services in the markets in which operates and determines what proportion of intangible earning is attributable to the brand. A demand analysis is measured by an indicator referred to as the role of branding index. This is done by first identifying the various drivers of demand for the branded business, then determining the degree to which each driver is directly influenced by the brand. The role of branding index represents the percentage of intangible earnings that are generated by the brand. Brand earnings are calculated by multiplying the role of branding index by intangible earnings. For some brands (perfume and clothing industry) is the role of branding index very high because consumer's subjective opinion plays an important role, while it is less prominent for others.
4. **Competitive benchmarking** – looks at competitive strengths and weaknesses of the brand as well as the likelihood of expected future earnings. This indicator is referred to as the brand strength score, which includes seven components: market, stability, leadership, profit trend, support, geographic spread and protection.
5. **Brand value calculation** – this is the net present value of the forecast brand earnings, discounted by the brand discount rate. The net present value calculation comprises both the forecast period and the period beyond, reflecting the ability of brands to continue generating future earnings.

### 3. Conclusion

Growing global competition and ever shorter periods of supremacy of products with inbuilt latest technology, the contribution of brand to its owners will keep on increasing. Brand is just one of several factors that provide stable competitive advantage.

Brands are generally a company's most valuable asset and the means through which profit and income are generated. Identifying what drives this value enables to increase a brand's performance, resulting in increased revenue, larger market share and higher profits. Brand valuation helps analyze and plan for this, which is what makes it useful.

As the need for brand valuation is constantly increasing from both the management and the market, the first and the most important step is development of a unique economic use approach to brand valuation. Such a system may well become the most important management tool in the future.

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## Balanced Scorecard as a strategic system for performance measurement of the company

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**Abstract.** The article is dedicated to the Balanced Scorecard as a strategic system for performance measurement of the company. BSC provides managers a comprehensive framework for transforming company strategy and vision into a set of indicators for performance measurement. Balanced Scorecard represents center between company financial accounting and necessity to be competitive in long – term. If it is used in the company, it will become the basic stone for management of the company and will help with increasing its performance.

**Keywords:** performance, company, Balanced Scorecard.

### 1. Introduction

In today's competitive world companies have difficult position. Market requires optimal adaptation, maximal performance and also future perspective. Company performance, its measurement and evaluation has become an actual theme. If company wants to build and maintain performance it needs not only to evaluate performance but also to use strategic management system which can ensure the use of resources leading to fulfillment company vision. Such a strategic management system represents concept of *Balanced Scorecard* (BSC) for the first time brought by R. Kaplan and D. Norton in magazine *Harvard Business Review* in 1992 and in 1996 first book dedicated to this topic was published – *Balanced Scorecard: Translating Strategy Into Action*. (Kaplan, Norton, 1996)

### 2. Balanced Scorecard

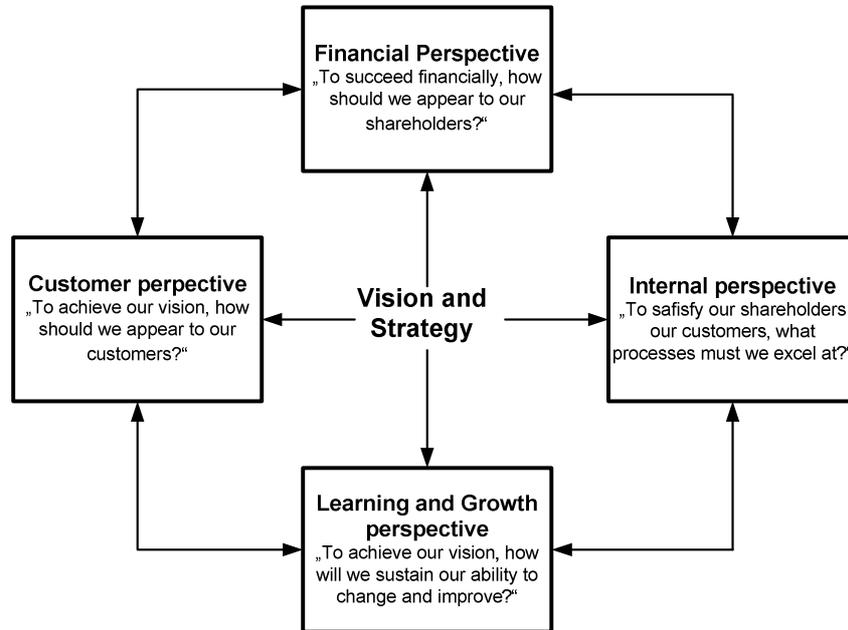
Balanced Scorecard is a multidimensional system used to define and to implement organization and management strategy on all company levels to maximize company value. It is an application of management system in a particular company which leads to effective use of resources for permanent recovery of shareholder's equity. Companies use BSC to facilitate the formulation and implementation of a strategic mission which core values are presented to all employees. BSC fills the space between the management systems, which is the absence of systematic process of implementation and feedback on the strategy. Management processes, which are based on BSC, allow company focus on the implementation of long – term strategy.

BSC maintain traditional financial indicators of past performance and modern indicators of future performance. Goals and indicators of BSC are based on company vision and strategy and monitor performance of the company from four perspectives (Marinič, 2008):

- customer perspective,
- internal business process,
- organizational growth, learning and innovation,

- create long – term value.

Balanced Scorecard expands the set of objectives of the business unit beyond normal financial indicators. Management of the company can measure how company activities create value for current and future customers. Although BSC captures short – term performance through a financial perspective, reveals the value – drivers leading to higher long – term financial performance. Schematic representation of four perspectives is shown in figure 1.



**Fig. 1.** Balanced Scorecard – four perspectives

Source: Wagner, J.: *Měření výkonnosti*. Praha: GRADA, 2009. Page 232. ISBN 978-80-247-2924-4

Four perspectives of Balanced Scorecard allow company to achieve a balance between short – term and long – term objectives, between required outcomes and drivers of those outcomes and between hard indicators and softer, subjective indicators. This system points to a complex economic activity of the company with quantifiable, financial and non – quantifiable indicators of quality and helps company to be competitive in long – term.

### 3. Four perspectives of Balanced Scorecard

View through four dimensions of the BSC affects fundamental company activities and only in the case of positive values of these parameters are expectations filled, prosperity ensured, positive direction of the company and fulfillment of the objectives guaranteed. (Pavelková, Knapková, 2005)

#### 3.1. Financial perspective

Creating Balanced Scorecard in the company should lead to link its financial goals with company strategy. Financial goals are center and into them go goals and indicators from other perspectives of BSC. Each indicator should be an element in the chain which increases financial performance of the company. BSC is a strategy beginning with long – term financial goals link with actions in financial and internal processes, customers and employees, in order to achieve long – term economic performance.

During the development of financial perspective of BSC in the company should managers define an appropriate way how to measure company strategy. Financial goals and indicators describe expected financial performance of the strategy and support evaluation of goals and

indicators of other BSC perspectives. Drivers of financial perspective must be adapted on the industry, competitive environment and company strategy. (Kaplan, Norton, 2007)

### **3.2.Learning and growth perspective**

Learning and growth perspective is necessary for making long – term growth and deals with company infrastructure while customer perspective and internal perspective are about current and future success. Companies are not able to achieve their long – term goals with existing technologies and abilities. Also strong global competition requires continual growth of company abilities for creating value for customers and shareholders.

In growth perspective company analyses factors and defines goals with relation to the area of potential development in the future. Financial perspective, customer perspective and internal perspective discover differences between current abilities and what is required to improve performance of the company. In order to eliminate these differences, company use learning and growth perspective in which goals and processes for improvement are formulated. Indicators involve the group of general outcome indicators together with the specific drivers of these indicators. (Vysušil, 2004)

### **3.3.Customer perspective**

Customer perspective in BSC is based on value for customer and allows management of the company to define customer and market oriented strategy which leads to future high financial return. The goal of activities in customer perspective is to find the most effective way between customer needs and wants and technic and economic options of the company. That means between market limits and company limits.

The most important advantage of BSC is an ability to evaluate specific facts complexly and at the same time from multiple points of view. It is important to choose partial goals that can be interconnected and at the same time connect with the top goal of the company. The key how to develop goals and indicators of customer perspective is to determine added value for selected segments of customers. In this way customer perspective of Balanced Scorecard transforms mission and strategy into specific goals related to customers and market segments of the company.

Managers have to determine what customers in selected segments appreciate. Then they can choose from three groups of characteristic specific goals and indicators for increasing the amount of business with target customers. These three groups of characteristic are (Kaplan, Norton, 2007):

- product and service futures: quality, price and functionality,
- relationship with customers: personal relationship, experience with shopping,
- image and reputation.

Choosing specific goals and indicators from these groups enables management of the company to provide added value for selected segments of customers.

### **3.4.Internal perspective**

Internal perspective is focused on all processes and procedures that are necessary for company and through them is created company value. Companies create goals and indicators for this perspective after developing goals and indicators for customer and financial perspective.

Perspective of internal processes discovers two main differences between traditional approach for performance measurement and Balanced Scorecard. Traditional indicators focus and measure existing processes while BSC shows new processes in that company have to achieve excellent results to fulfill its financial goals and to satisfy customer needs. The second difference in BSC is innovation process. Traditional systems for performance measurement focus only on processes of supply existing products to existing customers. Companies manage and improve existing operations. On the other side long – term financial success requires new products and services to satisfy both current and new customers. Innovation process and creation of long – term value are more important for companies than operation cycle. Internal perspective of BSC includes goals and indicators not only for long – term innovation cycle but also for operation cycle. (Wagner, 2009)

Partial goals related to top goal are set for company in connection to strategic goals in area of developing new products. Total Quality Management (TQM) has a direct impact on financial area through customer perspective and growth perspective. Activity Based Costing, Activity Based Management, Target Costing, Lean Management, CRM, outsourcing, acquisitions, and mergers have impact on other perspectives of Balanced Scorecard. They have direct or indirect effect on the top indicator and on the process of creating value. In internal perspective goals and indicators must be based on analysis of each process.

#### 4. Conclusion

Balanced Scorecard transforms vision and strategy of the company into goals and indicators through balanced group of perspectives. It represents center between the need of the company to be competitive in long – term and the need of financial accounting. BSC can be the core stone of the management system in the company because it supports key processes. When is Balanced Scorecard used in the company as a strategic management system, it leads to better performance and competitiveness in long – term. Implementing BSC in the company is connected with implementing company strategy.

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# The Balassa-Samuelson effect – theoretical and practical point of view

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**Abstract.** The article deals with the theory of Balassa-Samuelson effect and its impacts on Slovakia and the other European Union countries after 1997. In the theoretical section of the paper there is a definition of Balassa-Samuelson effect, description of its basic principles and some important specifications. The second part of the paper is dedicated to the analysis study of the economic development in the European Union countries regarding to the effect. The analysis suggests big difference between the Slovak Republic and the other countries mainly in competitiveness factors like unit labour costs or productivity.

**Keywords:** Balassa-Samuelson effect, traded sector, non-traded sector, economy

## 1. Introduction

Slovakia has been a member state of the European Union since 2004. In 2009 Slovakia also joined the European Monetary System (EMS). From V4 states only Slovakia made this decision. We can ask if it was good or bad decision regarding to V4 co-operating states because other countries belonging to Visegrad group still have their own currency. The European Union formally invited Slovakia to join the European single currency (to join to the European Monetary Union, EMU) and set the official rate at which koruna would be exchanged for euro – 30,126 koruna to the euro. Of course, all process of the accession took a longer time and Slovakia had to meet strict convergence criteria known as the Maastricht criteria, which are listed below in the Fig.1.

The most discussed point was the convergence criteria deals with sharply increased inflation rate, which is closely associated with Balassa-Samuelson effect. With regarding to our entrance into EMU, many economists did not expect that the effect would not appear in the Slovak economy.

What is measured:	Price stability	Sound public finances	Sustainable public finances	Durability of convergence	Exchange rate stability
How it is measured:	Consumer price inflation rate	Government deficit as % of GDP	Government debt as % of GDP	Long-term interest rate	Deviation from a central rate
Convergence criteria:	Not more than 1.5 percentage points above the rate of the three best performing Member States	Reference value: not more than 3%	Reference value: not more than 60%	Not more than 2 percentage points above the rate of the three best performing Member States in terms of price stability	Participation in ERM II for at least 2 years without severe tensions

Fig. 1. The five convergence criteria [1]

## 2. Balassa – Samuelson effect

The Balassa-Samuelson effect was firstly theorized independently by well-known economists Bela Balassa (1964) and Paul Samuelson (1964). The effect analyses the relationship between the increase in productivity realized in the traded good sector, increase in relative prices of non-tradable sector, and the real exchange rate appreciation. [2]

They identified productivity growth differentials between the sectors producing tradable and non-tradable goods as a factor introducing systematic biases into the relationship between exchange rates and relative prices. In case of this analysis, the traded sector is the sector, where the tradable goods are produced and non-traded sector which produces non-tradable goods.

From the history we know, that productivity growth in the traded goods sector has been faster than in the non-traded sector and that it is more exported orientated. [3] This is in comparison to the service sector which tends to be more domestically based. However, a rise in productivity in the tradable goods sector will tend to drive up wages in this sector and, as labour is assumed to be mobile across sectors, push up wages in the non-tradable sector. If the latter increase is not matched by a productivity increase, it will raise costs and prices in the non-tradable goods sector and thereby lead to a rise in inflation.

This theory explains that the countries with higher per capita real incomes have a higher real exchange rate and explains the long-run behavior of real exchange rates in developing (emerging) countries. It is also seen as the key source of observed cross-sectional differences in real exchange rates between countries at different level of productivity. [4]



Fig. 2. The Balassa-Samuelson effect [4]

## 3. Expansion of the non-traded sector

In theory, eliminating exchange rate risk and relaxing financing constraints should result in higher investment, widening current account deficits and higher productivity growth in the converging euro area countries. However, most deficit countries face lower productivity growth in manufacturing compared with surplus countries, despite higher investment ratios and rapid productivity growth prior to the launch of the euro. A number of research papers and studies confirmed that real convergence cannot account for observed inflation differentials among member countries, which manifest themselves as divergent real exchange rates in the euro area. Sectoral unit labour cost (ULC) and ULC developments also suggest that in most current account deficit countries – except Ireland – persistent ULC increases cannot be justified by catching-up or the Balassa-Samuelson effect. In theory, if the Balassa-Samuelson effect holds, the real exchange rate based on ULCs in the non-traded sector would appreciate more than in the traded sector.

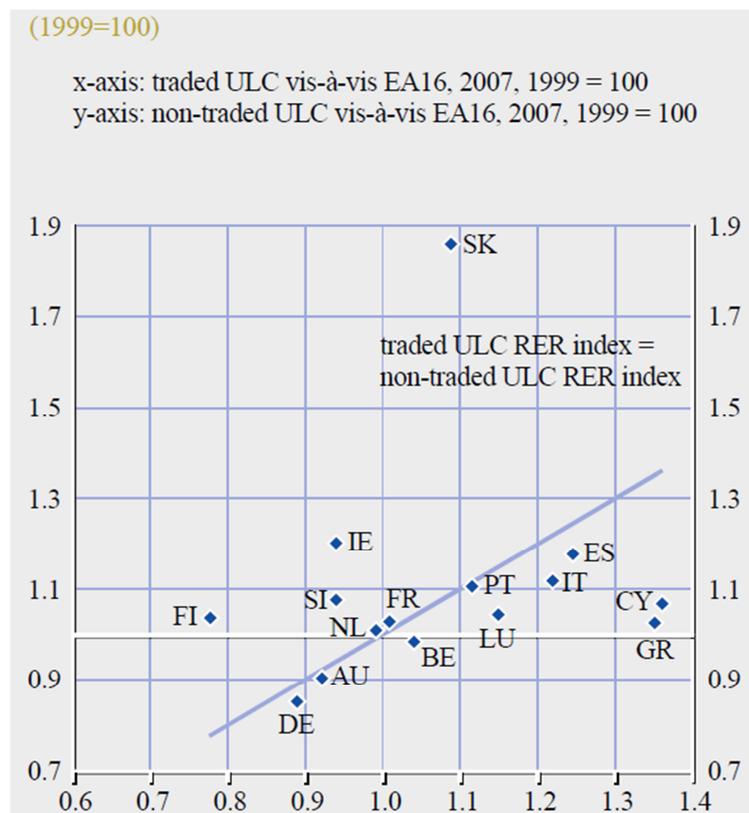


Fig. 3. Traded and non-traded ULC REER in 2007 against the euro area 16 [5]

Slovakia and Slovenia confirm this idea at least in part (they appear above the white line in figure 3). However, in most high current account deficit euro area countries, the real exchange rate based on manufacturing ULC usually appreciated against the euro area average even more than the one based on ULC in the non-traded sector (under the white line in figure 3). In some high-deficit countries, there is evidence of labour market segmentation, which might explain this disconnect. Analyzing the factors behind low productivity growth in the traded sector is beyond the scope of this paper. However, according to the Bank for International Settlements, sectoral imbalances themselves have contributed to weak productivity growth in some member countries. [5]

#### 4. Conclusion

According to the Balassa-Samuelson theory, the differential between traded and non-traded productivity is higher in a catching-up country. As wages are assumed to equalize across sectors due to high inter-sectoral labour mobility, the result is higher inflation and increasing unit labour costs in the non-traded sector. This paper confirmed existence of Balassa-Samuelson effect in Slovakia in a large extent.

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# ON A CHOICE OF RUSSIA'S DEVELOPMENT STRATEGY

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**Abstract.** The article deals with the approach to modernization as to a problem, taking up the economic sphere first of all, but which can't be studied and solved without interaction with all directions of human and society vital activity.

Mentality and civilization peculiarities are taken into account in modernization model analyze.

It is emphasized the necessity of co-ordination of social and economic transformation processes with the total combination of Russian society informal institutions.

**Keywords:** modernization models, society informal institutions, national mentality, civilization peculiarities.

## 1. Introduction

Both economic, and sociopolitical transformations in modern Russia is designated by the term "modernization". Modernization represents a problem which cannot be considered and solved without interaction practically with all spheres of life of the person and a society.

Modernization is an all-round process of transformations, it is a social and economic and technological revolution which changes all spheres of life of a society. The transformations in economic-technological sphere are accompanied by changes of both formal, and informal institutes according to modernity requirements. But how "modernity" can expose "requirements"?

Therefore there is a question, how these requirements are defined, what consequences is possible and it is necessary to expect at performance of these requirements? Besides, it is necessary to understand, what "modernity" essence consists in, how its requirements may change tomorrow, and, the main thing, whether it is necessary to fulfil these requirements, or more correctly to define the own purposes and to find ways for their prompt achievement.

## 2. Modernization models and Russia's interests

According to the historical experience, each state sooner or later, voluntary or compulsorily under the influence of changing natural or geopolitical factors has to accelerate natural development of economic-technological sphere (by introduction of technical achievements, more often, borrowed from neighbours) and thus compulsorily to introduce new, or to change old society institutes, that is, to carry out modernization.

Russia till the end of 17 century, and Japan, China and Turkey to the middle 19 century keeping up own civilization features from encroachments of the West, have been compelled to adopt material and technical inventions of the West, that is, industrial system and everything that accompanies it, together with public and political institutes. Thus, orientation was carried out on more developed in the technological relation and the aggressive neighbour, whose social and economic conditions set those «modernity requirements».

Since time of rapid development of the industry in the Western Europe a western civilisation began to define «modernity requirements», and "modernization" has been understood as an aspiration to "equal" on the West which owing to the obvious technological superiority over other peoples actually imposed the own representation about the civilization upon that peoples.

Hence, if we have not an aim to liquidate all civilizations, except one, it is necessary to consider not only all possible positive consequences of modernization, but also the latent threats which are born by the given process. And the percent of "positivity" and "negativity" of this process also depends on that type, or model of modernization which chooses for itself the given society.

The modernization initiative can arise in the state, then it is "overtaking", or "imitating", or "loan" modernization, and can - from the outside, then the model of modernization takes the form, known as "westernization".

The westernization represents process of transition from traditional societies to a modernity by way of direct carrying over the western values - structures, technologies and a conduct of life. This process is carried out at a complete negation of value of a private experience of the people and at a radical change of spheres of a policy, social life, economy and culture.

Minuses of this model are obvious to the westernized people: development is provided, but by loss of the national-state independence, the decision of a problem of increase of a level of living of the population is carried out only for a small part of inhabitants, the economic sphere develops one-sidedly, in that part in which "customers" of transformations are interested.

The second model of modernization - "overtaking", the decision on its carrying out is accepted "from above".

Essence of processes of overtaking modernization is in industrialization and improvement of living conditions of the person. The initiative of introduction of such transformations goes, as a rule, "from within" the states, and the form of realization of process depends on a level of development of the country, degree of comprehension in weights of economic problems facing them, their readiness for the decision of these problems. This model has the same deficiencies, as westernization, because to "overtake" equally successfully in all directions is almost impossible. But these deficiencies are shown in less expressed form.

Events of second half of XX century have shown both deficiencies of overtaking model, and competency of entering at the theory of modernization of one more model - "the postmodernization", representing modernization as development on the basis of own traditions.

The modern example of this type of modernization is given by the countries of southeast Asia though the prototype of such way can be seen by consideration of development of some the states of Europe in XVIII - XIX centuries when England was "the modern" state and the sample for imitation.

Taking as a basis of development of feature of own economic system and culture and basing on national mentality, without aspiring to change and to arrange it under perception of the western institutes, it has appeared to construct the institutional system probably, capable to compete to system of "sample".

At the same time the analysis of results of functioning of the given model of modernization shows slow, but true turn of the countries which have chosen this model of development, to the western model that it is possible to explain by development of an epoch of modernization into an epoch of globalization which extends on the world in conformity with own laws.

The Russian transformations, since XV century it is possible to attribute to type of "overtaking" modernization. However, features of process of modernization at Russia similar to some traits of model of modernization of China, Mexico, Japan, give grounds to allocate it in special model - "imperial" modernization.

The imperial model of modernization is a modernization for the sake of preserving of the military-political status of empire, for the sake of strengthening of military-technical power which would allow both to resist to an attack from the outside, and to support own expansion.

The changes of economic, social institutes accompanying similar process, are only a consequence and serve the best both fastest and effective achievement of a purpose - the purpose of creation of a powerful military-industrial complex: the strong army equipped with modern

weaponry, and the enterprises working on it. And only those institutes which create obstacles to delivered goal decision, are exposed to correction.

The westernization, also as well as overtaking modernization means liberalization of national economies and political systems that should be accompanied by mastering of "the western conduct of life», that is informal institutes of a society.

### **3. Conclusion**

Thus, Russia has a possibility of a choice of strategy of development.

First, to drift in a flow of globalization, where Russia is swallowed up by supporters of a westernization, losing national identity, joining individualistic, commercial ideals of the West.

Secondly, to borrow existing institutes of economic and sociopolitical life of the western civilization, trying to combine them with the Russian realities.

Thirdly, to move to the new concept of development, - to the national formula of modernization, having established accurate rules of its introduction. For this purpose it is necessary to process experience of the western civilization taking into account its errors and costs, to choose forms of social and economic life acceptable for us, taking into account the Russian outlook, centuries-old rules and traditions of economic and cultural life of Russia.

These rules and traditions, being integrated with the selected elements of the western institutional environment, should create conditions for revival of all spheres of life of Russia, and the national mentality should keep the specificity in the modernized forms too.





## Evaluation of green certificates support scheme

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**Abstract.** The article presents the scheme of green certificates as supporting the production of energy from renewable sources. The work describes the latest Regulation of the Minister of Economy. The certificates of origin determine the income of the green power producers. The system increases the profitability of alternative energy production.

**Keywords:** certificates of origin, power generation, biomass technology.

### 1. Introduction

Certificates identify the source from which the energy comes. They distinguish the origin of the energy. Red certificates attest the origin of energy from conventional sources – they are a form of support to entities producing energy in combination with heat generation, white certificates confirm carrying out energy saving activities and green certificates attest the origin from renewable sources. Green certificates are created on the basis of origin certificates. They are issued by the President of the Energy Regulatory Office and then registered to the Power Exchange. This property right contains information about the amount, time and the place of the electricity production. The Power Exchange registers the certificates of origin and then deals with the trade of the property rights to such certificates. Producers, electricity boards, and trading companies are entitled to buy and sell this property rights.

The energy producers who do not use all their certificates can sell them and make them an additional source of income. Sale of certificates, in addition to the sale of electricity and heat can be the second largest source of energy companies income. Producers selling green energy and the certificates of origin of course can get profit up to 400 PLN per megawatt hour (MWh), while the price of electricity from conventional sources is equal to around 160 PLN per megawatt hour.

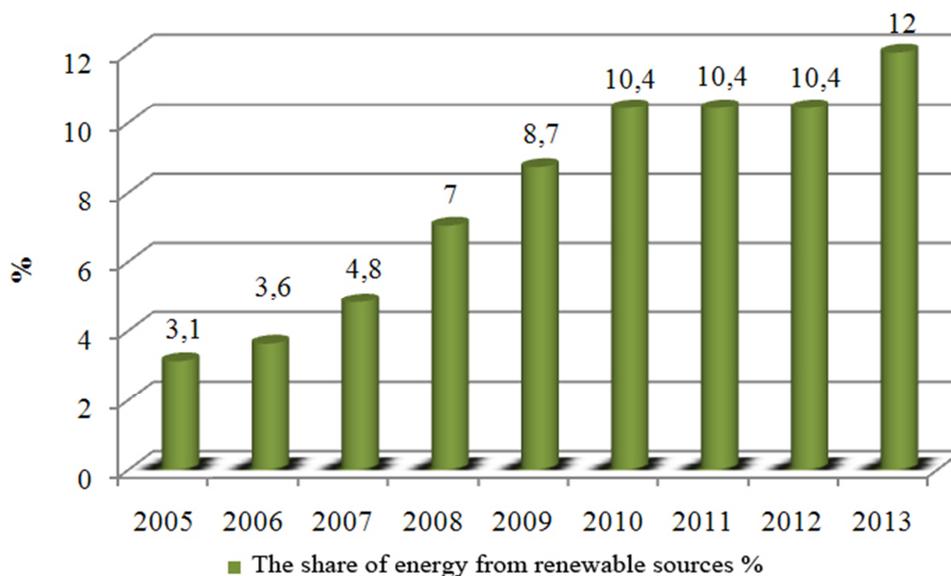
#### 1.1. The obligations of energy companies

The law imposes an obligation to purchase or generate electricity from renewable sources. Energy companies are obliged to obtain certificates of origin and amount of energy is determined administratively. The company must pay a substitute fee if does not fulfill the quota obligation. The price for green certificates was usually close to the substitution fee due to the scarcity of the green certificates. These units have the opportunity to buy green certificates at the Power Exchange either. The unitary substitute fee in force in 2012 was 286.74 per MWh according to the Information 2/2012 of the Energy Regulatory Office President dated 8 February 2011. The exchange rates of origin certificates can be found on the Power Exchange.

### 2. Technologies subjected to the support system

The supported technologies include energy production using wind, geothermal reservoir, drop of water in rivers or burning wood and agricultural raw materials, solar photovoltaic cells and solar panels to produce heat. Comparison of the various renewable energy sources in the electricity

production between 2002 and 2011 proves that the share of solid biomass increased significantly [2]. What is more the share of green energy in the energy balance should increase steadily as shown in the Fig.1. The share of energy from renewable sources should increase from 3,1% in 2005 to 12% in 2013 in accordance with the obligation to purchase and produce electricity from alternative sources as required by the Minister of Economy Regulation.



**Fig. 1.** The obligatory participation of energy from renewable energy sources from 2005 to 2013.

The green certificate scheme is not the only way to promote renewable sources in the European Union. Supporting the energy production from renewable sources depends on the installed production capacity, the renewable energy carrier and the date of entry into service or modernization. The biggest investment potential in Poland to 2020 in the sector of renewable energy technologies is in the biomass, wind and solar energy.

What is more a highly efficient cogeneration is also covered by support mechanisms. Cogeneration is used to generation of heat and electricity in one technological process. A support for cogeneration is set forth in the Energy Law and promotes primary energy savings [3].

### **3. The profitability of electricity generation in the power plants using co-firing**

The green certificates support scheme determines the profitability of electricity generation for some technologies involving unconventional sources. Taking into account the power plants that produce energy from biomass in co-firing it with coal, the green certificates system plays a crucial role in the costs of power generation. The most important components of the total cost of the electricity generation in the conventional power plants using co-firing are fuel feedstock costs, costs of using the environment, operation of the green certificates system and emissions trading.

Biomass calorific value is lower than coal calorific value, bio-fuel has higher moisture content and lower bulk density than coal. What is more biomass has a higher price per GJ (giga joule) in comparison with coal which results in higher cost of the electricity generation. Costs of using the environment include releasing gases and dusts into the air, water consumption, sewage placing into the water or to the soil and waste storage. These types of the environment use related to the energy sector and systems for the combustion of fuels. Taking into consideration the use of biomass in the coal-fired power plant the most significant costs are reduced by the release of gases and dusts into the air, resulting in lower emission of harmful compounds. Co-firing technology can reduce emissions of nitrogen oxides, sulfur dioxide and dusts, which can lead to smaller fees for the environment to which entities are required.

The green certificates system improves the cost-effectiveness of the use of plant fuels in power plants applying co-burning. Community system of emissions trading imposes the clearing obligation of annual greenhouse gas emissions and affects the cost of electricity generation either.

In many cases the green certificates support scheme decides on the profitability of biomass and coal co-firing. On the one hand there are problems arising from the physical and chemical properties of the biomass and the higher cost of fuel, due to the use of more expensive fuel, on the other hand the obligation to purchase or generate electricity from renewable sources is imposed on energy companies and utilities have to obtain and present the President of the Energy Regulatory Authority certificates of origin.

As the Fig.2 presents sale of certificates plays a significant role in the overall turnover of the power plant. Financial results are shown for the year 2010 and 2011 for the selected professional power plant benefiting from the green certificates support scheme. Sale of certificates corresponds to 10% of total turnover in 2010, and 11% in 2011.

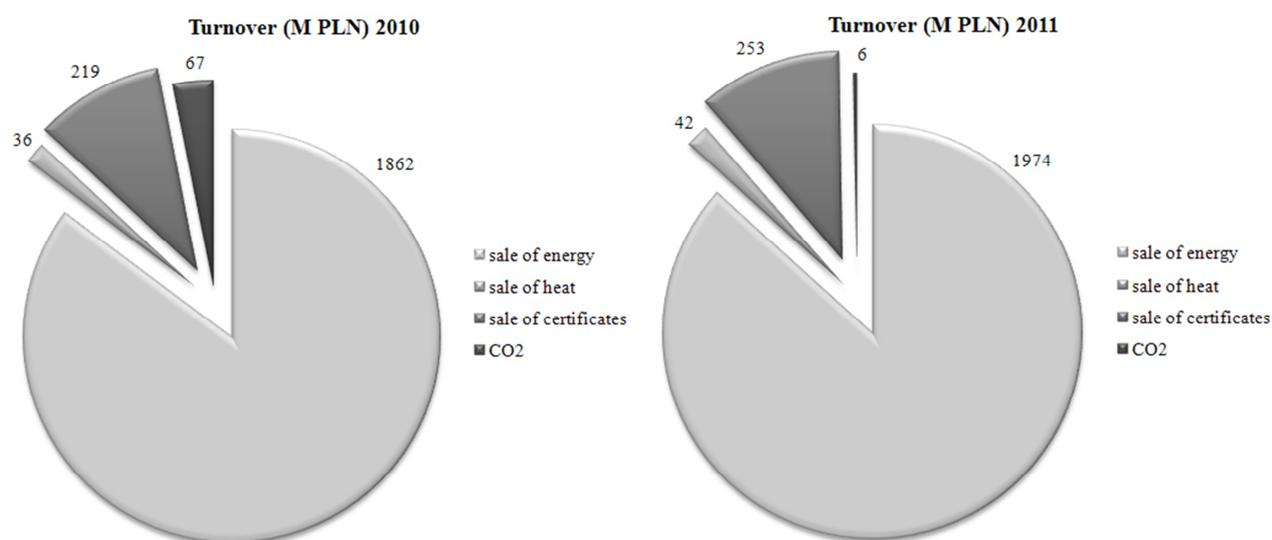


Fig. 2. Financial results for the selected professional power plant [4].

#### 4. Conclusion

The article deals with the green certificates support scheme and points out that in some cases certificates of origin are indicators of the profitability green energy producing. There is a particular need for co-funding in the power plants where biomass is used, because this fuel is more expensive than coal. The implementation of co-burning requires a modernization of the technological system in the power plant and the application of appropriate safeguards.

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# Supply Chain Intelligence as Decision Support System for Supply Chain Management

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**Abstract.** The paper points out significance of Supply Chain Intelligence (SCI) for decision making in managing complex supply chains. The first section of the paper briefly describes managerial decision making process and Decision Support Systems (DSS). Traditional DSS usually focus only on internal business processes in a company, but in complex global supply chains of nowadays it is important to have accurate and relevant information from other supply chain partners, too and to be able to analyze and interpret the information in order to make better decisions. Therefore, application of Business Intelligence approach to the whole supply chain is being in the forefront and is in more details described in the second part of the paper. The next section of the paper proposes, how the concept of Third Party Information Providers (3PIP) could be utilized to solve some of the issues regarding to SCI implementation. Lastly, opportunities for future development in the field of SCI are outlined.

**Keywords:** Decision making, Supply Chain Intelligence, Supply Chain Management, Third Party Information Providers, Web 2.0.

## 1. Introduction

Global turbulent business environment of nowadays is one of the main reasons for growing complexity of supply chains [10]. Efficient and effective management of such complex systems requires alignment of many elements and their interrelationships. The core activity of management of complex organizational systems, including supply chains, is decision making [8]. The statement is also supported by the study [14], which shows that managers consider decision making to be their most important practical task they perform while managing organisations. Decision problems are often very complex nowadays therefore decision support systems based on computer technologies play an important role in managerial decision making. Technological advances in information areas facilitate decision making, because real-time and accurate data and information are available [2]. However, despite tremendous advancement of information and communication technologies in last decades, the technologies still remains only a support tool for decision making, because many decision problems in organisations (especially on mid- and top-level of management in intricate business fields such as Logistics and Supply Chain Management) cannot be solved (due to their unstructured character) without participation of human, who involves soft inputs such as intuition, experience, situational context, etc., in the decision making process. Necessity of soft and hard inputs combination in SCM is underlined by study [7], which reveals that in decision making in the field of SCM managers utilize approximately the same amount of hard inputs (in the form of data and information processed by computer technologies) as the soft ones (in the form of managers' tacit knowledge). As for hard inputs of decision making process, it is important to realize that complex supply chain environment and number of logistics operations that are being realized in the environment, produce huge amount of data and information, which eventually can lead to information overload. That has negative effect on decision making process and its results [13]. Therefore, technologies that can provide right information at the right time for right people have been in the forefront for last decades. In SCM, the technologies are presented by Supply Chain Intelligence (SCI).

The purpose of the paper is to clarify the significance of SCI for decision making process in SCM and to outline, how it can efficiently support making better managerial decisions. The first section of the paper briefly describes decision making process in general, as well as DSS. In the second part of the paper, the concept of SCI is described in comparison to common enterprise Business Intelligence. Consequently, main reasons of non-success in SCI implementation are identified and possibilities for their elimination by outsourcing some of SCI activities to Third Part Information Provider (3PIP) are proposed. Lastly, opportunities for future development in the field of SCI supported by Web 2.0 technologies are outlined.

## Decision Making Process and Decision Support Systems

Managerial decision making is a sequence of activities, by which problem as a subject of solution is identified and analyzed, the possible solutions are provided and the most suitable of them are chosen according to set criterions [6]. It is a process that results in particular decision and its realization. Decision making can be looked at from two perspectives: problem solving and opportunity seizing [14]. Current literature offers several views of managerial decision making process. Some authors (e.g. [6] or [7]) provide a model of the process that consists of following linked activities: problem identification and goal setting, information analysis, variants determination, criterion determination, assumption of consequences of the variants, variants assessment and selection, realization of the selected variant and results monitoring.

Král [8] presents similar decision making model and calls it *normative model*. The author mentions that the general model is characteristic for program decision making that is made on daily, weekly or monthly basis and has its specific typology and routine. However, Král adds that for strategy and tactical management level the decisions are mostly non-program and they are difficult to be described by a general model, because such decision making processes occur sporadically (once per few years) or they are unique decision problems.

A-B-C-D-E Systems Model [3] offers another point of view at decision making, which first focuses on outputs of the process (decisions and their alignment to overall corporate strategy). Consequently, it suggests creating suitable feedback in a form of key performance indicators metrics to measure current state against desired future state of the process (or system). In the next step, inputs to the process are analysed in order to reach desired outputs (i.e. desired future state as a result of correct decisions). After that, the decision making process itself is scrutinized and transformation of hard and soft inputs into outputs (decisions) is analyzed in more details. The model emphasises continual need of perceiving changes in environment and its impact on the process, as well as the impact of the process on the environment (the next level system).

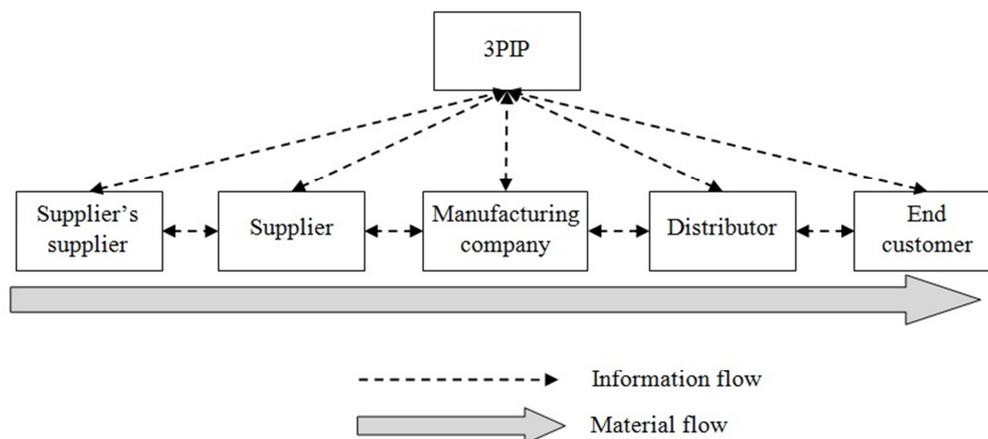
In relation to decision making, Zelený [15] underlines multi-criterion character of decision making and states that decision making is real only when there are at least two criterion based on which the decision is being made.

In order to make better decisions, decision making process is supported by various types of Decision Support Systems (DSS). DSS can be defined as computer systems for management level of an organization, which combines data, analytical tools and model to support decision making related to semi-structured and unstructured problems [9]. DSS can select, process and interpret data and information inputs from basic transaction processing systems according to specific information needs of its users [8]. There are several types of DSS that create a potential for taking better decisions. Currently, Business Intelligence (BI) plays a major role in the field of managerial decision making in businesses [12]. BI is based mainly on data from internal environment of a company [1] and on data that are created from transactions between the company and other organizations which the company is in direct relationship with (e.g. the first tier suppliers and customers, financial institutions, etc.). However, for efficient management of complex supply chains, emerging Supply Chain Intelligence is more significant, since it applies BI approach to the whole supply chain.

## Supply Chain Intelligence

Supply Chain Intelligence (SCI) is relatively new initiative in the field of DSS that creates potential for cost reduction, sales improvement and higher customer satisfaction by making better decisions based on collaboration in a supply chain [4]. SCI takes broader, multidimensional view of supply chain, in which meaningful information about the data can be discovered. In contrast to BI, for which internal operational and transaction processing systems are the primary source of data, SCI integrates data and information from supplier's and other supply chain actor's enterprise information systems. According to [4], what truly differentiates SCI from BI is the ability to collect and aggregate data across the value chain. The data are further analyzed and results are distributed to all supply chain partners, without regard of their physical location. Hence, BI approach to supply chain analytics gives an organization's employees, partners and suppliers easy access to the information they need to effectively do their jobs and the ability to analyze and easily share this information with others [12]. Supply chain partners usually have access to integrated OLAP solutions through SCI portal that enables to record and to share relevant information. Therefore, SCI allows supply chain partners to grasp more holistic and more precise view of their organisation in a chain and to be more flexible as a whole.

In a supply chain, its largest organisation usually acts as a SCI integrator. However, information security, availability and transparency are still an issue in many supply chains, preventing SCI from being successfully implemented and utilized. Regarding to the issue, Helgheim et. al. [5] propose outsourcing some of activities related to information flows in supply chains to intermediaries that would transform and distribute information between SC partners and act as the third party information provider (3PIP). The concept of 3PIP utilization is shown in Fig. 1.



**Fig. 1.** The concept of SCI utilizing 3PIP services.

Rapid technological advancement leads to growing popularity of Web 2.0 technologies in all areas of life, including business sphere, too. The impact of Web 2.0 technologies on supply chains is outlined only in a few papers (e.g. [13] or [11]). In relation to the new technologies and their application within SCI, new concept of SCI 2.0 has been emerging based on collective intelligence, which has two fundamental pillars: cloud computing and crowd sourcing [11]. Applied to supply chain, the Internet can be used as a common platform for all supply chain partners that enables them to access relevant shared information easily and to support information collection and information sharing through Web 2.0 tools in partner organisations creating a supply chain. In that way, SCI 2.0 can be considered as the next level decision support system for SCM that creates potential for making better decisions leading to higher performance of the supply chain as a whole, as well as to higher performance of individual organisations creating the chain.

## Discussion

Management theory still lacks satisfying answers on issues related to SCI 2.0 and its impact on managerial decision making about business processes and that creates interesting direction, where further research could be aimed. Comprehensive comparison of advantages and disadvantages of outsourcing SCI activities to information intermediaries (such as 3PIP) versus in-house solutions is also interesting topic to discuss. Another area of interest for further research is information and communication aspects of logistics operations and their significance for SCI.

## Conclusion

Decision making is one of the core activities of management of any organisational system. For efficient management of complex systems, such as global supply chains, relevant, accurate and timely information is one of the most important inputs to the decision making process. In environment of a supply chain, a lot of data and information is captured from daily transactions, which can cause information overload that has negative impact on managerial decision making. In SCM an effective solution to solve the problem is SCI, which aggregates data from supply chain partners and provides relevant information for supply chain actors in real time. However, there are still security, availability and transparency issues concerning collaboration and information sharing. Services of 3PIP as information intermediaries is one of the options, how to deal with the issues. Efficient utilization of Web 2.0 technologies in the field of SCI creates opportunity to improve managerial decision making in SCM, too. The field of SCI 2.0 and its impact on the decision making is still not clear and that creates an interesting area for further academic research.

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# Counteracting effects of natural disasters – evaluating the efficiency in Pomeranian Voivodeship

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**Abstract.** The aim of the article is evaluating the efficiency of counteracting natural disasters' effects. In the article, there is presented the case study of Pomeranian Voivodeship (NUTS 2). On the background of the conducted analysis, following conclusions can be drawn. In the years 2001-2011 per one km of levees have been spent approx. 344 thousands US\$. The range of objects in Pomeranian Voivodeship in the years 2003-2011 amounted 20. Total increasing capacity in the examined period amounted 1133 thousands m<sup>3</sup>.

**Keywords:** efficiency, counteraction, natural disaster, effects, Pomeranian Voivodeship

## 1. Introduction

In the year 2010 the flood occurred in the Pomeranian Voivodeship. In the beginning of the year 2012, the storm surge occurred in Pomeranian Voivodeship. On July the tornado caused losses in counties – Kwidzyń, Starogard and Sztum.

Tornadoes and floods, especially storm surges are examples of natural disasters. According to the Polish law, these phenomena can be defined as an event connected with impacting of nature's forces. Besides floods, storm surges and tornadoes, catastrophes are also: droughts, atmospheric discharges, seismic activity, intensive rainfalls, long-lasting extreme temperatures, landslides, fires, ice's phenomena on rivers, lakes, water reservoirs and the sea, infestations of insects and diseases of plants, animals and people[16, art. 3].

Coastal flood is a kind of inundation which occur in Pomerania. It is caused by hurricanes and other severe sea storms[2, p. 120]. It is a rise of the water level in the sea, an estuary or lake as result of strong wind driving the seawater towards the coast[1, p. 403-409]. The areas threatened by storm surges are coastal lowlands – Żuławy Wiślane in Pomeranian Voivodeship[3].

The aim of this article is to evaluate the efficiency[6] of counteracting natural disasters' effects, including storm surges. In the article, there is presented the case study on the regional level (NUTS 2). Author conducts the analysis of Pomeranian Voivodeship (NUTS 2).

## The attempt of evaluating the efficiency of counteracting effects of natural disasters in the examined area

Pomeranian Voivodeship is located in the north of Poland. It is high urbanized area. It borders with voivodeships: West-Pomeranian (west) [8, p. 345-360; 11, p. 233-240], Kuyavian-Pomeranian[9, p. 319-235] and Greater Poland (south)[10], Warmian-Masurian (east) and the Baltic Sea (north). It occupies 18.3 thousands km<sup>2</sup>. It has 2.22 million inhabitants. The population density is approx. 121 persons/km<sup>2</sup>. Its principal city is Trójmiasto – Gdańsk, Gdynia and Sopot. The examined area is situated in the low part of the area of Poland – at the Baltic Sea and in the North European Plain. Main river of the region is Vistula (Wiśła)[12, p. 14]. Pomeranian Voivodeship is in 8.8% covered by local development plans. It is bad result on the background of Poland (19.7%)[15, p. 271- 273].

1.	2.	3.	4.	5.	6.	7.	8.
1998	35576	16855	4436	454	10455	1652	1723
1999	31541	12779	7028	583	8622	1591	938
2000	24714	14398	3411	832	3259	1767	1049
2001	24159	11888	5879	393	1701	2782	1515
2002	27338	11331	4667	3962	1980	4019	1378
2003	29330	12743	3918	743	2218	8681	1027
2004	28557	12338	1493	2454	1782	9635	855
2005	18005	9994	2374	1449	129	4059	0
2006	30334	14723	6412	2263	1309	4623	1005
2007	40710	18949	6382	2138	2904	6774	3564
2008	29471	15136	6433	901	1443	4579	979
2009	50855	27225	19636	2234	0	1760	0
2010	75573	34543	32356	682	420	7572	0
2011	57592	24813	14686	774	1651	9489	6179
total - all years	503755	237716	119111	19860	37874	68982	20211

**Tab. 1.** Expenditures for permanent assets serving the water management in Pomeranian Voivodeship in the years 1998-2011 – directions of investing (in ‘000 US dollars indexed to the year 2011)

1. years, 2. total, 3. intakes and deliveries of water, 4. building and modernization of water conditioning stations, 4. water reservoirs and stages, 5. regulation and development rivers and streams, 6. levees, 7. pump stations on breaking downs and depression areas

Source: Own study on the basis of: [4].

Expenses for permanent assets serving the water management in Pomeranian Voivodeship in the years 1998-2011 according to directions of investing are presented in the table 1. As we can see, expenditures for levees (6.) in the years after the flood in the Odra and Vistula[7] basins in 1997[13, 14] leveled down in periods 1998-2001 and 2003-2005. In the years 2009-2011, expenses strongly leveled up to 1.6 mln US dollars after the flood in the Vistula basin in the year 2010[5]. Total expenses for permanent assets serving the water management in Pomeranian Voivodeship in the years 2001-2011 amounted approximately 412 millions US dollars indexed to the year 2011 and expenditures for levees – approx. 64 mln US\$.

1.	2.	3.	4.	5.	6.	7.	8.	9.
units of measure	‘000 m3	‘000 m3	km	unit	‘000 m3	km	unit	km
2001	11071	8709	346	1	150	3,4	4	25
2002	4187	8176	338	6	120756	13	3	61
2003	27209	5505	320	1	4700	34	3	40
2004	16935	3249	307	3	67559	50	2	20
2005	2077	3623	215	0	0	0,7	0	0,2
2006	13382	4503	253	1	1454	29	0	0,3
2007	7929	2914	296	1	4529	27	4	16
2008	10549	2410	218	0	0	9,4	1	19
2009	27946	22303	248	3	9	4	1	0,1
2010	18184	2167	279	0	131068	0,1	0	0
2011	7669	6402	311	2	65200	16	0	21
total - all years	147138	69961	3130	18	395425	186	18	203

**Tab. 2.** Effects of investing in the water management in Pomeranian Voivodeship in the years 2001-2011

1. years, 2. intakes – efficiency per 24 hours, 3. water conditioning per 24 hours, 4. water supply system, 5. water reservoirs – total number, 6. water reservoirs – total capacity, 7. levees, 8. pump stations on breaking downs and depression areas, 9. regulation and development rivers and streams

Source: Own study on the basis of: [4].

Effects of investing in the water management in the years 2001-2011 in Pomeranian Voivodeship are presented in the table 2. As we can see, in the examined period there were built 186 km of levees (7.). It means that per one km of levees have been spent approx. 344 thousands US\$.

In Pomerania there are executed programs to counteracting natural disasters' effects. These programs are e.g. 'Program małej retencji dla województwa pomorskiego do roku 2015', 'Program dla Wisły i jej dorzecza 2020' and 'Kompleksowe zabezpieczenie przeciwpowodziowe Żuław – do roku 2030 (z uwzględnieniem etapu 2015)'.

years	total	man-made water reservoirs	independent staging structures and water intakes on primary water-races	independent staging structures and water intakes on secondary water-races	staging lakes	fish ponds	other
2003	0	0	0	0	0	0	0
2004	26	0	0	0	0	0	26
2005	0	0	0	0	0	0	0
2006	254	0	0	0	254	0	0
2007	181	0	0	0	181	0	0
2008	0	0	0	0	0	0	0
2009	319	0	319	0	0	0	0
2010	121	0	0	0	121	0	0
2011	757	0	162	0	595	0	0
total - all years	1657	0	481	0	1151	0	26

**Tab. 3.** Investing expenses for the low water retention in Pomeranian Voivodeship – investing directions in the years 2003-2011 (in '000 US dollars indexed to the year 2011)

Source: Own study on the basis of: [4].

Investing expenses for the low water retention[4] in the area of examined region in the years 2003-2011 according to investing directions are presented in the table 3. As we can see, investing expenditures for independent staging structures and water intakes on primary water-races and staging lakes exceeded 1.6 million US dollars. Total investing expenses for the low water retention amounted approx. 1.7 millions US \$.

years	objects	increasing capacity	staging of lakes		artificial water reservoirs		fish ponds		staging structures	other	surface of irrigation (ha.)
			1.	2.	1.	2.	1.	2.			
	1.	2.	1.	2.	1.	2.	1.	2.	1.	1.	
2003	0	0	0	0	0	0	0	0	0	0	0
2004	3	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0	0
2006	1	538	1	538	0	0	0	0	0	0	0
2007	1	120	1	120	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0
2009	6	466	0	0	0	0	0	0	6	0	466
2010	1	0	1	0	7	0	0	0	0	0	0
2011	8	9	1	9	0	0	0	0	7	0	53
total - all years	20	1133	4	667	7	0	0	0	13	0	519

**Tab. 4.** Effects of investing in the low water retention – the range of objects in Pomeranian Voivodeship in the years 2003-2011

1. objects (units), 2. capacity ('000 m<sup>3</sup>)

Source: Own study on the basis of: [4].

Effects of investing in the low water retention are presented in the table 4. The range of objects in Pomeranian Voivodeship in the years 2003-2011 amounted 20. Total increasing capacity in the examined period amounted 1133 thousands m<sup>3</sup>.

## Conclusion

After the evaluation of the efficiency of counteracting natural disasters' effects in Pomeranian Voivodeship, the following conclusions can be drawn.

Total expenses for permanent assets serving the water management in Pomeranian Voivodeship in the years 1998-2001 amounted approximately 412 millions US dollars indexed to the year 2011 and expenditures for levees – approx. 64 mln US\$.

In the years 2001-2011 there were built 186 km of levees (7.). It means that one km of levees have been spent approx. 344 thousands US\$.

Investing expenditures for independent staging structures and water intakes on primary water-races and staging lakes exceeded 1.6 million US dollars. Total investing expenses for the low water retention amounted approx. 1.7 millions US \$.

The range of objects in Pomeranian Voivodeship in the years 2003-2011 amounted 20. Total increasing capacity in the examined period amounted 1133 thousands m<sup>3</sup>.

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# Implementation of projects co-financed from the HREOP in the public administration of the Czech Republic

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**Abstract.** This paper deals with the Human Resources and Employment Operational Programme in the Czech Republic in the period of 2007-2013, specifically the possibility of co-financing of projects in this operational programme in public administration. The aim is to show the latest developments in the use of subsidy from the Human Resources and Employment Operational Programme and its Priority Axis 4 and also highlight some specific causes that lead to this negative state.

**Keywords:** Human Resources and Employment OP, implementation of projects, Priority Axis 4, public administration

## 1. Introduction

The Czech Republic accession to the European Union has opened the possibility to draw a considerable amount of funds from European funds, at first in incomplete programming period 2004-2006, currently in the programming period 2007-2013. For the running programming period of 2007-2013, the Czech Republic has EUR 26.69 billion available from the European funds.

In the period 2007-2013, there is 26 operational programs used in the Czech Republic, serving as a basic tools for drawing on financial assistance from the Structural Funds and the Cohesion Fund. One of these programs is Human Resources and Employment Operational Programme (HREOP), its Priority Axis 4 is intended to improve the quality of public administration.

Implementation of projects co-financed from the HREOP, which are intended to improve the quality and efficiency of public administration of the Czech Republic, is the essence of this paper. It is structured into two parts, the first relates to the HREOP, its Priority Axis 4 and to the current developments in the use of funds. The second part describes some specific aspects causing complications in the implementation of projects financed from the Priority Axis 4, which are derived from the experiences of project implementers.

Aim of this paper is to describe the state of implementation of the HREOP, its Priority Axis 4 and subsequently on the basis of practical experience show possible causes of this condition.

## 2. Human Resources and Employment Operational Programme

HREOP is one of three operational programs in the Czech Republic solely financed by the European Social Fund. From the EU funds, the total amount of EUR 1.88 billion is reserved for the HREOP, which is approximately 7 % of all finances intended for the CR from the EU funds. The subsidy is intended for target groups within the following five Priority Axes:

- Priority Axis 1 - Adaptability,
- Priority Axis 2 - Active Labour Market Policy,
- Priority Axis 3 - Social Integration and Equal Opportunities,
- Priority Axis 4 - Public Administration and Public Services,

### Priority Axis 5 - Transnational Cooperation.

The progress of drawing financial assistance from the HREOP, based on the current data - 87.6 % of the total allocation of 1.88 billion euro has been so far covered by issued legal acts, the beneficiaries were paid (including advance payments) 45.3% and EU certified funds are currently 35.4%. HREOP does not lag or vice versa does not exceed in drawing of EU funds compare to other Czech operational programs. This is illustrated below in the attached table comparing HREOP with a total current state drawing of financial assistance from the Structural Funds and the Cohesion Fund of the EU in the Czech Republic.

	total allocation (EUR million)	approved funds (%)	funds paid out to the beneficiaries (%)	certified funds (%)
Czech Republic	26 690	81,4	51,7	29,4
HREOP	1 880	87,6	45,3	35,4

**Tab. 1.** Current drawing of EU funds and the HREOP.

### 2.1 Priority Axis 4 - Public Administration and Public Services

Priority Axis 4 - Public Administration and Public Services serves as a tool for co-financing projects aimed at improving the quality of public administration of the Czech Republic. Specifically, it focuses on the comprehensive modernization of public administration, including management and development of human resources, education officials, the introduction of modern methods, implementation and application of instruments enhancing the quality and accessibility of public services, participation of citizens in public life and last but not least the introduction of ethical standards and reduce the potential for corruption in public administration. To meet these goals helps created strategy Smart Administration<sup>1</sup>. The total financial allocation for this Priority Axis is 171.41 million euro, which represents 9.1% of the total allocation of the HREOP.

HREOP Czech governing body is Ministry of Labour and Social Affairs and the intermediate body of this Priority Axis is the Ministry of the Interior of the Czech Republic - Department of Structural Funds (DSF). Applicant (administrative office or local government unit) has the option to receive a subsidy to grant project or to an individual project. 17 Calls for individual projects and 4 Calls for grant projects have been announced so far, under these Calls are currently implemented 559 projects.

Regarding the current status of the use of funds under this Priority Axis, so here it is already possible to state that lags behind the overall drawing from EU funds in the Czech Republic, which is shown in Table 1. Below in Table 2 is shown the specific information relating to the Priority Axis 4 which illustrate this assertion. Visible is significantly lower amount paid to beneficiaries, which is approximately half of the entire operational program, and in particular the volume of certified funds lags behind the volume of certified funds the whole operational program.

	total allocation (EUR million)	approved funds (%)	funds paid out to the beneficiaries (%)	certified funds (%)
Priority Axis 4 HREOP	171,41	80,6	23,2	7,9

**Tab. 2.** Current status of drawing of HREOP – Priority Axis 4.

<sup>1</sup> Smart Administration – Effective Public Administration and Friendly Public Services. It is the government's strategy, which aims to ensure a coordinated and effective way of improving public administration and public services, using resources from the Structural Funds in the programming period 2007 - 2013, [www.smartadministration.cz](http://www.smartadministration.cz) [online]. [cit. 2013-03-24].

Although the Priority Axis 4, its financial allocation and the volume of projects is not one of the larger, yet the tables mentioned in the text shows that under this Priority Axis 4 is currently lagging in the overall utilization of financial assistance from EU funds in the Czech Republic and in the framework of the whole operational program. From this it is possible to conclude that in this Priority Axis is not all set and managed entirely optimally.

Of the 21 total Calls were only four conceived as a Grant Calls, logically, however, are determined by the broadest range of candidates (mostly municipality with extended jurisdiction), in these Calls is also allocated a high volume of funds.

### **3. Implementation of projects in HREOP Priority Axis 4**

The implementation of any project is associated with a certain degree of risk, it is the same in the case of projects co-financed from EU funds. However, in the Priority Axis 4 there is the frequency of complications relatively higher, which is then reflected in the drawing state financial assistance under this Priority Axis, which, compare to other operational programs and priority axes lags.

This fact may be caused by a number of objective factors, but experience from implementation of specific projects indicate some factors that to the beneficiaries greatly complicate the successful implementation of projects. Experiences are gained from three Grant Calls (fourth Grant Call is just beginning), the Calls with the highest number of projects and with a high allocation of funds. The following are shown the basic problems that the project implementers face.

#### **3.1 HREOP documents**

Project implementation must be based on a larger number of documents, which lists all the essential conditions for receiving subsidies in the required amount, the basic document is the legal act. The recipient is also required to follow guides and manuals, where the most important is the so-called Ten Commandments HREOP, which specifies the 10 most important areas of the project implementation. And it is in these guides where is a problem – they are relatively frequently updated (currently already appear as the ninth version), and it is not made clear which version is binding. Or is bound to guide, which was in force at the time the legal act was signed, but also in some cases is bound by the changes in the updated versions - it is not clearly defined. Neither intermediate body is unable to give a binding answer to clarify the conditions.

#### **3.2 Department of Structural Funds**

Priority Axis 4 intermediate body is DSF, with them the beneficiary acts in all matters relating to the project. The general problem is that despite all the efforts of the recipient usually gets no binding opinion, all communication is conducted over the phone (just because the recipient was not able to prove the opinion provider support), common is the change in DSF binding opinion during the implementation of project activities.

Another problem is that there are very frequent staff turnover at DSF. DSF project manager usually does not stay more than one year (financial managers it is also similar), which in turn significantly impedes communication with support provider. Typical is a discrepancy in views of project managers, which in turn causes (even retroactively) significant complications to implementers. Is not only often staff changes in various positions - in the current programming period, for example, all employees of the Legal department gave notice of termination of employment.

The recipient is also obliged to periodically send monitoring reports, which has to be processed within two months of receipt to DSF. The average length of control monitoring reports is

approximately six months, is not exceptional control lasting twelve months. This in turn causes delays in payments to the beneficiary, which may be in some cases the act of liquidation for the project.

### 3.3 Checks and financial penalties

Recipient least once during the project awaits intermediate body inspection, usually at the end of the project implementation. Frequently inspections are performed so there is found some errors for which are subsequently imposed sanctions (they are mostly errors in tenders). The problem, however, is that it is often an error that the previous checks and monitoring reports for error did not consider. This causes that during project implementation the same mistakes are repeated, which at the final check, results in several penalties for the same recurring errors. Common is also very subjective DSF decision about incomplete project publicity, against such a subjective decision there is no real chance to defend himself. Often the amount of incurred penalties is almost a quarter of the total amount of the subsidy which may be for some smaller recipient almost liquidation matters.

## 4. Conclusion

HREOP is one of three operational programs for the programming period 2007-2013 in the Czech Republic, which is entirely funded by the European Social Fund. In the overall comparison of utilization of financial assistance with other 25 operational programs in the Czech Republic, HREOP is not behind.

The Priority Axis 4 is intended to financially support projects aimed at improving the quality and efficiency of public administration of the Czech Republic. It is possible to state that the Priority Axis 4 in use of funds lags behind both the HREOP and also for the total drawing of EU funds, currently to the beneficiaries was paid only 23.2% and 7.9% of financial amount was certified by EU.

In the practical implementation of the projects, there are many negative phenomena that affect the state mentioned in drawing financial assistance in HREOP Priority Axis 4. Among the basic problems that are occurring during project implementation include poorly defined rules, communication with the intermediate body and often subjective opinions violation of project implementation leading to substantial financial penalties.

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# Design methodology determining the reasonable profit in public passenger transport

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**Abstract.** The main aim of article is to design methodology for the correct determination of economically reasonable profit in the direct award in case of public passenger services. The methodology will be designed with respect to the fact that the amount of a reasonable profit does not depend on the amount of costs, but the profit depends on the risk borne by the carrier in case of public transport services.

**Keywords:** costs, cost risk, revenue risk, carrier, authority

## 1. Introduction

Nowadays, the topic about determination economic prices in ordering public passenger transport is still very topical. After adoption of Regulation (EC) no.1370/2007, it is still possible to ensure transport services by direct award. In case of direct award it is necessary to determine transport service price which one of the most important part is a reasonable profit.

Design methodology is very important because of transport services. Almost all transport services are provided by contracts of PSO but these conditions are provided without tender until 2018. That means until 2018 it will not be realized for the service ability of price competition results, but the result of negotiations between the carrier and the authority. The outcome of such negotiations should be economically justified costs and a reasonable profit for the carrier which provides public transport services. In Slovak conditions the reasonable profit is determined as a percentage of the cost and similar manner is used in other neighboring countries.

In case of reasonable profit determined as a percentage of the cost, where costs are expressed in absolute value, when reducing the cost of transport services, the amount of a reasonable profit decreases. On the other side in case of increasing costs, the reasonable profit of carries increases, too. This is the wrong economic approach because it does not motivate carriers to reduce costs associated with the provision of transport services.

The main aim of article is to design methodology for the correct determination of economically reasonable profit in the direct award in case of public passenger services. The methodology will be designed with respect to the fact that the amount of a reasonable profit does not depend on the amount of costs, but the profit depends on the risk borne by the carrier in case of public transport services.

## 2. Risks associated with the procurement of transport services

In case of procurement of transport services, it is possible to define two basic groups of risks that may be borne by either the authority or carrier performance. It is a:

- cost risk
- revenue risk.

## **2.1 Cost risk**

### **Production cost risk**

These are costs incurred as follows: calculated estimated costs minus actual costs after implementation performance. In other words, the risk associated with that variance allocating payments to the person who bears the risk. If the operating costs will be higher or lower than expected in the contract, it is necessary to determine who will be responsible for any losses incurred.

It is also possible to divide the cost risks:

- ✓ External cost risks: this is the risk in which the operator can not influence the amount of costs incurred (such natural disasters that cause cost increases adequate) or operator can influence these costs only indirectly and in a small (in case of changes in fuel prices, legislative changes relating to the salary of the employee and the like.).
- ✓ Internal cost risk: there are costs, the amount of which is influenced to transport operators (maintenance, repairs, etc., which is, to some extent, controllable amount of costs).

### **Cost risk of investment**

In this case it is basically setting the residual value of the asset at the end of the contract period. In other words, determination of liability risk associated with the property and the value of assets (in the case of mass transport it can be infrastructure, stations, vehicles and so on.).

## **2.2 Revenue risk**

Revenue risk is characterized as a risk reduction / increase in expected returns. It is also to establish liability in the event that revenues are lower than anticipated in the contract. This risk can carry either the authority transport service, as well as the carrier itself.

Revenue risk can be divided into the following groups:

- ✓ Income risk associated with decreasing demand: risk reduction in revenues associated with changes in the number of transported passengers in ensuring transport service. If this risk is assumed by the authority, it is necessary to appropriately involve the operator's compliance with the required quality of transport because the compensation is not directly dependent on the number of transported passengers.
- ✓ Income risk associated with changing the structure of the passengers: risk of changes in revenue due to changes in the structure of the passengers.

## **3. Forms of contracts according to the relation to the risk assumed by the carrier**

In relation to risk, there are three basic forms of service contracts to ensure transport service which may be concluded between the authority and the carriers of transport service. They are:

- Management contract: the authority bears both risks, the carrier none.
- Gross- cost contracts: the carrier bears production cost risk, the authority keeps the revenue risk.
- Net- cost contract: the carrier bears the balance of both risks, the authority none, as a typical case.

In Fig. 1 allocation of risks is processed in individual contracts. In Fig., 1 there are listed in addition to the basic forms of contracts and contracts that are accompanied either by incentives or apportioning specific risk. It is a form of contract used in the EU in ensuring transport service.

		Costs risk is borne by			
		Authority		Carrier	
Revenue risk is borne by	Authority	Management contract MC	MC with performance incentives	GC with a common cost risk	Gross- cost contract GC
		MC with revenue incentives	R with revenue and performance incentives	GC with revenue incentives and with a common cost risk	GC with revenue incentives
	Carrier			NC with revenue incentives and with a common cost risk	NC with common revenue risk
				NC with a common cost risk	Net- cost contract NC

Fig. 1. Dividing contracts and risk allocation

#### 4. Design methodology determining reasonable profit

The methodology of determining a reasonable profit is based on the requirement that a reasonable profit must be related to the risk borne by carrier. Therefore, the next section is about manners of determining a reasonable profit processed for each base form of the contract.

##### 4.1 The operator does not bear any of the above risk

In this case, the carrier and the authority conclude management contract and the authority carries the risk (calculation of the cost of providing public services, in the event that the authority takes both the risk, is the same as the calculation for a contract specifying the net cost). If the operator does not bear any risk- the level of reasonable profit related to the invested capital in ensuring transport service to the same degree as the profitability of the capital invested in term deposits with a guaranteed yield, respectively government bond yield. Given that the return government bonds below 2% per year, reasonable profit should represent 2% of the capital to put the carrier to ensure the transport service.

##### 4.2 The carrier bears cost risk-operator enters into a gross- cost contract

In this type of contract the carrier bears the cost risk, it means that the authority keeps the revenue risk.

##### The calculation of a reasonable profit in case if gross- cost contract

If the carrier bears cost risk- level of reasonable profit should consist of evaluation of capital invested to ensure the carrier transport service (same component as a reasonable profit for the carrier without any risk) and the component corresponding to the revenue risk. Component corresponding to the revenue risk should be provided in case of on public service contracts, between the authority and the carrier by the formula (Equation (1)):

$$RP = OC \cdot 0,02 + \left( \sum_{i=1}^n (EJC_i \cdot CR_i) \right) \cdot PR \text{ (€)} \quad (1)$$

- Where: - OC - capital of the carrier invested to ensure the transport service
  - - 0, 02 - return on invested capital of the carrier
  - - n - number of cost elements of the carrier
    - - i - i-th item cost of carrier
  - - EJC - estimated value economically justified costs of i-th item cost of carrier in unit terms
  - - CR - cost risk i-th costs item of carrier expressed in percentage terms
    - - PR - realized performance.
    - - RP- reasonable profit
  
- Determination of cost of risk can be determined by calculating the standard deviation and the calculated percentage deviations from the forecast cost item.
- Table 1 shows the percentages calculated of the standard deviation of forecast values.

Cost (in €/km)		Prognosis 2009	Prognosis 2010	Standart deviation	2009- %	2010-%
	Fuel	0,2978	0,31	0,04223888	14,183639	13,625444
	Tyres	0,005899	0,005325	0,00254458	43,135791	47,785545
	Other direct material	0,03208	0,03025	0,01010533	31,500415	33,40606
	Priame mzdy	0,1674	0,16321	0,09066725	54,162039	55,552511
Vehicle	Direct wages	0,18664	0,199237	0,06636589	35,558233	33,310021
	Repairs and maintenance	0,069198	0,069963	0,02495967	36,070194	35,675339
Other direct costs	Travel	0,01243	0,01197	0,00658853	53,005045	55,041998
	Charge-off from transport vehicles	0,05015	0,05046	0,03474814	69,288405	68,862733
	Other	0,0615	0,0629	0,02122126	34,506119	33,738097

**Tab. 1.** Risk of cost items.

#### 4.3 The carrier bears both risks-operator enters into a net- cost contract

In this type of contract, the carrier bears the balance of both risks and logically the authority does not bear any type of risk.

If the carrier bears the cost and revenue risks- level of reasonable profit should consist of evaluation of capital invested to ensure the carrier transport service (same component as a reasonable profit for the carrier without any risk) and the component corresponding cost risk and revenue risk.

Component corresponding to the cost risk is determined as in the previous case. Component of revenue risk is contained in the following equation (Equation (2)):

$$RP = OC \cdot 0,02 + \left( \sum_{i=1}^n (EJC_i \cdot CR_i) \cdot PR + \sum_{j=1}^m (R_j \cdot RR_j) \right) \cdot PR \text{ (€)}$$

- Where: - j - j-th group of passengers with the same fare
- - m - number of groups of passengers with different fare (2)
- - R<sub>j</sub> - expected revenues for the group of j-occupants in the unit term
- - RR - revenue risk j-th group of passengers expressed as a percentage.

## 5. Conclusion

Currently after changing the rules at the EU level but also at the national level the reasonable profit is still determining as a percentage of economically justified costs. Such reward is determined disincentive to carriers, so carrier does not encourage cost savings. For this reason it is necessary to find solutions with which it is possible to determine a reasonable profit independent of cost. For authors it seems to be the right solution when reasonable profit depends on the risk carried by the carrier in ensuring transport services. The paper elaborated the methodology of determining a reasonable profit, not only usable in SK but also in the EU.

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## Issues Related to the Use of International Financial Reporting Standards by the Largest Joint-Stock Companies Listed on the Warsaw Stock Exchange

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**Abstract.** This paper presents the results of a survey study among the largest joint-stock companies listed on the Warsaw Stock Exchange – entities required to use International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS). This survey was conducted because accountants, expert auditors, users of financial statements emphasize that frequent changes in applicable standards as well as introduction of new regulations make the proper application of IAS/ IFRS difficult and complex.

**Keywords:** International Accounting Standards, International Financial Reporting Standards, survey

### 1. Introduction

Harmonization and standardization of financial statements are a key element in terms of usefulness of information necessary for the users of statements to make decisions.

Rules for the application of International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) to the preparation of financial statements in the EU are defined in the Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards. That Regulation made IAS/ IFRS obligatory for use by selected companies, starting from 1 January 2005.

Frequent changes in applicable standards as well as new regulations introduced in the place of current ones make the proper application of IAS/ IFRS difficult and complex. That fact is emphasised by representatives of business entities using IFRS as well as by accountants, expert auditors, users of financial statements and representatives of academia. The entities mentioned above usually draw attention to:

- too rapid changes introduced to IFRS,
- difficulties in understanding the subject matter and aim of introduced changes by the users of statements,
- increased burden on companies using IFRS which results from changes and modification of IT systems,
- increased operating costs of entities resulting from modification and adjustment of financial-accounting software,
- necessity of introducing the so called “lull” – slowdown of and limitation to introducing changes during the period of two years.

The expressed opinions have inclined the authors of this paper to conduct a survey study among the largest joint-stock companies listed on the Warsaw Stock Exchange (WSE) – entities required to use IFRS. The aim of the study was to check whether the evaluation of regulations introduced by and work of the International Accounting Standards Board (IASB) caused doubts for business activity and practice of joint-stock companies in terms of speed of work and possibility of effective implementation of standards in a way that would allow for a proper preparation of financial statements.

## 2. Description and methodology of the study

The aim of the study was achieved on the basis of a saturation survey, i.e. a survey of small and very small populations, in which all component entities are surveyed. The largest companies listed on the Warsaw Stock Exchange were invited to participate in the study, i.e. companies which were included in WIG-20<sup>1</sup> on 15 February 2012 and had registered offices in Poland. The study was conducted from 20 February 2012 to 15 March 2012 by means of a postal survey.

The questionnaires sent to respondents consisted of two parts:

- the first part called demographics included first eight questions and its aim was to provide basic information on studied companies, such as a type of business activity, employment etc.,
- the second part included the next nine questions and referred to opinions on IAS/ IFRS, changes to IAS/ IFRS and their use by surveyed companies.

## 3. Description of survey sample and study results

The questionnaires were sent to 19 companies as one of the companies which were included in WIG 20 was a Ukraine company (Kernel company), and being an international company, it was excluded from the study. Seven companies sent back properly completed questionnaires, which gave a 36,8% return level.

Five of the surveyed companies conducted service-related activity, one conducted production activity and one commercial activity. All of the companies formed capital groups or were members of capital groups, and prepared consolidated financial statements. They also employed over 250 people and their revenues exceeded PLN 500 000 000.

The conducted study showed that the respondents had already had long experience in using solutions resulting from the application of international regulations to the preparation of financial statements. Regarding the question how long financial statements had been prepared in accordance with IAS/ IFRS, the most common answer was for six or seven years. It should be pointed out that in the case of three entities (42,9% of the respondents) their financial statements had been prepared in accordance with the international standards even before floating shares on the Stock Exchange.

The respondents were asked which of IFRS they applied and the application of which was most problematic. The results are presented in Chart 1.

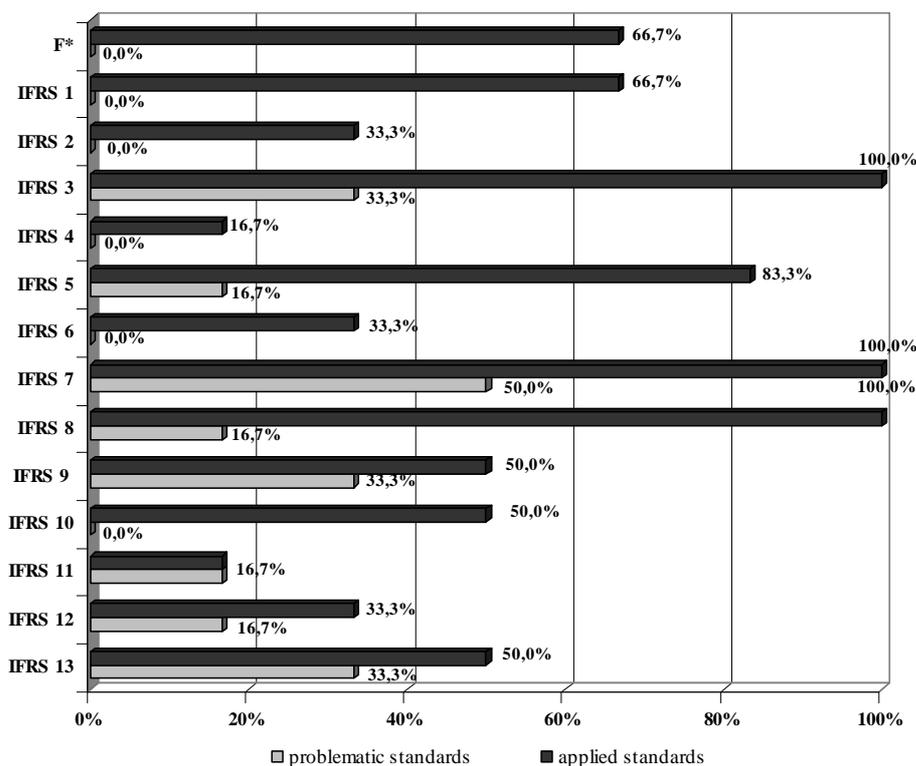
The most common International Financial Reporting Standards applied by the respondents included: IFRS 3 – Business Combinations, IFRS 7 – Financial Instruments: Disclosures, and IFRS 8 - Operating Segments which were applied by all the surveyed companies. IFRS 5 - Non-current Assets Held for Sale and Discontinued Operations were applied by 85,7% of the respondents while the framework for the preparation and presentation of financial statements was applied by 71,4% of the companies. The most rarely applied standards included: IFRS 4 – Insurance Contracts and IFRS 11 – Joint Arrangement which were used by one company only, IFRS 2 – Share-based Payment, IFRS 6 - Exploration for and evaluation of Mineral Resource, and IFRS 12 – Disclosure of Interests in Other Entities, applied by two companies. It is worth mentioning that the thematic range of the applied standards directly resulted from business activities of the surveyed entities, which was why some regulations were not applied by the companies or their application was limited.

In terms of the most problematic standards, the respondents most often indicated: IFRS 7 – Financial Instruments: Disclosures (57,1% of indicated answers), IFRS 9 – Financial Instruments, and IFRS 13 – Fair Value Measurement (42,9% of indicated answers). However, comparing the number of positive answers with the number of companies applying a given standard, one should

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<sup>1</sup> WIG 20 index – index of the 20 largest companies listed on the Warsaw Stock Exchange. Companies included in the index are selected on the basis of two criteria: capitalization and turnover.

notice that 75,0% of the entities using IFRS 9 and IFRS 13 found them difficult to apply. In the case of IFRS the level was 57,1%.



F\* – framework for the preparation and presentation of financial statements

**Fig. 1.** Applied IFRS and problematic IFRS in the case of the surveyed companies.

Source: own work based on survey study results

The aim of the study was also to show opinions of respondents on the frequency and nature of changes introduced to IAS/ IFRS and their impact on a company. The absolute majority of the respondents indicated that changes introduced to standards reached their users in a proper time (85,7% of indicated answers) and changes had a significant influence on the preparation of financial statements (71,4%). On the other hand, only 28,5% of the respondents admitted that those changes were adjusted to altering economic conditions, and barely 43% said that the changes reached companies and users in a proper form. The results clearly indicate the subject matter and complexity of legal regulations in terms of adjusting them to the speed of changes taking place in economic processes which require standardization and adoption of common and consistent solutions. Moreover, more than half of the respondents considered the form of presenting standards as insufficient.

What should be indicated is that changes resulting from update and introduction of new standards have a significant impact on functioning of companies using IAS/ IFRS. All of the respondents said that those changes simultaneously required the following: changes in the accounting policy, changes in the preparation of financial statements, adjustment of financial-accounting software, training and consultation of employees as well as changes in management accounting and controlling. The range of changes and adjustment of adopted solutions to changing standards can be diverse, but areas influenced by changes have impact on various levels of company functioning.

Difficulties with the application of existing standards and the necessity of implementing changes due to update and introduction of new standards confirm the relevance of IASB establishing the so called “lull”, that is a period during which no new IAS/ IFRS are introduced. According to the respondents, lull would allow for the adjustment of applied software (71,4% of

indicated answers), systematization of adopted solutions (57,1%) as well as correct implementation of published standards and thorough training of employees (42,9% of indicated answers each).

Finally, the respondents were asked to indicate five of the 18 areas presented which they considered significant and which should be regulated by international laws, and five which they considered insignificant and not requiring to be regulated. The results are presented in Table 1.

S ignifi- cant	Area	I nsigni- ficant	S ignifi- cant	Area	I nsigni- ficant
0 ,00%	Agriculture and biological assets	8 5,70%	0 ,00%	Government subsidies	4 2,90%
1 00,00%	Business combinations	0 ,00%	2 8,60%	Corporate Income Tax	0 ,00%
0 ,00%	Discount rate	5 7,10%	2 8,60%	Tangible and intangible assets	0 ,00%
0 ,00%	Earnings per share	2 8,60%	5 7,10%	Midyear reporting	0 ,00%
2 8,60%	Sales of emission allowances	5 7,10%	0 ,00%	Islamic accounting	8 5,70%
5 7,10%	Equity method	0 ,00%	1 4,30%	Framework	1 4,30%
2 8,60%	Mining industry	4 2,90%	2 8,60%	Other total income	0 ,00%
5 7,10%	Presentation of financial instruments	0 ,00%	5 7,10%	Scope of disclosures	0 ,00%
1 4,30%	Exchange differences	1 4,30%	0 ,00%	Share-based payment	2 8,60%

**Tab. 1.** Percentage of answers indicating significant and insignificant areas in terms of international regulations.

Source: own work based on survey study results.

Significant areas requiring legal regulation that the respondents most often indicated included the following: business combinations (100% of indicated answers), equity method, presentation of financial instruments, and scope of disclosures (57,1% of indicated answers). The following were considered insignificant: agriculture and biological assets, Islamic accounting (85,7% of indicated answers each) as well as discount rate and sales of emission allowances (57,1% of indicated answers each).

A special attention should be drawn to two areas indicated in respondents' answers:

- sales of emission allowances, which 28,6% of the respondents considered significant while 57,1% insignificant,
- mining industry which 28,6% of the respondents considered as a significant area and 42,9% as an insignificant one.

Thus, the presented areas were considered significant by almost 1/3 of the respondents while half of the respondents found them insignificant. It resulted from the fact that interest in presented areas was directly related to the business activity of a company.

## 4. Conclusions

On the basis of the presented survey study results, it should be stated that:

- the largest companies listed on the Warsaw Stock Exchange, i.e. companies included in WIG-20 index have six- or seven-year experience in the application of IAS/ IFRS to the preparation of financial statements,

- despite long experience and practical application of standards, the respondents still find some of the standards difficult to use, and most often indicate the following: IFRS 7 – Financial Instruments – Disclosures, IFRS 9 – Financial Instruments, IFRS 13 – Fair Value Measurement,
- the speed and scope of changes resulting from update and introduction of new standards require the following: changes in accounting policy, changes in the scope of prepared financial statements, adjustment of financial-accounting software, training and consultation of employees as well as changes in management accounting and controlling. In such a situation, IFRS proposed by IASB will allow for a proper adjustment of software, organization of adopted solutions and proper implementation of published standards as well as thorough training of employees.





# Economic policy and its impact on the create and share of knowledge

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**Abstract.** For effective functioning and growth of the economy is important that basic economic subjects are working properly. Companies belong to basic economic subjects. Knowledge can support their correct and efficient functioning. From a macroeconomics point of view, human capital, and thus knowledge, is resource of economic growth. State by its policy is affecting business environment, and therefore it has to influence it in such way, that its policy will support knowledge using. The state has many ways and tools to support knowledge, one of its tools is economic policy. However, it is necessary that the economic policy is created by experts, because all tools, that can state use, can not only support knowledge, but they also could also demotivate companies and their employees. These employees then slip the routine work that does not create any knowledge.

**Keywords:** economic policy, knowledge, knowledge creating, knowledge sharing

## 1. Introduction

In a time of economic crisis, the emphasis is on increased competitiveness with an emphasis on higher employment rates (this is said by the strategy of the European Union - Europe 2020). Competitiveness of the company can be improved through effective use of human capital and business knowledge. Knowledge and knowledge management provide the basis for effective functioning of the company, and thus support its competitiveness.

Today, not all companies are able to make effective use of knowledge without outside support. The European Union is trying to support in this effort, for example by the above mentioned strategy - Europe 2020. States may encourage companies by laws and regulations. One of the tools to support knowledge sharing in companies is the economic policy of the state.

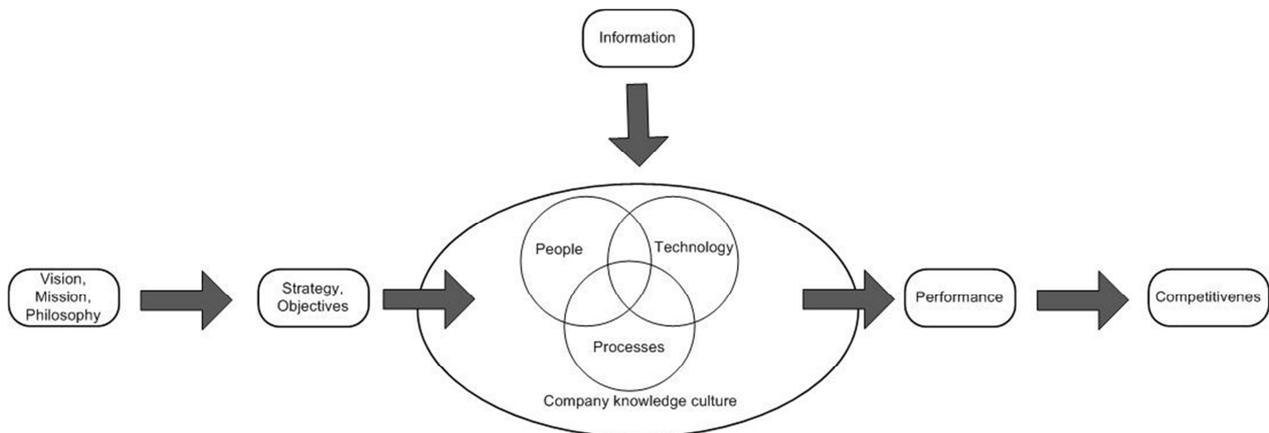
## 2. Knowledge and Knowledge Management

Knowledge itself can be defined understand in many ways. For example, Tobin understands knowledge as information plus intuition and experience. Woolf sees knowledge as organized information used for problem solving. For Wiig knowledge is the body of understandings, generalizations, and abstractions that we carry with us on a permanent or semi-permanent basis and apply to interpret and manage the world around us. [3]

The nature of knowledge as management resources differs greatly from that of physical resources. The attributes of knowledge are such that it does not lose value when used by a large number of people, so it is a revenue-increasing resource, it, it transcends time and space, whether in the form of subject, writing, or traditions passed on through generations, so it is an infinite resources. It is produced and consumed simultaneously, making knowledge production and consumption interconnected and inseparable. Its value is born of the creation of new types and combinations of knowledge. [4]

Knowledge Management combines three important components: processes, people and technology. Processes mean learning and development of organizations introduce processes to facilitate the sharing, verifying and extracting knowledge. People mean the connection people

which have the knowledge and are willing to share it and receive feedback. Technology means information technology systems and technology infrastructure, which allows sharing knowledge. [1]



**Fig. 1** Model of achieving competitiveness [modified by Collinson, Parcel]

Model shows achieving competitiveness by using of knowledge in the company. Knowledge of the company is created in company knowledge culture which includes the cycle of continuous learning. Continuous learning is learning before, during and after every process in the company.

The process of learning “before” means acquisition of knowledge before the start of each process. The process of learning “during” means learning from your own experiences and the experiences of others who, at the same time, are solving the same or similar problem. The process of learning “after” means retrospective look at the solved problems. Learning from what was successful and what was failed. [1]

Input to this process is the company vision, mission and philosophy, on which company strategy and objectives are based. It is important to create a culture of company knowledge, which should include open communication and an atmosphere of trust, because only when these two factors are present, knowledge will be created in process of continuous learning. Company knowledge culture also works due to three components: people, processes and technology (described in the previous section).

In addition to these inputs (vision, mission, philosophy, strategy and objectives), creation and sharing of knowledge in company is also influenced by information from company’s external environment. Information from external environment is: information from suppliers, customers, competitors, information about economic situation, taxes, loan rates and other. This information is the information about the economic policy of the state.

### 3. Economic policy and its impact on knowledge in the company

Economic policy as state’s approach to the economy, is a series of decisions, laws, rules, and regulations of the institutions, by which the government regulates and influences the behavior of economic subjects, the course of economic activities and overall economic reality.

Economic subjects in an open economy we mean companies, home, country and abroad. The definition implies that economic policy affects economic activity of companies and hence knowledge sharing in companies.

Trend of the current economic policy is described by the theory of continuous development, thus achieve economic growth which can provide renewal of resources and which can create innovations which will replace a non-renewable resource.[2]

Innovation is the result of work of employees and their knowledge, therefore companies should invest into the development of human potential and thus to knowledge.

State approach to economic policy can be liberal or interventionist. Interventionist approach means state interventions to the economy, without market will fail. Liberal means minimal state interventions, because state interventions cause inefficient use of production factors.[2] This approach (liberal) is essential for the development and use of knowledge in company, because the pressure on the effective functioning is forcing company to focus on new ways of functioning and to use knowledge. Economic policies consist of fiscal, monetary, structural and foreign trade policy.

**Fiscal policy** is the macroeconomic stabilization measures relating to the state budget and the budgets of regional authorities. Regional authorities are municipalities and higher territorial units, which cover primary, secondary schools and university and determine their budgets.[2] By these measures, fiscal policy affects environment for the development of basic knowledge, which are further developed during their working lives.

The basic role of fiscal policy is determining the scope and structure of government spending (G). This will determine the funding for science, research (and development) and foundation of innovative incubators.[2] If there is sufficient funds allocated and if there is ensured their efficient use, suitable environment is made for creating knowledge, which may be used for improving effectiveness of companies.

The next task of fiscal policy is to determine income tax. The progressive tax (higher income = higher taxes) means the risk of demotivated employees, who won't work more and work more efficiently because income taxes will reduce their net income. This may cause a reduction in the use of knowledge during work and workers will only exercise routine.

Fiscal policy also determines the tax rate for businesses. The increase of this tax may have two effects on knowledge. The first is similar to progressive income tax, thus causing reduction in the use and creation of knowledge. The second effect can be reversed, companies will have fewer financial resources (reduced by higher taxes), and therefore will push on their employees to come up with new ideas on how to work more efficiently. This is the place where knowledge can be used and where new knowledge may be created.

Fiscal policy deals with the public budget, which includes the budget of the social security and health insurance. In this case, it is a great threat to increase levies on labor agreement. Increasing levies reduce the number of working students, and thus prevents linking information gathered during study and practice. Because only information used in practice, will become knowledge.

**Monetary policy** is a set of decisions, laws and measures that the central bank regulates money supply and the price of the money - the interest rate. The central bank determines the interest rate for commercial banks, which vary depending on the interest rate for companies and thus affects the size of investments that companies can do.[2] Larger investment (lower interest rates) offer more space for knowledge creation, but on the other hand limited investment (higher interest rates) may force companies to operate more efficiently, and therefore to use and create knowledge.

**Foreign trade policy** is a set of different tools, policies and institutional arrangements which are used by government to regulate the amount goods and services crossing the border into or from the country. Foreign trade policy can be liberal or protectionist. Protectionists supports export, but limit import, it is also called the policy "impoverish thy neighbor." [2] Liberals create conditions for the development of the international division of labor, which encourages the development of international business and international cooperation between companies which means international creation and sharing of knowledge.

Foreign trade policy also affects the exchange rate. The exchange rate reflects the price of one currency in another currency. [2] Exchange rate affects the amount of input on the foreign market, as well as entry of foreign competition on the domestic market. Thus, the exchange rate affects the international sharing of knowledge.

**Structural policy** is a set of tools, institutions and measures which the government influences the behavior of economic subjects, the structure of industries and sectors. The goal of this policy is to maintain or change the existing structure of economic activity in the national economy while using as low costs as possible.[2]

If the state is supporting only one sector for a long time, it may cause structural crisis. It is necessary to switch to another production or even another sector. Employees from the sector hit by crisis need to be retrained and thus they will be given an opportunity to create and share new knowledge. The state has a number of resources to support the creation and sharing of knowledge.

First of all, it is free provision of information, because knowledge is created from information. Support for small and medium-sized companies based on knowledge includes mainly advices and foundation of science and technology parks. To support business in selected areas the government can build technical infrastructure and support the development of industrial parks.

Also, the government can support publicity of successful companies. Companies that successfully leverage knowledge for effective operation can serve as an example for other businesses.

#### **4. Conclusion**

Nowadays when all companies and the state also want to achieve intensive economic growth and when there is huge competition on the global market due to globalization is a lot of pressure on the effective use of production factors. Human capital and therefore its knowledge are regarded as a source of economic growth.

The state may (by its policy) create an environment supportive to the creation and sharing of knowledge. It is very important that the state will use its resources efficiently. Thus the role of the state is not only in the allocation of funds, but the state must ensure effective use of its financial resources.

This article describes how a state could support knowledge with its economic policy. All the instruments of economic policy should be handled very carefully. As already was mentioned above - they do not always have to have positive effects on knowledge

#### **Acknowledgement**

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## Participative Management Style and Its Relation to Employee Willingness to Accept Job Offer in the Company Again

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**Abstract.** Participative management style is based on the involvement of employees in decision-making and problem-solving in the company, as well as on supporting their high autonomy and own initiative. The article describes outcomes of our research which examines the interaction between the management style and willingness of employees to accept job offer in the current company again. According to the results there is highly significant correlation between the willingness of employees to accept the job offer in the same enterprise again and satisfaction of employees with management style as well as use of the elements of participative management style.

**Keywords:** Participative management style, manager, demotivation, decision-making.

### 1. Introduction

Participative management style is not a new style of management. It was presented in the book of American professor Douglas McGregor - *The Human Side of Enterprise* in 1960, which is a classic piece of research of company bureaucracy and human nature. McGregor described two different approaches to the management of people: Theory X and Y - X theory which says that the average person has an innate aversion to work and tries to avoid it as much as possible, and because of this innate reluctance should be mostly forced to work, managed, controlled, and sometimes it is necessary to threat employees with penalties to begin to spend adequate effort leading to the achievement of business objectives. Theory Y assumptions say the contrary, that external control and the punishment of employees are not the only possibilities to achieve business goals. In order to accomplish the tasks, one is able to learn self-control and self-management. Commitment to achieving goals depends on the rewards connected to their attainment. The most interesting of these rewards - the satisfaction of the ego and the need for self-realization may be a direct result of efforts to achieve business objectives. In terms of modern industrialized life, the possibilities of the intellect of the average person are only partially used [1].

The current work environment is too bureaucratic and hierarchical, very often with lack of good management. Business is too focused on the fact that people should not do any mistakes, rather than support them in achieving exceptional results. Superiors treat employees like children who do not think for themselves and do not know anything. Everything must be approved by several people, each activity must be documented carefully. The rules are therefore adjusted so that no one has to do nothing wrong - but even nothing exceptional. In other words, the current model of people management in most companies does not stimulate innovations and the search for higher value-added [2].

The behavior of managers to employees is the factor that has the greatest impact on employee motivation. Managerial behavior leading to demotivation is in most cases unnecessary - not related to the "objective" conditions of work. It is the result of management mistakes and mostly of the lack of attention devoted to business training and selection of executives. [3]

## 2. Participative management style

In this article we examine the participatory management style that in some companies has the form of so-called freedom at work. According to research studies, the concept of participative management style is currently used by 3-5 percent of enterprises only [4], which due to its effectiveness is considered as to be too low amount.

Participative style can be defined as a management style based on informing employees about important aspects of business development and their participation in decision-making and solving business problems, especially those that concern them. The main aim is to use their potential, knowledge, motivation, increase their job satisfaction and strengthen their identification with the company, but at the same time to gain their understanding of the new measures or changes in the company. [5]

Participative style does not mean that a manager requests from subordinate ideas and opinions, which are then used for decision-making. Participative decision goes further - employees are involved to participate in the management and development of the company, where openness, trust, consensus-building and mutual respect are the norms [6]. Subordinates have enough space to present their own initiative and independence in carrying out tasks. The manager encourages participation in decision-making of subordinates.

Currently, there are companies in which participative style goes even further - nothing is required, employees can decide what, when, where and how they will do. They can decide when to work, determine the amount of their salary, elect their own bosses. These companies are usually the leaders in their respective fields of business and are the examples of one of the strongest trend in today's business world. In the free enterprises it is important to have two-way communication, where most decisions are taken by consensus.

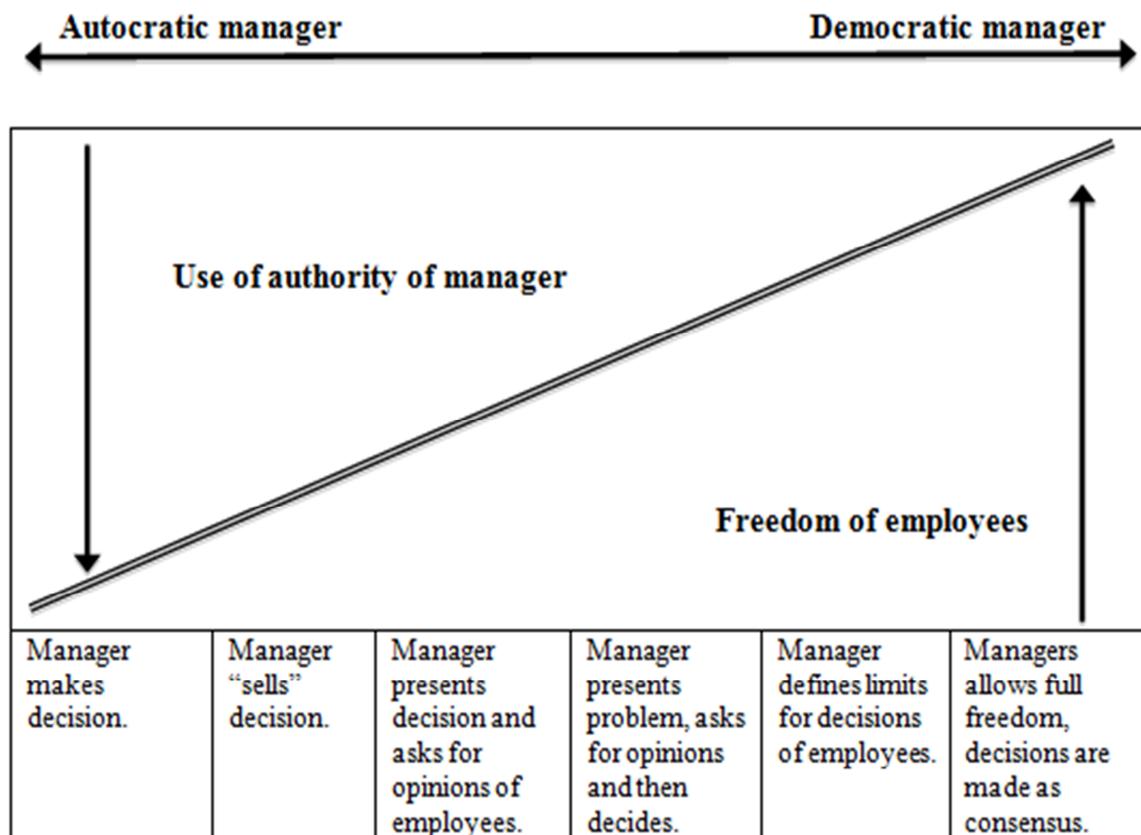


Fig. 1. The Management Behaviour Continuum. Source: self-processed based on [7].

### 3. Research

The type of research we used was a mapping research. This research is a research project to describe and classify the investigated phenomena [8]. We used the correlation to answer the question: Is phenomenon A related to the phenomenon B?

As the research sample we chose larger enterprises subordinates (200 employees on below manager level). All selected companies are long-term existing enterprises in the market and the management of human capital is at a very high level there. We obtained respondents from sectors: electricity, gas and telecommunications. As a research tool, we decided to use questionnaire because of the necessary number of respondents and the importance of anonymity needed for examining sensitive issues in relation manager – subordinate. In our research we tried to obtain information through a questionnaire of attitudes and opinions on the behavior of their managers.

Our hypothesis: *H1: The satisfaction of employees with management style is related to their willingness to accept the job offer in the same company again.*

(Questions: “Would you accept a job offer in this company again?” and “Are you satisfied with the management style used by your manager?”)

*H2: The use of elements of participative management style is related to willingness of employees to accept the job offer in the same company again.*

(Questions: “Would you accept a job offer in this company again?” and total of elements of participatory management style (15 questions in the questionnaire). For testing we used the Kendall’s Tau correlation coefficient.

**Table 1. Correlations**

			Management style	Participative management style
Kendall's tau_b	Accepting of job offer in the same company	Correlation coefficient	,564**	,596**
		p	.000	.000

Source: self-processed

Correlation is significant at the significance level of 0.01, it means that the:

- the willingness to accept job offer in the same company and subordinate satisfaction with the management style is in a highly significant relationship,
- the willingness to accept job offer in the same company again and the extent to which a manager uses a participative management style is in highly significant relationship.

In this case, we confirm the theoretical background that management style is an important factor that affects subordinates, as we can see the results, it is closely related to whether the subordinates would accept the job offer in the same company again. The results confirm that the use of elements of participative management style is significantly related to the fact that the subject is willing to accept an offer to work in the company again.

### 4. Conclusions

In practice, we often see the resistance of managers towards participative management style as they believe that if they focus on people development and facilitating of their independence, their performance will suffer. We incline to the view that human resources are the most important means to achieve power. The company cannot be successful without the financial and material resources,

but human resources should be an active element that sets the other ones in motion and keep them going. The difference is, whether the performance is achieved by encouraging co-operation and activities of the human factor, it means "with people" or "against them". An effective manager has the highest performance due to effective leading style. He uses individual motivation, reinforces the sense of group loyalty and identification with the organization. The ideal situation is when maximum performance is accompanied by employee satisfaction, good relationships within the group and a positive team spirit at work [9]. Researches show that satisfied employees are more productive in the long run than unhappy and dissatisfied. They don't have so many absences, are less likely to leave the company and work more than what are their duties. Our research aimed to contribute to a deeper knowledge of the attributes and relations of participative management style. We confirmed that the willingness of employees to accept the job offer in the same company again is significantly related to their satisfaction with management style, as well as using of elements of participative management style. We consider this style as the most appropriate style of management for the future businesses.

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## Analysis of health care situation in quality aspect

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**Abstract.** Healthcare is one of the key health-related industries, being a branch of the national economy. Client in this case becomes a patient of health care facility, who comes after the expected product, which is the solution to the problem health. It was showed in the paper the health care situation in Poland and in chosen countries with taking into consideration quality and patient satisfaction.

**Key words:** client/patient, hospital.

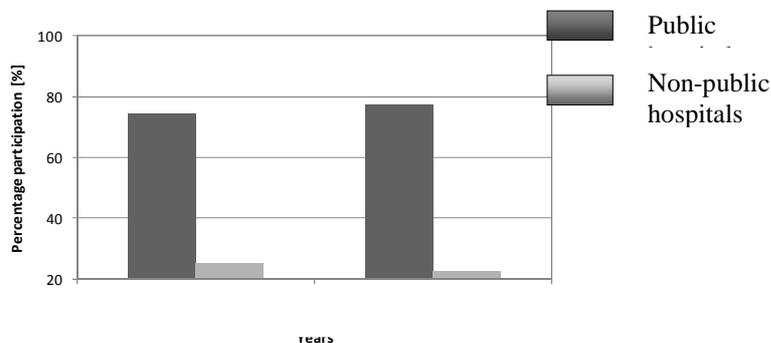
### 1. Introduction

Medical service is a special kind of service. An important feature of health services is their intangibility combined with the lack of guarantee of its effectiveness. Health care is one of the basic branches related to health, constituting a part of national economy. A client, in this case, is a patient of a medical care centre who comes in an expectation of receiving a given product which is in facta solution to his or her health problem. In the field of the health care system, the definition of a product comprises the complete set of services provided, firstly including strictly medical services such as doctors' and nurses' care, but also accompanying services, e.g.: hotel or information services. Health care inpatient medical care, admittedly is a nonprofit institution, however, it is still subject to rules of the market and therefore hospitals contend especially with big financial problems. So far the issue of managing the quality of medical services, was not the subject of broader, comprehensive scientific discussions. Medical service is a specific kind of services. The vital feature of health services is their intangibility connected with the lack of guaranteed effectiveness. Client/patient as the recipient of medical services is never sure of the final outcome and he/she is often unaware of the effects of abandoning a given action, which has a considerable impact on the decision about accepting a given offer. Clients/patients have to place their trust in a provider of medical services. Therefore, it is crucial for a given provider to be ready to render services, as while executing a service the provider becomes its part as it were. The uniqueness of health services is related to the requirement of having the skills and specialist knowledge, as well as the professional experience, and the ability to communicate [1].

### 2. Hospital situation in Poland and in chosen OECD nations

After the reform of the health care system, as many as 49% of patients using the medical treatment within the system of Health-Insurance Fund, use also paid services. The main reasons for that is the conviction that paid medical services are generally better (66%) and more available (62%) [2]. They evaluate a given medical facility on the basis of the factors which they are able to assess: quality of service while obtaining medical care treatment, availability and aesthetic qualities of the facility [2]. Not only in Poland, clients'/patients' satisfaction has been recognized as one of the essential factors of competitiveness in the health care system, since a proper attention to it in

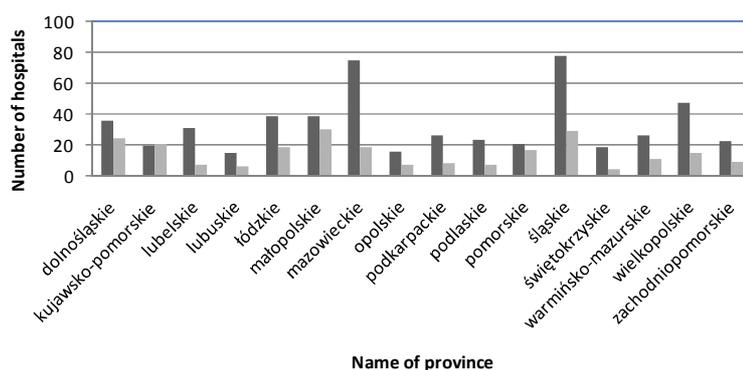
that sector of services is currently a standard of proceeding that has a significant impact on meeting the requirements and expectations of clients/patients, and simultaneously on their loyalty. Satisfaction is the level of meeting consumer's expectations with a given service or product [3]. The concept of satisfaction is strictly connected to quality. Client/patient using medical services anticipates a product compliant with the parameters, which were previously agreed, and with the reproducible quality level. In the figure 1 showed number of hospitals in Poland in 2008 and 2009 years [4, 5].



**Fig. 1.** Number of hospitals in Poland in 2008-2009 years.

Source: GUS

As it can be seen from the figure in 2008 in Poland there were 732 general hospitals, including 546 public health care (representing 74.6%) and 186 non-public health care (representing 25.4%) (GUS, 2008). In 2009, the number of general hospitals was 795 (GUS 2009). During the year, the number of non-public hospitals by 42 amounting to 228, which is 22.5%. In the same year the number of public hospitals has fallen by 20 units less compared to 2008, which is 77.5%. Presentation test object and methodology of examinations. Figure 2 shows the number of hospitals with the division of public and non-public in each province in Poland.

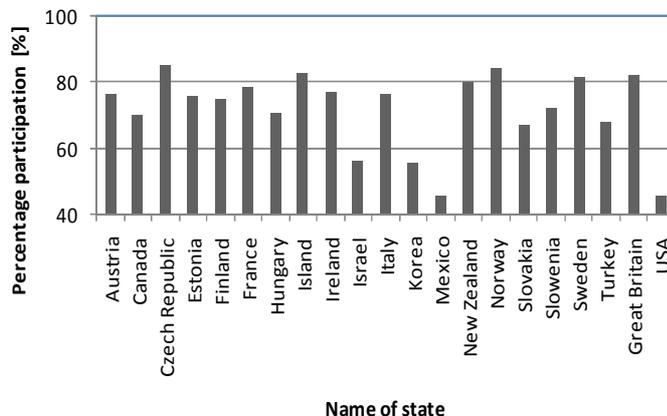


**Fig. 2.** Number of hospitals in provinces in Poland.

Source: own study basis on: GUS 2009

From figure 2 it can be seen that the largest number of public hospitals located in the provinces is in Mazowieckie (78 hospitals) and in Slask (75 hospitals). The lowest number of public hospitals located is in Opolskie (15) and Lubuskie (14). In the case of non-public hospitals most are located in Malopolska (30 hospitals) and Slask (29 hospitals), and least in the provinces Lubelskie (7), Opolskie(7), Podlaskie (7) and Swietokrzyskie (4). Analyzing the health care situation in Poland, worth noting is

how the levels of medical services in selected OECD countries are shaping. Figure 3 shows the share of public expenditure in total expenditure on health care in selected OECD countries in 2007.

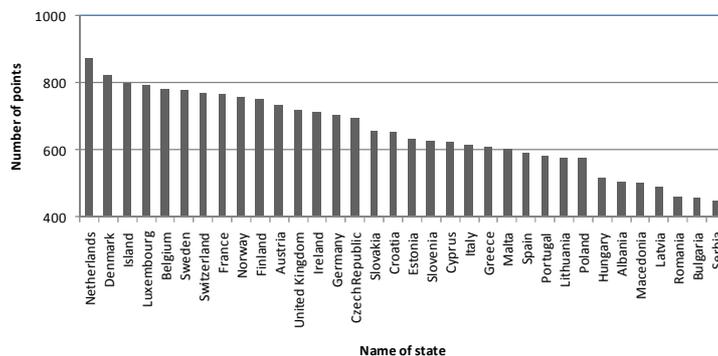


**Fig. 3.** The volume of expenditure in selected OECD countries in 2007.  
Source: Own study basis on: GUS 2009

Analyzing the data presented in figure 3 shows that the largest expenditure on health care took place in Czech Republic (85,2%), And Norway (84,1%). The lowest during the analyzed year were the four countries: Mexico (45,4%), Korea (55,2), Israel (56%) and United States (45,5%).

### 3. Health care quality ranking

In 2012, based on 42 indicators assessed 34 public health care systems in Europe, taking into account five key areas for consumers: patients' rights and access to information, waiting times for treatment, treatment outcomes, prevention / scope and extent of services offered and the availability of drugs. EHCI ranking is developed on the basis of public statistics, questionnaires completed by patients and an independent study, conducted by the authors of the ranking - the research institute Health Consumer Powerhouse (HCP), based in Sweden. According to the European Health Consumer Index (EHCI - Euro Health Consumer Index) Poland received 577 points in 2012 (fig. 4), being placed on the 27 spot, one place lower compared to 2009.

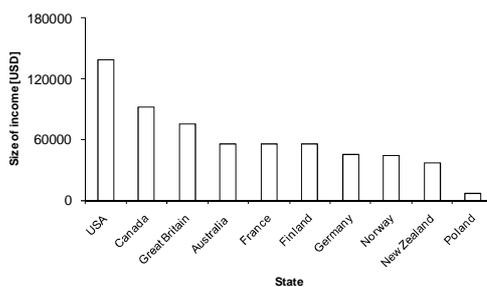


**Fig. 4.** The number of points obtained by countries in the EHCI ranking in 2012.

Źródło: [www.healthpowerhouse.com](http://www.healthpowerhouse.com)

## 4. Conclusion

The article presents a very interesting analysis of the health care service in Poland and in selected OECD countries. Analyzing the presented results and their analysis found that the medical facilities in Poland in recent years try to change their management style, way of managing human and material resources, change the image of the company to more positive for the patient, mainly due to the slowly increasing competitiveness in the market of medical services in Poland, as well as desire to ensure a higher quality of medical services. Analyzing the data presented and the conclusions that the authors of the article came up with on the health care situation in Poland in comparison with OECD countries, it is worth noting another very important aspect relating to the motivation of health care employees as a determinant of quality of medical services. Medicine is one of those disciplines where striving for the highest quality of services has a long-standing tradition, as life and health of a patients depends on the skillfulness and qualifications of a doctor. The discrepancies between the desires of clients/patients and their actual health needs is characteristic for medical services. Contractor/service provider is not always able to satisfy a clients/patient, as in contrast to the market services, the service provider is guided by the principle PRIMUM NON NOCERE (firstly do not harm) and the superiority of the clients/patients' well-being. This aspect is the size of the earnings of Polish primary care physicians, compared to selected earnings of physicians in selected countries (fig. 5).



*Fig. 5. Annual earnings of primary care physicians in selected countries.*

Źródło: Rosak J., Borkowski S. 2007

The presented figure 5 emphasizes that the current level of physicians fees in Poland, is far from the level in developed countries, which can be a powerful stimulus for the emigration of Polish physicians, and certainly everyday is a strong reason for frustration.

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# ACCOUNTING TREATMENT OF THE COSTS AND EXPENSES FOR SOME SPECIFIC INSURANCE AGREEMENTS IN TRANSOPR ENTERPRISES

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**Abstract:** The transport's enterprises activity is accompanied with different risks. It contracts insurance agreements for their reducing. It contracts insurance agreements for their reducing. It is necessary to make some costs (expenses) for contracting the insurance agreement. Depending on weather the costs (expenses) are required from the law or not they fall in two categories – obligatory and optional. This allocation is important because it has meaning about the calculation in a transport company. The costs (expenses) for contracting the insurance agreement are object of the financial accounting and the management accounting.

**Keywords:** insurance agreements, costs (expenses), financial accounting, management accounting.

## 1. INTRODUCTION

The transport enterprises have its activity to transfer goods and people. The transport's enterprises activity is accompanied with different risks [1]. It contracts insurance agreements for their reducing.

It is necessary to make some costs (expenses) for contracting the insurance agreement. These costs should be present in the financial statements of the enterprise and they have to receive methodological correctly accounting treatment. Also all costs and expenses are managed and checked and they are subject of management accounting. The aim of this paper is to analyze the cost and expenses which appears when the transports enterprises contract specific insurance agreements. This analyze will be of the view of the financial and management accounting.

## 2. EXPOSURE

Depending on weather the costs (expenses) are required from the law or not they fall in two categories- obligatory and optional. This allocation is important because it has meaning about the calculation in a transport company. The obligatory insurances are regulated in different enactments. For example obligatory insurances are the insurance Accident for the passengers in vehicles for public transportation and Liability for the automobiles. Also the transport companies have to contract insurance Labor Accident for their workers. This insurance is obligatory for activities with high occupational traumatism coefficient according to Ordinance of the Ministry of the Labor and the Social Politic.

If the transport company provides public transport and the starting and ending point of the transportation are in Republic of Bulgaria, they must contract the insurance Accident. (The insurance Accident is obligatory if there are two conditions. First, the transport enterprise provides public transportation.

And second, the starting and ending point of the transportation are in Republic of Bulgaria.)  
The public transport modes are:

1. Railway transport modes;
2. Trolleybuses autobuses and coaches;
3. Air transport modes;

4. Maritime transportation;
5. Ropeways and lifts;
6. Taxis

Object of the obligatory insurance Accident are passenger's health, life and body.

Passengers are the people that are in the vehicle or near by the vehicle before the upload or after getting of the vehicle. Driver's and service personal's health life and body are not object of the insurance. The minimum insurable value for the insurance Accident is 20 000 levs (about 10 000 Euros) for every passenger and every insurance event.

The other obligatory insurance is Liability, according to the insurance law. Every transport company must contract this insurance if:

1. Own a vehicle that is registered in Republic of Bulgaria;
2. Own a vehicle when entering Republic of Bulgaria and do not have a valid insurance.

Object of the insurance Liability is the liability of the companies for some damage they cause. This damage should be related with the act of owning and/or using vehicles that the insured have responsibility by the Laws of Republic of Bulgaria or the laws in the country in witch was damaged appeared.

Insured people are the owners of vehicles witch are object of a valid insurance policy. Also insured people are all people who use vehicle lawfully. Other people are all people without the person who are responsible for the damage. It is good to know that Liability insurance does not cover the responsibility as a haulage operator of the insured.

The third obligatory insurance, the object of this paper is Labor Accident for the workers in transport enterprises according to the Ordinance of the Ministry of the Labor and the Social Politic. This ordinance is updated yearly and in 2013 it includes transport activities. The waterway is third of the risk activities and the road transport is 34th with traumatism coefficients 4,37 and 1,45. Compared the average traumatism coefficient is 0,75. So the traumatism coefficients for the waterway and road transport are much higher than the average for Republic of Bulgaria in 2013 [2].

The costs and expenses for obligatory insurances could be considered as inherent in the transport activity. That's why it is methodologically right to include them in the transport service cost. Their treating as a manufacturing cost is economically justified, because the contracting of those insurances is mandatory and could not be avoided. It should be noted that the cost and expenses for insuring the personnel are the only cost for insuring that is included in the cost price in the in the times terms of planned economy [3]

In terms of the Management Accounting this costs and expenses are relatively fixed, for the period and controlled as far as the transport enterprise is the one that chose the insurance company [4]. So it could choose one that provides better conditions of the insurance policy. It is important to know that just like the other cost and expenses, those for contracting insurance policies reflect at the finical result. Their amount has important meaning in the terms of economics crisis. It is possible for them to receive high share to the enterprise's incomes because of reducing the volume of business.

Sometimes the management of transport enterprises decides to contract optional insurance agreements. The typical optional insurances are insurance Life (for the staff) Liability of the transporter and Cargo.

The insurance Life is an optional addition to the insurance Accident.

The insurance Liability of the Transporter is other optional insurance that the cargo transport companies could contract. Object of the insurance is the responsibility of the company in the case of reclamation when the cargo is damaged. Object of the insurance could be also the package of the cargo in case of accident, fire or other disasters.

Insurance that have the load for an object is the insurance Cargo. In this case the insurance company has responsibility to compensate the transport enterprise in the condition of insurance event.

The management of the transport enterprise has discretion to contract an optional insurance policy. Therefore the accounting policy for costs made for them could be determinate in two ways:

1. To be treat as expenses. In this case the expenses are impossible to be integrated in manufacturing cost of the transportation service. That is not economically correct because the costs for assurance the cargo and the responsibility of the company are related with the main activity of the enterprise. That's way regardless of their optional nature they should be part of the manufacturing costs.
2. The costs for insurance agreements to be integrated in manufacturing cost of the transportation service. This treatment is economically more correctly than the first one. Also those costs are related with the accounting principle of conservatism.

A transport enterprise had a contract with insurance company for insurance Life (for the staff). The amount of the insurance premium is 10 000 levs (about 5 000 euro). If the accounting treatment is as expense so the expenses rise up to 12% of the whole costs and expenses. According to the Bulgarian tax lows only 10 % of the costs and expenses could be expenses. That's why the accounting profit rises with 7 000 levs (about 3.500 euro) and so the taxies with 700 levs.

The accounting treatment of these 10 000 levs as costs reduce the accounting profit and the enterprise will not pay this 700 levs as taxes.

Management accounting treat that costs as controllable costs, period costs and/or product (transport service) costs. To make a decision for do dis costs is in connection of risk management in the transport enterprises.

### **3. CONCLUSION**

The transport enterprises have to contract different insurance agreements to manage risks. To conclude insurance agreement is necessary to make some costs witch are good to be treat as manufacturing. This is economically right because of their nature and gives an opportunity for them to be allocated in the manufacturing costs of the transport service.

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# Implementation of Reverse Logistics in Supply Chain Management

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**Abstract:** Reverse Logistics has been stretching out worldwide, involving all the layers of supply chains in various industry sectors. Reverse logistics deals with the organization of the various processes which are necessary for returning waste materials and used goods to their producer resp. into the economic cycle. Reverse Logistics has become a key competence in modern supply chains. Article shows importance of reverse logistics and defines its basic principles. Furthermore, it is focused on waste management and its connection with tasks referring to reverse logistics. This article also discusses the use of returnable packaging. Better waste processing can gain outcome savings and contribute to get more earnings from this area.

**Keywords:** reverse logistics, supply chains, waste, recycle, waste management.

## 1. Introduction

Logistics is developing since antique times. Currently we can't say that the development is completed. Logistics have to be fully adapted to the demanding requirements of the market and in each of its main areas, which are the purchase, production and distribution logistics. Currently the most authors deal with the problems in the direction of the flow of goods from producer to consumer and the optimization of it. It's a natural fact. This need is further intensified with the advent of the crisis. Many authors have begun to examine the material flow in the opposite direction. Thus the direction of the customer. It is the flow of materials that either do not meet the requirements of the customer, are broken and need repair, are morally outdated or broken. These activities form the basis of reverse logistics.

### 1.1. Reverse logistics

Reverse logistics is not a new discovery. The first mention of reverse logistics (as we know) are from the 90s of the 20th century. Managers studied mainly in U.S. companies reverse logistics problems partially or completely non-functional goods from customers (complaints). The main task of reverse logistics is the collection, sorting, dismantling and processing of the products, parts, by-products, excess inventory and packaging materials, where the main aim is to make them a new use, or material recovery in a way that is environmentally friendly and economically attractive.

Reverse logistics is viewed from two main perspectives:

- a) protection of natural resources,
- b) corporate interests.

The most important ambition of reverse logistics is to focus on the protection of natural resources and reduce waste of resources, thereby extending the life of products, as well as partitioning of material flows in society through recycling. The costs of reverse logistics flow of

goods are not just a negative externality. Returned products are feedback from customers on the use and requirements. Willingness to complaints as well as the possibility of disposal of obsolete products is a competitive advantage that builds customer loyalty to the brand.

There is a incorrect exchange between reverse and green logistics used in some literature. The main role of both activities logistics is to reduce the impact on the environment. Some elements are common but they are two different areas. While green logistics examine the impact on the environment and an understanding of logistics as a polluter (eg production of greenhouse gases), reverse logistics is aimed at exploring the possibility of reverse flows of materials and the use of them.

## 2. Basic activities of the reverse logistics

Reverse logistics is most closely connected to the waste management company. It is based on material recycling. These activities should aim at minimizing waste, and less need for material resources entering into production. It doesn't concern solely of materials entering the production as well as packaging that can be reused for distribution.

In some cases when the return flow of goods not only for their disposal. Especially when there is a mail-order departures resold the goods. This product is sold as second-hand goods at a lower price than its original selling price. They use the activities repackaging and reselling. The costs of return logistics will increase with the increase in sales over the internet. According to estimates based on retail online store will be up to 25% of returned goods. Shops reported 6% of returned goods.

System of the reverse logistics is based on four basic process:

- 1) Gatekeeping – entry control, that decides to let into which decides whether admit entering element (product material) into the reverse logistics.
- 2) Collection – collection, the collection of products and materials for further processing.
- 3) Sortation & Separation – goods are classified according to how they are further processed.
- 4) Disposition/Re-processing – products are by reason of entering the reverse logistics processed (repair, dismantling applicable functional parts, recycling, disposal).

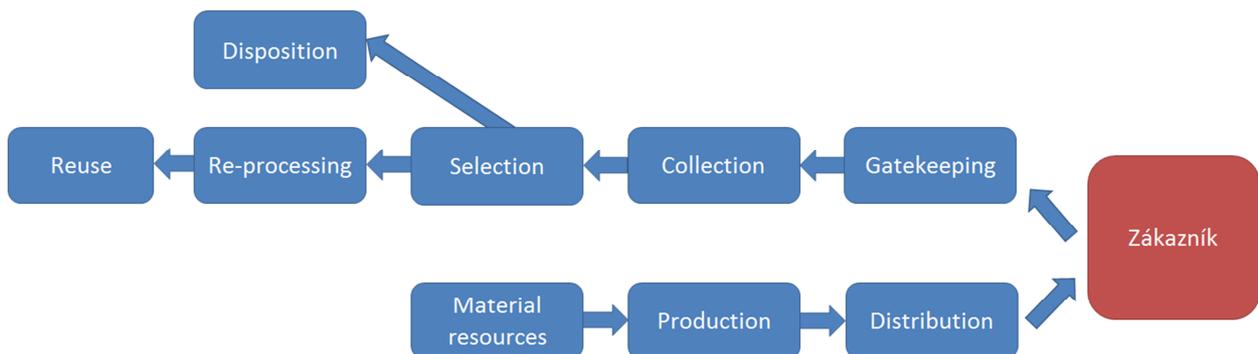


Fig. 1. Wiring material flow in logistics system Source: author

### 2.1. Gatekeeping

It is a complete review of materials and goods entering the reverse logistics. It examines in particular the origin of the goods (goods sold or the entity with which enters the circulation reverse logistics), causes entry into reverse circulation (reclamation, disposal), or whether it is not a product containing dangerous substances (special mode of treatment and disposal).

To streamline the entrance into reverse circulation and prevent the illegal disposal of waste dumps or black, consumers are motivated to be rid of the goods in an appropriate manner. This is particularly the economic incentives: backup, back redemption, prize money for product delivery, discount on new product shipped old, free or discounted cash collection.

## 2.2.Collection

In this step, it is the gathering of goods and materials entering into reverse flows. The customer can deliver goods directly to either the manufacturer, the supplier for the goods purchased, or with a third party, which looks after the collection of goods (eg waste disposal). The collection can also occur indirectly through bins (eg separated waste). In this case, the addition of a third party provides bins at a location near the consumer and at regular intervals, taking care of their collection is a centralized collection point.

## 2.3.Selection

The decision-making occurs after assembly of goods and materials in the collection point, whether there is product repair or disposal. In the case of liquidation is examined whether the product contains economically useful parts. In this case, there is a removal of the product and use its parts.

## 2.4.Re-procesing

Efficiency of the product is limited by its nature, ie design and material craftsmanship. Further treatment of goods depends on many aspects, but especially on the degree of damage, and moral obsolescence by market demand. If it is economically disadvantageous to evaluate the product for re-use, will be deposited into landfill or incinerated.

	<b>Degree of removal</b>	<b>The quality requirements</b>	<b>Final product</b>
Direct application	Without	There is a cleaning and repackaging	Reusable goods for their original purpose.
Repair	To the level of material	The high quality of material is used in the new parts. For other purposes it is sufficient to lower quality	Materials reused to manufacture new parts.
Re-format	To same parts	Check all modules and enhance the level of new products.	Used and new parts (modules) from a new product.
Upgrade	To the level of modules	Check all relevant modules and improving the desired level.	Some modules are repaired, replaced (for the same or improved).
Change	On selected parts	Depending on the further use.	Part of parts are re-used, other is recycled or disposed.

**Tab. 1.** Methods for assessment of old products Source: author

## 3. Conclusion

Reverse logistics is a growing segment of logistics unit. It is mainly caused by environmental pollution and reduction of natural resources. Humankind began need avert the consequences of

inappropriate behavior from previous years. More and more businesses are forced to pay attention to environmental problems. Consumers in deciding take into account not only the price but also the responsibility to protect the environment. According to 84% of consumers in China, India, Malaysia and Singapore accept a higher price for the so-called. "Green" products, while in western countries are only 50%.

Reverse logistics is the correct way to achieve these aims. Properly set reverse logistics is then important not only in economic terms but also in terms of attracting customers and hence competitiveness. Strategy of the reverse flow materials should not start at the endpoint (ie the customer) but the manufacturer, which should produce products that have a long life, cause damage to the environment, have low energy and material intensity. The same, it should be make use of containers which can be used even after their primary use.

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## Analysis of Oil Price Drivers

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**Abstract.** The transport has been in the whole history of mankind the basic and determining mover of the human society shape. Its role in the 21th century will not differ and the question is rather the form of its future use. The trend of last several decades (and above all the increase of car traffic) has been showing that it will be necessary to solve the question of the energy source for transport (or the substitution of the oil by another source. The oil price will decide about the success of the alternative fuels shortly, it will be the critical parameter of the economic efficiency of the particular energy sources. This topic is discussed in this paper that researches the various factors influencing the final oil price, whether the quantifiable factors (GDP growth, dollar exchange rates) or non quantifiable ones (natural catastrophes, political situation in oil exporting countries and others).

**Keywords:** Oil, price, GDP, USD.

### 1. Introduction

The oil has been known to the mankind for hundreds of years without bigger attention. It was of course used, it served as an additive for the construction materials in ancient Syria, later it substituted the blubber and was used for lubrication and lighting.

Its industrial use started up to the second half of the 19th century – the first commercial well was opened in 1861 in Pennsylvania. The golden era of oil came of course after the improvement of the spark-ignition engine cars and the beginning of their mass production. It had two presumptions – the first one is the feature of oil to concentrate big amount of energy in very small volume. It is the key feature for the propulsion of transport means, there is no need for transport of coal or heavy accumulators in the transport means.

The second presumption can be simply called Henry Ford – he improved the car with spark-ignition engine and was able to produce it so cheap thanks to the conveyor-belt line based production. The decision was made about the car propulsion for the next one hundred and fifty years. But it is necessary to add, that the 19th century was the period of the intensive searching for the suitable energy source for the propulsion of transport means. Of course the coal was pushing oneself from the beginning – partly in the steam propulsion. The second possibility was then the electric propulsion, but the electric cars were not successful because of their insufficient driving properties and the electricity found its use in the transport only in the dependent traction especially in the rail transport.

### 2. History of the price of oil

The oil price can be observed since 1862. At that time one barrel (159 l) of oil was sold for 75 US cents. At the end of the 19th century there was a fight among three biggest extracting companies that originated according to the extraction location. The extraction from the Caspian Sea was begun by Ludwig Nobel, but there was no sale in Russia, so he united with European markets, the French stem of the Rotschild family, and interconnected Baku with the Black Sea port of Batumi, from where the oil was exported to refineries in Rijeka. The Rothschilds united then with the branch of the Standard Oil in Great Britain.

After 1890 the salesman Marcus Samuel grounded the company Shell Transport and Trading and was sent to Asia, where he should bid the Russian oil for unrivalled prices. At that time the extraction also began in Indonesia under the control of the Royal Dutch Company that merged then with Samuelson into the Royal Dutch – Shell.

But Standard Oil faced the intervention of the antitrust authority, after which the famous group “Seven sisters” originated – Exxon, Mobil, Chevron, Gulf, Texaco, BP, and Shell. It controlled the whole world oil trade. At the beginning of the sixties of the 20th century the Arabian states joined and the OPEC originated. During the last more than 50 years the oil price experienced the growth and the fall several times. The first oil shock was the rapid growth of the oil price in 1973, when the Egypt-Israel war begun (the Yom-Kippur war). This development was preceded by the beginning economic stagnation in the USA, that president Richard Nixon tried to stop by the uncoupling of the dollar from the golden standard, what led to the depreciation of the dollar. So this depreciation raised discontent in the Arabian states and the attack upon Israel.

The second oil shock occurred in 1979 after the so called Islamic revolution, when the Islamic regime begun to export less oil to be able to influence the world trade.

The third oil shock happened in 1990 during the Gulf war (invasion of Iraq into Kuwait). This conflict was followed by the interruption of delivery from these two strategic countries. The oil price grew twice.[1] At the beginning of 2008 the oil price broke the limit 100 USD, in the half year even 150 USD. This fluctuation did not last long, already in December the price was 40 USD for barrel. The price evolution is displayed in the Fig. 1.

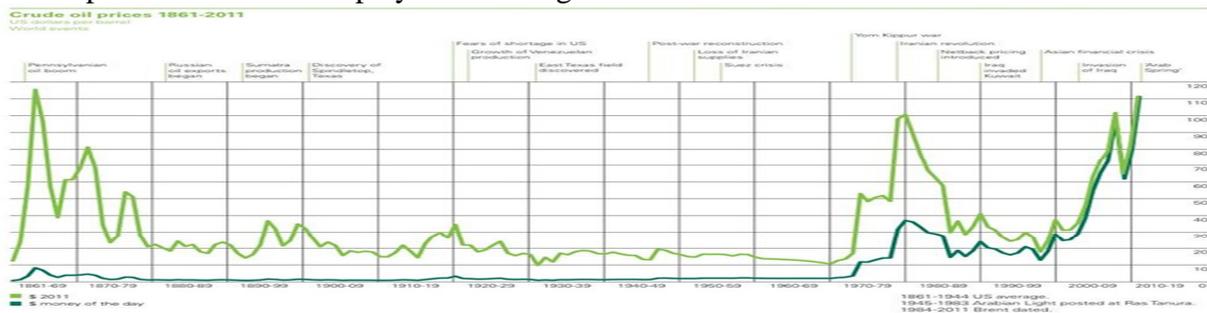


Fig. 1. The crude oil prices 1861 - 2011 [2]

### 3. The dependence of oil price on quantifiable factors

The oil price is influenced by a number of factors. The most of them are not quantifiable (speculations, political situation etc.), as mentioned at the end of this paper in the complex analyse of these influences. At first we mention the dependence of oil price on quantifiable factors, namely in the period 2003 - 2010, when the price fluctuations were very sensible.

#### 3.1. The Relation between oil price and US dollar value

The most important quantifiable factors influencing the oil price are the GDP of demanding states and the value of the US dollar, used in oil trading. The tightness of the dependence of the oil price and these factors can be expressed by the correlation coefficient and graphically demonstrated by the regression line. The Fig. 2 shows the dependence of the oil price on the dollar exchange rate. The value of dollar is expressed by the exchange rate of the US dollar and the currency basket (SDR). The basket of currencies diversifies the variability of values of the individual currencies. The oil price as well as the dollar value are not adjusted for the inflation, so they are real.

The correlation coefficient is -0,787 in this case, what evidences a tight indirect dependence.

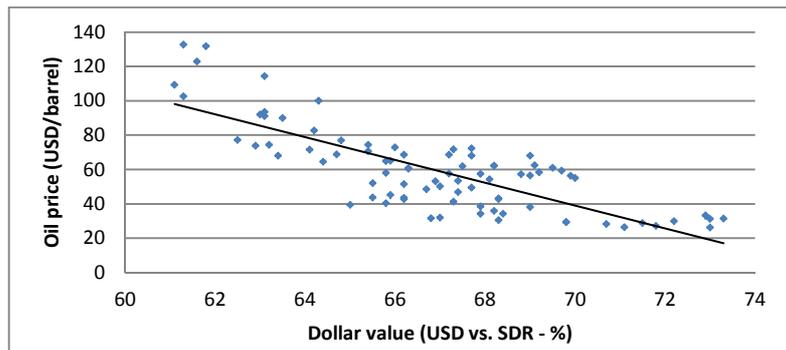


Fig. 2. Dependence of the oil price and USD exchange rate [2, 3, 4]

### 3.2. The Relation between oil price and the GDP of the G7 group

For the purpose of the calculation of the dependence of the oil price and the GDP of demanding states we chose the G7 countries as the demanding ones, thus the strongest world economies. The correlation coefficient is +0,79 in this case, what means a tight direct linear dependence. The graph 3 shows this dependence by a regression line.

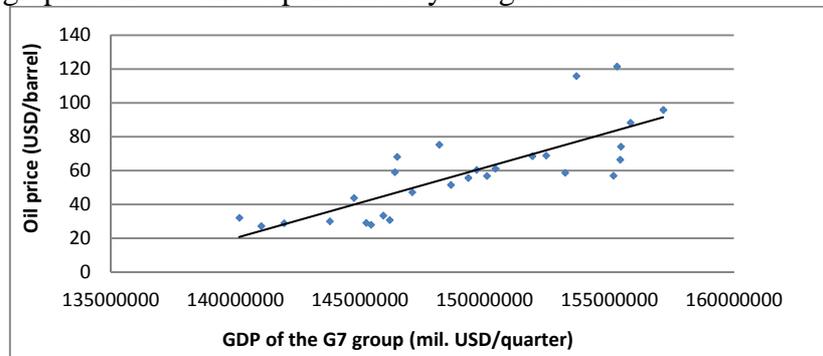


Fig. 3. Dependence of the oil price and GDP of G7[5]

## 4. Complex analyse of oil price drivers

In this article we will be concerned with the particular causes of the oil shock in 2008, which result from the causal analysis of this problem. By understanding the oil price development in this period we can find the factors that will also influence it shortly. As the basic drivers we can regard: *demand for oil, US dollar value, speculations, natural and ecologic effects, oil production or if you like oil supply.*

The production of the OPEC cartel was decreasing in 2008. The OPEC has been regulating the oil quantity by production quotas that were broken by some member states in order to get higher profit. The instability of delivery from non-OPEC countries was influenced by the expectations of troubles of terrorist attacks. For instance in 2008 it came to the decrease of the production growth in the western Siberia that has the highest share of the Russian oil production. The price stability was also negatively influenced by the war conflict between Russia and Georgia. But this Transcaucasian region represents an important path as for Gazprom, as for the Nabucco pipeline. Another oil producer is Iran, ranking among five greatest world exporters. In the first half of 2008 there was the conflict between Israel with the USA and Iran because of the everlasting threat of nuclear and rocket programs.

The economy of one of the richest countries in Africa, Nigeria, is based on the oil industry and it is the 7th biggest world oil exporter. Here rebel aggressions occurred, they wanted the increase of production quotas just because of the growing price [6]. Also Venezuela belongs to oil powers. Under the presidency of Hugo Chávez it started to nationalize the oil industry. Chávez also

threatened with the stopping of the oil export to the EU and USA in the effort to strengthen his political influence as home as abroad.

Besides the political situation the next cause of the oil price growth is the decrease of the production mainly in the North Sea as a result of the gradual exhaust of deposits. It is connected with the next cause-the oil supply. The continual decrease of the number of new deposits and the verification of the Hubbert theory of the oil peak affects the oil price [7].

The oil has been being traded in US dollars. Because of the economic crisis the value of USD was decreasing. If the dollar depreciates, the oil producing countries headed by the OPEC decrease the oil production, what raises the oil price [3].

Other very important dollar value factors are stock and commodity markets. As the stock markets at the crisis time are primarily influenced by the sentiment, we can attribute to the financial crisis also the short term growth of the dollar value in the half of August and so the oil price shrink. The mortgage crisis can be regarded as the main driver of stock markets.

## 5. Conclusion

Oil and its price is the key parameter of the development of an economy. It is of course a big question, whether actual fluctuations are caused by the giving out of the oil stock or by the functioning of other factors. As for the year 2008, just these other factors caused the drastic growth of oil price. The causes can be found above all in the coming economic recession with the decrease of the American dollar and speculations at commodity markets. In the connection with the following decrease of the GDP the oil price than started to sink logically and its today's growth can be explained by the economic revival. The short-term rapid fluctuations are caused by instable situations in oil exporting countries. These fluctuations can be the demonstration of the world political instability and as well a sign of more serious problems, the analyse of this topic is already out of the economic character of this paper.

This conclusion does not want to hide possible problems with giving out of the oil stock. The mankind will shortly come into the epoch, when the oil will be albeit sufficient, however its extraction will be far more difficult and also costly, which is connected with the failing energetic return of its extraction.

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## The Impact of Competitive Tendering on the Costs of Competent Authorities Related to Service Provision

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**Abstract.** This paper deals with a competitive tendering for providing services in public interest, as well as, its impact on the costs of competent authorities. The services are paid from public funds and for direct award of contract to a given operator, it is necessary to negotiate a price for required performance. The price should reflect a sum of economically justified costs and reasonable profit. After introduction of Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road, a majority of services are delivered through the competitive tendering. This process represents a competition where bidders (operators) offer delivering services at the lowest possible costs. Therefore, the purpose is to highlight an impact of competitive tendering experience on the costs of competent authorities.

**Keywords:** Competitive, Tendering, Contracting, Costs, Savings

### 1. Introduction

In the Slovak Republic, the public passenger services, either in railways or bus transport, are historically provided through a direct award of contracts. This means that the competent authorities do not call for a competitive tendering for delivering services but they negotiate with a selected operator who historically performed the transport services in a given area. While drafting a service contract, it is necessary for authority and operator to agree on price in return for realized performance. The services in public interest are publicly funded and the price must correspond to a sum of economically justified costs and reasonable profit. But in practice, it causes a lot of problems to determine a justification of particular cost items and define a range of the reasonable profit. After introduction of Regulation (EC) No 1370/2007, the authorities (besides some exceptions) are required to procure the public passenger services through the competitive tendering. The aim of this paper is to point out an impact of competitive tendering on authority's costs related to procuring the services.

### 2. The Benefits of Competitive Tendering for Service Provision

In present, there are plenty of mechanisms how to procure transport services in public interest. It is in particular providing services:

- through competitive tendering (public tender),
- based on negotiation with a incumbent,
- combined, e.g., where public service obligations are determined through competitive tendering and incentives related to patronage are determined through negotiation between parties.

Experience from developed and also less developed countries suggests that when public transport is operated on monopoly basis, it cannot be effective. However, if these services are subject of competitive tendering, it will be possible to achieve considerable cost savings. The competitive tendering represents an operator selection system from a group of candidates (bidders)

in order to ensure required service level as well as efficient and sustainable level of costs. For awarding of contract it is necessary to take into account following principles [1]:

- avoid a situation when one from operators achieves such a large market share which would suggest monopoly situation,
- support of public competitive tender for delivering regular passenger services,
- ensuring an integration of public passenger transport services,
- support of effective operation and innovations.

Other benefits of this mechanism can be an increase in quality and quantity of services and associated increase of patronage. As an example of transformation from providing bus services on government monopoly basis to the services provided by private operators through competitive tendering can be mentioned experience from town of Adelaide in Australia. During a period of twelve years (from 1994/95 to 2006/07 when three rounds of competitive tendering took place), the results from introduction of competitive tendering in public passenger transport were following [1]:

- increasing of provided services range by 14 % - increase is mainly attributed to the effective and efficient use of cat fleets from operators' side. And thus, it was possible to gain additional revenues related to patronage
- overall improvement in service quality – e.g. arrivals 'on time' in the range of 0 – 5 minutes increased from 72 % in 2000 to 91 % in 2006/07. Also, earlier arrivals decreased from 15 % to 1 % when comparing the mentioned periods
- increase of patronage by 15 % - mainly through additional services during the time beyond peak hours. These services were funded by using cost savings obtained by the introduction of competitive tendering
- decrease of unit costs per bus kilometer in the range from 26 – 31 %. It was reflected in a reduced need of financing from public funds.

Thank to cost savings it is possible to release funds either for additional services provision or served area expansion. If not all funds are needed in public transport system, the rest of them will present net savings for the authority. From passengers' perspective, the savings can prevent rapid increasing of fares when input prices change.

Effective costs, however, cannot be achieved in the short term by simply transformation from providing services on monopoly basis to procuring services through competitive tendering. Experience from Adelaide suggests that three rounds of competitive tendering were needed to achieve sustainable and effective level of costs as well as effective tender price [1].

The key factor in competitive tendering is an adequate regulatory framework and conditions of contracting which should encourage competitive behavior of bidders. In the process of preparing and contracting, the attention must be paid to aspects such as:

- contract period
- scope of contract
- structure of payment (it should represent a balance between profit and reward for realized performance)
- freedom which be given to the operator in designing and making changes in services
- method of monitoring and controlling a fulfillment of public service obligations

It should be noted that a proper adjustment of these aspects by authorities helps to operators improve efficiency of service provision and reduce costs.

The regulatory framework consists of three levels [2]:

- strategic (setting basic goals to be achieved)
- tactical (emphasis mainly on design of services and fares)
- operational (ensuring the service provision in the market according to goals)

### 3. The Economic Impacts of Competitive Tendering for Service Provision from Authority's Perspective

The most discussed issue related to introduction of competitive tendering in area of procuring services is whether the introduction brings cost savings to competent authorities in a majority of cases. It should be noted that there are differences in considering of cost decrease after the first round of competitive tendering and during subsequent rounds. Table 1 displays cost savings in relation with the first round of competitive tendering; this means the first situation after transformation from direct award of contracts to processes of competitive tendering. The most of analyzed contracts represented gross cost contracts which are also used in the Slovak Republic for direct awarded contract (e.g. London, Helsinki, Stockholm, and Helsingborg). For some gross cost contracts, there were indicated additional payments related to service quality (Helsinki, Copenhagen) or patronage (Perth). The net cost contracts were recorded in the Netherlands. The contract period was in the range of 4 to 6 years. And cost savings were in the range of 8 to 54 %. Furthermore, there were recorded following changes:

- increase service quality and their scope
- decrease of fares
- decrease age of vehicles

State	Town	Initial rounds of competitive tendering	Unit cost savings
Great Britain	London	1985 - 2000	51%
	Rest of GB	1986 - 1999	54%
Norway	Lillehammer	1994	21%
Sweden	Stockholm	1989	20 % - 32 %
	Helsingborg	1992	27%
Finland	Helsinki	1995	17 % - 34 %
Denmark	Copenhagen	1990 - 2002	24 %
Netherlands	Amersfoort	2002	37 %
Italy	Rome	2001	8 %
Australia	Perth	1995 - 1998	22 %

**Tab. 1.** Summary of cost savings in the first rounds of competitive tendering [Own processing of author according to 3]

Experience with subsequent rounds of competitive tendering did not bring as positive benefits in cost savings as in the first rounds. The results were usually increase of unit costs and tender prices compared to situation from the first rounds (Table 2). The increase could be associated with increased demands on service quality that were included in contract, e.g. use of low-floor buses or lower age of vehicles. Also, it could be attributed to better experience of bidders while estimating costs and submitting bids. Last but not least, inflation, labor costs and fuel prices have influence in this area.

### 4. Conclusion

Based on experience of transformation from service provision on monopoly basis (direct award of contracts) to competitive tendering, it can be concluded that there are still cost savings related to competitive tendering despite slightly increase of costs in subsequent rounds compared to the first round. The measure of success of a mechanism used to procure the service provision in public interest is not only achieved cost savings but also increasing in patronage. In many cases, there are also recorded positive changes in scope of services provided.

State	Town	Subsequent rounds of competitive tendering	Increase compared to the 1. rounds
Great Britain	London	2000 - 2001	58 % - 63 %
	Rest of VB	1998 -2002	10 % - 20 % pa
Norway	Lillehammer	1996 - 2000	45 %
		2000 - 2001	33 %
Finland	Helsinki	1997 - 1998	1 % - 3 %
		2000 - 2001	9 % - 15
Denmark	Copenhagen	1990 - 2003	-13%

**Tab. 2.** Summary of cost savings in subsequent rounds of competitive tendering [Own processing of author according to 3]

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## Dynamic Pricing Model in the Passenger Air Transport

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**Abstract.** The tariff structure is a tool of a carrier to influence his profit and to react on competitors respectively. It is a strategically planned sophisticated system of offered seat capacity for specific prices depending on many variables. The tariff structure has considerably changed in last years, above all as a consequence of the entry of low cost carriers.

**Keywords:** passenger air transport, demand, fare structure, forecasting, GDP, pricing model

### 1. Introduction

As seen historically, air transport is a growth industry as proved by its resilience to external shocks. The several exogenous events it has faced recent years had an impact in the short-term, but did not prevent air traffic from recovering its long-term growth trend.

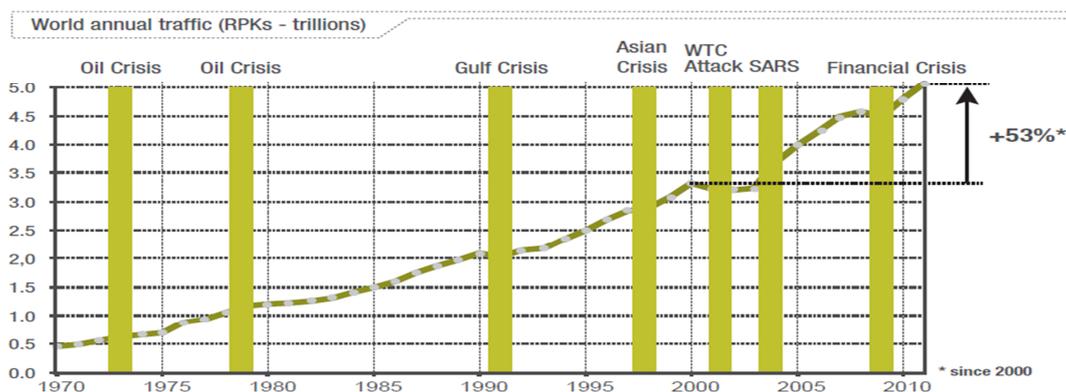


Fig. 1: Air travel has proved to be resilient to external shocks (source: IATA, ICAO, Airbus)

For example, the 1990 – 1991 Gulf war provoked a -2,9% decrease in world traffic, expressed in RPKs (Revenue Passenger Kilometres). The 1998 Asian crisis slowed the world traffic growth down to 1.8%. Last decade (2000-2011) had several very pronounced exogenous shocks: the 2001 terrorist attacks in the US (-2.9% RPKs in 2001, -0.5% in 2002), the 2003 SARS respiratory disease (+1.3% RPK in 2003), and finally the 2008-2009 Financial crisis (+2% RPK in 2008, and -2% RPK in 2009). All these events did not prevent passenger traffic from increasing by 53% over the period of 2000-2011 period. People definitely want and need to fly.

#### 1.1. Air traffic growth factors

Growth over the last 40 years was enabled by various factors:

- **Demographic evolution**, with both greater population and especially greater urban populations.
- **Increased wealth**, in parallel with the development of a middle-class in many countries

- **Progressive liberalization of air transport**, which permitted the creation of the low-cost business model. This in turn provoked the reaction of traditional airlines, which improved the efficiency of their operations. The overall effect was decrease of the airlines unit cost (average cost per RPK), which itself has translated into a decrease in the average ticket price over time.
- **Globalisation**: Allowing increased world connectivity of people as well as their overall increased need and ability to travel

From a forecast perspective, passenger air traffic is driven by two main factors:

- **Global economic activity**. Considering only the GDP at a worldwide level, an increase of this indicator translates into an increase of global wealth, which increases people's propensity to travel. Among the other macroeconomic activity data, we also look at Exports, Imports, Disposable Income, Private Consumption, Unemployment Rate, Consumer Price Index, Oil Prices, etc.
- **The price of travel**. Everything else being equal, a decrease in the average price relaxes the consumers' budget constraints and makes more people economically able to fly. It is estimated that the price elasticity of passenger air traffic is around -0.6 at world level, meaning that if the average price decreases by 1% then the air traffic is expected to increase by 0.6%. [1]

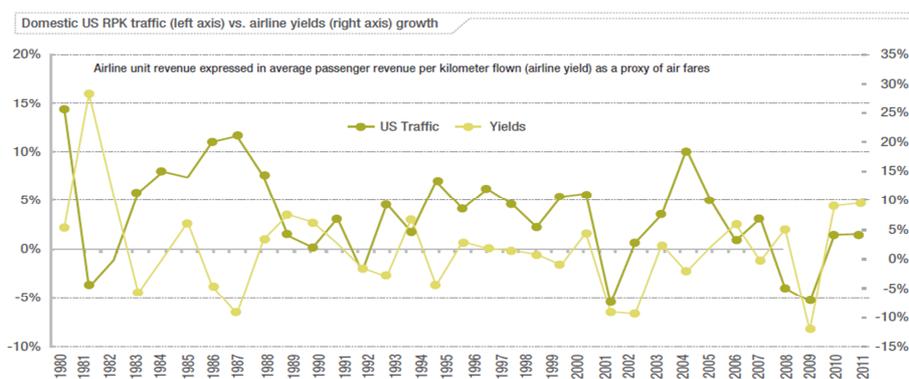


Fig. 2: Air traffic is correlated to air fares (source: IATA, ICAO, Airbus)

## 2. New Dynamic Price Model for standard airlines

On the basis of the above text, it is clear that price level or tariff structures are one of the main pillars gainful airlines. For determining a right tariff structure is using the Revenue management systems (RMSs). It is tool to micromanage seat availability at different prices: pricing and revenue management have increasingly been used together to maximize revenue capture on a departure-by-departure, different market segments with ticket conditions and constrained seat availability in an attempt to prevent price-inelastic customers buying fares set below their willingness to pay.[2]

The basic division of tariff is:

- **Pricing differences between cabins**. The difference based on onboard class (economy, upper economy, business, first class) or we can understand as differential pricing based on production costs associated with cabins services. For example high standards of inflight service and associated ground attributes (priority check-in, baggage allowance, lounge access etc.) for business or first class are so much higher than economy class.
- **Pricing differences within cabins**. It is right place for RMSs which allocate seats within each cabin to different booking classes: the highest booking classes usually contain full, on-demand, unrestricted fares, whilst lower booking classes contain

discounted fares which typically been offered subject to progressively tighter restrictions as the depth of the discount increases.

**But the main question is whether different fares in the same cabin carrying different booking conditions or usage restrictions do indeed represent different products with different production costs and also how many booking class is really necessary.**

## 2.1. The basic principle of the New dynamic pricing model for standard airline

Standard traffic structure contains around 20 booking classes for the Economy class with different price level and conditions but based on the Integrated Revenue Management decisions had been made 6 months ago. The fare levels and conditions were primary depend on the price management combine with the route management decisions and respected some airline politics for the zone but did not respect the right demand on real time.

The Real Time Display Pricing (RTDP) model is reducing the traffic structure up to 8 classes and they are conditioned on information in the request as on time as possible. Also a very important change for calculate the fare is the partition for the return tickets for the 2 separated fares. It means you can combine two different price levels and make your fare more interesting for the costumer.

The RTDP use a mathematic model system working with a several variable data, for example place of booking, conjunction flight, inventory situation, competing offer, fare rules, fare adjustment, price level, costs cover etc. Also we can talk about so-called “a seamless request reveals information” system.



Fig. 3: The RTDP role in the New Dynamic Pricing Model (source: author)

For the using of RTDP i.e. right fare structure determining you need to know the solid market segmentation. You have to know, which fare type or levels are the pillar, and the minimum price level depend on PLF (Passenger Load Factor) for the whole costs cover for the mentioned flight. The perfect segmentation: forecasting independent bookings per class would be sufficient to calculate bid price. How we can calculate right bid price?

**FARE – FARE MODIFIER = BID PRICE (fare modifier depends on elasticity)**

The price discrimination effected via 3 basic categories:

1. Itinerary and time booking (advance purchase, min stay, season, weekday etc.)
2. Passenger segment (tour operator package, seamen, student etc.)
3. Flexibility, additional services (rebooking, refund, bundling with ancillaries)

Category 1 and 2 can be coded onto availability:

Category 3 implemented according the new fare structure: dynamic price for each offered booking classes. Fare adjustment can be calculated from demand forecast considering choice behavior via the efficient frontier construction, usually a too fine grained segmentation. Need to extract important features: Customer segmentation.

## 2.2. Demand Forecast – Costumer Segmentation

The fare structure consists of two basic fare families. Each fare family has the same set of restrictions (within a family price is the only difference). For example “f” family fare as the flex

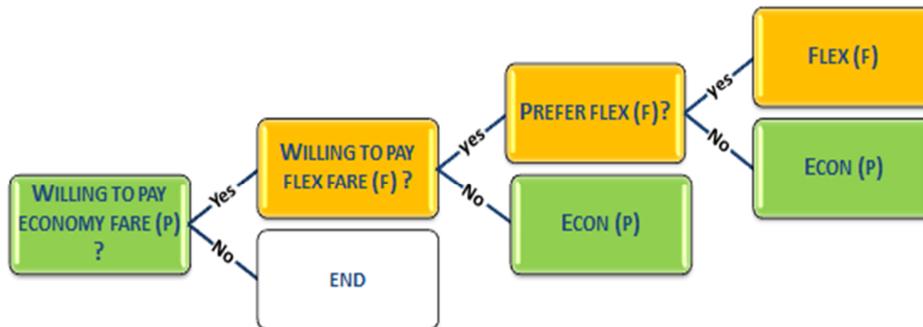
fare and “p” family fare as the economy fare. Both mentioned fare families consists up to 4 booking classes. The main target for model: **MAX TOTAL REVENUE REQUIRES**

Forecasting:

- Demand model that for any policy (p,f) predicts the demand in economy and flex

Optimization:

- Determine the set of efficient policies (p,f)
- The ordering sequence of the policies
- Bidprice for the legs



**Fig. 4:** Forecasting model for determine the fare structure (source: autor)

Also you can use for example Bellmann recursion formula or Marginal Revenue Transformation, but will produce same bid-price. Sometime the PODS Simulation setup model is using for his better Hybrid Forecasting possibilities. The PODS Simulations can also count with the PLF (Passenger Load Factors), price and product demand or booking class mix. But the final conclusion in simple is:

$$\begin{aligned}
 \text{TOTAL DEMAND:} & \quad Q = dflex(f,p) + decon(f,p) \\
 \text{TOTAL REVENUE:} & \quad TR = f \times dflex(f,p) + p \times decon(f,p)
 \end{aligned}
 \tag{1}$$

### 3. Conclusion

Classic airlines market segmentation consist six types or groups of airlines: Global Network, Major Network, Small Network, Low-Cost, Charter, Regional and Affiliate. Global Network airlines will be the largest in 2031, keeping a share of traffic of 59%, slightly down from 60% in 2011, by the IATA 20-years Passenger Traffic Forecast. Low-cost carriers will gain the most market share, from 15% to 20%, thanks to the dynamics of the American, European and Asian low-cost carriers and as a consequence of ongoing liberalization of air transport all over the world. [1]

So, the standard airline managements still are looking for new tools to be more competitive to the low-cost and fare structure change must be used as the first step on this exhausting way. Fare structure will evolve towards fare families driven customers (changes in corporate travel policies) airline and competitors.

Review of the fare adjustment theory:

- Fare adjustment theory introduces transformation is a tool for the New Dynamic Price Model that allows traditional fare booking class systems change to for fare families.
- Efficient conditions are nested for fare families (price level, availability, inventory etc.)

Application to fare families:

- Closing flex classes while keeping lower economy classes open
- Offer depending on time frame, competition and inventory by local market conditions
- Policies shift in class sets on remaining capacity

- Fare family forecasting achieves gain revenue

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## Competitive Advantage Evaluation of Polish Post

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**Abstract.** This paper presents the results of a research on the assessment of postal services, conducted by the author in the segment of institutional buyers. The questionnaire was anonymous. The survey was conducted between 20 November 2011 and 22 December 2011, on the population of entities sending large amounts of mail (letters and packages). A total of 674 subjects were selected from the top rankings of the largest administrative entities. 57 responses were obtained, all of which were valid.

**Keywords:** postal services, postal operator, competitive advantage

### 1. Introduction

The main task in determining the postal operator's competitive advantage is to find the answers to the following questions:

- Which elements influence the choice of a postal operator?
- To what extent are the postal operator's services compatible with the buyer's preferences?
- How buyers evaluate the offer against the operator's competitors and their activities?

### 2. The Results of Survey on the Competitive Advantage of the Polish Post

The study showed that the Polish Post, despite its strong market position, is only partially able to compete on the open market. Its strongest advantages are: mail delivery to each recipient in the country, a wide range of services, benefits to basic services, the availability of the branch network and post boxes, regularity of service, visual identification of the company. However, this is a fairly narrow range of assets (examined were 42 factors) since in less than a year the company will have to work in a fully liberalized market. The ranking of features of competition instruments due to their importance for the institutional buyers are presented in Table 1.

Lp.	Element	Weight	Instrument of competition a feature is assigned to	public postal operator's competitive advantage or flaw
1.	Quick response to customer needs	4,99	OK	flaw
2.	Shipping safety	4,92	J	flaw
3.	Adapting to customer expectations	4,91	OK	flaw
4.	Matching the needs of business buyers	4,9	A	flaw
5.	reliability	4,89	J	flaw
6.	price levels	4,82	C	flaw
7.	additional services (eg order, cash)	4,81	A	advantage
8.	Delivery to any address in the country	4,77	D	advantage
9.	Simplified access to the operator for business customers	4,76	J	advantage
10.	Timeliness of delivery	4,75	J	flaw

11.	communication	4,74	OK	flaw
12.	The effectiveness of service	4,72	J	flaw
13.	courtesy	4,72	OK	flaw
14.	knowledge of the offer	4,7	OK	flaw
15.	The ability to customize services to the particular customer's needs	4,63	A	flaw
16.	Speed	4,63	J	flaw
17.	simple procedures	4,63	OK	flaw
18.	The complexity of the needs met by the service	4,54	A	advantage
19.	price stability	4,54	C	advantage
20.	accuracy	4,54	OK	flaw
21.	Matching services to individual customer's needs	4,45	A	flaw
22.	discount Policy	4,36	C	flaw
23.	The regularity of service	4,32	D	advantage
24.	price negotiations	4,27	C	flaw
25.	Number of facilities	4,27	D	advantage
26.	Time of delivery	4,24	D	flaw
27.	Availability of facilities and mailboxes	4,22	J	advantage
28.	The use of telecommunications technology in distribution of shipments	4,19	D	flaw
29.	Comprehensive identification (visualization of the company)	4,18	P	advantage
30.	Number of services	4,09	A	advantage
31.	Number of postboxes	4,01	D	advantage
32.	Way and time of billing for services	3,90	C	flaw
33.	Access to other services in operator's facilities	3,66	D	advantage
34.	Seasonal price reductions	3,47	C	advantage
35.	providing both postal services and other services	3,42	A	advantage
36.	Conditioning prices on mail preparation	3,18	C	flaw
37.	Public relations (media relations, customer events and actions to the public)	3,09	P	flaw
38.	Advertisement	3,02	P	flaw
39.	Sponsoring	2,72	P	flaw
40.	Acquisition (personal sales)	2,63	P	flaw
41.	Participation in trade fairs	2,45	P	flaw
42.	Further promotion (eg. so-called. Freebies, contests, lower prices)	2,38	P	flaw

Note: A – range of postal services, J – quality of postal services, C – pricing policy, D – distribution, P – promotion, OK – customer service.

Tab. 1. The ranking of elements of competition instruments due to their importance for the institutional buyers

Source: own.

The ranking of elements of competition instruments indicates that for the surveyed institutional clients most important are parameters associated with the quality of postal services (eg four parameters in the top ten), customer service and range of postal services (the two elements for each in the top ten). Price levels came in sixth place, and the service throughout the country - in the eighth. Particularly noteworthy is a result of promotion items, which are particularly unimportant for customers - six of the seven elements of the promotion was on the last places in the ranking.

Operators competing with the Polish Post are already able to adapt to the needs of customers. The threat of the Polish Post position in the traditional market for postal services is real and it is expected that the fight for a significant part of the market (especially the letter service) is yet to come. This can mean significant benefits for customers in the long term, especially in the form of price reductions and improvement of service quality of the both public and competing operators.

The consumer satisfaction index (CSI) has been used for a summary of research. The following issues were possible to determine:

- what are the components of competitive instruments and benefits expected by the buyer from the postal operator,
  - what is the importance of these elements for the buyer,
- as well as the assessment of the implementation level of various instruments and its comparison with the surveyed entities' expectations.

The CSI method means the evaluation of offers made by individual companies or entire industries in relation to the ideal offer according to the respondents' point of view. The result of the analysis is understanding the degree of satisfaction of the respondents (mostly) buyers with the current offer of postal operators in relation to the services provided.

In order to assess the customers' satisfaction with the postal services, six basic competition instruments of postal operators have been used by the author of the study: range of services, quality, pricing policy, distribution, promotion, customer service. This set of instruments allows complete evaluation of the company's offer in the client's opinion.

CSI - customer satisfaction index - is the quotient of the sum of the products of importance ranks and corresponding ratings of individual components of the competition instruments' implementation and the sum of the products validity ranks and maximum ratings (equation 1).

$$CSI = \frac{\sum_{i=1}^n R_i \times O_i}{\sum_{i=1}^n R_i \times O_{\max}} \quad (1)$$

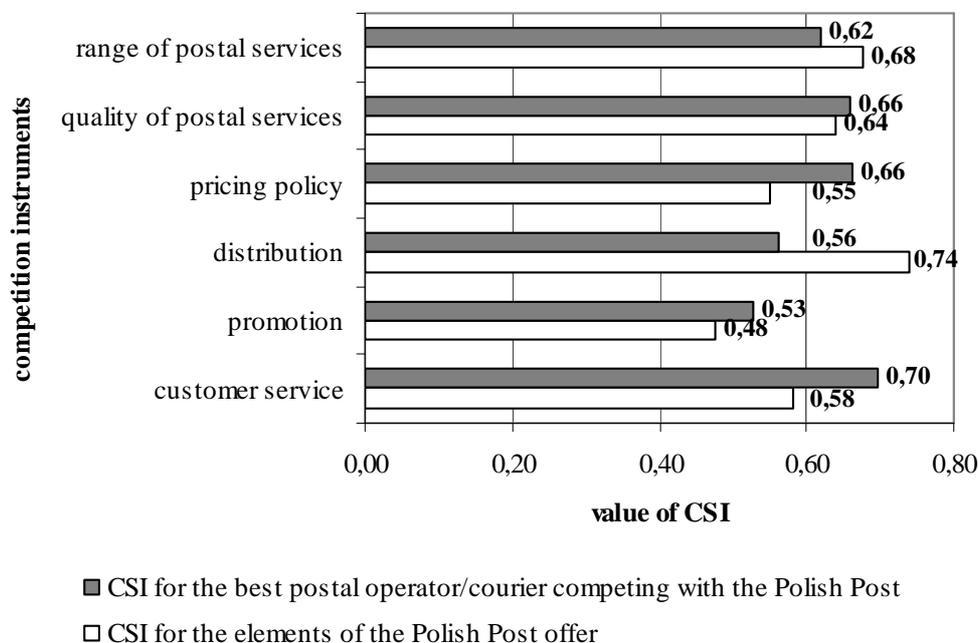
where:

R<sub>i</sub> - rank importance the i-th element of postal service

O<sub>i</sub> - evaluation of the implementation of the i-th element of postal service

O<sub>max</sub> - maximum evaluation of the implementation of the i-th element of postal service (5 points in the study).

The CSI for each of the instruments shown in Figure 1:



Note: The implementation of the CSI scale from 0 - lack of satisfaction to 1 - the maximum satisfaction of customers.

Fig. 1 The value of the customer satisfaction index (CSI) for the elements of the Polish Post offer and the best postal operator/courier competing with the Polish Post according to the respondents.

Source: own.

Based on this measurement, it can be said that the public operator has the advantage of competition in the two instruments: range of services and distribution. The other four instruments are rated by the surveyed customers as worse than by the competitors. Particularly significant are three of those instruments: quality, pricing policy and customer service. Many of their elements were placed in the top ten in the ranking of importance (up to seven features is in the top ten). This is an important observation because of the fact that the Polish Post, thanks to its monopoly till the end of 2012, as sole operator handled 74.4% of the total market shipments of items (with the exception of unaddressed mails) and acquires 52.7% of the revenue of the postal market (excluding segment unaddressed mails) - calculations based on data from the Office of Electronic Communications. For other shipments and revenue Polish Post competes with the other operators. After the abolition of its legal monopoly, the public postal operator has to compete for all the shipments. In case of possible decline in revenues from the sale of services, its internal situation and competitive position will substantially worsen.

### 3. Conclusion

Based on the study it can be concluded that:

- First of all - in terms of business clients - elements of the range of postal services offered by the public operator are implemented well below expectations. In order to strengthen the market position it is necessary to adapt services to the needs of specific customer groups, and even the creation of tailor-made services for single clients.
- Quality of service is perceived by customers as a very important factor. In practice it contributes little to building a competitive advantage at a low level. Public operator's competitors are assessed higher in this area than the Polish Post.
- The pricing policy pursued by the public postal operator is assessed as much less satisfying than competitors' pricing policies. What matters is not only the amount of charges for services, but also the possibility of negotiation and rebates.
- Distribution is the strongest point of public postal operator. However, it cannot continuously offer only the traditional ways of collecting and deliveries. Flexibility of service system and its adaptation to the senders' and receivers' expectations in terms of delivery time and the use of telecommunications technology for the contact with service users is an important factor contributing to the reduction of the entire distribution system evaluation.
- Promotion is an instrument that has a moderate impact on the assessment of the advantages of the public postal operator's offer.
- Customer service is rated as a very important instrument of competition. However, its use by the Polish Post deviates significantly from the standards used by competitors.
- Knowledge of the most important components of competition instruments should more determine the directions of restructuring the public postal operator and more closely link its transformations to the market goals.



## Costs of quality in company and their measurement

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**Abstract.** This paper deals about quality costs in company which becomes frequently asked question especially in case when companies facing of challenge to implementing one of the many qualitative tools into their processes. There is still dilemma where companies can save some money or what is possibility of quantifying costs. The next relevant question is what are possibilities of measuring costs reduction once quality process is set up. Next in the paper it is described most used ways of defining value during quality process running and options of their quantifying.

**Keywords:** quality, costs, company, saving, measuring process.

### 1. Introduction

The quality requirements are increasing worldwide and it is also necessary to continue to increase demands on quality management. This corresponds to the current development management activities in this area, ranging from quality assurance only for anonymous users (on a shelf) when the quality was only a supporting part in the production of secondary value, to the latest management systems such as TQM - Total Quality Management and TPM - Total Prevention Maintenance when required by the overall quality and reliability of products at a level that completely minimizes the need for future maintenance by the user. The aim of the novel concept of quality management is to expand the quality assurance of the entire enterprise for all its sections and at all stages of its operations.

In this times of massive enforcement of quality management implementation into companies processes, there is still rising demand after statistical statement of amount of costs of quality.

Costs do not consist from only producing and fixing failures; a high amount of costs comes from ensuring that good products are produced. Cost of quality is more comprehensive concept covering the cost of poor quality and the cost of good quality. In short, any cost that would not have been expended if quality were perfect contributes to the cost of quality. [3]

#### 1.1. Quality control methods

The mission of the technical production quality control is to control, analyze and evaluate the quality of the company from the entry of raw materials (access control), through manufacturing operations (production resp. process controls) to the output of finished goods (output control). The underlying assumption of perfect quality control is unity and accuracy of values and measurement units. Technical control methods include a wide range of methods from Ishikawa diagram quality through Pareto analysis, ABC method, PERT diagram, histogram, outline, correlation chart, followed by many exact methods and high quality control.

## 1.2. Quality costs classification

Classification of costs related to quality can be divided into few categories according the area of interest:

a) *classic breakdown:*

- prevention costs, to prevent poor quality,
- the cost of poor quality production (the cost of internal and external errors),
- the cost of quality control.

b) *according to the stages and sub-stages of new products:*

- the cost of the product concept of quality,
- the costs of designing a new product prototype,
- the cost of making the product etc..

c) *the stages of quality management:*

- the cost of the forecasts of quality parameters,
- the cost of marketing research quality,
- the cost of research and development work quality,
- the cost of the design, technological and other preparation, and more.

d) *triple understanding as:*

- costs associated with the production of the manufacturer's quality assurance,
- user costs,
- social cost to the environment [2].

As defined by Philip B. Crosby in his book **Quality Is Free**, the cost of quality has two main components: the cost of good quality (or the cost of conformance) and the cost of poor quality (or the cost of non-conformance). This components can be divided into group as in following figure 1..

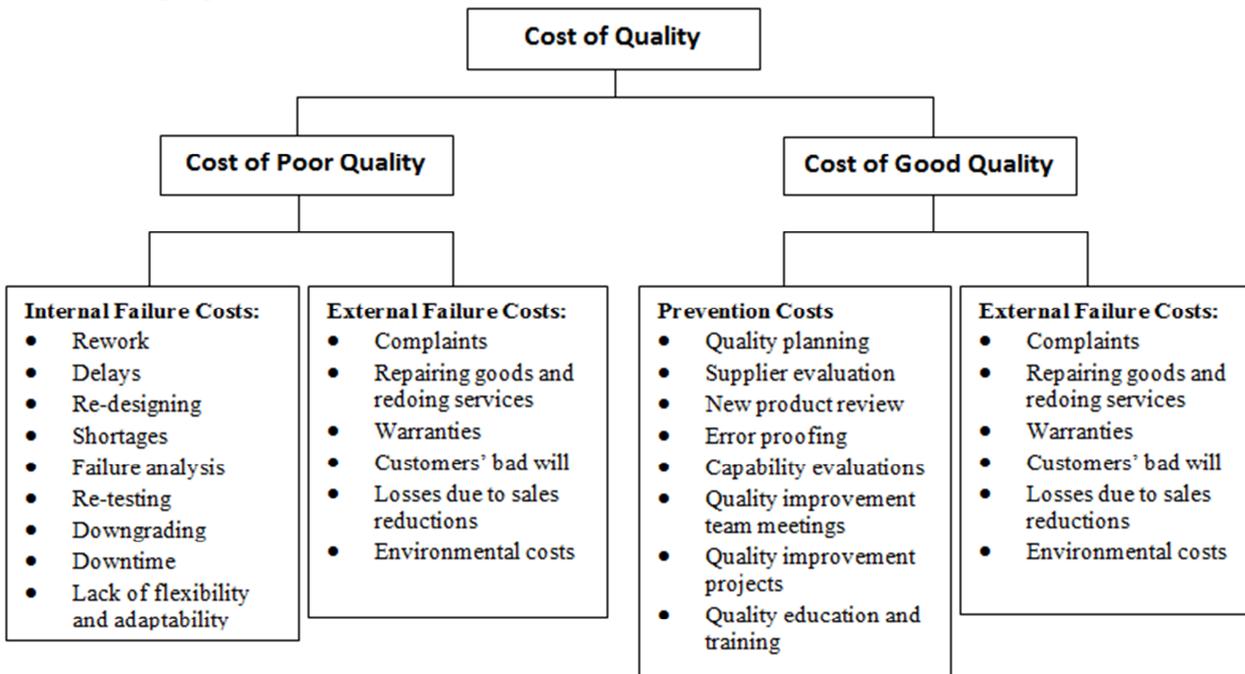


Fig. 1. Costs of poor and good quality [6]

## 2. Quality measurement in company

In many companies are commonly used basic calculations of quality cost through the simple summarizing of individual items in accounting as was mentioned in figure 1.. But in international big companies is necessary to use more complex methods working with set of indexes, rates and statistical forecasts. The next subhead deal with few main way of index and rate evaluating of quality costs.

### 2.1. Quality cost and defect rate calculation

One of the basic index used for evaluation of cost is “Quality cost index (QCI)”, by which can be statistically followed up progress of quality cost in time in relation with defectiveness in the production. The QCI is counted as divide of number of product defects with sum of costs related to quality assurance:

$$QCI = \frac{\text{sum of defects}}{\text{quality costs}} \quad (1)$$

(1) can be used for one main QCI and also for sub-indexes, which could be counted for separate products or costs.

The next most important indexes are AR - annual rate and QR – quarter rate, which are counted as divide of number of defects from the field (from customers) with sum of sold products (on the market):

$$AR = \frac{\text{sum of defects from the field}}{\text{quality costssum of sold products (sales)}} \quad (2)$$

$$QR = \frac{\text{sum of defects from the field by quarter}}{\text{quality costssum of sold products by quarter}} \quad (3)$$

The biggest advantage of indexes (2), (3) is ability to follow up seasonality or defectiveness in different areas of sale.

Through the separate indexes can be easily followed up progress of each product so is possible immediately identify most of defective and problematic products.

## 3. Conclusion

The main goal of every organization should be continual decreasing of mentioned indexes, what will have future impact on decreasing quality costs in separate processes and defective products in production.

Certainly is still necessary to pay attention to deeper analysis of partial quality costs together with continual decreasing quality costs by regularly audits independently of progress of indexes.

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## **Liability for the Data Stated in the Consignment Note Being Subject to the CMR Convention**

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**Abstract.** This contribution is devoted to the analysis of the consignor's and carrier's liability issue pursuant to Article 7 of the CMR Convention. The consignor is liable for damage to the consignment due to the inaccuracy or inadequacy of consignment note data filled in either by the consignor or by the carrier acting on behalf of the consignor for the completion of the consignment note. Pursuant to Article 7 para. 3 of the CMR Convention, the carrier is liable for the dereliction of his/her duty to indicate in the consignment note that the shipping is subject to, notwithstanding any clause to the contrary, the provisions of the CMR Convention.

**Keywords:** CMR Convention, consignor's liability, carrier's liability, consignment note, compensation for damage.

### **1. INTRODUCTION**

The most common case of carrier's liability in the international road transport is the liability for the partial or total non-delivery of the consignment, its damage or for any exceeding of delivery period. The CMR Convention contains a substantial part regulating this liability as well as the possibilities of discharging of liability and extent of compensation for damage in cases where the carrier is liable for the damage. This rule is mandatory, which means that the parties cannot, in any case within their contractual freedom, divert from this Convention or refer to national law.

In addition to the abovementioned liability for loss, damage or delay in the consignment delivery, the CMR Convention provides additional cases of the carrier's and consignor's liability, which shall be considered as legally binding in relation to the possibilities of the transport contract parties to agree upon such liability in other way or in relation to supportive use of the applicable national law. This category of the special liabilities of the transport contract parties contains also the liability for the data stated in the consignment note in accordance with Article 7 of the CMR Convention, which is the subject of this contribution.

### **2. CONSIGNOR'S LIABILITY UNDER ARTICLE 7 OF THE CMR CONVENTION**

Article 7 of the CMR Convention regulates the consignor's liability in relation to carrier or other persons for the provided data or for the data stated directly in the consignment note.

#### **2.1 The consignor's liability within the scope of Article 7 para.1 of the CMR Convention**

Article 7 para.1 of the CMR Convention establishes the consignor's liability in the event that the data stated in the consignment note are inaccurate or inadequate, and it is irrelevant whether the data were filled in the consignment note by the consignor or by another person acting on behalf of the consignor's instructions. The CMR Convention does not directly identify the person, who shall draw the consignment note and complete the required data. Nevertheless, it arises from Article 7 para.1 of the CMR Convention that the consignor is responsible for the data stated in the

consignment note or for drawing of such document. It is logical whereas the consignor is generally aware of all data necessary to fill in to the consignment note which are related to the content of the consignment, to the consignee or to others. It may happen that the data are filled in by the carrier or the truck driver when receiving the consignment for transport purposes or after the consignment loading on a truck according the information received from the consignor. In this case, the consignor shall not be relieved of liability; he/she is on the contrary liable for the data on the consignment characteristics, the consignee and on the others which he/she knows best.<sup>1</sup>The consignor is fully liable for any inaccuracies in the data provided to the carrier or referred in the consignment note, as directly resulted from the nature of the contractual obligation, irrespective of the consignor's fault. If the consignor provides inaccurate data to the carrier and the carrier fills in these data in the consignment note on behalf of the consignor and eventually signs it, the carrier may consequently claim compensation for damage against the consignor, however not according to the CMR Convention but under the national law of the State concerned.

The data that shall be contained in the consignment note are included in Article 6 of the CMR Convention. To be precise, it should be pointed out that the consignor is not liable for all data stated in Article 6 of the CMR Convention.

According to the CMR Convention, consignor is liable for the following particulars:

- Consignor's name and address - it should be the same as the consignor's name and address in the transport contract. There is a common practice in the Slovak Republic that the carriers fill in to the consignment note the data of the person from whom the consignment for transport purposes was received instead of the consignor's data. It is often the name and the address of the seller's storage where the consignment was stored till the moment of shipping. This fact then causes difficulties in case of the pending lawsuits;
- The place and the date of the consignment receiving and the place designated for delivery - it is important to point out, that loading place or place of the consignment receiving shall be identical with the address of the consignor, otherwise it cannot be contained in the consignment note. The place designated for the delivery shall be specified in a manner allowing delivery without any obstacles;
- The consignee's name and address – may be the consignee's address or it may be the address of his/her store;
- The usual denomination of the shipping goods nature and the type of package, in the case of dangerous goods - their generally recognised labels. Mostly the common denomination of things according to the Customs Tariff is used<sup>2</sup>;
- The number of the packages and their special marks and numbers;
- The gross weight of the consignment or the quantity of goods otherwise expressed;
- The instructions necessary for Customs and other official proceedings.

As it is indicated in Article 6 para.2 of the CMR Convention, the consignment note shall contain other required data, but only if the content of these data has resulted from the previous agreement between the parties prior to such entry in the consignment note, respectively if the consignor carries out other instructions against the carrier, anticipated in Article 6 para.2 of the CMR Convention. As mentioned above, the consignor is not liable for all the particulars listed in Article 6 para.2 of the CMR Convention, but only for the following:

- Prohibition of transshipment;
- The amount of the cash on delivery charges, which shall be requested when the consignment is delivered;
- The indication of the consignment value and the amount representing personal interest in delivery;
- The consignor's instructions to the carrier regarding insurance of the consignment;

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<sup>1</sup> Judgement of Federal Court of Justice of Germany, 13.7.2000 – 1ZR 156/98

<sup>2</sup> Judgement of the Higher Regional Court Düsseldorf, 23.1.1992 – 18U 127/91

- The contract period within which the carriage shall be carried out.

Pursuant to the wording of Article 6 of the CMR Convention, the data filled in the consignment note are divided into 3 groups: obligatory (Article 6 para.1 of the CMR Convention), required in the case of the agreement of the parties (Article 6 para.2 of the CMR Convention) or there may be data which content is not required, but parties may deem them as useful regarding the means of transport, nature of goods or other circumstances (Article 6 para.3 CMR Convention). In the latter case, more useful data can be taken into account in case that one of the contract parties considers them as important to enter them into the consignment note e.g. arbitration clause entered into the consignment note.

Unless all data required in accordance with Article 7 para.1 of the CMR Convention are entered in the consignment note, there is no risk for the carrier and no liability will be given to the consignor. In this case, the consignment note is absent as a whole, or due to inaccurate data it cannot be used or it cannot be considered as a valid consignment note. The carrier generally refuses to carry out the shipping because it is not even possible due to lack of required data.<sup>3</sup> If the required data have been provided otherwise, e.g. specified in documents accompanying the consignment note, it is necessary to explore the sufficiency of the data contained in those documents in accordance with the national law of the State concerned. This is often the case when the parties agree on the certain conditions of transport which are not laid down in the consignment note. Even in this case, the consignor's liability is given, although the burden of proof is on the carrier who shall prove what data had been provided by the consignor. Another situation is when data are filled in by a truck driver on behalf of the consignor when receiving the consignment. Then, there is a link of prospective claims for wrong shipping with claims for compensation of damages caused by inaccurately filed data. The carrier is responsible even if he/she used, for the purpose of the transport performance, the entrusted carrier who fulfilled the consignment note incorrectly thus he/she performed the shipping inaccurately. In accordance with Article 8 para.1 point a) of the CMR Convention, the carrier, when receiving the consignment for the shipping, has the obligation to revise the accuracy of the data on number of packages and their marks and figures. If these data are inaccurate, the carrier's liability is limited according to the specific circumstances. For instance, if the sender stated the gross weight of the consignment inaccurately, he/she takes full responsibility for stated data.

The CMR Convention does not include the provisions about the extent of compensation or extent of consignor's liability for inaccurate data stated in the consignment note. These facts may tend to unlimited liability for damages and expenses in such a case. The consignor's liability is undoubtedly given in cases when the consignor enters data by himself/herself or provides the carrier with the inaccurate or incomplete data and based on these data the shipping is performed. The same situation arises when the carrier enters data according to consignor's direct instruction or request. In this case, the consignor shall be liable to the carrier as if the consignor entered data on his/her own. If the third party provided the data, the carrier shall demonstrate that the third person had acted on behalf of the consignor and thus the carrier's liability will not be given.

## **2.2 How can the carrier discharge of liability according to Article 7 para.2 of the CMR Convention?**

Article 7 para.2 of the CMR Convention indicates the legal presumption that the carrier, performing on behalf of the consignor, unless the contrary is proved, states in the consignment note the abovementioned data at the request of the consignor. This fact is, however, necessary to properly demonstrate, namely that the carrier is authorized representative acting on behalf of the consignor. The complications could occur if the data were partly filled out by the consignor and partly by the carrier. It is presumed, as before, that the carrier has acted on behalf of the consignor who, in order to relieve of liability, shall rebut this presumption. Nevertheless, it will always be

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<sup>3</sup> Judgement of the Higher Regional Court, 13.12.1990 – 18U 142/90

mainly the carrier's liability to prove minimum implied consent of consignor to fill data in the consignment note.

### **3. THE CARRIER'S LIABILITY IN ACCORDANCE OF ARTICLE 7 OF THE CMR CONVENTION.**

According to Article 7 para.3 of the CMR Convention, if the consignment note does not contain the statement that the shipping is subject to the provisions of this Convention, called Paramount clause, the carrier is liable for all expenses and damages incurred due to the dereliction of the duty to state that statement in the consignment note. The carrier dispose of the most certain information about in what legal regime the shipping takes place therefore he shall make a statement in the consignment note that the CMR Convention shall be applied to the carriage. This statement is important to be indicate in the transport contract because in the event of a dispute brought before a court in a State which is not the Contracting Party to the CMR, the CMR Convention can be determined as an applicable law chosen by the transport contract parties. The dereliction or intentional omission of this statement in the consignment note leads to the application of another law and in the case of damage; the carrier is liable for damage incurred and expenses. This liability is objective.

The CMR Convention contains no provision as to the extent of carrier's liability and to the extent of the expenses and the compensation. Therefore according to the CMR Convention, the carrier's liability is unlimited.

The interesting fact is that under Article 7 para.3 of the CMR Convention, the carrier's liability is given when the CMR Convention is not applied in the Contracting Party State, but even when it is not applied in a Non-Contracting Party State. If there will be no application of the CMR Convention in the Contracting Party State because of the carrier's neglect of duty related to Article 7 para.3 of the CMR Convention and the damage will occur, the entitled person may demand, due to the carrier's fault, for the compensation, if causal nexus is to be proven. In this case, the position of entitled person is strengthened and there is a better chance to obtain full compensation. If there will be no application of the CMR Convention in a Non-Contracting Party State because of the carrier's neglect of duty related to Article 7 para.3 of the CMR Convention and the damage will occur, the position of entitled person will be considerably weakened because he/she will have to prove that when reference is made to the CMR Convention in the consignment note, the Non-Contracting Party State usually applies regulation and awards the compensation to a defendant under the CMR Convention. In practice, there may be instances where entitled person instead of claiming compensation for actual damage will apply directly for the compensation pursuant Article 7 para.3 of the CMR Convention. In this case, the decision of the court will be complicated. We cannot excluded the case when the lawsuit for damages is pending, not according to the applicable CMR Convention, and simultaneously another lawsuits is outstanding against the carrier in respect of the same amount, but based on the carrier's dereliction pursuant Article 7 para.3 of the CMR Convention.

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## Economy and urban space. Case of modern shopping structures

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**Abstract.** Economy can create a city and can take its life. New huge services, transport and industrial investments affect the urbanization processes, while collapse of major companies cause cities to shrink. The aim of this article is to present the results of a research on modern shopping structures in American and European cities. The creation of new shopping environment is primarily conditioned by economic factors. Modern shopping structures were developing mainly on two continents: Europe and North America. This new forms of shopping investments were a milestone in the development of trade. Thus they affected the landscapes of towns and cities. They swayed the balance between the city and suburbs and were also a competition to traditional stores. The most important is the fact that modern shopping structures influenced consumer behavior. It became not only a place of shopping but also a meeting point.

**Keywords:** modern shopping structure, transformation, economy, urban space

### 1. Introduction

Development of metropolis in the past, was an area determined by the development of railways, transport and heavy industry. Many nineteenth century industrial plants left mark on the urban structure of a city.

Nowadays important sectors are services and technologies. Especially important sector of economy for a twenty-first century city is trade. It applies both locally and globally. Changes in economy like: new act of law concerning commercial activity or influx of foreign capital are immediately apparent in the urban space. In the towns - in the form of stalls or traditional shops on the streets and in the region - in the form of international investment.

### 2. The importance of shopping environment in the urban structure of a city

The first documented commercial space are well-known Greek Agora and the Roman Forum. Their formation was determined by economic considerations. Due to the climate of Mediterranean region and the inability to illuminate rooms economic space had a special importance. It was a place which inhabitants used to procure food and other essential products. Agora was usually formed by the main communication routes or in close relation to the harbor [9]. A similar rule was used at the creation of commercial space in medieval cities. In cities there was a place appointed for trade. It was an important area because it would bring the most revenue to the city, allowed to control trade and it was an advertisement of the city. All of this aspects composed for the fact that the market was the busiest place [11].

The appearance of department stores in the XIX century was a milestone in the development of trade. Industrialization and the development of metropolises contributed to the emergence of a new form of trade. It should be noted that commercial buildings (which include department stores) were investments aimed at making money. Therefore, the architecture had to be not only functional but also appealing to the recipient [6]. Department stores were also innovative in respect of management, they were the first representatives of business. They have developed not only as a place of commerce but also as social events place [5]. Revolutionary changes in department stores

(compared to earlier forms of trade) are: they have first set fixed prices for their products and provided that information to customers. Moreover, the prices took into account relatively low margins, giving a big profit due to the huge amount of goods sold. Goods, which were bought in department stores could be exchanged [8]. In the nineteenth century in Paris nearly 400 department stores were in operation. The essence of department store was described by Nikolaus Pevsner in a funny way as: everything for sale, from elephant to pins in one place [10].

The urban space of the eighteenth century city has changed due to the emergence of a shopping arcade<sup>1</sup>. Reasons for appearance of a shopping arcade can be found in the economic and social situation of Paris<sup>2</sup> after the great French Revolution. Arcade was created and could develop quickly for the following reasons [12]:

- As a result of expropriation of church property in the city there were new areas for development.
- Trade (especially cloth) evolved. It needed new structures and sales organization.
- The number of inhabitants grew rapidly in cities. Society got wealthier, in addition, there were many changes in customs, especially in leisure.

Concurrently with shopping arcades and department stores an innovative form of shopping environment (in the late nineteenth century ) were chain stores. Nowadays chain stores have become the foundations for shopping centers. The development of chain stores was possible thanks to the development of rail and wheel transportation allowing for quick and easy distribution of goods. The first chain store was a tea room, owned by Thomas Lipton. It was opened in Glasgow in 1872, within 25 years the number of Thomas Lipton stores increased to 250 located throughout the United Kingdom.

### **3. Shopping malls - a revolution in the spatial structure of a city**

The development of new forms of shopping in the early twentieth century was influenced by many factors. First of all, it was the increase of private transport and the development of suburban areas also the number of inner-city areas to invest decreased. With respect to the rapid development of motorization - shopping center had to meet consumers' expectations providing convenient parking. The opportunity to buy everything in one place suited to a faster model of life in the early twentieth century. The first supermarkets were located on the outskirts of American cities, near large metropolises and transportation hubs. The industrialization of food processing, the possibility of long-term storage and packaging products also contributed to the development of supermarkets. Shelves could be filled with articles having a long expiration date. In addition supermarkets offer was supplemented with fresh products thanks to which modern and traditional retail stores coincided. Development of malls was also possible thanks to technological development: the applicability of air conditioning, ventilation and lighting. In addition, the development of new shopping environment was affected by factors not related to technology, such as first credit cards (the year 1920) and introduction of ATMs (1970) in shopping malls. Customers could forget about cash and give themselves up to the pleasure of consumption.

A modern shopping structure which affected the further development of the city was Northland Shopping Centre in Detroit, designed by Victor Gruen (1954). After the war the city grew faster than any other. Detroit has become the fifth largest city in the country. Company Hudson planned a 20-year development for decentralization of trade in the city, management has concluded that the development of suburban areas and the rapid population growth must be used to ensure company's future. Hudson dominated the market. Company knew that its customers were moving out of town

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<sup>1</sup> The term 'shopping arcade' or 'passage' mean a street with a glass roof. Such a street is surrounded on both sides by rows of shops and it connects two busy streets. Floors housed retail, offices, workshops and flats. Shopping arcade is a form of retail organizations. It is a public space on private land and a protection against weather.

<sup>2</sup> The first passage was built in Paris

and was going to chase them. Gruen studied the populations potential within 5 to 30 minutes by car (to planned mall localization). Thanks to that the first time a mall had appropriate size and number of parking places. New investment was a success - after three years the shopping center earned \$ 100 million, twice as much as expected. Unfortunately Northland ousted commercial activity from downtown Detroit old town. The city center moved to suburbs. Attractive neighborhood of shopping center attracted more residential and commercial investments. The center of Detroit was not attractive to investors due to the decreasing number of commercial activity [7]. Gruen stated that Northland could change America forever - he was close to the truth - the real revolution in trade came a few years later. The first closed shopping center - Dayton's Department Store, was built in 1956 in Edina's suburbs, Minneapolis.

In the 1990's popularity of shopping centers has dropped in the U.S. Some of them were not as attractive as in the 80's. Many investments were closed because of too little profit. It was the new spatial problem: how to develop the areas and abandoned buildings? Most of them were unsophisticated buildings located by major roads. One of the many shopping malls (converted to a different function) was Park Forest Centre in Chicago. This investment was converted into downtown shopping street with a variety of cultural and public functions. Some abandoned malls were adapted for different functions (not related to trade). Willingboro Center Plaza in New Jersey was converted into multi-functional urban center with a town hall and attractive public spaces [7].

#### **4. Modern shopping structures in European cities**

Europe struggling with uncontrolled inflation wanted to attract retailers who would offer their products at lower prices. The aim of this operation was to reverse the economic recession in 1980. Authorities were planning to expand the service sector so that workers who lost their job in the industrial sector could be hired in services. American shopping malls<sup>3</sup> gave a solution to the European financial problems. Thanks to improved distribution and sale of large quantities it was possible to reduce the prices. In the 1980s prices in markets and supermarkets were 20% lower than in small shops. Taxes collected from new shopping investments were entrusted to nearby cities and towns [4].

Local retailers imposed high margins while American retailers sold products at prices 30 to 70% lower than in small shops in town centers [1]. In this way, modern shopping structures were seen as economical saviors and customers were very pleased with competitive prices. Irresistible temptation for European client was not an architectural effect, but lower prices. The biggest changes of urban structures concerned the suburbs. Commercial activities slowly moved to the suburbs. Planning policy classified the cities' district in the order of trade. Larger number of stores were planned in the city center than in suburbs. Thus the development of trade was based on market rules only, not deliberate planning policy [2]. Local dealers were afraid of the competition from modern shopping centers. They organized protests, cooperated with politicians and environmentalists fearful of damage associated with the escalation of traffic in the vicinity. Every minor comments like: the declining number of traditional shops and ecological aspects merged into a bigger one: big-boxed architecture that standardizes the landscape of Europe [3].

This has disturbed the culture and tradition of urban structures. There was a conflict between the economy and the city's identity. Europeans struggling with American style of shopping were helpless in the light of financial mechanisms. The increase in economic was impossible without changes in urban structures. The emergence of fully commercialized modern shopping structures was a result of economic and social development.

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<sup>3</sup> American style shopping came to Europe in 1963 with the opening of the first hypermarket in France. It was a Carrefour that had many goods in their offer: food, clothes, household appliances, etc.

According to CBRE<sup>4</sup> researches there are currently a record number of commercial areas being built - 32 mln m<sup>2</sup> worldwide. 51 shopping centers were opened last year in Europe, with total area of 4,5 mln m<sup>2</sup>. The most dynamic European country is Turkey with 400'000 m<sup>2</sup> new sales area in 2012. Germany is in second place with 165,000 m<sup>2</sup>, followed by Poland and Italy - 140,000 m<sup>2</sup> each.

## 5. Summary

Urban landscape has changed as a consequence of modern shopping structures development, also the consumers behavior has changed. New investments were competing with traditional shops and as many of them can be described as a big-box architecture, nevertheless, there are some outstanding architectural buildings

Noteworthy is the development of modern shopping structures in such countries as the Czech Republic, Poland, Slovakia, Romania and Ukraine. Development of modern shopping structures were delayed due to the transformation, and they have appeared tens of years later than in Western Europe.

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<sup>4</sup> CBRE Shopping Centre Stock in Europe researches and analyzes data on the existing and being built shopping centers in Europe with an area above 10 000 m<sup>2</sup>.



## Scenarios in Terms of Performance Evaluation

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**Abstract.** It is very important to have well developed and realizable strategy. Companies are not able to perform well without it. Even if the strategy is well defined there can be some difficulties to execute the strategy. These difficulties can be diminished by the process of scenario planning. Steps how to proceed process of strategy formulation and execution is described in the article. At the other end of strategy, there is feedback about performance carried out by performance measurement system. This article is about strategy from the view of scenario planning, performance measurement and improvement. Process of performance evaluation is the best way for controlling of strategy and scenario implementation. For better understanding how scenario planning contributes to corporate performance, managerial tool Balanced Scorecard as evaluation system is mentioned.

**Keywords:** strategic planning and management, scenario planning, scenario performance evaluation, performance measurement

### 1. Introduction

The terms strategic planning and strategic management are often used interchangeably, but in fact they are not the same thing. Strategic planning is the process of clarifying mission and vision, defining major goals and objectives, and developing long-term strategies for moving a company into the future in a purposeful way and ensuring a high level of performance in the long run. Strategic management, in contrast, is the larger process that is responsible for the development of strategic plans, the implementation of strategic initiatives, and the ongoing evaluation of their effectiveness. Thus, strategic planning is a critical component or the cornerstone of strategic management, which is necessarily a more encompassing process. [3, p 159-160]

The need for accurate formulating and successful execution of the strategy requires reliable and easy to follow system of results measurement. This measurement system should provide a reflexion on correctness of strategy formulation and execution process. There exist various systems and for purpose of this article, Balanced Scorecard is chosen. As the formulation process of the strategy is described from the point of scenario planning, measurement system is aimed on scenario planning as well as on overall company's performance.

### 2. Scenarios and scenario planning

Scenario-based planning has emerged during the wars. One of the first representatives of this kind of thinking was Sun Tzu (722-481 BC) - Chinese military general, strategist and philosopher who is attached to the authorship of the book The Art of War. Some of the chapters were called: Planning, Planning of the attacks, Weaknesses and Strengths, Maneuvering, Variations, etc. Economic forecasts become a key tool towards the desired future. During the 60th years there were developed different approaches to planning, included three basic phases: defining the desired future, development plan and its implementation. Constantly it appeared parallel with war strategies and

world events. American futurologist Herman Kahn (head of RAND) is considered a father of scenario planning. He wanted to make possible that some message could be created through the linking analysis and imagination. Message should sound like it would be written by people from the future. A lot of companies have started to use scenarios in their planning processes, e. g. Shell, GE or IBM.

A scenario is the tool which is useful in long-term planning process and leaders can much better prepare companies for the future. Porter said the scenario is “an internally consistent view of what the future might turn out to be – not a forecast, but one possible future outcome [2, p.63].” Schwartz thinks that scenario is a tool for ordering one's perceptions about alternative future environments in which one's decision might be played out right [2, p.14]. Ringland considers scenarios as a part of strategic planning which relates to the tools and technologies for managing the uncertainties of the future [2, p.14]. Author Kees van der Heijden divided scenarios into external and internal. He said that external scenarios are internally consistent and challenging descriptions of possible futures and internal scenario is a casual line of argument, linking an action option with a goal, or one path through a person's cognitive map. [2, p.14]

## 2.1. System of management strategies

The architecture of integrated management system is described as follows. This system links strategy formulation and planning with operational execution. System is continuous. It has six main steps: [1, p. 22]

1. Develop the strategy: In this step there are developed mission, values and vision of a company. Here are created the strategic analyses (the external and internal environmental analysis, competitive analysis). The last step is strategy formulation. Managers should know the answers to questions about next existence of a company.
2. Plan the strategy: Strategy map and system BSC are created and there are selected measures, targets and gaps.
3. Align the company: It is necessary to align all business units, support units and employees. It is a basis for company's success. The leadership is very important here.
4. Plan operations: In each strategic theme it is very important to improve key processes. Unit's leaders must plan sales, resource capacity and budget. The sales plans are related to the sale forecast.
5. Monitor and learn: Here are very important company meetings, because they are one way of data sharing. It has a sense for strategy management review.
6. Test and adapt: Managers order special meeting for research strategy. They have new and fresh data and information. Here they can change strategy or repair some parts of it.

A lot of companies started-up new unit: *office of strategy management* (OSM). OSM cares about the process of implementation of the strategy. It integrates and coordinates all processes which are related with strategy execution system. OSM has three roles in the company: [1, p. 32]

1. *Process architect*: is responsible for the structure of processes, new processes and integration of process of planning, executing and feedback.
2. *Process owner*: is responsible for all processes related to strategy.
3. *Integrator*: is responsible for align many key processes with the strategy.

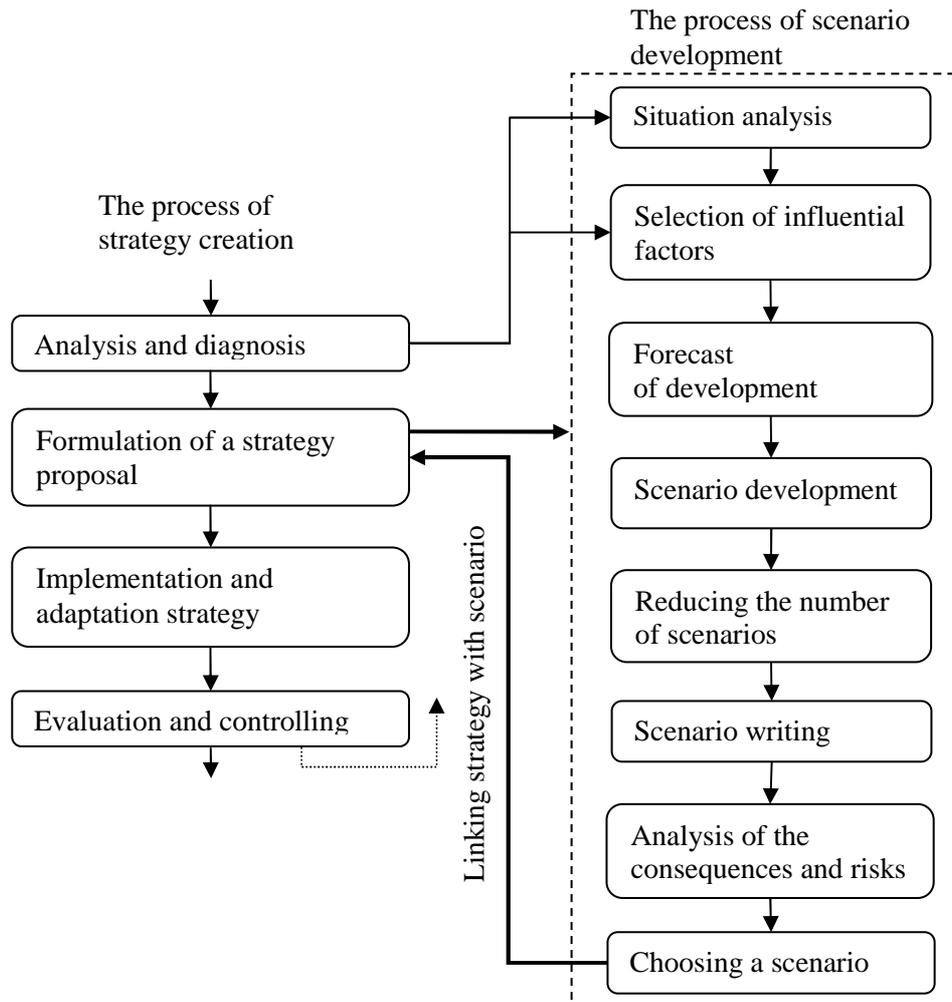
Each company should have executive management. Head of the company should be a visionarist; he should believe in the strategy and participate fully in its implementation, monitor and participate in any changes. He should communicate the strategy to top managers and to execution team.

## 2.2. Process of scenario planning creation

For long-term planning in the companies it is important that companies have own strategy system (e.g. approach Balanced Scorecard by Kaplan and Norton). There are a lot of different systems but for this purpose it is easy to show basic principles on the general model. At the Fig. 1 it is shown basic general model of connection between process of strategy development and the process of scenario creating. Process included only influencing factors from external environment and not from internal environment of the company.

Information from situation analyses is the first information which is important for the process of scenario creating. There are chosen force-driven factors which have the highest impact on the company and can change markedly the company's internal environment. This analysis is made on the executive level of company so they do not have been made twice. After analyzing there are used some prognostic methods (e.g. data-driven prognostics, model-based prognostics and hybrid approaches). Based on this kind of data and information managers can built up usually three or four scenarios (it depends on managers). It is necessary to have project meeting for the reason of decreasing amount of the scenarios. Some indicators and key amounts help to make it. After this it is possible to write new stories about future of the company – scenarios. Really important is the name and the purpose of each scenario. Based on this purpose there are determined the consequences and risks for each scenario. When they are known, decision-making process which scenario (scenarios) will be the best for implementation, can start. After this it is important to test the resistance of company's strategy according to the chosen scenario. When the strategy is reviewed the next step is strategy implementation. And the process of work with strategy can continue as usually.

Managers forget on really important *process of performance evaluation*. And this is the best step for controlling of strategy and scenario implementation. Process of evaluation of scenario and strategy is different. By the strategy realization managers measure performance through indicators, the performance measures of processes, achievement of the objectives, etc. By the scenarios there are set indicators of changes. Scenarios represent the future events but nobody knows if the event will happen. So indicators of this process are for signaling of some events in the external environment or for signaling of the achievement of some objectives and goals which are set in the scenarios. So the difference is that the *indicators in the strategy are for thing and events which have already happened* and the *indicators for scenarios are for thing and events which are starting to happen right now*.



**Fig. 1** Scenarios in the process of working with the strategy

## Performance measurement in scenario planning

Performance measurement needs to be a critical element of both strategic planning and the overall strategic management process. Performance measurement can be defined as the process of defining, monitoring and using objective indicators of the performance of companies on a regular basis, which becomes of vital concern to managers. Established and implemented performance measurement system is of strategic value to a company since strategic management requires good information on performance. [3, p.186-189]

Effective strategic management and planning require established system to track and evaluate particular indicators that are tailored to the specific strategic initiative – in this case it is scenario creating. For this purpose measures such as efficiency, effectiveness, productivity, quality, customer satisfaction and so forth can be set.

Evaluation of performance outcomes is one of the most challenging parts of scenario project evaluation and is tightly bonded with its primary intention. Outcomes are estimated at the beginning. The more specific and concrete the project is, the simpler the estimation is. The same applies to scope of the project, the more narrow it is, the more defined the estimation is. The first estimated performance outcomes are set at the beginning of the project along with desired results of the whole project.

Reevaluation can be done during the project or as well as after implementation of scenarios. There are two areas which are under estimation – the system and finance. System and finance outcomes are interconnected. It can be useful to use Balanced Scorecard evaluation system for it, to set the necessary indicators for each perspective and monitor their status. The measuring system has the purpose to help the company to capture changes in environment. After this managers can revalue the new situation and new events and can plan the necessary changes in activities of company, make up the company's strategy or they can implement another suggested scenario. This is important part of whole part of process because these suggested changes could have an influence on performance of company. If managers realize changes correctly the company's performance will grow up.

In general, system evaluation is about products, goods or services which could increase or be maximized via changes. Observed indicators can be for example produced products, contracts, accounting hours, given services and so forth. They are outcomes of the company in the form of goods or services which have value for customers and which are connected with the core business of the company, workflows and individual or team contributions to the company.

Project which shows opportunities or supports innovative product ideas could assist in estimation which idea could lead into success. As an example of positive result, staving of disaster or averting loss can be used. Results such as rate of incurred errors and defect products can be useful for the project. Data can be collected before the project begins and again after it finishes. If the aim of the project is focused on production errors elimination, *collected and compared data after scenario planning can bring an improvement of this situation.*

Estimation of financial results is achieved after transforming expected system results into financial valuation. For example new technology development ahead of competitors could offer strategic marketing advantage and sales could be estimated as financial return on investment of a company. For example, sales estimation and quantity of products could be generated on the base of perceived product demand. By using a financial savings approach, each scenario can be approached in terms of saved financial resources when things which could change the nature of business of the company are expected.

Discussions about how to estimate the savings and profits can be realized due to an interest to avoid discontinuities or implementation of innovative opportunities. Information can be acquired upon these questions which are used for every scenario:

- What will happen, when scenario "A" happens and the company is not prepared? What losses could occur?
- What will happen, when scenario "A" happens and the company is well prepared? What can the company gain in regard to ideas which lead into innovative products?

For financial results estimation cost-benefit model and return on investment ROI are used. The same models were used in preparatory phase of the project. The formula used to financially assess the benefit is:  $\text{output value} - \text{costs} = \text{benefit}$ . Costs are known and system evaluation and financial results are focused on project outputs value estimation. Described model basically determines the return of investment.

	Quantitative survey	Qualitative survey
<b>Performance results</b>		
System	System results estimation is based on initial aim of the project.	Did scenario planning project help company productivity? If yes, how? In what way? Did some strategic insights, creative changes or other innovation occur for which you feel are beneficial to scenario planning project? Describe them.
Finance	Performance value – costs = benefit Estimates of disconuities which company avoided Estimates of benefit as a result of strategic knowledge	How did scenario planning project contributed for financial stability of a company?

**Tab. 1** Scenario performance evaluation [2, p. 212]

### 3. Scenario planning contribution

All employees have to know company's strategy and have to be motivated to help company to fulfill the strategy. However, in most companies it is a standard praxis not to inform all employees. To diminish this reality, Balanced Scorecard can be used as a vital mean of communication of strategy as well as goals, indicators of measurement system, partial tasks and way of strategic feedback on strategy. There is no coincidence that Balanced Scorecard integrates key corporate performance indicators in four perspectives as well as scenario planning performance evaluation indicators under one holistic and interconnected system of strategy planning and execution.

From previous text it is obvious that scenario planning results will be reflected in overall company's current performance and to a great extent will influence future heading and performance of the company. Scenario planning contributes to a company in terms of:

- strong and lasting company strategy,
- better ability to appropriately prepare for changes, which will occur soon or later in the future,
- building stronger and more stable company with higher level of flexibility in decision-making process,
- significantly more complex insight into a company and its environment. Managers and those who participate in scenario planning project are no longer concentrated on just one object they are currently working on, but they can see in a broader context,
- transferring new knowledge and skill obtained during scenario planning process into other internal processes and work tasks,
- improving practical and system thinking of managers and employees, they learn how to use various techniques and methods which were not common before.

As scenario planning is considered as an improvement approach to the strategy, the overall contribution is increasing of company competitiveness, market share growth resulting in increasing of customer base as well as successful product placement and so forth. The basic premise of scenarios success is properly implemented strategy.

### 4. Conclusion

This article is about scenario planning as an evitable part of management strategy. Scenarios are described as basic framework for the excellent work with strategy. It is important to realize that the company's work is not only about many frameworks, structures, work procedures and precise

steps. They offer us a strong system to work with and they make work easier and clearer. These frameworks must be completed by processes which are implemented. Without the implementation of all processes the strategy can not be realized. And unrealizable strategy can not and will not be successful.

The process of creating scenarios is set into the strategy formulation process and incorporated with all partial steps of ongoing processes. Last but not least process of the strategy formulation process is evaluation where outputs and results of both scenario planning and strategy execution are controlled. For this purpose, Balanced Scorecard framework is used in order to encompass this process of evaluation and measurement under one holistic system.

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## Ethical Aspect of Competitive Intelligence

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**Abstract.** Since ancient times the marketers are interested in competitor and competitive environment monitoring. Only within the last thirty years we can talk about a unified and formalized approach to the reporting process. This discipline is named as Competitive Intelligence. The purpose of this paper is to briefly outline what exactly Competitive intelligence is and point out that Competitive Intelligence is often mistakenly confused with espionage. Therefore we deal with information about the ethics in competitor information gathering.

**Keywords:** competitive intelligence, ethical aspect, code of ethics

### 1. Introduction

Necessity of today is the early awareness of enterprises about what is happening around them, what realize their competitors. In this context, the term competitive intelligence is mentioned more increasingly. Competitive intelligence (CI) has established itself as a new branch of management, primarily associated with the development of strategic work in the conditions of competition, i.e. in terms of the usual (and still significantly affecting the business). [5]

### 2. Competitive Intelligence definition

Bouthillier and Shearer summarize the issue of very large number of not very differing CI definitions. They evaluate the definitions such as rarely comprehensive, generally vaguely speaking about competitiveness, ethics and legality of activities. Neither theorists nor practitioners do agree on a general definition. In the following examples of the definitions it is obvious consensus in some aspects of CI functions as well as some confusion. [1]

Lesáková identifies with this characteristic which argues that competitive intelligence is creating of effective information system of competition and it is the basis of quality competitive analysis processing. [7]

Society of Competitive Intelligence Professional (SCIP) can be regarded as authority of the competitive intelligence issue and their definition of competitive intelligence in 2003 'as a systematic and ethical program gathering, analysing and managing external information that can affect your company's plans, decisions, and operations.' [13]

Bill Weber, former president of the SCIP defines competitive intelligence as a 'dynamic business discipline for gathering, analysing, communication and managing of knowledge about business environment, and for comprehension of competitive intelligence in the company strategy to ensure and sustain the competitive advantage.' [6]

According to Fleisher competitive intelligence is 'the process by which organizations gather actionable information about competitors and the competitive environment and, ideally, apply it to their decision-making and planning process in order to improve their performance.' [4]

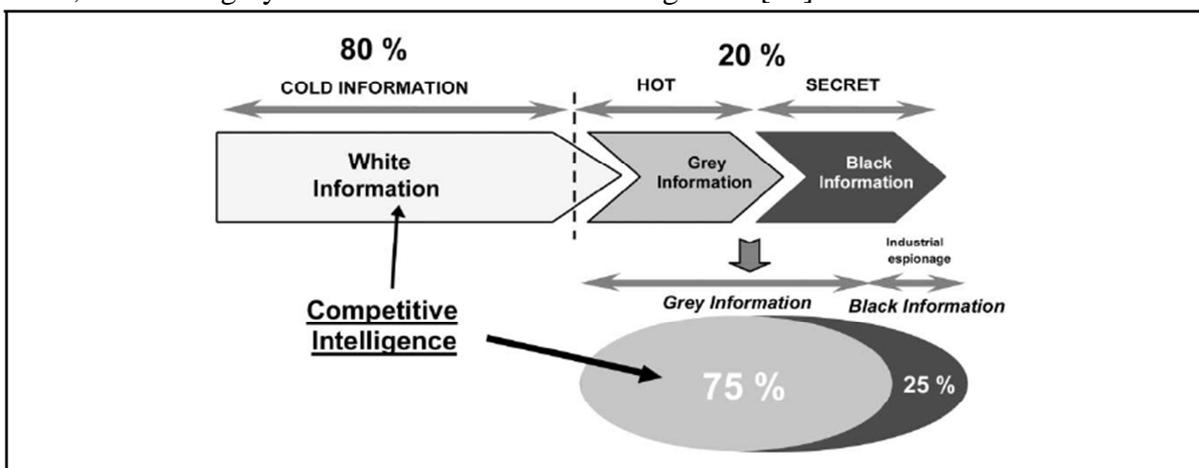
Competitive intelligence is a cross-discipline, which seeks to achieve competitive advantage through targeted collection and analysis of partial (various locations) information about the market and competition. [11]

The definitions are essentially identical to the characteristics of Competitive Intelligence as a process in which companies monitor, collect, analyze and evaluate information about their competitors and the environment in which they operate. The findings of information analysis and synthesis are applied in order to retain or gain new competitive advantage.

In other words, competitive intelligence is the process of increasing competitiveness through exhaustive but ethical recognition of competition and competitive environment. This is a legal collection and analysis of information concerning the capabilities, vulnerabilities and intentions of competitors, using databases and other publicly available sources of information.

Principles and methods implemented within competitive intelligence have a long tradition. They began with the activities of the state security and military services. Not only because of it is the issue of CI often mistakenly associated with espionage, illegal and unethical practices. Ethics plays a significant role in the implementation of the CI processes and activities and logically closely relates with this issue, because it is often about using information sources and methods that should not be contradict the law and professional ethics.

We have to mention that CI is not business espionage. Richardson and Luchusinger defined espionage as “unlawful and unethical while competitive intelligence is legal an associated with a detailed code of ethics.” [9] Main goal of CI project is to use different information sources in order to increase the competitiveness of the organization while decreasing the competitive advantage of rivals. [3] Vejlupek indicated different types of information sources and usability of the content in terms of CI implementation. [12] Up to 95% of the information can be obtained from so called open sources of information from which 80% by using publicly available resources – white information. The grey information is defined by Osayande according Hirtle as “the quasi-printed reports, unpublished but circulated papers, unpublished proceedings of conferences, printed programmes from conferences, and other non-unique materials which seem to constitute the bulk of our modern manuscript collection”. [8] Only 5% of the information so called black is confidential and hidden from the public. Rouche and Santi share the same opinion about the percentage quantification of white, black and grey information as is shown in Figure 1. [10]



**Fig. 1.** Classification according to information types [10]

The basic sources of CI so the white and grey information are by Colakoglu according to Fitzpatrick and Gelp et all “archival and published works, government documents, online competitive data bases and on the record interviews with corporate personnel or industry experts”. [2] Efficient use of CI systems significantly affects the performance of the company and its success in the market. Increase overall business performance and competitiveness of the enterprise is the primary reason why organizations more and more focused on competitive intelligence projects and their application in business management.

### 3. Ethical Aspects of Competitive Intelligence

Ethical business culture greatly affects how CI professionals can handle the pressure, which is generated by their work. In the companies with the staunch ethical sentiments and established ethical standards the CI professionals receive clear instructions from the management. They are trained for the job and may also rely on ethical codes and manuals that specify all the significant. The management support which proclaims public resistance to unethical practices is equally important.

The ethics code is a document relating to general and specific rules within a particular industry or profession. It exist disciplines and professions that have already incorporated their code for a long time. Then the behaviour automatically becomes part of the ethical equipage of the majority of industry members (e.g. medicine, judiciary etc.). The fact that CI activity has shorter history and it does not have yet established barriers of permissible and impermissible behaviour is a big disadvantage for CI professionals so as for whole CI field.

There are a multitude of codes and is often that some codes and even principle in particular codes are controversial. Is not easy to take in that situation clearly and absolutely correct opinion. We present here some examples of codes, which by its nature and focus can be used for the obtaining and processing of data about competitors in the commercial sphere.

One of the important organisations which associate the information professionals in the field of CI is a non-profit group SCIP. They have set CI promoting and implementation as a recognized profession and observance of ethical standards as one of the fundamental objectives. For these needs the code has been created. It should set the frames to make decisions in difficult situations and help in the assessment of ethical and unethical behaviour. Looking at the code it is obvious that its makers keep the members in the organization associated SCIP large array of open questions. Construction of individual points of the code is very general such as

- To continually strive to increase the recognition and respect of the profession.
- To comply with all applicable laws, domestic and international.
- To accurately disclose all relevant information, including one's identity and organization, prior to all interviews.
- To avoid conflicts of interest in fulfilling one's duties.
- To provide honest and realistic recommendations and conclusions in the execution of one's duties.
- To promote this code of ethics within one's company, with third-party contractors and within the entire profession.
- To faithfully adhere to and abide by one's company policies, objectives and guidelines.

The ICC/ESOMAR Code on Market and Social Research, which was developed jointly with the International Chamber of Commerce, sets out global guidelines for self-regulation for researchers and has been undersigned by all ESOMAR members and adopted or endorsed by more than 60 national market research associations worldwide. The Code sets minimum standards of ethical conduct to be followed by all researchers and clients and is to be applied against the background of applicable law and of any stricter standards or rules that may be required in any specific market.

Ethical principles members ECIA (European Council of Information Associations) are a set of recommendations for information and documentation professionals ECIA grouping, which unites 9 European associations in the field of information and documentation. ECIA organization seeks to provide comprehensive support in ethical decision making. If the effort in the field of ethical correctness and clarity in the staff conduct is evident, it is necessary to determine the exactly-

defined constraints, which will help in contentious situation thus increasing the credibility and acceptance of the field.

#### 4. Conclusion

People who work with information in a commercial environment (acquisition, processing, and dissemination) should be aware of the legislative framework. Also unwritten rule is that the CI professional should avoid all illegal and unethical conduct during the CI process. What is unethical and illegal are often poorly established and everyone sees the situation differently. So many professionals often decide only on the basis of their own values and attitudes, without the support of the organization, without ethical training. They should follow the ethics code and business law, including the protection of human rights of citizens and other related laws. Violation of these rules is for the CI professional unacceptable not only for ethical reasons but also because such conduct might be criminal and easily actionable and it would ultimately harm his employer.

#### Acknowledgement

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## Approches to measurement of quality of life

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**Abstract.** The quality of life integrates social and individual lives, lead to the synthesis of various aspects related interdisciplinary sciences. The concept of quality of life is used to evaluate the general state of well-being of individual people and society. It appears in a wide range of contexts, including as international development, as well as health care and policy. The concept of quality of life should not be confused with the concept of standard of living, which is primarily based on income. Some results of the survey of quality of life is shown in this paper.

**Keywords:** lity of life, regional development, evaluation approach, survey of quality of life

### 1. Introduction

There is a very wide range of definitions and interpretations of quality of life (QOL) - over 100 definitions. The view of many researchers that QOL cannot be defined exactly. The individual orientations of the wide range of disciplines concerned with QoL are one factor influencing definitions of QoL and explaining the diversity of definitions. Defining quality of life and determination of its components (indicators) is an interdisciplinary problem, which has an applied character. This is an area in which the overlaps research from a wide range of scientific disciplines such as sociology, economics, political science, ecology, demography, ethics etc. (Tokárová, Kredátus. a kol. 2002).

Alternatively QOL has been defined solely in terms of life satisfaction. Definition of QOL as being “the conscious cognitive judgement of satisfaction with one’s life”, a concept that has been operationalised using both uni-dimensional and multidimensional measures, i.e. in terms of satisfaction with life in general, or of satisfaction with specific “domains” of life considered separately. One of the most popular measurement instruments, devised by Andrews and Withey, consists of a single question, “How do you feel about your life as a whole?” rated on a Likert scale of life satisfaction/dissatisfaction.

Quality of life is gradually becoming an important baseline category of social policies and other local areas of social life. Since it is possible to analyze the development, quality of life is an important concept in international development (Svobodová 2007).

There are several important areas that directly affect the quality of life and its sustainability. It is about social cohesion and the welfare state, labour market and employment, education, population structure, housing, family, health care, external and internal security, environmental protection and regional development potentials.

Component definitions break down QOL into its constituent parts, dimensions or “domains”, or identify key characteristics considered essential to evaluate QOL. These fall into two categories. The non-research specific will typically identify a number of dimensions of general QOL - both objective and subjective - although it may not claim to cover all the possible dimensions of QOL.

## 2. Objective and subjective social indicators

Today there is more or less a consensus around the need to combine objective with subjective aspects of QOL, based on an acknowledgment of the strengths and weaknesses of each approach. However the debate continues about the relative importance of objective versus subjective factors in determining QOL, and about the relationship between the two. Other evidence from the mental health field demonstrates a strong correlation between psychological well-being and objective socio-economic factors. (Tab.1)

Frequently used objective social indicators	Frequently used subjective social indicators
(represent social data independently of individual evaluations)	(individuals' appraisal and evaluation of social conditions)
Life expectancy	Sense of community
Crime rate	Material possessions
Unemployment rate	Sense of safety
Gross Domestic Product	Happiness
Poverty rate	Satisfaction with "life as a whole"
School attendance	Relationships with family
Working hours per week	Job satisfaction
Perinatal mortality rate	Sex life
Suicide rate	Perception of distributional justice
	Class identification
	Hobbies and club membership

Tab. 1. Type sizes for manuscript. Source: Rapley (2003) p.11

## 3. Measuring the quality of life

There are different approaches to measuring Quality of Life (QOL). How QOL is measured clearly relates to how the term is defined, and therefore to what is being measured. The multidimensional nature of QOL acknowledges that the different dimensions of QOL may best be measured by using a range of techniques, thus QOL may be measured from both subjective and objective perspectives (Tab.2).

Systems level	Measurement focus	Measurement strategies
Microsystem	Subjective nature of QOL ("personal appraisal")	Satisfaction survey Happiness measures
Mesosystem	Objective nature of QOL ("functional assessment")	Rating scales (level of functioning) Participant observation Questionnaires (external events and circumstances) Engagement in everyday activities Self-determination and personal control Role status (education, employment, living)
Macrosystem	External conditions ("social indicators")	Standard of living Employment rates Literacy rates Mortality rates Life expectancy

Tab. 2. Methodological pluralism applied to Quality of Life measurement. Source: Schalock (2004), p. 207.

We can make a broad distinction between methods used to measure the QOL of the general population, and those used to measure the QOL of individuals. In both approaches the dominant research methodology can be described as positivist and based on quantitative methods. Qualitative methods are used in QOL research, particularly in the development of QOL instruments, but more in some disciplines than in others.

There are three main approaches described in literature, each of which presents methodological issues relating to measurement:

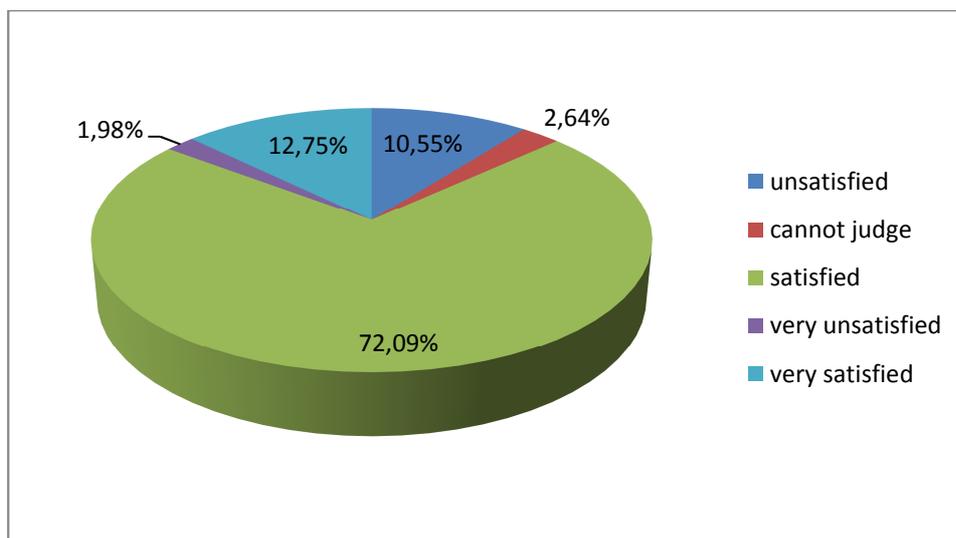
- Uni-dimensional single scale measures
- Multi-dimensional, single-scale measures: these break down QOL into its various dimensions or domains and use a single question, rating or item to measure each one.
- Multiple separate scales: these used a number of separate scales each measuring individual dimensions of QOL, for example satisfaction, self-esteem or social relationships. Each scale comprises a “battery” of questions, the scores of which may be aggregated and weighted to give an overall measure for each dimension.

Decisions about the weighting of indicators can have a huge effect on research outcomes. Methods of weighting variables are therefore of great importance and the subject of much debate.

Self-assessment of life-this quality refers to the subjective evaluation of life. This is generally expressed in terms such as subjective well-being, life-satisfaction and happiness. As mentioned above, the most common tool for measuring quality of life in the qualitative and quantitative research.

The research activities conducted at the University of Žilina was to determine how the citizens of Žilina county perceive their quality of life of. Marketing research was carried out in order to determine the perceived quality of life, which areas are unsatisfying and which spheres of life, on the contrary contribute to their overall well-being and balance.

The question related to whole satisfaction with quality of life, quality of service provided by educational institutions, conditions for culture, sport and leisure, quality of services, business services, transport accessibility and facilities of the site, public transport, availability of information, its level of safety and security of property etc. Figure 1 shows satisfaction with whole satisfaction with quality of life in the place of their residence. The research was conducted in the Žilina county (about 455 people) with 19 questions will bring valuable input to management for the next period.



**Fig.1.** Satisfaction with whole satisfaction with quality of life in the place of their residence

Source: own processing

Subjective site of quality of life speaks about the valuation of level of needs satisfaction. This is a category associated with the subjective perception of the own life with in a certain system of values, and within certain social, economic and political conditions.

#### **4. Conclusion**

There are different approaches to measuring Quality of Life (QOL). The multidimensional nature of QOL acknowledges that the different dimensions of QOL may best be measured by using a range of techniques, thus QOL may be measured from both subjective and objective perspectives. There are three main approaches described in literature, each of which presents methodological issues relating to measurement.

Marketing research was carried out at University of Žilina in order to determine the perceived quality of life, which areas are unsatisfying and which spheres of life, on the contrary contribute to their overall well-being and balance.

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# Bank Performance in Emerging Europe: A Cross-Country Analysis

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**Abstract.** The paper's main purpose is to provide a comparative analysis of the performance and efficiency of commercial banks in seven European Union countries and the medium results recorded in this area (Bulgaria, Czech Republic, Hungary, Latvia, Lithuania, Poland and Romania). The new global order stands to be trapped in a spiral of change, which became increasingly complex and fast, so the analysis undertaken in the paper highlights the need for banks to apply essential adjustments in their activity. In the study there were pointed out a series of issues which captured the overwhelming implications of the global financial crisis on the "health" of the financial system in European Union and also a chain of challenges that banking environment was facing in this context.

**Keywords:** Sub-prime Crisis, Efficiency, Performance, Financial Stability, DEA.

## 1. Introduction

The current financial crisis was reflected mainly on the financial markets, so the propagation on emerging economies has been relatively quick, through the transmission channels, in this context amplifying the contagion feature of risks. Faced with powerful tensions, the most affected were the emerging economies, due to the fact that exhibits a weak capacity to dissipate the adverse effects of the crisis, vulnerability which is caused by the underdevelopment of financial and institutional structures. The paper aims to address the repercussions of the current economic crisis, providing a big picture of banking performance in term of Emerging Europe, highlighting some key lessons that revolve around the policies and measures pursued by central banks. The paper is structured in 5 sections: the first part of the paper include a synopsis on the importance of the theme; the second part is devoted to literature review, the third shows the consequences on the sub-prime crisis with reference to the analysis of the financial soundness indicators of the banking system and in the fourth part are reflected the masterly measures embraced during the financial crisis, aiming to support the financial system. The paper ends with a summary conclusion.

## 2. Literature review

During the global financial crisis, the literature has shown a particular interest in financial stability issue, suggesting that its provision has always been a natural concern of monetary authorities. [Stein, 2011] We are witnessing a paradigm shift in term of risk management, financial entities solvency requirement, borrower behavior in crisis situation, in the idea of rethinking the policies regarding future financial system. It raises the need for transparency, accountability and the development of an environment of confidence.

From the literature review it can be extracted the statement that there is a strong relationship between financial systems regulations, surveillance and banking performance. [Chortareas et al, 2010] Theoretical studies have revealed the importance of bank capital requirements rules, so an adequate level of capital will serve as a buffer for the manifestation of strong shocks. [Dewatripont, Tirole, 1993] There are also opinions considering that overregulation could cause constraints on

banking activity, which would lead to the downward of financial performance, a relevant study regarding this issue being: *How can the Invisible Hand Prudential Regulation?*. [Herring, 2003]

The concept of performance was addressed over time in numerous studies and analyzes, being explained in term of effectiveness, adaptability etc., but in the banking system the term refers to creating a value adage, pursuing the insurance of a cost-benefit optimality. For the existence of a coherence in addressing the performance and efficiency of banking systems, for increasing the level of comparability between countries, namely to increase transparency in the world banking systems, IMF has defined a set of financial soundness indicators (FSI) and also ECB has promoted a set of similar indicators (MPI), both having the same mission, namely to provide benchmarks for financial system soundness. Another indicator that is imminent mentioning is Z index, which estimates failure probability, being based on the report between the sum of return on assets and the amount of capital in total assets on the volatility of return on assets. [Berger et al, 2008]

Regarding the methodology found in the literature examined there is a preponderance use of quantitative tools but also graphics techniques and methods of deduction. In this regard, in addition to the above, the most common method of statistical analysis of data is non-parametric, known as DEA, observing also other types of analysis, namely Du Pont model, CAGR, SFA etc.

### 3. The comparative analysis of banking systems soundness in Emerging Europe

The current economic and financial crisis is considered unprecedented in the last half century, the devastating effects expanding in all sectors, especially in banking. The radiography years of crisis reveal a reduction of bank lending, a deteriorating profitability and efficiency, an increase in nonperforming loans and a deep orientation towards foreign currency lending.

In the current analysis it was addressed both qualitative and quantitative performance recorded in the banking sectors of Central and Eastern Europe, so we chose to analyze FSI promoted by IMF, concerning mostly on *basic analysis* and not in the recommended one.

Thus, regarding the analysis of *capital adequacy* (CAR), there has been noticed a decreasing trend of the growth rate during 2009-2011, presently this evolution is stabilized, although it is considered to be more robust (see Table 1). In 2011, the risks to financial stability increased considerably in the light of worsening sovereign debt crisis and increasing the negative effects on banking sector. So it has been noticed an inability to honor properly the debt service, which led to an increasing level of NPLs, in the top of the countries analyzed being Lithuania, Hungary and Latvia. The average value recorded in this region is 25.88% for the period 2009-2012, the average deviations being mainly in the countries mentioned above, so the maximum value of this indicator is 77.11% (LT) and the lowest was observed in Poland (12.96%).

	2009			2010			2011			2012 (Q3)		
	CAR	NPL to provision	LR	CAR	NPL to provision	LR	CAR	NPL to provision	LR	CAR	NPL to provision	LR
<b>BG</b>	13,2	146,5	-0,9	2	61,9	10,2	0,9	27,6	4,9	-4,9	15,8	2,9
<b>CZ</b>	11,8	48,8	7,5	13,1	29,2	6,2	2,4	0,9	1,7	2,1	-12,5	5,5
<b>LV</b>	22	214,1	115,5	2,9	-5,7	-1,1	1,9	-20,1	28,1	6,9	-75,6	12,9
<b>LT</b>	2,9	91	6,5	15,8	0,2	2,1	1,9	-16,8	-1,8	6,9	-18,4	7,4
<b>PL</b>	9,7	32,9	10,9	11,7	-10,6	12,1	-2,5	7,3	-4,5	4,1	14,3	-3,5
<b>RO</b>	6,4	5,1	20,1	0,3	27,1	3	-2,6	11,8	-0,04	2,4	-5,7	-2,8
<b>HU</b>	10,1	69,3	20,7	2,1	34,1	1,6	1,2	16,7	4,3	6,7	6,7	8,9

Source: Own calculations

Tab.1 The growth rate of some FSI in the countries analyzed, during 2009-2012 (%)

Credit risk, significant pillar in the management of a credit institution, can be estimated with *assets quality*, so in the region studied it has been observed the majority of loans to residents, 91.66% on average, of which top place is occupied by the loans granted to non-financial corporations. For a realistic assessment of the situation of an institution is necessary the *analysis of operational results*, due to the fact that this indicator is considered to be the most suitable in terms

of time to determine bank performance. In this respect, the most important are return on assets (ROA), return on equity (ROE), net interest margin and others (see Table 2). After spreading international financial crisis, the banking system of the countries surveyed showed a downward trend in the majority of its activities, in some countries profitability indicators were falling in a negative territory, so the performance was low for all the operation performed, regardless of their importance. The sudden collapse of the results took place in all the countries but mostly on Latvia and Lithuania in 2009, the situation trickles in the following years but at a slower pace. The best results in 2012 were found for Latvia, Czech Republic and Poland, for example the growth rate for Latvia was of 154.01%.

	2009				2010				2011				2012 (Q3)			
	ROA	ROE	EP	Z	ROA	ROE	EP	Z	ROA	ROE	EP	Z	ROA	ROE	EP	Z
<b>BG</b>	1,1	9,8	9,1	31,8	0,8	7,8	9,3	30,2	0,6	5,7	9,1	30,4	0,8	7,9	9,9	29,6
<b>CZ</b>	1,3	23,8	17,9	134,9	1,4	22,2	15,9	147,2	1,3	20,2	15,3	148,5	1,4	20,9	15,1	154,4
<b>LV</b>	-3,9	-50,6	13,1	0,4	-1,8	-19,7	10,8	0,8	0,5	4,8	9,7	1,2	2,5	22,2	8,8	0,9
<b>LT</b>	-2,1	-27,2	13,2	4,1	-0,5	-6,5	13,2	5,5	1,2	12,9	10,7	8,2	0,8	7,03	8,8	9,4
<b>PL</b>	0,9	13,2	14,1	27,8	0,9	12,1	13,2	29,1	1,2	15,4	12,9	29,1	1,2	14,5	12,1	31,3
<b>RO</b>	0,3	2,9	11,6	10,3	0,2	0,2	0,8	10,8	0,3	-0,1	-4	10,3	0	-0,3	0	9,8
<b>HU</b>	0,9	11,4	12,4	27,2	0,6	7,3	12,2	27,4	0,3	3,2	12,7	26,9	0,3	2,9	10,9	27

Source: Own calculations

Tab. 2 The evolution of profitability indicators, in Emerging Europe, during 2009-2012

The main reasons for registering these results, are based on are those referring to the increase of risk provisions due to stricter requirements of the monetary authorities. The leverage effect (LE) in the countries studied suggests that there were committed resources in an advantageous manner, so economic profitability is still higher than the cost of new resources.

Following topic addressed in the analysis is based on the study of banks' *liquidity indicators*, namely the liquidity ratio (LR) and the share of liquid assets to short term liabilities. The revival of the indicators can be seen in Table 1, so the fastest growth rhythm was in the case of Latvia and the average value recorded in the region was 27.94% in the third quarter of 2012, down with 4.55% compared to the same period of the last year.

A particular importance in the present context has banking *sensitivity analysis*, in this respect analyzing the net foreign currency position to capital. An important step to counteract risks in the international financial environment, was the represented by the measures taken by G20 regarding TFF financial institutions. To identify a general risk level in the banking systems analyzed it was calculated also *Z index*, which indicates the likelihood of failure of institutions. For the higher values of this indicator you can say that the vulnerability is lower, so high values can come either from big revenues or additional capital, which indicates a higher level of financial stability. Regarding the countries studied, the major value was recorded for Czech Republic for the period 2007-2012 where you can observe an average value of 136,68. The lowest value registered was in the case of Latvia, the average for the same period being 0.85.

The second pillar of the analysis is based on *encouraged analysis*, the main indicators being: capital exposures, foreign currency position of transactions, non-interest costs etc.

In order to avoid a collapse of the financial system, aiming to an improvement in the transparency and liquidity in the banking system there was adopted in 2011 the last agreement from Basel, which is regarded as being the main response of monetary authorities to deficiencies caused by the international financial crisis, because it has two additional security systems that are activated in case of excessive lending, namely capital conservation buffer and countercyclical buffer. Basel 3 was adapted to the trend of the economy, supporting precision and accuracy of economic-financial nature of the forecasting, promoting the changes referring to the increase of capital adequacy ratio, to tougher risk weightings for trading assets etc. [Elliot, 2010] The measures taken to sustain the financial system were used in combination, remarking ad-hoc measures, implemented in individual financial institutions and complex schemes applied when the global financial crisis intensified. The main unconventional measures taken by ECB during the crisis were those referring to the

improvement of liquidity and intermediation on financial markets (swap, repos etc.) and those to counter liquidity constraints, mainly credit easing.

A fundamental lesson that should be learned from the current crisis is that of *temperance*, valid for all participants in the financial markets and beyond, which from the desire to earn quick money assumed excessive risks, not falling under any form in the *pattern of rational agent*.

#### 4. Conclusion

The radiography years of crisis reveal a reduction of bank lending, a deteriorating profitability and efficiency, an increase in nonperforming loans and a deep orientation towards foreign currency lending, observing the necessity of integrated financial supervision and more strictly regulations. The results of the analysis suggests us that the risks addressing financial stability increased considerably in light of worsening sovereign debt crisis and the increasing negative effects on the banking sector. After the spreading of the financial crisis, banking systems were deeply affected and even we are witnessing a slightly recovery we can consider that the financial system is still lethargic so we must take into account one of the fundamental lessons of the recession, namely to respect the principle of prudence. Financial soundness indicators are meant to sketch a picture of international economic context, in order to monitor the “health” and soundness of financial institutions and markets, highlighting strengths and weaknesses of each financial system, and also to avoid addressing the approach one-size-fits-all.

In this respect, I conclude by saying that the financial system plays a fundamental role in ensuring financial stability, being drained and consolidated over time, so despite the international pressures it must be increased the level of efficiency regarding the measures taken, which implies greater flexibility of economic policies.

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# PROMOTION MIX IN MARKETING COMMUNICATION OF ENTERPRISES

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**Abstract.** Marketing communication of enterprises with market participants takes place mainly through the promotion mix tools such as advertising, direct marketing, sales promotion, personal selling and public relations. In order to achieve efficient transfer all the instruments of promotion mix should be used in an integrated way. A well-conducted promotional activities can be a source of competitive advantage.

The essence of the paper is to present the promotion mix as a mean of communication between a company and market participants. Paper presents the importance of promoting and indicates the aims of promotion in the organisations marketing communications with clients. The further part of the work includes the functions of promotion. The article contains a summary of the presented parts. Research method used is the study of literature in the subject undertaken in the article.

**Keywords:** marketing communication, promotion, enterprise

## 1. Introduction

Promotion should be an indispensable part of the marketing actions of most of the manufacturing companies and service companies. It helps to accurately select and adjust the way of performance and reaching the message targeted to potential buyers. Tools helpful in obtaining effective communication are the previously mentioned instruments such as: advertising, direct marketing, sales promotion, public relations and direct sales. Organisations producing and selling their products strive to reach customers on a challenging and competitive market. In order to achieve the intended promotional results, the company should not be limited to using only one or two instruments of promotion - mix. For this reason, the company should use all the elements of the promotion together. Developing advertising campaigns, activity in the field of public relations and sales promotion does not guarantee success, since they must be transferred in the right way to the selected recipient, the target group. Promotional campaigns are now ubiquitous and affect all areas of the broader enterprise. Without professional and efficient sales promotion campaign the sales of products will not reach a satisfactory level, and the service will not be enjoying the attention of customers.

## Meaning of promotion

Manufacturing and service companies engaged in business activities should appreciate the role and importance of the promotion. Organisations wishing to achieve success in the market must, inter alia, seek to acquire new customers, develop positive relationships with the environment and carry out effective promotional activities for market participants.

In the subject literature a lot of attention is put to issues of promotion. K. Bialecki defines promotion as "the impact on customers in order to induce them to act in accordance with the intentions of the seller"[1]. However, B. Szymoniuk shows the promotion as "informing-soliciting activities, designed to stimulate demand for promoted products, shaping a strong brand image of this offer and the seller (company, organisation or institution"[2]). According to A. Pabian

promotion in narrower terms is "a set of activities and means with which the company provides information describing the product and/or a service, shapes the needs of customers, stimulates and directs demand and reduces its price elasticity"[3]. H. Meffert presents the promotion in a different way. Author shows promotion as a "marketing tube" through which the organisation publicises and supports the sale of their products[4]. P. Kotler defines the concept of promotion as a set of instruments used by the company to communicate in a convincing manner to the customer the value and to build lasting relationships with the buyer [5]. E. Przydatek and J. Przydatek defines promotion as "influencing the consumers of products of the given company by transferring the information, which aim at adequately raising awareness about the products and the company itself in order to create preferences for them on the market"[6].

Reviewing the definitions of promotion it can be said that the promotion of the company is a deliberate action, set to inform customers about the products/services on the market in order to persuade potential customers to buy the offered goods.

## Aims of promotion

Promotion of a company should establish objectives and functions of carried out promotional activities. According to I. Bielski the goal of promotion is to reach the surroundings and to inform about the activities and products offered by the company. Author also believes that promotion contributes to creation of the positive image of the company [7]. A. Pomykalski claims that the promotion can be discussed in two dimensions. The first are the economic objectives that are quantified and are expressed by such items as: sales, expenses, profit. Social promotion policy objectives are related to the company (e.g. raising the knowledge of the company), the consumer (e.g. gaining customer loyalty) and the product (for example, the construction of the image) [8].

W. Šmid in his considerations of the purpose of promotion goes further by proposing the division for the purpose of promotion into individual problematic groups [9]. The division of targets into problematic groups are presented in Table 1.

Introducing new product	<ul style="list-style-type: none"> <li>- does it provide satisfaction to a consumer?</li> <li>- who is it for?</li> <li>- who decides on the purchase?</li> <li>- when, where and by which methods should the promotion be performed?</li> </ul>
Acquiring new consumers	<ul style="list-style-type: none"> <li>- on which segments of the market?</li> <li>- what product characteristics are required?</li> <li>- which motives and arguments have significant meaning?</li> </ul>
Maintaining current level of sales	<ul style="list-style-type: none"> <li>- what type of promotion should be used to remind about the values of the product?</li> <li>- what type of promotion will ensure the popularisation of the product brand?</li> </ul>
Rapid increase in the sales level	<ul style="list-style-type: none"> <li>- what activation measures should be directed at the final consumers?</li> <li>- which activation measures will stimulate purchase made by retailers and wholesalers?</li> <li>- what activation measures should be used towards own retailers?</li> </ul>
Gaining competitive advantage	<ul style="list-style-type: none"> <li>- what comparative promotion should be used indicating advantage of the characteristics and values of a product?</li> <li>- how to "break" the competitive promotion by the use of similar types of promotion and media choice, leading the company to potential buyers?</li> </ul>

**Tab. 1.** Problematic groups of the promotion aims

According to E. Przydatek and J. Przydatek the promotion aims focus on three main areas, namely [6]:

- the increase of sales,
- the acquisition of new customers,
- maintaining the level of sales.

Increasing sales leads to the turnover increase and thus, more revenue for the company. However, reduction in sales can contribute to a lack of developing opportunities for the company, or even the need to liquidate.

In a situation where new products or some of the previous ones, despite strenuous efforts are not finding customers, a company should determine the cause of the problem. Such information can be achieved by the use of marketing research techniques. Analysis of the results may, for example, show that customers are willing to buy praised by the promotional campaign merchandise, but in smaller unit packages. Adapting to the requirements of customers will meet their expectations, and the company will achieve expected, higher turnover.

The second aim of promotion next to the increase in sales is to attract customers. Customers are the foundation of existence of each company and are a key component of micro-surrounding of enterprises. If a company do not have enough for efficient functioning number of customers, which means the appropriate scale of purchases, will have no right to exist on the market. The problem of acquiring customers does not only refer to new customers but also to existing customers. There is a risk of losing a group of regular customers, which carries a lot of risk for the company.

The third objective of promotion in the opinion of E. Przydatek and J. Przydatek is to maintain the level of sales understood as the sum of goods sold during the given period, for example, on the day, month or quarter. Many organisations runs selling of goods subject to seasonal fluctuations, which at certain times of sale is a sudden increase or decrease. In the sales of products and services related to the seasonal cycle of customer interest important is to maintain the level of sales as long as possible and as efficiently as possible.

Interpretation of promotion aims according to E. Przydatek and J. Przydatek shows Table 2.

Increase of sales	<ul style="list-style-type: none"> <li>- causing the increase of the store turnover,</li> <li>- increase of the assortment sales,</li> <li>- extension of the product sales season,</li> </ul>
Acquiring new customers	<ul style="list-style-type: none"> <li>- customer interest in new products,</li> <li>- finding new customers for products,</li> <li>- introducing new products,</li> <li>- increase the frequency of purchase,</li> </ul>
Maintaining the level of sales	<ul style="list-style-type: none"> <li>- maintaining existing customers,</li> <li>- regaining lost clients,</li> <li>- increase in sales in the low season</li> </ul>

**Tab. 2.** Aims of promotion

## Functions of promotion

Equally important area, in addition to the designation of the purposes of the promotion, is to determine the functions of promotion. The basic functions include the information, persuasive and competitive function [10]. The information function is the primary one in the promotion. It provides information about the product for existing and potential customers, properly chosen and comprehensive makes the product more attractive to potential customers. The purpose of the persuasive function is to evoke a desire to purchase the promoted product. A strong link with the previous one features competitive function, which is expressed through the creation of a set of

compete instruments not involving the price. A similar view on the functions of promotion presents A. Czubala. The author also distinguishes three identical functions of promotion [11]:

- information function provides existing and potential consumers information about the situation in market, the company's activities, as well as products sold. Its mission is to increase demand for the sold products,
- persuasive function primarily encourages and urges potential consumer to purchase, as well as stimulates his interest in the product. The purpose is to obtain an new customers and maintain the existing ones.
- competitive function convinces consumers that the products of a given company are better than the competition products. This function uses attractive information to create consumers motivation.

The company using promotion wants it to achieve the desired results. For this reason, before beginning promotion activities, it sets goals and plans, which the company wants to achieve as the results of this activity. These objectives may vary depending on the organisational and financial situation of the company and on which market position it is located.

## Conclusion

The implementation of an effective promotional program by marketing staff requires adequate preparation. In order to bring the expected results of promotional activities, research of the target group of the marketing messages should be carried out in advance. In order to increase the effectiveness of marketing communication, the purpose and functions of media promotion should be specified. Omission of these important projects can contribute to the discrepancy of communication between the company and a group of customers, which will be addressed with promotional messages.

It should be noted that the above features may intermingle, and sometimes it is impossible to identify them. Also, noteworthy is the fact that the promotion aims should be determined in such a way as to be able to determine whether they are implemented and to what extent.

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## RECOMMENDATION FOR EFFECTIVE COOPERATION MANAGEMENT IN AN ENTERPRISE PRACTICE

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**Abstract.** The main purpose of the article is to present some knowledge in the field of cooperation management focused on the field of management and marketing and to show possibility to use the cooperation in a company practice effectively. The article contains drafts for successful functioning of the cooperation in practice. There are also identified the main fields of potential problems, which should be discussed by responsible participants within cooperation to achieve effective functioning. The solution of the questions researched within the article needs to use several methods depending on the character of particular parts of the solution.

**Keywords:** cooperation management, research of cooperation potential, cooperation towards competitiveness

### 1. Introduction

In the present the field of cooperation management is not fully elaborated, contrarily, it is the core interest for theoretical specialists and practitioners. Their main effort is to create a model of successful use of cooperation management in a company, which would secure their competitiveness. Cooperation management creation in a company often fails. The reason is that mostly there is no clear activities plan, there is an absence of competence division for implementation, strategy of an enterprise is not oriented towards creation and improvement of the cooperation. In the company's practice there are some mistakes within the loss of managers in this field. Mainly it is an incorrect understanding of the term cooperation management and insufficient use of cooperation potential in the enterprise. The suitable recommendation draft within this field can considerably contribute to increase success of cooperation management use in the enterprise. [1, 2, 4, 7, 8, 9, 10, 13]

The purpose of the article is, on the base of a detailed analysis of literary sources in the field of strategic management, cooperation management, marketing and a realized research, to gain a picture referring to the use of cooperation management in Slovak companies and the knowledge gained subsequently apply into the recommendation draft for effective cooperation control in a company's practice.

The subject of the research was companies acting in all branches of the national economy in Slovakia. Factually, they are companies, which are, according to the number of employees, included into the medium-sized and big businesses by the Statistical office of the Slovak Republic.

The number of a selective sample introduces 367 respondents for a 95% confidence interval required at a 5% maximum permissible mistake. In consideration of the fact that 273 respondents participated in the research, the mistake that has arisen represented 5.83%. The data were collected only by personal asking. 497 companies were asked, from which 273 managers fulfilled the questionnaire, which means 54.93% of the return

## Current state of dealing with the issue

Among the professional public is currently debate about definition of cooperation management and allocation of areas of their operation. There are a few definitions of cooperation management in the literature, but each of these cover only a section of the overall role of cooperation management. The above mentioned definitions bring to fore the following features of cooperative management [3, 5, 12, 14, 15]:

- Cooperative management is a complex decision making process, and decisions are made at all the three levels of management pyramid.
- The overriding objective of cooperative management is to serve the needs of members.
- The conduct of all the activities must be governed jointly by the two sets of principles namely, a) principles of management and b) principles of cooperation.
- The creation of proper balance between efforts aiming at commercial success and those aimed at maintaining the institutional goals of the cooperative association.
- Like any other management, it seeks to achieve its aim by means of effective and efficient use of resources.

Based on a thorough analysis of domestic and foreign literature, we can proceed to the following definition: *Cooperation management is effective and purposeful relationship management in the meaning of cooperation between individual, relatively independent organisations or individuals with the aim to increase their competitiveness.* [11]

## Situation in Slovak enterprises – results of the empirical research

From September 2012 up to February 2013 a research, whose main task was acquiring and interpretation of information referring to the level of cooperation use in conditions of Slovak enterprises, was done. The main purpose of the research was an attempt to identify key elements of the effective managing (functioning) of cooperation, problems, satisfaction with enterprises' cooperation and possibilities to improve functioning cooperation. The data gained brought a complete picture of Slovak enterprises' preparedness to use cooperation management.

273 managers of middle-sized and big enterprises acting in the Slovak Republic took part in the research. All respondents were addressed through personal asking. In the processing of the information were used  $\chi^2$  independence tests of qualitative features and a cluster analysis.

A lack of literature referring to the issue of cooperation management use (specification of terms, structure and methods of use) reflects the reality that just a few managers had the processes documented and understood the issue.

The ascertainment that almost half of the respondents (48%) are planning to cooperate with another enterprise or organization intensively in the near future (within 1 year time), can be taken positively.

The same can be evaluated the fact that even 46% of the managers asked would decide repeatedly to cooperate with their most important partner. It proves their tough relationship, which can be considered as the basic prerequisite for a successful cooperation.

Within the research the intensity rate of cooperation of a certain enterprise with other enterprises on the point scale from 1 up to 10, where 1 means "almost none" and 10 means "very intensive" was found out. Interesting findings:

- Enterprises cooperate the most intensively with commercial enterprises; high intensity of cooperation (the level 8, 9, 10) affirmed 64.4% of the managers asked,
- Enterprises do not almost cooperate (the level 1) with non-profit organizations, this possibility was pointed by 55.2% the respondents asked,

- Really weak intensity of enterprises cooperation is with the European Union, 49.7% managers asked affirmed that they do not almost cooperate with the EU,
- Similar situation is within the enterprises cooperation with a local self-government and regional self-government (Senior Territorial Unit).

$\chi^2$  independence test of qualitative features proved that there is a kind of dependency between satisfaction of enterprises with the level of the current cooperation (satisfaction index) and largeness of enterprises.

The main problems which occur during a cooperation of enterprise with other enterprises and organizations were considered mainly insufficient fulfillment off terms of contract (58.39%), financial demands (35.04%), information distortions (34.31%), low efficacy of cooperation (29.56%) and unwillingness to provide internal information from the side of a co-operational enterprise, i. e. concern about providing internal information of an enterprise (28.83%).

## **Draft recommendation for effective cooperation management in an enterprise practice**

The main problem occurred is *an unemployed cooperation potential of an enterprise*. The enterprise either does not know its cooperation potential or there are none conditions in an enterprise for its improvement and use. Displays of these problems differ. First of all it is connected with the appearance of misunderstandings, expenses and realization of inefficient cooperation processes (many times repeating).

Managers of the enterprise should be interested in a detailed analysis of cooperation capacity of the enterprise. The enterprise must have a view of their knowledge, experience, sources, property and managerial abilities and skills which they have at their disposal and they can use them to the full when creating and managing cooperation. To do so, it is important that the top management of the enterprise have an exact conception referring to cooperation creation and their management which must be stated in the enterprise strategy supported by responsible human and financial sources. Managers must communicate with potential partners and their employees actively and join them into the cooperation creation. The top management should create a kind of motivational scheme, which will stimulate their employees to join the cooperation processes.

Another risk area is *absence of information system* supporting effective exchange of information between partners within cooperation. Information coming from partners are not often registered in the form they could be used later or they are not accessible to all responsible people. This leads to the situations when managers and employees react insufficiently towards the information replies within the cooperation.

Managers of an enterprise should create certain databases connected with information system of the enterprise. In the case of impulse everyone in the enterprise must exactly know how to react. This enables just effective work within the cooperation. Information system must take into consideration requirements and a current situation in the field of information technologies of individual partners within the cooperation.

A very serious problem is considered to be *a lack of appropriate conditions supporting cooperation creation*. Managers of the enterprise should focus on creation of the enterprise culture with an appropriate motivational scheme. Except for the recommendations mentioned above whose application causes improvement of the cooperation conditions, it is needed to focus on the employees of the enterprise. The top management should try to encourage their activity and to create appropriate conditions, which will secure open communication, discussion on cooperation possibilities, team works. Employees of enterprise should bring their enthusiasm into the development of new cooperation.

## Conclusion

The analysis of special literature and the research realized proved the fact that the key role in the issue plays mutual reliance, fulfillment of terms of contract, level of communication and information system enabling effective work with the information referring to the cooperation. It can be stated that:

- Effective cooperation has significant impact on competitiveness.
- Experience and mutual trust are important factors for cooperation development.
- Cooperation between independent companies could be managed in order to gain competitive advantage.
- Cooperation with R&D could improve innovation process.

Managers of the enterprise should make a plan connected with creation and improvement of cooperation including a method how to achieve it; remake an enterprise strategy so that it contains creation and improvement of cooperation relationships; earmark sufficient sources (human and financial) for cooperation and their searching; make appropriate conditions for creating and improvement of cooperation relationships.

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## Regional Passenger Companies in Russia: Problems and Ways of Solving

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**Abstract.** This paper is related with problems of regional passenger companies (RPC) – independent railway commuter operators in Russian Federation. Commuter service market regulation mechanism does not provide economic efficiency of RPCs. We offer means of transport cooperation as possible way to solve the problem of commuter operators in regions. To choose the most available mean of transport for particular direction, it is proposed to compare average coach occupancy in fact and critical coach occupancy index.

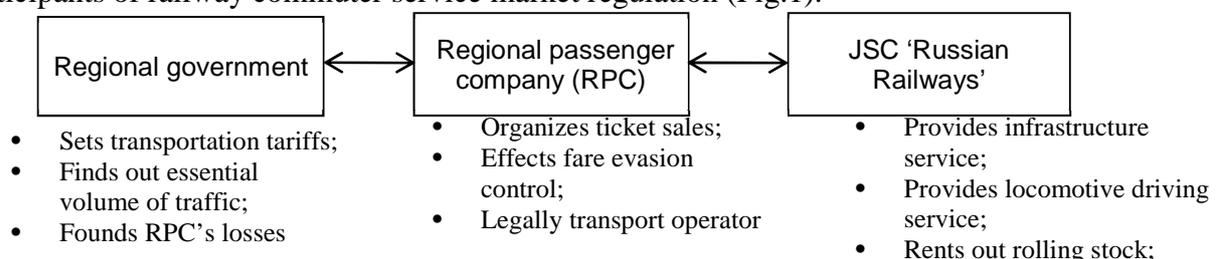
**Keywords:** commuter transportation, regional passenger companies, cooperation scheme, coach occupancy, economic efficiency.

Since 2001 railway transport in our country has been reforming. The aim of reform was to increase its economic efficiency by developing competition in those fields of operation where it is possible [1]. As a result, we have freight transportations market, high-speed transportations market, passenger transportation market, commuter service market.

More than 90% of passenger transportation in Russia are commutation service. The density of passenger traffic is more than 1.1 billion passengers per year. [2] Generally passenger transportation is realized by automobile and railway transport.

The specificity of railway passenger transportation is in its loss-making because of regional tariff regulation (when tariffs are lower than self-cost). Besides that, there are a lot of passengers who have travel privileges.

During the reform of Russian Railways regional passenger companies - independent operators - came into being. Regional passenger companies are joint-stock companies, and shares are owned by Russian Railways and government agencies of Russian Federation subjects. They are the main participants of railway commuter service market regulation (Fig.1).



**Fig. 1.** Commuter service market regulation mechanism.

Transportation tariffs are settled by regional governments lower than their economically feasible level. Up to now losses from passenger transportation were covered by profits from freight operations. But since regional passenger companies have begun operating, their losses have to be funded from federal budget and budgets of Russian Federation subjects.

In spite of the fact that the documents regulating calculation of expenses of regional passenger companies in recent years were accepted, many regions consider expenses unfairly high and refuse to fund losses. This is important problem, because commuter transportation is essential for regional economic development.

The other problem is that regional passenger companies in Russia don't possess any active assets. They rent all the rolling stock from infrastructure owner (Russian Railways). They command the services of foot-plate staff and train staff. So, regional passenger companies are operating as shell companies. This problem or property is aligned with economic efficiency of companies. Transfer of the ownership of rolling stock to regional passenger companies will improve the efficiency of cost management.

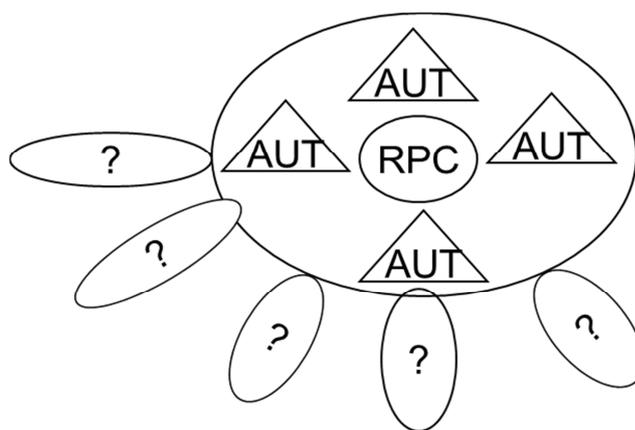
Some results of North-West passenger company activity analysis are in the Tab. 1.

	2008	2009	2009/2008, %	2010	2010/2009, %	2011	2011/2010, %
Passenger traffic, thousands	127100	116692	91,81%	80331	68,84%	76559	95,30%
Passenger kilometers, millions.	5579	5189	93,01%	2987	57,56%	2954	98,90%
Average length of haul, km	43,9	44,5	101,37%	37	83,15%	37,3	100,81%
Expense, million rubles	4934	6882,3	139,49%	7161,2	104,05%	5224	72,95%
Income, million rubles	3669,9	6713,9	182,95%	4976,2	74,12%	5327	107,05%

**Tab. 1.** Indexes of North-West passenger company activity [3].

As we can see from the table 1, volume of company's work is declining while expense is increasing. So, company can't operate economically effective and makes loss.

To solve the problem of RPC's economic inefficiency, we offer means of transport cooperation scheme in regions. Instead of competition development, we propose to choose the most available mean of transport for every direction accounting their competitive advantages (Fig.2).



**Fig. 2.** Means of transport cooperation scheme.

It is common knowledge that railway transportation is effective on directions which have regular big volume of passenger traffic. That is why we offer to calculate the critical coach occupancy index (1) for every direction:

$$h = \frac{z}{d + s}, \quad (1)$$

$z$  – 1 car kilometer self-cost for direction, rubles;

$d$  – 1 passenger-kilometer tariff, rubles;

$s$  - 1 passenger-kilometer subsidy, rubles.

If average coach occupancy in fact is less then critical coach occupancy index, motor transport is more available for direction then railway transport. Regional government may provide transportation by autobuses instead of commuter trains to decline regional passenger companies losses.

## Conclusion

The purpose of railway transport reform was to increase its economic efficiency, but regional passenger companies make losses. Regional governments need to develop cooperation of means of transport to cut down their expenses on commuter transport. Means of transport cooperation scheme allow to increase regional passenger companies' efficiency and commuter service market performance.

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## Janosik tax as a sign of Poland's social solidarity

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**Abstract.** Poland's local government units with the highest revenues per capita earned from taxation are obliged to make a special financial contribution to the state budget known as 'Janosik tax'. Every year those local government units transfer to less affluent communes, districts and provinces over 2 billion PLN. On the one hand, this financial commitment is intended to equalize the differentiation in the affluence of regions, on the other hand, however, it functions as a barrier to the development of the regions deemed affluent.

**Keywords:** *local government unit, tax, social solidarity*

### 1. Introduction

The development of the whole state is dependent on the development of all of its regions. The concentration of income in specific regions only does not influence positively social relations and the broadly understood social justice. The common interest of all local government units is more important than particular aims of specific subjects. The idea of social solidarity assumes that societies tend to achieve common success - the sustainable development of the whole country and not the expansion of some towns and the contraction of others with no chances for the improvement of their situation. These assumptions are consonant with the policy of the European Union on sustainable development [2; 3].

The objective of the paper is to present the fiscal burden which by its assumption is intended to equalize the differences in incomes observed between specific regions in Poland. Also, the work will show the financial effects resulting from the introduction of Janosik tax and will discuss some proposals of changes.

### Janosik tax – background

Janosik tax<sup>1</sup>, also named as wealth tax, was levied in 2003 and is dependent on the level of tax revenue per capita of a given local government unit [6]. The tax is paid by communes whose revenues exceed 150% of the average revenue for communes, by districts whose revenues exceed 110% of the average for districts, and by provinces whose revenues exceed 110% of the average for provinces.

That tax is paid by communes, districts and by provinces [the territorial division in Poland: 1] which do not need to be very affluent to pay it, since while calculating tax revenue per capita only the sheer value of income is taken for the purposes of calculation. Other elements such as, for instance, the level of indebtedness, the level of needs or other relevant factors are neglected in this

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<sup>1</sup> The name of the tax – 'Janosik' - is taken after a Slovakian highwayman living at the turn of the 17th and 18th centuries. According to the legend, he robbed the rich and gave the haul to the poor. Janosik has gained his popularity also in Poland and is considered by many as a Polish historic hero.

calculation. Making payments to the state budget by local government units with the assignment to the sustainable or regional parts of the general subsidy<sup>2</sup> is related to the system of equalizing revenues of units as a result of the horizontal redistribution of financial means [5].

## The principles of the tax redistribution

For various levels of local governments, different schemes of the redistribution of funds derived from Janosik tax have been applied. The principles of the redistribution are not dependent merely on a unit's income level or its financial situation. Other factors taken into consideration while redistributing the tax include: spending on social welfare (allowances for housing, regional passenger transport), on the infrastructure (maintaining the road system) or macroeconomic factors (unemployment or GDP).

The distribution of funds from the equalization subsidy to communes is significantly differentiated:

- a) 50% is allocated to those towns in which spending on allowances for housing for the poorest inhabitants exceeds 80% of the average spending calculated for one inhabitant in other towns,
- b) 25% is allocated to rural and rural-urban communes in which spending on allowances for housing exceeds 90% of the average spending calculated for one inhabitant in other towns,
- c) 25% is allocated to rural and rural-urban communes in which the aggregate of tax-earned revenue (the share of PIT, agricultural and forest taxes) is lower than 80% of the average revenue obtained from the same sources in other communes.

The distribution of the amount of the equalization part of the general subsidy to districts is as follows:

- 9% is allocated to districts which were not obliged to make payments due to Janosik tax, or for which the level of payment was established as lower than 1 million PLN,
- 7% is allocated to districts indicated by the appropriate minister dealing with labour issues in which there is no district labour office during the tax year,
- 30% is allocated to districts in which the total length of district roads per district inhabitant is higher than the average length of district roads calculated for the country,
- 30% is allocated to cities with district rights depending on the total length of provincial and state roads located within the administrative boundaries of the city,
- 24% is allocated to districts in which the budget inflows planned for the tax year are lower than the amount of inflows planned for the base year.

The regional subsidy is distributed among provinces as follows:

- 20% is allocated to provinces in which the unemployment rate is higher than 110% of the country's average unemployment rate,
- 40% is allocated to provinces in which the total surface of roads per province inhabitant is larger than the country's average road surface calculated for a province,
- 10% is allocated to provinces in which GDP per capita is lower than 75% of the country's GDP per capita,
- 15% is allocated to provinces with the consideration of the level of current expenditure on regional passenger transport,

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<sup>2</sup> In Poland JST (*Jednostki Samorządu Terytorialnego* - Local Government Units) receive the general subsidy which is composed of the following parts: the part for educational purposes (communes, districts, provinces), the compensation part (communes, districts, provinces), the equalization part (communes, districts) and the regional part (provinces).

- 15 % is allocated to provinces which in the current year may receive less from the general subsidy (the equalization part and the regional part), i.e., the amount is reduced by the payments made due to Janosik tax, if compared with the base year.

## Janosik tax – the financial aspect

Approximately 40% of payments made towards Janosik tax comes from districts which are predominantly big cities with the status of a district (Table 1). However, the most important is the concentration of tax payers that occurs at each level. In the case of communes, nearly 50% of the payment made towards the tax comes from one unit – Warsaw (as a commune)<sup>3</sup> is to pay 285.3 million PLN in 2013.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Communes	342.9	385.9	441.9	463.6	558.0	716.1	637.9	619.4	651.0	571.3
Districts (including cities with district rights)	475.8	506.7	604.2	773.8	885.9	1095.0	1133.7	1137.2	1068.6	1076.6
Provinces	380.5	314.5	637.7	642.3	720.6	890.8	955.6	627.8	687.1	735.3
Total	1199.3	1207.2	1683.9	1879.7	2164.6	2702.0	2727.4	2384.5	2406.9	2383.2

**Tab. 1.** Payments towards Janosik tax in the time period 2004-2013 (in millions of PLN)

In 2013 out of the total of 1 billion to be paid in by districts, as much as 717 million PLN is to be provided by Poland's five largest cities with district rights, which constitutes about 71.7% of the total sum due to the tax (part of these means is returned to the tax payers, see Table 2).

Tax payers	2013	
	Payments due to Janosik tax contributed to the state budget	Revenues from the equalization subsidy (Janosik tax) distributed to communes and districts
Warsaw	506 720 961	44 065 616
Cracow	64 435 833	Lack of data
Łódź	26 747 116	17 594 044
Wrocław	52 639 176	19 347 711
Poznań	65 371 798	16 527 466

**Tab. 2.** Payments due to Janosik tax contributed to the state budget and revenues from the equalization subsidy in Poland's five biggest Polish cities.<sup>4</sup>

In 2013 the *mazowieckie* province due to 'its affluence' is expected to contribute as much as 661 mln to the state budget (23% of all expenses included in the province's budget). The second province that contributes most to the budget is the *dolnośląskie* province with the decidedly lower amount of only 26 mln PLN. It must be noted that the regional subsidy is distributed to all the provinces (16 units) and, for instance, in 2011 the amount of 19.4 mln PLN was redistributed to the *mazowieckie* province.

<sup>3</sup> Warsaw is a homogenous commune with district rights and is composed of 18 supporting units – districts.

<sup>4</sup> In 2013 the two largest tax payers (Warsaw, Cracow) submitted a motion to the Constitutional Tribunal to abolish the tax, however, it ruled that the tax is consistent with the Constitution of the Republic of Poland.

## Conclusion

Janosik tax may impact the equalization of differences between specific regions in Poland. However, it is also a fiscal burden for the most entrepreneurial communes. At the same time, the tax rewards the poorest units which are incapable of increasing their revenues and of limiting their expenditures. It happens so quite frequently since due to the state's support it does not pay for the poorest units to increase their revenues or limit expenditures.

The existence of the tax seems to be justified, however, it should be imposed on a smaller number of units. Only the richest units should be obliged to pay it and not only due to tax revenues earned, maybe payments due to Janosik tax contributed to the state budget should not exceed a certain level of unit's own revenues. The financial means collected should be distributed only to the poorest units and the number of the tax eligibility criteria should definitely be increased. New regulations should reflect the economic and financial situation of a unit more comprehensively. A solution might be the introduction of a multi-factor measure.

The issues which need considering include abolishing the tax, changing its distribution and/or financing the poorest units with the money coming from the state budget and not from the local government units.

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## Status of cybercrime in the EU

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**Abstract.** Cybercrime is a kind of crime that happens in "cyberspace", that is, happens in the world of computer and the Internet. Although many people have a limited knowledge of "cybercrime", this kind of crime has the serious potential for severe impact on our lives and society, because our society is an information society, full of information exchange happening in cyberspace.

**Keywords:** Cybercrime, Identity theft, Online fraud, Scan E-mails.

### 1. Introduction

Cybercrime is criminal activity done using computers and the Internet. This includes anything from downloading illegal music files to stealing millions of dollars from online bank accounts. Cybercrime also includes non-monetary offenses, such as creating and distributing viruses on other computers or posting confidential business information on the Internet.

Perhaps the most prominent form of cybercrime is identity theft, in which criminals use the Internet to steal personal information from other users. Two of the most common ways this is done is through phishing and pharming. Both of these methods lure users to fake websites (that appear to be legitimate), where they are asked to enter personal information. This includes login information, such as usernames and passwords, phone numbers, addresses, credit card numbers, bank account numbers, and other information criminals can use to "steal" another person's identity. For this reason, it is smart to always check the URL or Web address of a site to make sure it is legitimate before entering your personal information.

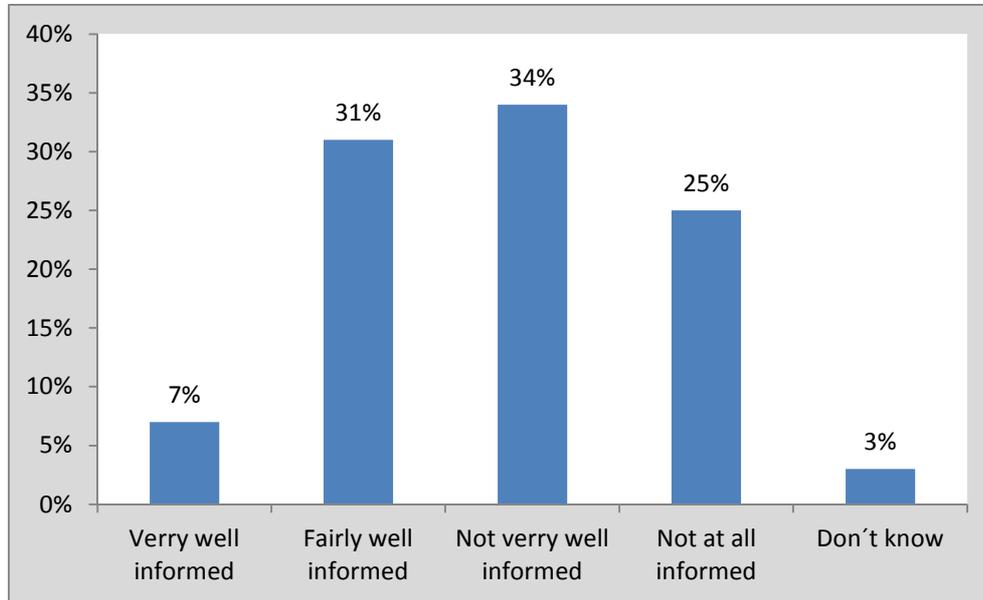
Because cybercrime covers such a broad scope of criminal activity, the examples above are only a few of the thousands of crimes that are considered cybercrimes. While computers and the Internet have made our lives easier in many ways, it is unfortunate that people also use these technologies to take advantage of others. Therefore, it is smart to protect yourself by using antivirus and spyware blocking software and being careful where you enter your personal information [1].

Identity theft is a crime in which an imposter obtains key pieces of personal information, such as Social Security or driver's license numbers, in order to impersonate someone else. The information can be used to obtain credit, merchandise, and services in the name of the victim, or to provide the thief with false credentials. In addition to running up debt, an imposter might provide false identification to police, creating a criminal record or leaving outstanding arrest warrants for the person whose identity has been stolen [2,3].

Identity theft is categorized in two ways: true name and account takeover. True name identity theft means that the thief uses personal information to open new accounts. The thief might open a new credit card account, establish cellular phone service, or open a new checking account in order to obtain blank checks. Account takeover identity theft means the imposter uses personal information to gain access to the person's existing accounts. Typically, the thief will change the mailing address on an account and run up a huge bill before the person whose identity has been stolen realizes there is a problem. The Internet has made it easier for an identity thief to use the information they've stolen because transactions can be made without any personal interaction [2,3].

## 2. Results of research of cybercrime in European Nation in 2012

The next paragraphs try to approximate results from research, organized by European Commission. The survey was being processed in the 27 Member States of the European Union during the year 2012. Almost 27 000 respondents from different social and demographic groups were interviewed face-to-face. Here are some interesting results of status of cybercrime in EU.



**Fig.1.** How well are users informed about cybercrime (\*EU 27 average) [5].

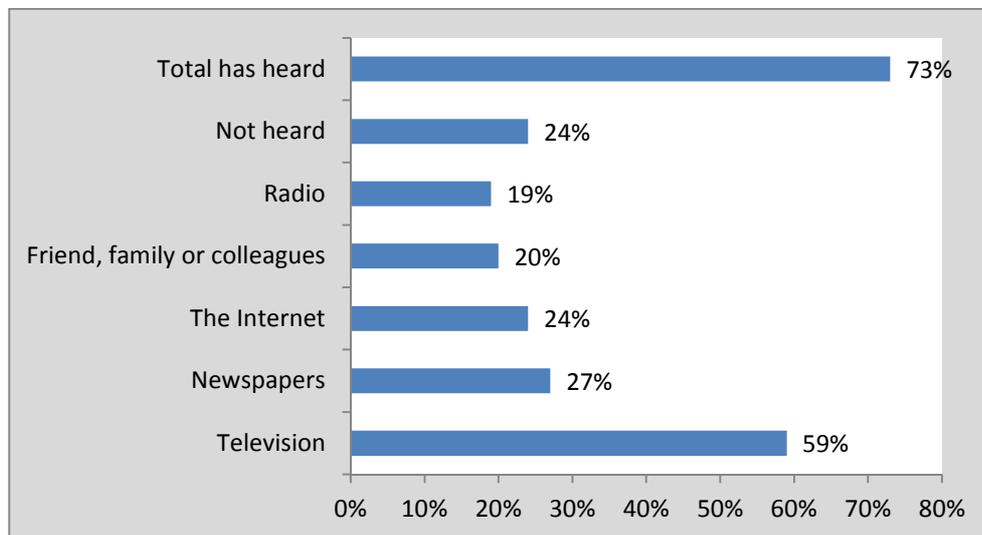
The figure 1 talks about users informed about cybercrime, who use the internet for online banking or buying things online. Most EU citizens do not feel well informed about the threats. Just 7% of EU citizens feel very well informed about the risks of cybercrime, while 31% say they feel fairly well informed. The majority either feels not very well informed (34%) or not at all informed (25%).

Countries	Well informed	Not very well informed	Not at all informed	Don't know
EU27	38%	34%	25%	3%
Denmark	73%	20%	6%	1%
Sweden	69%	26%	5%	0%
Germany	38%	37%	22%	3%
Austria	34%	38%	27%	1%
<b>Slovakia</b>	<b>34%</b>	<b>39%</b>	<b>26%</b>	<b>1%</b>
Poland	33%	35%	29%	3%
Czech Republic	31%	40%	28%	1%
Hungary	30%	37%	32%	1%
Spain	28%	44%	27%	1%
Greece	27%	36%	36%	1%
Bulgaria	24%	34%	36%	6%

**Tab.1.** How well are users informed about cybercrime in EU countries [5].

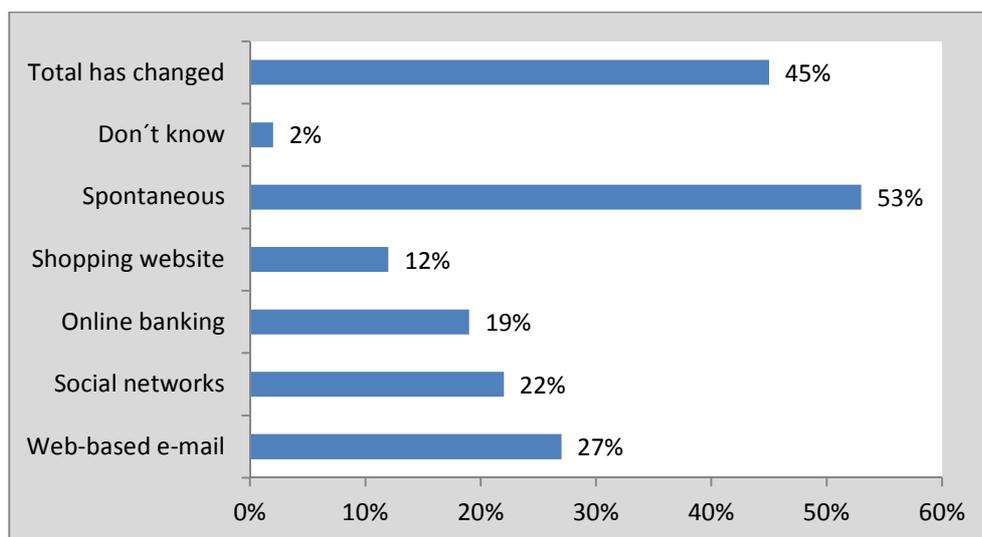
The table 1 further describes the situation in some EU countries. The most well informed are users from Nordic countries (Denmark 73%, Sweden 69%). Contrast this, absolutely informed are users from Bulgaria and Greece (36%). In the middle of informed are most citizens from Czech

Republic (40%). Slovakia achieved results very similar to the EU average. Younger respondents tend to feel better informed than older respondents. The proportion that feels very or fairly well informed ranges from 52% among 15-24 year olds to 25% among those aged 55 or over. Men are more likely than women to feel well informed (43% compared with 33%).



**Fig 2:** User awareness of cybercrime (\*EU 27 average) [5].

Respondents were asked about sources of information on cybercrime (figure 2). The majority of EU citizens say they have seen or heard something about cybercrime in the last 12 months (73%). When shown a list of possible sources of information, respondents are most likely to say they got their information about cybercrime from television (59%). Around a quarter saw something about cybercrime in newspapers (27%) and the internet (24%), while 19% got information from the radio and 20% from friends, family or colleagues. Most EU citizens say they have seen or heard something about cybercrime in the last 12 months, most commonly from television. However, the majority do not feel very or at all well informed about the risks of cybercrime.



**Fig.3.** Changing users passwords during the past 12 months (\*EU 27 average) [5].

Figure 3 describes change users passwords during the past 12 months. Users should use strong passwords. Although it may be easier for users to remember short passwords that reference on birthday, middle name, or pet's name, these kinds of passwords also make it easy for hackers. Strong passwords can go a long way in helping secure users information, so choose a password that

is at least 10 characters long and consists of a combination of letters, numbers and special characters. Also consider changing your password periodically (at least once for half a year) to reduce the likelihood of it being compromised [4].

In total, 45% of internet users across the EU have changed their password to access one of these services (mentioned in figure 2). The proportion of internet users that have changed their password to access online services is highest in Estonia (68%), Finland (66%) and the Netherlands (65%). Internet users are least likely to have changed their password to access online services in Bulgaria (32%), Hungary (32%), Greece and Spain (33%). In Slovakia totally has changed password 45% internet users.

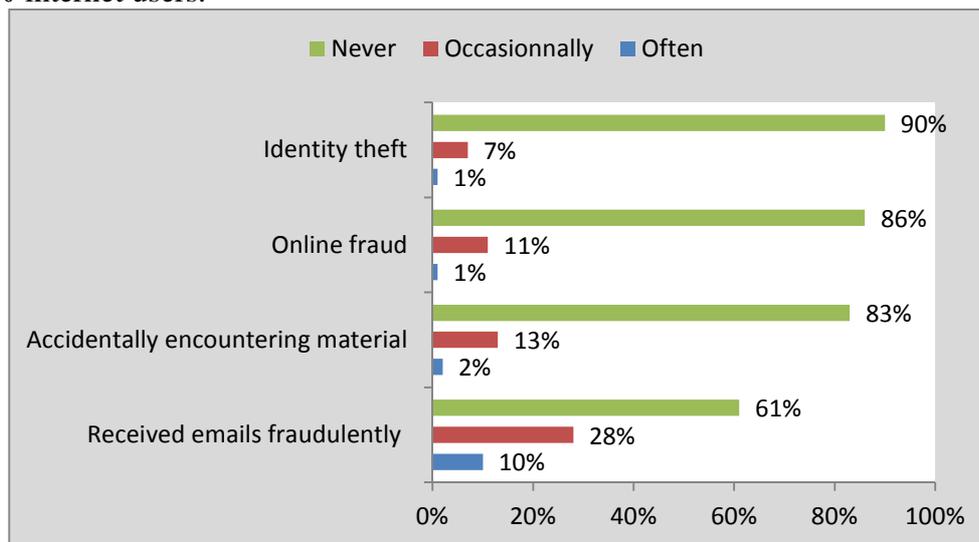


Fig.4. Users experiences with cybercrime (\*EU 27 average) [5].

The figure 4 looks at internet users' experience of different types of cybercrime (respondents were asked how often they had experienced or been a victim of different types of crime). More than a third of internet users across the EU (38%) say they have received emails fraudulently asking for money or personal details. This is by far the most common type of cybercrime experienced by respondents. In addition, 15% of internet users say that they have accidentally encountered material which promotes racial hatred or religious extremism. 12% of internet users have experienced online fraud (where goods are not delivered, counterfeit or not as advertised). Across the EU, 8% of internet users say they have experienced identity theft.

Identity theft				
Countries	Offen	Occasionally	Never	Don't know
EU27	1%	7%	92%	0%
Romania	5%	11%	80%	4%
Hungary	1%	11%	87%	1%
Austria	4%	7%	85%	4%
Spain	1%	7%	92%	0%
Poland	2%	6%	91%	1%
Bulgaria	3%	5%	91%	1%
Czech Republic	1%	4%	94%	1%
<b>Slovakia</b>	<b>1%</b>	<b>4%</b>	<b>93%</b>	<b>2%</b>
Slovenia	0%	2%	97%	1%

Tab.2. Rate of identity theft in some EU countries [5].

On average across the EU, 8% of internet users say they have experienced or been a victim of identity theft. This figure is similar in most EU countries, but is highest in Romania, where 16% of internet users say they have experienced identity theft, including 5% who say it has happened to them often. Respondents in Hungary (12%), UK (12%) and Austria (11%) are also more likely than average to say they have experienced identify theft. The lowest levels are in Slovenia (2%), Greece (3%) and Denmark (3%). Slovakia has a little bit better results than the European average.

Scan E-mails				
Countries	Offen	Occasionnally	Never	Don´t know
EU27	10%	28%	61%	1%
Nederland	18%	36%	46%	0%
United Kingdom	21%	31%	48%	0%
Austria	8%	31%	59%	2%
Spain	5%	22%	73%	0%
Poland	6%	13%	80%	1%
Bulgaria	6%	12%	81%	1%
Czech Republic	3%	24%	72%	1%
<b>Slovakia</b>	<b>3%</b>	<b>25%</b>	<b>70%</b>	<b>2%</b>
Greece	4%	14%	82%	0%

Table 3: Rate of Scan E-mails in some EU countries [5].

In several countries, around half of respondents say that they have received emails fraudulently asking for money and personal details: the Netherlands (54%), Malta (53%), Sweden (53%), UK (52%). The proportion that say this has happened to them often is also high in these countries, particularly in UK (21%) and Luxembourg (20%). The lowest numbers for receiving a scam email can be seen in Bulgaria (18%), Greece (18%) and Poland (19%). Slovakia has results under the European average. Detailed results are shown in table 3.

Online fraud				
Countries	Offen	Occasionnally	Never	Don´t know
EU27	1%	11%	86%	2%
Poland	3%	15%	81%	1%
Hungary	2%	15%	81%	2%
<b>Slovakia</b>	<b>1%</b>	<b>14%</b>	<b>83%</b>	<b>2%</b>
Austria	3%	12%	83%	2%
Romania	4%	10%	81%	5%
Spain	1%	6%	90%	3%
Czech Republic	1%	11%	87%	1%
Bulgaria	2%	7%	88%	3%
Greece	0%	3%	96%	1%

Table 4: Rate of online fraud in some EU countries [5].

The proportion of internet users that say they have experienced online fraud (12% on average across the EU) is similar in most EU countries. The highest figures are in Poland (18%), Hungary (17%), Malta (16%) and UK (16%), while respondents in Greece (3%), Slovenia (6%) and Spain (7%) are least likely to have experienced online fraud. Slovakia has results very similar with European average. Detailed results are shown in table 4.

### 3. Conclusion

In the article is mentioned status of cybercrime in some European countries. The growth of cybercrime all over the world, is on the rise and to curb its scope and complexity is the pertinent need today. Cyber space offers a plethora of opportunities for cyber criminals either to cause harm to innocent users, or to make a fast buck at the expense of unsuspecting users electronic banking, and their level of security.

According to the values given in the article may seem that the state of cybercrime isn't a growing trend in the EU. But the opposite is true. More than a million people fall victim to cybercrime every day. Cybercrime currently is on the rise. It is a very modern way of crime, which is difficult to detect. The perpetrators are not on venue, so it is less likely to will trace them. Also, the attacker may be located in another country, and therefore the possibility of law enforcement to identifying the offender may be limited. Because of concerns arising from cybercrime are changing the behavior of users. Approximately 38% of European Internet users have changed their behavior as a result of concerns about computer security. During the year 2012, decrease the number of users by 18%, willing to buy via the Internet, and decreased the number of users by 15%, who use Internet banking. For this fact is responsible increase in cybercrime, the lack of legislation in cybercrime.

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# Underpricing of Initial Public Offerings on Warsaw Stock Exchange

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**Abstract.** The underpricing effect was first identified by Ibbotson in 1975. He pointed several possible explanations for abnormalities in financial market and IPO process. If investors are better informed than the issuer than he will face the problem with the pricing and IPO process of its shares. There are more theories on underpricing which are compared in this paper. In addition this paper explains underpricing effect for short term and long term periods and shows the analysis of underpricing of IPO process on Warsaw Stock Exchange between 2003-2011.

**Keywords:** IPO, underpricing.

## 1. Introduction

Initial public offering (IPO) are underpriced on average: secondary market trading prices of stock is on average higher than the IPO price. In recent years, the market for IPO has been characterized by several important developments. One main characteristics was the outperformance of IPO of firms called new economy and underpricing of IPO. Another striking future is IPOs cyclicity. The puzzle of IPO pricing both for short-run and long-run investment has become leading example of market inefficiency. While the most widely empirical regularity is underpricing of IPO offers, the evidence of IPOs long-run performance is mixed. This suggests that investor should buy a portfolio of IPO shares and sell them in the short-run instead of avoiding long-run losses. This phenomenon is called “money left on the table” [1]. The first part of this paper documents the IPO mechanism available on stock exchanges. The second part focuses on IPO underpricing on Warsaw Stock Exchange and analysis of short-run and long-run performance of IPOs.

## 2. Measures of the underpricing of IPO process

Measures of underpricing differ according to which price is takes as the post-IPO equilibrium price and which return is chosen as a benchmark. Initial performance can be measured by the difference between the post-listing equilibrium price (EP) and the final offering price (OP) divided by the offering price:

$$U = \frac{EP-OP}{OP} = \frac{EP}{OP} - 1 \approx \ln\left(\frac{EP}{OP}\right).$$

A main problem is the choice of equilibrium price EP. When market is sufficient liquid, EP corresponds to the first day closing price. In other cases equilibrium can be obtained a couple days after the IPO. Having that problem some authors measure initial returns over a five day or week horizon. The raw initial return can be consider as a measure of underpricing, assuming that the normal return under efficiency would be close to zero. Other measures relaxed these assumption and adjust raw returns.

## 2.1 Adjusted initial returns

Three adjustment methods are used in the literature:

- The initial return adjusted for a market index:

$$U_m = \frac{EP-OP}{OP} - \frac{I_1-I_0}{I_0} \approx \ln\left(\frac{EP}{OP}\right) - \ln\left(\frac{I_1}{I_0}\right),$$

Where  $I$  designates the market index closing prices.

- The initial return adjusted for systematic risk:

$$U_s = \frac{EP-OP}{OP} - \beta \frac{I_1-I_0}{I_0},$$

Where  $\beta$  is the systematic risk.

- And the raw initial return adjusted for the return of a control portfolio:

$$U_p = \frac{EP - OP}{OP} - R_p$$

Where  $R_p$  is the return of a reference portfolio.

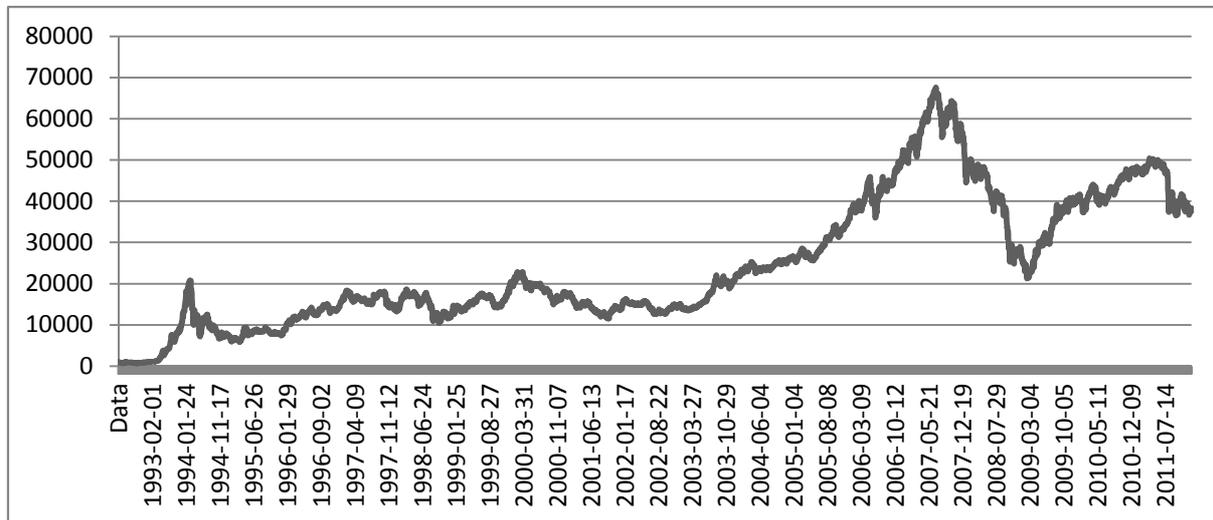
Moreover some authors calculate the return that would be obtained by an uniformed investor participating in all the IPOs. Considering that market movements are often too small most of authors use raw return and select the closing price at the end of the first day of quotation as the equilibrium price. Adjusted returns are preferred when the delay between the IPO date and the determination of the first equilibrium price is too long. The most widely used measure is market, which implicitly standardises systematic risk to 1. Limits of the second model lie in the difficult and biased estimation of beta[2].

## 3. Empirical results on global IPO underpricing

A well-accepted result is that IPOs are underpriced. It has been observed in the world in various periods and the level of underpricing has been changing over time. In the 1980s average IPO underpricing was 7%. It increased to 15% during the period 1990-1998, before jumping to 65% during short 1999-2000 period corresponding to the Internet Bubble[3]. The magnitude of initial returns depends on the selected measure and is influenced by taxation and specific market regulation it is observed in US, EU and Asia markets. It also varies over the time. Most empirical studies demonstrate positive short-run returns for IPOs investments. In contrast, mixed results are found with respect to the long-run performance of IPOs. The short-run performance varies across markets. In Europe highest average IPO return was in Poland (over 60%) followed by Greece, Germany and Ireland (about 40%). On the other side were Luxemburg (5%) and Denmark (10%). The lowest IPO returns were observed in Latin America in countries like Chile, Uruguay, Mexico and Brazil (less than 5%). Rhee [4] analysed over 800 IPO in US market in 1999 and 2000. He found that average returns were 72% and 56% respectively. Bolto, Smart and Zutter [3] examined 7306 IPOs in 34 countries. They found that IPOs are less underpriced in countries where existing public firms produce higher quality earnings information. The impact of going public in a country with relatively low earnings reporting quality is partially offset by the use by high quality underwriter. Adding to that underpriced IPOs exhibit higher aftermarket trading activity than overpriced IPOs [5].

### 3.1 IPO underpricing on Warsaw Stock Exchange between 1991-2011

The present paper is checking the value of IPO returns between 2 period 1991-2002 and 2003-2011. In this period we could observe many changes at the Warsaw Stock Exchange from bullish market between 1991-2000, 2003-2007 and 2010-2011 and few sharp corrections in 2000 and 2007.



**Fig. 1.** Daily WIG index 1991-2012.

Source: WSE.

Bullish market influences investors which were using low interest rates to allocate capital in equities. The data set includes 185 companies for the period of 1991-2002 and 314 for the period of 2003-2011. All the companies conducted the IPOs in WSE. 185 IPOs conducted in 1991-2002 had average underpricing during first day equaled to 26%. IPOs' underpricing was positively related to number of days and change of the broad market index. Between 2003 and 2011 the average initial return equaled to 14,2% and the median was 5%. Although on average IPOs investment were profitable the number of IPOs with negative initial returns were quite high (83 or 26% of all offers) for the period of 2003-2011. In general the negative initial returns stayed in relatively narrow range – from -10% to 0%. 50 offers yielded over 25% [6]. It can be figure out that kurtosis of initial returns is positive which means that observations are closer to the mean than in normal distribution. At the same time the skewness is also positive which means that there were IPOs with returns significantly far from the mean.

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Number of IPO	6	36	35	38	81	33	13	34	38
IPOs value (in PLN m)	1,358	12,734	6,981	4,155	26,94	2,803	583	1,238	417
Average IPO value	226	354	199	109	333	85	45	36	11
Market capitalization	167,7	291,7	424,9	635,9	1,081	465	715	796	642

**Tab 1.** The WSE equity market selected statistics.

As can be observed in tab 2. IPO returns turn negative in one month, there months and one year period. Holding shares result in -1.1% loss for one month, -1.0% for 3 months and -4.2% for one year. So for Polish market the best strategy would be selling stock just after IPO. The average Abnormal Initial Return (AIR) was calculated with aggregation of transaction costs, taxes (19%) and changes of the benchmark (index WIG)

$$AIR = \left[ \frac{EP - OP}{OP} - \frac{TC}{P_{AVG}} \right]_{+0,81} - \left[ \frac{WIG_t - WIG_{t-1}}{WIG_{t-1}} - \frac{TC}{WIG_{AVG}} \right]$$

Where: TC – transaction costs, WIG – prices of the index WIG, Pavg – average cost of transaction costs.

	Initial return	AIR	1m AAR	3m AAR	1Y ARR
Average	14.2	12.9	-1.1	-1.0	-4.2
Median	5.0	0.6	-1.8	-2.5	-11.8
Minimum	-75.2	-76.5	-21.7	-32.8	-85.1
Maximum	481.3	317.1	26.2	36.1	57.6
Standard Deviation	44.2	23.4	7.5	12.8	37.1
Skewness	6.7	9.5	0.7	0.3	0.1
Kurtosis	60.0	120.0	0.8	-0.4	-1.3
Number of IPO with negative returns	83	139	199	182	153
Number of IPO with positive returns	207	174	114	131	127

**Tab 2.** Descriptive statistics for IPO returns on WSE for 2003-2011

IPO on Warsaw Stock exchange can be profitable with average return at the 14,2% level. However there should be taken into account many other factors that influence investor's return. Those are capital gain taxes, transaction costs (commissions) and oversubscriptions (reduction). These factors are not pointed in literature as factors that really influence investors return. Most important factor in this case might be oversubscription when investor froze his funds and reduction take place. He will earn only on part of his capital. The rest of the funds will not generate the profit. Worse situation is when investor is using leverage to invest in IPO. It is very hard to measure uncertainty connected with reduction rates which might influence positively or negatively on initial return [7]. Between 2003-2011 total value of IPO was 75.6 bln PLN and if this number would account for 84.2 bln PLN there would be no underpricing. That means that companies left to investor's hands 8.6 bln PLN which is 11.4% of IPO value.

#### 4. Conclusion

As we can observe initial returns for IPO in Poland are positive and they follow the global trends. There are few factors that influence that underpricing. Most important is information asymmetry, size of speculative demand caused by individual investors, sentiment towards certain economy sectors, structure of the offer and reduction rate. In general during high volatility of market rate of returns IPOs offers high underpricing and that is why companies want to postpone their offers.

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# Knowledge as an Important Source of Competitive Advantage

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**Abstract.** Knowledge is increasingly becoming an important source of competitive advantage and key differentiating factor in business. Knowledge management can improve company's performance. The aim of this paper is to show the importance of knowledge in organizations and its contribution to success. This paper involves quantitative research methodology using questionnaire technique from which data were derived and analyzed. The analysis shows that companies need to look for different approaches to improve their performance. Based on the research, recommendations for improvement were proposed. These recommendations are based on knowledge management theory and its practice in Slovak companies.

**Keywords:** knowledge, competitive advantage, research, sources of knowledge, tools, strategies.

## 1. Introduction

“Amongst the most obvious consequences of markets becoming more competitive and customers more demanding is that many of the traditional bases of competitive advantage have been eroded. One way in which to combat this is for the marketing planner to differentiate the organization from its competitors by focusing upon the delivery of greater customer value.” (Wilson, Gilligan, 2005) There are several ways in which this can be done. One way is to implement knowledge management to company's processes. Knowledge is significant source of competitive advantage. This paper is demonstrating this significance based on the results of research.

Many authors agree that knowledge is an activity, process or action. Knowledge is purposeful coordination of actions (Zeleny, 2006). Polanyi stated that knowledge is an activity that can be called as the process of knowing (Zeleny, 2006).

In former Czechoslovakia Tomas Bata was an appreciated businessman. He recognized the value of knowledge many years ago. He said that own experience is great wealth because only own experience evaluates people's knowledge. People can pass the knowledge onto others, but experience must be acquired by their own sweat, own calluses. Only those, who look at things in their own eyes, have a chance to succeed. For businessman it is the worst to have a presumption of his own perfection. It is manifested by refusing knowledge in belief that it is not necessary to know and learn. So it is essential to preserve open heart for new knowledge whatever side it comes from. (Zelený, 2006)

Strategic thinking is very important if companies want to sustain competitive over the years. “If you think in terms of a year, plant a seed; if in terms of ten years, plant trees; if in terms of 100 years, teach the people (Confucius).” So companies need to think of knowledge management as something what can bring them sustainable competitive advantage.

This paper is focused on results of research conducted last year and major conclusions implied from it. These conclusions are related to knowledge management initiatives undertaken in Slovak companies. Companies are implementing knowledge management in order to improve their performance. On the other hand it is essential to implement knowledge management for increasing customer satisfaction. Paper is mainly focused on analyzing results from research and recommendations for companies which implies from it.

Competitive ability of companies lies on knowledge of their employees. Knowledge can be thus considered as an ability to react fast and effective on market changes. Adaptation to these

changes is not easy. Therefore many companies do not succeed. Because of that it is very important to monitor, analyze and try to predict possible changes which can have major impact on company.

## **Methodology**

Research was conducted at the end of year 2012. Object of research were all managers, owners and CEOs from Slovak companies. Population size was 60 589 managers. Sample size with 95 % confidence level and 10 % margin of error was 96 so the sample size was representative. There were sent almost 7 000 emails to managers of Slovak companies who were asked to fill questionnaire in attachment. Only 122 responses fulfill the requirements of research. Companies were from various industries. The most frequented industry was IT, industrial manufacturing and other industries. 38 were micro companies (0-19 employees), 29 small companies (20-49 employees), 23 middle companies (50-249 employees) and 32 large (250 and more employees).

## **Results**

During recession customers are stricter in setting priorities and they reduce their spending. When sales start to decrease, companies typically start to decrease costs, prices and postpone investments. Cutting costs are regarded also to minimizing marketing expenses (marketing communication budget, market research budget, etc.). This might be a mistake. Although it is good to change approach to reduction of costs, failing in brand support or investigation of change in customer needs may threaten performance of company for long time. Companies which identify new customer needs and adapt strategies, tactics and product offers according to it may prosper in long-term even after recession. Marketers can forget that success depends on effective marketing communication and products themselves. Buying behavior depends on disposable income of customers, security in question of future, belief in companies and their products and their lifestyle and values. Bad economic news changes buying behavior. A lot of frauds, corporate scandals and bad news supported customer ignorance and skepticism towards marketing messages of companies.

With this kind of situation Slovak companies had to deal, too. After crisis in 2008 companies lost a lot of customers, sales decreased, also profits and that led to unpleasant consequences. Because crisis had impact on customer losses, marketing departments had to increase their activities to better specify new customer needs in order to accommodate products and help them in the same tough situation. It was crucial to show customers that company cares about them and they want to solve this situation together with them. The biggest impact of crisis was laying-off of employees and sales decreases. They also went for cost cutting and innovation of products.

People in companies have willingness to learn and grow (65 of respondents marked on the scale from 1 to 10 number 10 which meant strong willingness). Respondents also consider willingness of company to learn and grow as strong.

Companies know many tools of knowledge management and they also use them in daily practice. The most frequently used tools are meetings, workshops, trainings, communication with experts inside and outside of company and databases of problems and solutions.

The most beneficial for acquiring new knowledge are practice, trainings, observation, university and scientific publications. Companies provide opportunity to participate in conferences to 79 respondents. From this number, 72 participate in conference once a year. Only 1/3 of them consider conferences as beneficial for their work. Besides conferences, 92 employees also participate in workshops with 53 of them going once a year. 73 of 92 participating consider workshops as beneficial for their work. This means that employees like practical trainings and they think of them being more important for daily praxis.

Because competitive advantage refers to marketing field it is important to see the linkage between competitive advantage, marketing management and knowledge itself and in connection with two mentioned terms.

Before research was conducted, author had presumption that by cooperation in identification of customer needs and gaining their knowledge and involving this knowledge to product development companies can increase their competitive advantage. This presumption appeared to be right.

Close cooperation with customers in identification of their needs is necessity of companies in 90 cases. Only 6 respondents mentioned that their company is not able to identify customer needs.

71 of examined companies involve customers in the product development process largely. If they do not cooperate with them it is because their business does not require it.

77 companies measure customer satisfaction in long-term with 44 of them quarterly, 37 yearly and almost all of 32 respondents continuously.

Competitive advantage companies obtain by close cooperation with customers, by knowledge of their employees and by continuous innovation.

In 89 cases companies continuously change their strategy according to market changes.

More than a half of respondents need for successful work performance:

- their personal and professional growth (71),
- clear rules (61),
- determining responsibilities and authorities (63),
- competence of their supervisors (56),
- competence of their coworkers (58).

Most important organizational sources of knowledge are following documentations:

- manuals (67),
- norms (45),
- software (82).

Mentioned documents are available for all employees in 92 cases.

Employees are generally creative. They come up with new ideas occasionally in 57 cases, often in 36 cases and in some companies not at all (6).

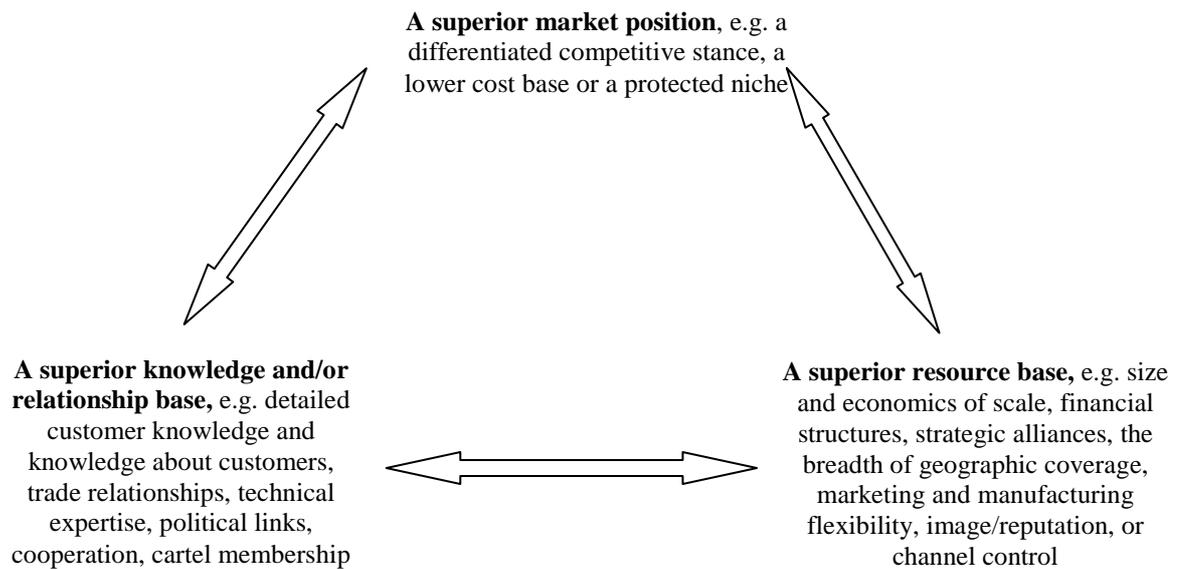
Employees are not financially motivated for knowledge sharing or ideas for improvement in 74 cases. That might be a reason why they do not come up with new ideas very often.

In almost all companies employees know who to come to if they need help. Relationships on the working place are generally positive so people are friendly and open to help. But when they help they want to be recognized for that. They do not want people they helped to take advantage of what they told them. Other barriers for sharing knowledge are lack of time and absence of incentives.

Employees strive for their professional growth. They are willing to learn. They also feel that company support them in further education.

Companies have problems caused by underestimation of proper communication. That is the reason why companies should try to improve communication skills of their employees in order to improve knowledge sharing.

In the literature and scientific publication there can be seen recognition of knowledge as an important source of competitive advantage. Research was based on results implied from literature. The analysis of respondents' answers showed that it is really essential to work with knowledge because it might be fruitful for company.



**Fig. 1.** Knowledge as a source of competitive advantage  
*Adapted from Wilson, Gilligan, 2005*

On the Figure 1 there can be seen that superior knowledge is one of the most important sources of competitive advantage. Companies should therefore strive for effective work with knowledge. Knowledge can be acquired not only from their employees but also from customers, competitors and other parties.

## Conclusion

It is possible to say that by application of available elements that knowledge management provides it is possible to improve flexibility of companies and their reaction on changing requirements of customers with emphasis on effort for maximal customer satisfaction. By application of knowledge management into the process of interaction with customers it is necessary to understand broader context. One of the most important factors contributing to success or failure of implementation is neglect of consideration of previous needs of customers' satisfaction and forgetting about dynamics of change. Customer can be influenced by whatever impulse which changes the attitude of customers. One day they can be in good mood and forgive every mistake of company but another day they can change their mood and this problem in serving can result to their loss. Therefore every day companies should treat their current customers differently according to customers' personality, changing situation and customers' state of mind.

The change is not regarding their requirements but also buying behavior which is influenced by several factors that company cannot affect. Therefore employees of company should try to observe customer behavior and adjust their approach to their knowledge about customer.

Companies in B2B environment are cooperating more closely with customers because they found out that this close cooperation brings them several crucial values. One of the key benefits is understanding of customers' requirements and their effort to find mutual way to their satisfaction.

Another crucial benefit is acquiring their knowledge, their comparison with company knowledge and mutual enrichment of these both sides knowledge. Thanks to successful cooperation both companies can obtain competitive advantage and both can reflect dynamic changes in environment and customers' requirements in broader sense of whole supply chain. It has mutual advantage that companies reduce their costs because they do not produce redundant inventory but

they adjust their products to customers' individual requirements. Knowledge brings new understanding into optimization of processes and making company's activities more effective.

Important influence on company success and customer satisfaction has also understanding of need of changing mindset of whole company. It means also change of company values as well as personal attitudes and values of company employees as the members of society. Each and every member of society creates social knowledge and therefore it is important to constantly enrich and share their knowledge among all members of society. Because of that it is important to change behavior into behavior where morality and ethics win. Generally in business environment these terms have lost their real meaning.

Knowledge management offers a lot of tools that managers can use effectively in their work. It is important to get to know these tools, understand their way of usage and cons and pros of their application to particular situation. Research showed that basic tools as conferences and workshops are not considered as beneficial according to employees' opinion. The usage of these tools is often financially demanding and their impact on company is not as notable as wished. Therefore it is important to consider which of them to use. Based on research it can be said that the best way to learn is to learn by doing and therefore it is important to provide employees with the possibility to experience everything what is in competence of company. Trials and errors cannot be punished because this way of learning is considered as best learning tool.

It is important to pay attention to improvement of skills and abilities of company employees to create tacit knowledge. This knowledge can be acquired not only by praxis but also by observation and dialogue. Dialogue, whole company communication and the ability to observe and draw conclusions are at low level. People have not enough developed these abilities. It is recommended to focus energy of companies on improving dialogue, observation and virtue as practical wisdom is. Is it mastery of reasonable judgment in particular situation thanks to which employees can gain or discourage customers from buying. Neglect of this ability is therefore out of the question.

In summary it is possible to state that appropriate implementation of knowledge management is challenge for companies. It is difficult but its contribution is priceless. Therefore companies should not underestimate this implementation and they should try to learn in trial-and-error's way as much as possible. They should continuously improve implementation until they achieve the level that employees would understand essence of learning organization and they would like to be active part of company's improvement and growth.

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## Research of Customer Satisfaction and Requests in a Consumer Electronic Company

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**Abstract.** Services industry is very specific by reaching customer satisfaction. There are many companies who are specialized on the same segment and the best of them have very insignificant competitive advantage. Companies have to realize that the whole process is not just about exchanging products for money but it is lot more than that. If all company's activities will be realizing in accordance with customer requests, it will lead to customer satisfaction and company's prosperity. The information about customer satisfaction is very valuable and that is why it is important to make researches about their satisfaction and still ask them about their feelings and requests while they are in a shop. All this information should companies use for their improvement.

**Keywords:** Research, company, customers, satisfaction, recommendations.

### 1. Introduction

One of the most important things, business cannot work without, are customers. Company's profit and success depends on them. This is the reason why companies have to try to satisfy all their needs and requests. They offer integrated services and different innovations to their customers.

Nowadays the whole marketing is focused on getting customers. There is a strong link between customer satisfaction, customer retention and profitability [6, p. 1]. After all, profitability lies at the heart of the marketing concept [7], [8]. Customer satisfaction has therefore become the key operational goal for many organizations. They have invested heavily in improving performance in areas that make a strong contribution to customer satisfaction, such as quality and customer service. [3, p. 1] When companies know who their customers are, they should find out their needs, level of loyalty, opinion about products, services and their satisfaction.

Customer value and satisfaction are important ingredients in the marketer's formula for success. [5, p. 380] Customer satisfaction is a measure of how organization's 'total product' performs in relation to a set of customer requirements. Satisfaction is simple. If customers get what they wanted, if their requirements are met, customers are satisfied. [2, p. 7] There are many word and phrases which can described the concept of customer satisfaction. The most common are customer loyalty, the customer relationship, the customer experience, customer focus, customer delight, wowing the customer, the loyalty effect, customer retention, the advocacy ladder, emotional attachment, service quality, service recovery, zero defections, customer win-back, etc. They are different words that describe the same phenomenon – the attitudes or feelings that customers form based on their experiences with a company. Satisfaction is a convenient generic word to summarize all this attitudes and feelings. [4, p. 2]

There was used questionnaire's type of research in a specific company. Questionnaire is one of the most popular research instrument applied in the social science [9, p. 1]. „Customer satisfaction questionnaire must collect at least the following items of information: Customer identification information, overall criteria ratings, performance ratings on more specific functional areas.“ [10, p. 128] The research was about customer satisfaction of company selling consumer electronics. The aim of the research was to find out customer satisfaction with products, services and employees of a

company. We were trying to determine a customer's opinions, what can be improved in a company and what will make them to be more satisfied. It is necessary to find out how much information has customers about company's products and services.

## Research of Customer Satisfaction

Research of customer satisfaction was realized in company which sells consumer electronics. Approximately 100 customers were addressed at the research and from this amount we got back 68 answers. 40 responders were men and 28 women. The questionnaire had 21 questions.

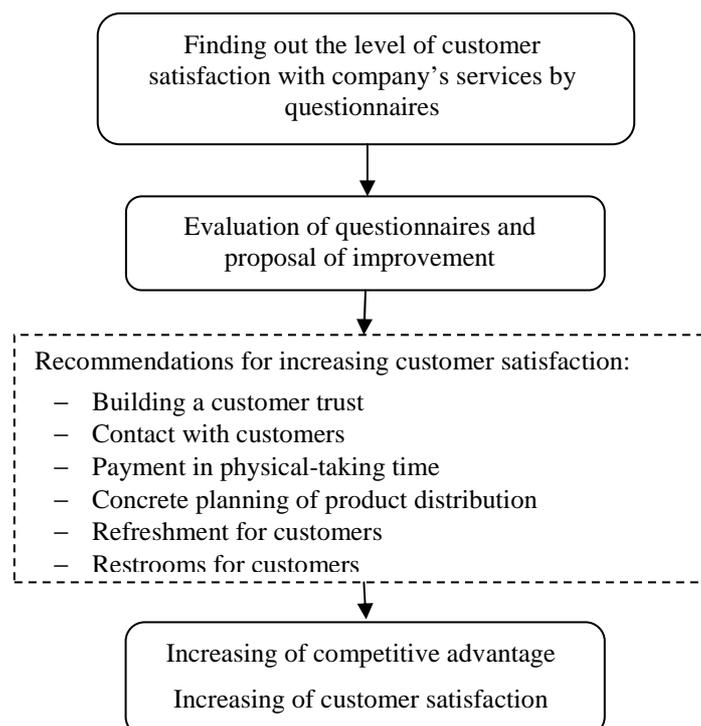
The satisfaction was proved in this area:

- Location and accessibility of shop.
- Organization of products on selling area.
- Products that company offers.
- Provided services.
- Provided information about products and services.
- Staff's helpfulness to give advices during the sale.

Around 16 customers said that they had bad experience with their purchase and two of them filed a complaint. The failings and comments which were found out by the research were related to: an approach of employees during stress situation, small number of employees on the selling area in the time they were needed what was the reason of slower service and longer time of waiting which leads to growing of nervousness and dissatisfaction of customers.

We proposed some recommendations for company employees to reduce customer dissatisfaction. Customers are not interested in building buffet where they can get any refreshment at the shop. They are interested in payment at the time they physically receive ordered product. The payment should be realized by credit terminal. Customers also showed interest in restrooms which are not at the shop yet.

Based on these results of customer satisfaction research we proposed model of increasing customer satisfaction. This model gives recommendations which should be used in a company for increasing customer satisfaction and getting a competitive advantage.



**Fig. 1.** Model of increasing customer satisfaction.

This model was proposed for company selling consumer electronics. It recommends to determine level of customer satisfaction by questionnaire research. Other way of research will not give us all information we can find out so simply by questionnaire. This information can be for example attitudes of customers, level of satisfaction with company's services or the reasons of dissatisfaction.

After we evaluate filled questionnaires we find out why customers are not satisfied and we can propose recommendations which will help us to reduce problems with customer dissatisfaction. All the recommendations should help us to increase customer satisfaction and competitive advantage. Concrete propositions of recommendations are listed below.

**Building a customer trust** can be very complicated. If customer is often disappointed with provided services it can lead to losing him. If he does not feel that he can talk to someone when he is dissatisfied and nobody will solve his problem, he can stop buying anything at that shop. So customer should have impression that somebody is taking care of him and he can talk about his suggestions and problems with competent employees. If he has this impression he does not have a reason to leave company and company can get his loyalty.

Complaint's department is made for receiving complaints in many shops with consumer electronics. It is necessary to monitor amount and reason of complaints as often as possible. These complaints are mostly valuable and they can help company with the problems of product portfolio enlargement.

When we talk about **customer contact** we need to realize that very important is attitude of employee who is in touch with customer. Many companies have instructions how to start to communicate with customers during shopping. Employees need to realize that they cannot come to customer and ask him right away questions about product he is looking at. They cannot scare and shock customers. He can also feel like he is attacked and maybe he did not need a help or he was not interested in communication. To find out if conversation goes well and customer service is provided on high level, companies mostly use mystery shopping. It is a management tool which is used for improving provided services. Its purpose is to help increasing customer satisfaction and loyalty. [1]

**Payment in physical-taking time** is very important for customers. They should pay for their product in the time they get it. That means if they order products they should pay them when they arrive to their home. They can pay for products with debit or credit cards when the delivery arrives. This service is profitable from two reasons. The first reason is that sometimes an unexpected situation appears when customers do not have cash for paying their order. This way they can pay by their cards and they do not feel embarrassed. The second reason is that customers do not believe some companies. There are still more and more imposturous companies. Customers do not want to pay before they get their ordered products. This way they can pay for products they really get.

Every company should make **concrete planning of product distribution**. Deliveries should be planned on concrete day and exact time. Employees should inform customers about day and time they can deliver their order. They should discuss what day is the best for both of them. If they are late they should inform customers right away.

Research made in consumer electronic company indicated that **customers** need any kind of **refreshment** in shops. There has to be coffee automat for customers and employees in every shop. Next to coffee automat can be placed snack automat. There will be various kinds of snacks (for example chocolate, nuts, chips, chewing gums, croissants). There is another possibility of automats: combined automat for coffee and snack together. Snacks and coffee can really make shopping to be pleasant for every customer.

In many larger shops with consumer electronics are **restrooms** available for customers as well as for employees. Results from research showed that this kind of service is really necessary for

customers. That is why shops should have restrooms for customers and employees and if they do not have they have to build them.

## Conclusion

The research was realized in one affiliated company which is focused on selling consumer electronics. Based on the answers got from research we can generalize the consequences and following proposals for any affiliate company of parent company which is in Slovakia. We can also say that these results can be used for any company which is specialized on consumer electronics or similar activity. Companies can modify proposals listed above but they have to be compatible with company's goal. Due to these proposals companies can achieve customer satisfaction and achieving of defined goals.

The questionnaires are the tool of the quantitative research. This research can be supplemented by qualitative research through customer observation, interviews, focus groups, etc. Company may decide if it has conditions and resources for other research. It is recommended to use the other techniques of research because companies can obtain valuable information. This kind of information can help to companies gain new customers, retain old and profitable customers through their satisfaction.

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