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DEVELOPMENT RECIPROCITY OF ENTREPRENEURSHIP
AND CORPORATE SOCIAL RESPONSIBILITY

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In contemporary entrepreneurship, an entrepreneur is continuously faced with a whole range of questions that can or cannot be resolved, professional and moral doubts, numerous uncertainties and risks, all of which contributes to the idea that an entrepreneur's life is not an easy one. Furthermore, it is subjected to everyday stress and the focus of one's responsibility is to risk one's own capital to produce and sell one's products and/or services. On the other hand, the focus of one's responsibility must be centered on corporate social responsibility. In spite of numerous doubts, there are also possibilities for an entrepreneur to balance one's interests with the interests of the larger community, including economic demands or issues on social responsibility or ethic demands. The role of management is, without doubt, very important in the realization of projects. The authors in this paper have tried to underline the possibilities of reciprocity between entrepreneurial development and corporate social responsibility, as the two unknowns of one equation, which do not exclude one another, but on the contrary, complement each another by reaching shared goals.

Key words: *development, entrepreneurship, corporate social responsibility, firm*

1.INTRODUCTION

The active role of entrepreneurship in economic development insists on initializing and applying changes in the structure of an organization's business and in the society in general. Continuous need for changes implicates the growth and increase of production and development. This allows rational and fair distribution of newly created values to the participants of the work process, and fulfillment of all legal obligations towards the institutions like taxes, contributions, fees, etc. *What is the needed support for changes and development in a specific environment?* One of the theories of economic growth detects innovations as the key factor for the development of new products, as well as the generator to stimulate the investment interest of individuals for future initiative. New investment acts in the "growth equation" on both sides – the side of supply and the side of demand. The new money capital which is created expands the growth capacities (the supply side). The new consumption resulting from the growth capacities uses new capacities and production (the demand side). Investments and innovations are very important for economic growth of an area. Nevertheless, there is still a lack of understanding for the evolution process of a product. It is a process in which an innovation is developed and commercialized by entrepreneurship activity. It results with stimulation of economic growth. The critical point in the evolution process of a product is combining the knowledge with recognized social needs, in which point the development stage of a new product begins. This point, also known as the *iterative synthesis*, often confronts with the production itself and/or the product sale on the market. It is in collision with principles of corporate social responsibility and in a certain way threatens the sustainable development. This happens because there is a lack of competence and proficiency in the area of synchronization of technology with the appropriate market and the

creation of necessary adjustments. This is the main problem of every technological transfer (Hisrich, Peters, Shepherd, 2011:13-14).

Significant share growth in internationally oriented businesses influenced the growth of interest for similarities and differences in business attitudes and practices of different countries, which is compatible with the question of culture and ethics. Ethics researches everything for well-being of human race, while business ethics studies business practices in the light of human values. The central question of business ethics is – For whose profit and at what price one should manage a firm? (Freeman, 1994:67)[1] To the point answer is included in the thesis of impartial distribution, or resource division. It includes the division of profits between all stakeholders who have certain expectations from the newly created values which are derived from the work process – the owner, employees, buyers, suppliers, banks, cities/municipalities, counties, countries and the society in general. If there is no such a practice in reality, we can talk about exploitation of one over the other. Such outcomes are to be neutralized. Furthermore, there is a possibility that some questions, which are unnecessary for discussion and dialogue basing on corporate social responsibility, will never get a compromising solution. Such an entrepreneurship activity should be unconditionally stopped. Nevertheless, it is known from the practice that some entrepreneurship activities are continued regardless of all professional, scientific and public criticism, legal regulations, common practice, negative environmental influences, people's health, etc. This is mainly the case with businesses which are based on illegal and immoral lobbying with the representative institutions. These institutions give consents, authorizations, make decisions, publish formal decisions, concessions, etc. Certain favors and corruption and bribery easily let and support the Machiavelli's thesis that the goal justifies the means. Entrepreneurship should incline towards impartial distribution of resources and profits in order to compensate or neutralize exploitation of certain interest factors. The entrepreneurship system should serve as a mechanism which secures a fair and efficient system of resource distribution, but also to spread tolerance among all participants of natural and social environment. Therefore, as long as there is evidence that some are using the entrepreneurship process to use others exclusively for their benefit and incur damage on the wider social community and the environment and nature in general, there is a need to act energetically and interactively in order to stop such actions without any questions. On the contrary, it should be reasoned that the entrepreneurship process could be an important means of helping the exploited and establishing a stable business. By analogy, the entrepreneurship process should be considered as the means of efficient reaching goals for everyone, but not damaging the others. (Hisrich, Peters, Shepherd, 2011:17).

Globalization is without question greatly responsible for modernization of the work process. It also bears the obligation for the whole process of the social responsibility because the social conscience for the environment and society in which we live has grown. Business activities of firms are, therefore, more zoomed, the public is more critical and categorical, and the consumers are self-conscious, which implicates their role and importance when deciding on the business success and existence of the firm. Therefore, the entrepreneur logic should be focused on the perception of consumers and the public and on the fact that they show preference, in the sense of product consumption, and give their support to the firms which try to harmonize attitudes, suggestions and criticisms of consumers and which try to fulfill the criteria set by the wider and local environment.

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[1] Freeman, E. R. *A Stakeholder Theory of the Modern Corporation*, U.T.C. Beauchamp i N.E. Bowie (ed.), *Ethical Theory and Business* (Englewood Cliffs, NJ: Prentice Hall, 1994), pp. 66-76 (quotation from p. 67) (adapted from Hisrich, R. D. & Peters, M. P. & Shepherd, D. A., *Poduzetništvo*, Mate d.o.o., 2011, p. 17.)

2.ENTREPRENEURSHIP AND SUSTAINABLE DEVELOPMENT

Doing actively business activities and social responsibility of a firm are prerequisites for sustainable development of the firm. Firms are aware that they can contribute to sustainable development by managing their business activities in order to improve economic growth, while at the same time, they secure better environmental protection and promote social responsibility, including the consumers' interests. Sustainable development is a term which includes the component of environmental protection and social and economic component. The idea of sustainable development has been created by combining different influences of production and development with, unfortunately, usually very negative influences on our surroundings and environment. The goal of doing business, which is in accordance with sustainable development, is to identify and channel the very vectors of development which will not derogate environment, but which will single out the importance of social and economic aspect and improvement of qualitative determinants of life; and, at the same time, not to ignore development, stop or slow down the prosperity itself. Therefore, the concept of sustainable development is based on the idea that development should not endanger prosperity, or the future of generations to come by exploitation of unrenewable resources, long-term destruction and pollution of the environment. The main goal is to secure sustainable usage of natural resources nationally and internationally (Ingra, 2007). Correlation between sustainable development and all other aspects of corporate and social life in a certain environment are visible in the following chart taken from Wikipedia (http://en.wikipedia.org/wiki/File:Sustainable_development.svg).
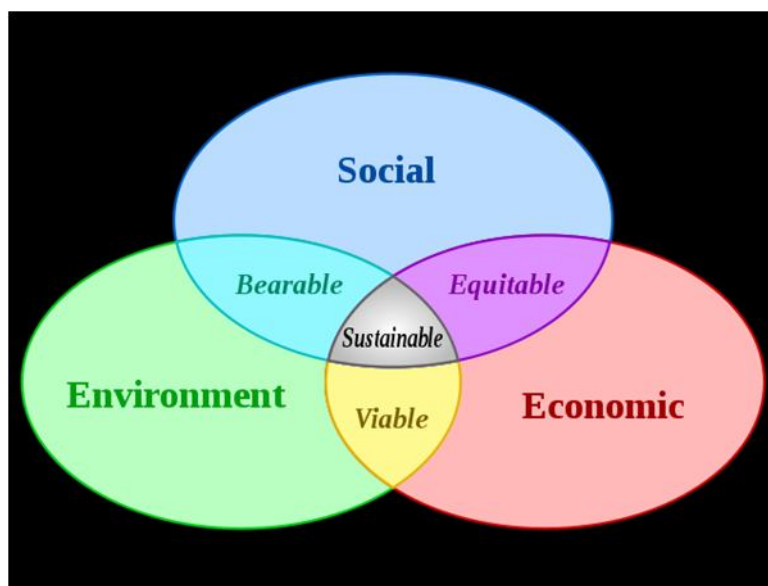
Sustainable development

Furthermore, today we live in a society of change that markedly quantifies some economic moments (situations) like competitiveness, quality, technology, time, knowledge, export, variety of production, expenses, risk, market, shorter life span of a firm, product/service, Ethics, attitude towards environment and similar. In one term, all these quantifications come under one name – sustainable development. Dissonance in relation with the values accepted earlier may but may not be new and/or

different product/service but has to be visible in the value added by an entrepreneur. There are three basic elements which define an entrepreneur (Buble, Kružić, 2006:46):

1. creating increasing wealth
2. supplying values and
3. taking risks.

The conscience of the need to support and undertake the sustainable development concept impulses from very high to very low levels, which is in correspondence with economic growth of individual countries. Developed countries with economically strong business subjects are socially more responsible than undeveloped countries. It is mostly because they have the ability to secure money and are ready to set aside additional means to support sustainable development and implementation of planned assignments. The fact is that only the firms, which are socially active and socially responsible, support the local community, take care of their employees, consumers and environment, and reach the synergy effect between making profits and the contribution to the local community. In order to make such firm's missions possible, it is necessary to be a part of an inventive society and an inventive firm. This makes entrepreneurship process a perfect means to create values by compiling unique resources in order to take chances. This entrepreneurship process aggregates all contents (inputs) of entrepreneur's activity on planned outputs – for example improved product or service quality, innovative products, new technologies, dispersion towards new markets, employing the most adequate human resource, relation towards permanent education. This is a paradigm to create a competitive precedence of a firm. The main role of business subjects is to notice and discover new possibilities and create opportunities in a changing environment. In modern entrepreneurship information, communications, knowledge and entrepreneurship itself are crucial resources and carriers of technological, economic and social development. In this sense economic theory underlines entrepreneurship as a foundation stone of economic system and economic development, but it is also seen as a special productive factor (Škrić, Mikić, 2011:1). Therefore, entrepreneurship is definitely much wider term than usually described – an accumulation of activities of an individual who makes them in order to meet the market demands and by personal risk try to gain as much profit as possible (Žižek, 1999:21).

It is irrefutable that an entrepreneur during the transformation of entrepreneurship process evaluates, which includes finding, integration and development of opportunities for manifestation of a new enterprise. Before confirming the "identification" about the future entrepreneurship activity, the entrepreneur is obliged to take a consistent, constant attitude on perceiving the firm's vision. The very decision of starting an entrepreneur enterprise consists of several steps: 1) a decision of leaving current career or entrepreneur style, 2) a decision that an entrepreneur enterprise is needed and 3) a decision that outside and inside factors make such a new enterprise possible (Hisrich, Peters, Shepherd, 2011:20).

Entrepreneurship is an important initiator of economic growth of a sector, an industry and an economy in general. Even though the entrepreneurship activities differ among countries, their role in modeling economic environment is unquestionable. From the macroeconomic point of view, entrepreneurship may influence the employment rates, technological progress of a country, liberalization of closed sectors and stimulate the development of a country into a country of knowledge. From the microeconomic point of view, entrepreneurship activity means opening new firms, producing new products or services, and discovering market slots (Grgić, Bilas, Franc, 2010:69). In any case the characteristics of modern and new entrepreneurship are: promptness to take risks, visionariness, autonomy, independence, inclines towards success generated on changes, creativity and

innovativeness, associate trust, motivation mobility, high level of applied management and technical and technological knowledge, quality, diversification of performances of production/service process. The development of entrepreneurship insists on freedoms: freedom of thought, freedom of expression, and freedom of creating in market oriented economy.

Considering the goals of entrepreneurship set as principles and as theories, it is a fact that Croatian entrepreneurship business practice crystallized the priority goals, but also the key problems. It also set measures to encourage further development of small and middle businesses in the Republic of Croatia. These businesses participate with circa 90% in the overall number of entrepreneurs in Croatia as shown in the following table made by the authors of the paper.

Goals of small and middle businesses	Key problems	Stimulative measures
(Self)Employment stimulation	Business offices	Accelerate makings and stabilize spatial plans of local government
Stimulation and diversification of production	Spatial plans of local government	Develop concept of entrepreneur infrastructure development
Clasterization	Valorization of free zones	Use the money from the EU funds
Export promotion	Lack of education	Continue the privatization of state firms
Acquisition of new technologies	Too high credit insurance – mortgage	Disburdening of firms from fiscal and par fiscal giving
Producing product and services of greater quality	Bank interests	Appropriate management
Resource allocation	Bank fees	Favorable credit fees
Youth employment	Building permits	Synchronize the needs of economy and education
Women's employment	Unsubstantial organization	Encourage foreign investments and types of business cooperation (strategic alliances)
Innovations	Unsatisfactory management	Systematic education of entrepreneurs Learning Organization
Conquer new markets	Technical and technological equipment	Develop TQS
Creating the society of knowledge – permanent education	Resistance to clusterization	Continue energetic approach to fight criminal and corruption
Environmental protection	Legal regulations	Legal regulations

Goals, key problems and stimulative measures for small and middle businesses in the Republic of Croatia

There are numerous problems to deal with in front of Croatian entrepreneurs in order to bring to life the whole concept of sustainable development, including the corporate social responsibility.

If all key problems of small and middle businesses, or at least the most of, are dealt with successfully and if the future measures include stimulation, the Croatian entrepreneurship will gain power and start a new process of reincarnation. Consistently, entrepreneurship is without doubt, the generator of every economic activity and has to be embedded in the foundations of each economic system which tries to be successful and competitive. Therefore, it must be embedded into Croatian entrepreneurship system, as well. All in all, in the sense of setting the correlation between a firm and entrepreneurship, it is without doubt that the same has to be treated through companionship of unbroken relations, because no firm can exist without entrepreneurship, or systematic entrepreneurship without firms. The firm success is determined by entrepreneurship success, which has to be systematically organized in order to meet development goals of firms and economy as a whole with efficacy. With analogy, in front of Croatian entrepreneurs, relevant institutions and associations are many complex assignments to be resolved fast and systematically in order to get a better result in economic growth and social development. Therefore, entrepreneurship, as a creative force focused on initializing, organizing and innovation of firms' business making, calls out for a complete mobilization, which should be based on production, creation of newly created values and their proper and fair distribution between interest-influence groups and in context of active, not declarative, advocating the standpoint of the necessity of corporate social responsibility in business practice.

3. EVOLVABLE CONTEXT OF CORPORATE SOCIAL RESPONSIBILITY (OF FIRMS) IN THE REPUBLIC OF CROATIA

Corporate social responsibility means promoting responsible practice in economy, which is useful to society and makes it easier to create social, economic, and ecological sustainable development by maximizing positive influence of the economy on the society, and at the same time minimizing negative influences to the lowest levels possible. Social responsibility of a firm is the main assumption for the idea of sustainable development, which includes social and economic component together with the environmental protection. This idea is based on the fact that development should not endanger the future of generations to come.

Different types of corporative investments into community were noted in the Republic of Croatia even before the World War II. The interest of business sector for quality control appeared in 1960s. Relatively new business practices, like the promotion of team work and counseling with stakeholders, are often a combination between modern western approaches of quality control and Croatian heritage (Acceleration of Corporate social responsibility Practice, 2007). Already in the 1990s an organization in the Republic of Croatia was defined by modern empirical understandings as a situational value marked by situational factors of environment, size and technology. The interaction between the organization and the environment results with strategic processes of the organization's adaption to product and market (Bahtijarević-Šiber et al., 1991:9). Concretization of thinking about the strategic interaction between an organization and the environment in Croatia started at the end of 1990s when the Croatian Business Council for Sustainable Development (HR PSOR) was founded. The Council recognized sustainable development as the most appropriate way to accomplish the following goals: the balance between business success, social welfare and environmental protection. The main starting point of re-articulation of deviation in business strategies was a greater care for elaboration of the problem of systematic relation between people and environment. Being inside a certain social and economic system, a human degrades existing stability and structure, in environment and in social and

economic system. Regardless of how today's perceptions of human influence on the environment and society are correct, they have globally mobilized a large part of civil, business and political structures on activities which should contribute to decrease of harmful influences (Matutinović, 2007). The burden of political and economic context of the 1990s resulted with the combination of Croatian business recognizability and the process of European integrations, when the Republic of Croatia became an EU candidate country in 2004. The first national conference on corporate social responsibility Agenda 2005 is considered to be the key event for actualizing the corporate social responsibility in the Republic of Croatia. It was attended by 120 practitioners and researchers, who focused on their contribution to formulate common priorities for the development of corporate social responsibility in Croatia (Acceleration of Corporate social responsibility Practice, 2007).

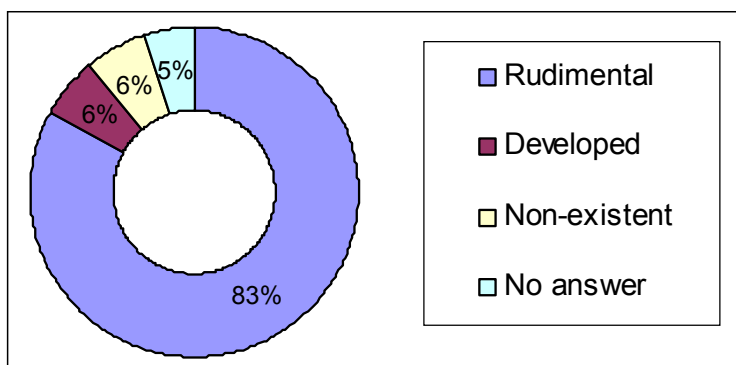## 4. THE CONTEXT OF CORPORATE SOCIAL RESPONSIBILITY IN THE REPUBLIC OF CROATIA

Encouraging corporate social responsibility is defined as one of the goals of Strategies of Sustainable Development of the Republic of Croatia. Therefore, by identification of key interest-influence groups, it is necessary to analyze its application in the Republic of Croatia. It has to be analyzed in the context of: 1) corporate social responsibility on the national level, 2) corporate social responsibility on the local community level, 3) correlation between business sector and corporate social responsibility, and 4) correlation between Croatian society and corporate social responsibility.

1. Corporate social responsibility on national level includes activities in the area of corporate social responsibility of each of the following interest-influence groups: 1) business associations, 2) professional and advisory organizations, 3) government institutions and public agencies, 4) international organizations for development, 5) academic community, 6) civil society organizations, 7) unions and 8) media. When we take a general look into each of the listed interest-influence groups and their corporate social responsibility, it is obvious that they have an important role within their area of program activities. When looking at them separately they do not accomplish the moment of synergy. Inexistent correlation of their activities makes their support to the corporate social responsibility divided into numerous individual activities. In case of inter-sector partnership they would bring activities of corporate social responsibility on a much higher level.

2. In order to analyze the application of social responsibility on local level, it is possible to use a research conducted in Rijeka in 2004. It had a sample of 84 institution and organization representatives, which directed a part of the finances to associations and were familiar with their work and needs. Respondents, chosen from public, profitable and non-profitable sectors and local media, were questioned about the application of local philanthropy as a model for resolving problems in the local community.

It is visible from the chart that the most of the respondents thought that the current level of philanthropy was in its beginnings, while, on the other hand, 6% of respondents thought it was inexistent. The most of the respondents appreciated the few activities of informal citizen initiatives and citizen associations in the local community which implement useful projects for the local community. The chart which shows levels of local philanthropy is borrowed from the paper The Foundations Development Possibilities of Local Communities in Croatia (Pavić-Rogošić, Kunović 2004).

On the other hand, the public opinion research, conducted in 2005 in the Primorsko-Goranska County, confirmed the relatively low levels of satisfaction of citizens considering the environmental protection in the County.

Local philanthropy level in Rijeka in 2004.
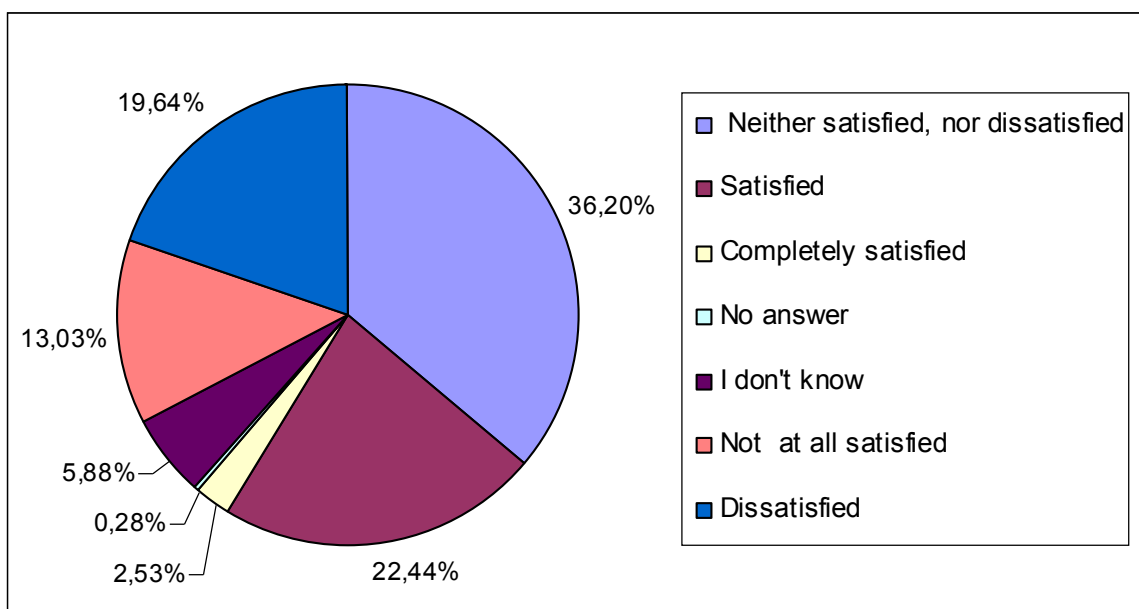
Satisfaction with the environmental protection in Primorsko-Goranska County

The fact is that people were not satisfied with corporate social responsibility in the environmental protection sphere on the local level. This was noticeable from people's indifference (36,20% of respondents) as well as the equal percentage of answers about satisfaction and dissatisfaction about the environmental protection.

The same research also confirmed the fact that even 41% of respondents supposed that ordinary people were not at all influential factors for development and organization of life in a town, a municipality or a city. There was no doubt about the existence of a number of individuals from different sectors who could take part in the development of philanthropy and raising conscience about corporate social responsibility. It is necessary to work on the development systematic multi-sector partnerships between local authorities, associations and non-governmental organizations and firms

which help the development of local community. The chart which shows the satisfaction of environmental protection is borrowed from the paper Public Challenges – Public Opinion of the Primorsko-Goranska County (Primorsko-Goranska County) (Boneta, Banovac, Vujić 2005).

3. The recognition of corporate social responsibility in Croatia is enabled by the initiative called The Index of Corporate Social Responsibility. It was initiated in 2006 by the Croatian Business Council for Sustainable Development and the Croatian Economic Chamber. Corporate social responsibility was researched in 2007. The random sample of 35 firms was taken from 500 best rating firms. The research showed that most of the firms were included into initiatives important for the development of corporate social responsibility in the Republic of Croatia. More than a half of the firms (21 firms) have signed the Ethics Codex in Business Making created by the Croatian Economic Chamber. A similar number – 19 firms – have certified for ISO 9001. On the other hand, from the firms researched a few had actively participated in relevant business associations (HR PSOR, Community for Corporate social responsibility, certificates like OHSAS 18001 or the association Employer-Partner). There was relatively high percentage of firms – 9, to be exact, which had signed the Global Compact. This fact was not at all surprising considering that the sample was based on the most successful firms (Acceleration of Corporate social responsibility Practice, 2007: 46).

4. Croatian civil sector still lacks a critical mass to encourage a larger number of firms to responsible business making. When speaking of environmental protection everyone supports it, but when one has to pay for it, consumers lose their interest and motivation to move things forward. The crucial criterion when buying a product is the price. Croatian consumers still insufficiently award or punish socially (ir)responsible practice (Dokonal, 2009:28-29). Everything stated above is supported by a research conducted in 2007 on the sample of a thousand respondents. The goal was to discover how much the consumers were familiar with the terms such as sustainable development and corporate social responsibility , the importance of perceivinig responsibility and irresponsibility of a firm to consumer's choice of product brands and the importance of percieving the relatioship of a firm towards natural environment. The term corporate social responsibility of a firm was familiar to 67% of respondents, while 33% are not familiar with it. Greater familiarity with terms corporate social responsibility and sustaninable development was, generally, shown among people with higher education. The term sustaninable development was more familiar to men than women, and to people from urban areas, and the term corporate social responsibility to elderly.

It is noticeable from the chart that the term of corporate social responsibility for consumers mostly deals with the care for employees, the firm's responsibility and the care for society, community and people. In a smaller extent it deals with compliance with laws, integrity and the care for environmental protection. These are the starting focal points for creating future assignments and determinants. Considering that the respondents could choose more than one answer, the fact that a large number of consumers are not familiar with corporate social responsibility is surprising. The chart which shows the meaning of corporate social responsibility for consumers is borrowed from the paper Influence of Socially Responsible Behavior to Consumer Behavior (2007).

23%	Care for employees/workers
17%	Responsibility
15%	Care for society, community and people
10%	Compliance with laws
10%	Integrity, morality, respect
9%	Care for environmet/natural resources
5%	Sucessful business making
5%	Proper relation of worker to duty or work
2%	Something positive
2%	Responsibility to the state
1%	Customer care
4%	Other
21%	I do not know
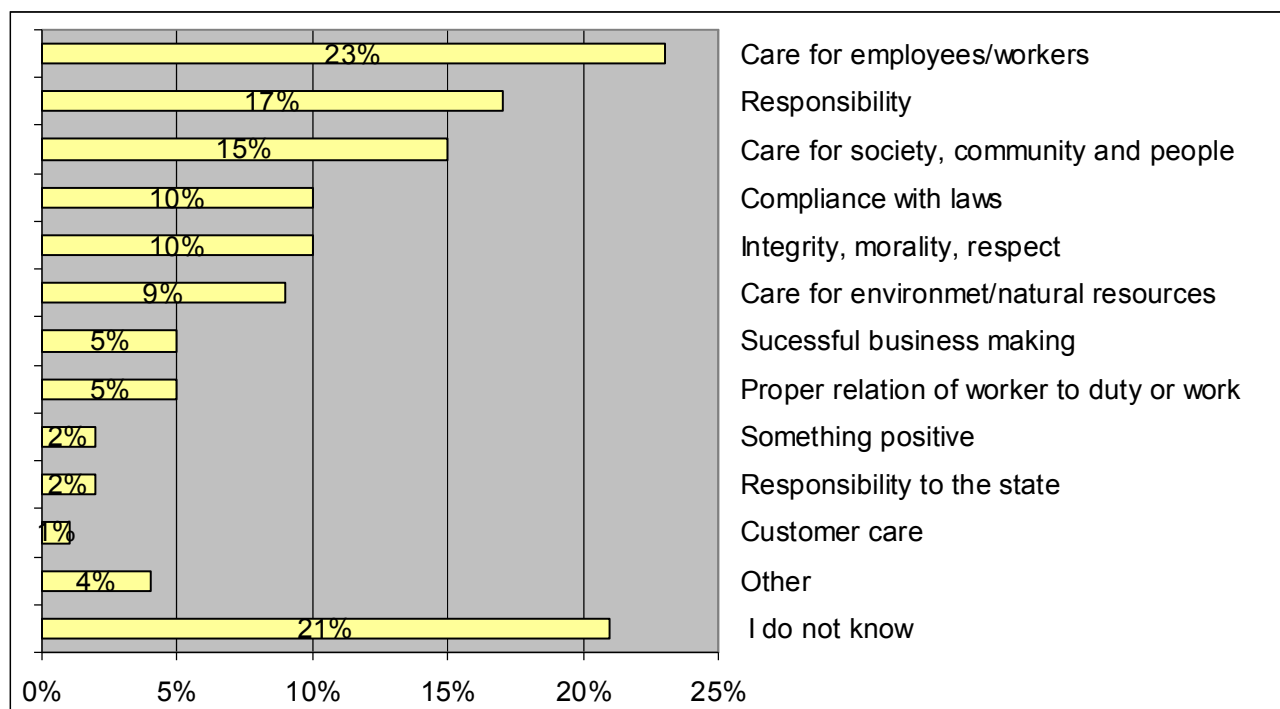
The meaning of the term corporate social responsibility for consumers

5. THE ROLE AND SIGNIFICANCE OF MANAGEMENT AND EMPLOYEES IN CORPORATE SOCIAL RESPONSIBILITY

In application of social responsibility in a firm, managers and other employees who plan programs are faced with a challenge each time they make a decision – from choosing a social problem, in whose resolving they will take part and an innovative way to do it, to developing and managing the program and estimating the outcome (Kotler, Lee, 2009:29).

All kinds of organizations, no matter if they are profit or non-profit organizations, public or private, need managers who would apply science and skill to realize set goals, including interests of different groups, and settle conflicts inside and outside the organization. Managers are expected to manage organizations in a way that serves the society in general, at the same time creating corporative social responsibility of a firm (Črnjar, Črnjar, 2009:253). The fact is that the concept of management which treats people as machines, natural resources as inexhaustible resources, and subjects long-term consequences to short-term financial goals is considered to be old fashioned in the picture of the new paradigm. The old paradigm is marked by fear which is derived from short-term goals and rigid hierarchy. The new paradigm bases itself on a vision of an individual and an organization by promoting flexibility oriented towards people and market. Instead of dealing with group policies primarily focused on the needs of stockholders, the new approach is equally focused on all – employees, clients, suppliers, local community, natural environment and stockholders. Rather than fight and competition, the new approach includes cooperation, joint creation in which relations between company's insiders and outsiders transform from cooperation into creativity and implicitly

include contribution of every individual. This way a strong leadership implicitly includes the participation of all people in the leadership at the same time. When a slightest problem appears, managers often turn around trying to use the new paradigm methods in the old fashioned way. Therefore, business world in most cases had not been able to change the prevailing manager system with a new one, which is more appropriate for our needs today and in the future (Ray, 2009).

One way of changing is to apply Senege disciplines as a specific theory translated into a series of practical methods. Building a common vision is crucial, together with considering the fact that that it is never final, but that it represents a process in a constant flow. Before building a common vision, it is necessary for each participant to create one's own vision. Personal enhancement adds to the devotion to the vision, and if people are not aware of things that really matter to them, the easiest way is to follow someone else's vision. Considering that the picture of the outside world is based on individual personal and internal pictures, when one leads a team it is necessary to take into account mental models, or to set the balance between questioning and advocating. In this way managers are not to advocate their opinion only, but disclose the best form their associates in order to enhance common mental group models. All important decisions are made in groups. Therefore, individual learning in organizations is almost insignificant. The crucial learning for organizations is team learning. It becomes very important for the organization functioning. By combining all previously described disciplines, the last one is created – the systematic thinking. It represents decisive set of tools for understanding complexity and strategic problems. It helps to see more clearly in which way one can create one's own reality by one's own actions. This brings hope that a man possesses an ability to influence its own future, and the vision stops being just a nice wish (Senge, 2009).

The market dynamics demands modern organizations to turn for 180° or to encourage creative individuals who accept changes as a way of life and push forward by creating added value for the society. Changes which happen every day have to be perceived as opportunities and chances which are offered, not as threats. Everything previously stated enables identification of very weak signal of changes, their anticipation and fast and immediate action, as well as proactive activity. Even the best decisions and actions which are applied late not only have undesirable effect but may also destroy a firm. This state is described best by the Druckner statement that companies in the future will have either fast or dead managers. All this necessarily leads to the orientation towards people, their potentials and constant sustainable development as a key source of organizational flexibility and success and key tool of adaptation to constant changes (Omazić, Baljkas, 2005:15).

Only some people pay attention to the fact that every day the world of business becomes more complex, changes are faster and larger, and not much attention is given to the dominant way of thinking which has to change radically if one wants to do business in a world of increasing interdependence. (Senge, 2009). Doing business represents the only social institution which has at its disposal means and infrastructure for catalyzing the planetary evolution which is taking place right now. Think globally, act locally is a way in which changes in everyday life, work groups and organizations can influence the change in the world and in the way it functions (Ray, 2009). Accordingy, this should bring a general increase of implementation of corporate social responsibility.

6. CONCLUSION

Corporate social responsibility in the modern word has become a trend which tries to satisfy more successful and profitable firms. Nevertheless, some firms with their action create negative influences on the environment and on the local surroundings, which suffer the consequences of such activities.

This influence reflects negatively on doing business and on firm's image. Social responsibility is not only promotion for firm's activities, but it is an important factor of success in modern society. It greatly influences all aspects of business, creates the brand, influences the image, financial stability of a firm and creates uniqueness.

Socially responsible activities are the most important activities which a firm initiates to support social goals and fulfill obligations in the area of its social responsibility. These activities are in accordance with a chosen strategy.

Considering social responsibility and the areas of its influence a conclusion can be drawn. Corporate social responsibility affects all areas of doing business and if firms underestimate that influence, it is impossible for them to survive in the future and to take part in economic development. Firms have to be aware of the need to conduct socially responsible activities, and to use them in practice regularly. The important role has the management, the one inside a firm and the one which rethinks the prosperity of entrepreneurship, economic and other development and works on the institutional level. The fact is that the entrepreneurship development and corporate social responsibility are two unknowns of the same equation, which do not exclude one another, but, on the contrary, reciprocally complement each other in the sense of completing the same goals.

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BANKING SECTOR STABILITY IN SOUTH-EASTERN EUROPEAN COUNTRIES UNDER FINANCIAL CRISIS – COMPARATIVE ANALYSES

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Abstract

Financial systems of South-eastern European countries are bank dominated system. Banks have important role for stability of financial system and national economy. Having on mind specific features of financial systems we will analyses major characteristic of banking sector and their behaviour in financial crisis and after. Bank's stability and managing it in condition of financial crises has requested continues review of financial stability indicators for banking sector and possible sources of instability. Author in this paper will analyse banking sectors in selected South-eastern European countries (Bosnia and Herzegovina and Croatia) through follow indicators: banks assets and quality of assets, changes in credit structure, capital, profitability and liquidity.

Key words: *banking sector, financial stability, indicators, South-eastern countries.*

1. INTRODUCTION

Banking sectors in South-eastern countries presents key part of financial system. Total banking assets in GDP of BH (banking intermediation) is about 90%, wile in Croatia was 113% in 2010. That information show how banks have major role in financial intermediation. Also it is obviously how national economy and their segments depend of banks behavior in financial crisis. National economies sectors (firms, households and public sector) depend specially from volume and direction of bank' credit activities. So financial system of South-eastern countries are "bank dominate" financial systems.

In last decades South-eastern countries record changes structure of banking market (consolidation, concentration, domination of foreign capital, competition). As major part of still undeveloped financial system it's important to analyses impact of financial crises on banking sector and their credit activities. Bank credit has different functions in national economy, known as channel of monetary transmission mechanism. Through banking credit banks received free fund transferred to money deficit unit, enhance in advance defined sectors and firms of national economy. Problems in the functioning of the banking sector can have impact on macroeconomic (allocation of resources, price stability, the international capital markets) and microeconomic effects (the functioning the payment system, developing a brokerage function, development of financial markets). Instability of banks affects other sectors in financial system (financial stability) and the real economy. Financial stability is defined as the ability of the financial system to absorb shocks that could adversely affect the financial system. Financial crisis has impact on decreasing credit activities of banking sector. Banks are faced with increasing credit risk content in decreased credit standing new and existing borrowers determinate with deteriorate national macroeconomic condition and global economic condition.

Market structure of the banking sector of selected South-eastern countries has been analyzed through a series of indicators of banking sector: the number of banks, banking intermediation, concentration, foreign ownership in second part. Authors in the third part observe effect of the financial crisis on the condition and stability of the banking sector. The analysis is based on the time series of basic indicators of the banking sector and their behaviour in terms of the financial crisis. Analysed indicators of financial stability of the banking sector are: the activities of banks, assets quality, capital adequacy, profitability and liquidity. At the end of paper we give conclusions.

2. BANKING SECTORS OF BOSNIA AND HERZEGOVINA AND CROATIA

The financial system of South-eastern European countries unitil 1990 has function in central planning economy. In central planning economy, banks had a passive role. Satisfaying plan of national goverment determined the financial transaction of banks. The allocation of loans at that time for banks was only accouting mechanisam for tracking goverment decision to allocate resources to different business and sectors. Banks of South-eastern countries to 1990 operated in mono-banking system, system in which central bank carried out the functions of commercial and central bank. In mono-banking system banks providing payment services, collecting private saving, profits and taxes and transferred them to the state budget or state institutions, reviewed achiving plan and operation of state institutions. Countries of former Republic of Yugoslavia had built a "two-tier" banking system which was consisted of central bank and individual commercial banks.

In all these stages, which the banking in former Yugoslavia countries and other countries of region pass until 1991 are marked by administrative regulation of business, losses in bank operation, negative real interest rate – the inflationary financing, difficulties in maintaining liquidity due to excessive exposure to the economy, lending decisions that were influenced by policy, and addiction of economy at banks. The accumulation of bad loans and inadequate regulation and supervision of the banking system resulted by banking crisis. Rehabilitation of failure banks was carried out in two ways: design different models of bank rehabilitation and by opening the banking sector to foreign strategic partners (privatization). The process of rehabilitation lead to their nationalization, average cost of rehabilitation is about 10% of GDP.

Early stage of banking sector transition in South-eastern European countries supposed restructuring of state banks and abandoning direct financing. Reconstructing leads to bank privatization and growth of financial markets. The period of transition banking sector had significant structural change that outlines some basic features:

1. enter of foreign capital into the banking system

2. growth in domestic lending in particular household sector

3. increasing exposure to foreign currency risk

4. increasing profitability and satisfying rate of capital adequacy

5. credit expansion and growth of risk assets

6. improving the supervisory framework

7. implementing of accounting standards.

Total value of merges and acquisitions in the period 1991-2005 in Central and South-eastern European countries were more than USA $ 20 billion (Domanski, 2005, 71).

The institutional framework of the banking sector enhanced constantly. EBRD index of banking sector reform (quality of banking regulation and supervision, banking competition and financial depth) review the BH and Croatian banking sector with good prospects.[2]

Table 1: Major indicators of banking sectors in BH and Croatia

Indicators		2005	2006	2007	2008	2009
Number of banks	BH	33	32	32	31	30
	CR	33	33	33	33	32
Banking intermediation	BH	69.3	76.8	93.8	82.9	86.5
	CR	110.4	111.4	122.3	105.9	113.9
Foreign capital in total capital	BH	67.6	73.0	83.0	87.0	89.2
	CR	96.6	95.8	90.4	90.6	90.9
HHI	BH	919	926	890	973	999
	CR	1.358	1.297	1.279	1.308	1.366

Sources: CBBH and HNB, Annual reports, different years

After cleaning the bad loans in bank's assets bank start with strengthen the capital for normal operation. The process of capitalization in South-eastern countries was aimed to improve capital adequacy and liquidity of banks at the national level. Higher capital requirements put banks in front of process of mergers and acquisitions. Consolidation of the banking industry has a significant impact on the banking market structure and organization of banks, and exposes the market to dominance of large banks.

Banking intermediation indicates the role of banks in achieving the core functions – the accumulation and allocation of money resources. The share of domestic bank's claims on the private sector of banking sector assets and GDP is the most common approach in the financial literature when we measure and compare degree of banking intermediation. Bank intermediation, together with data on the number of banks, offices, branches of a country is indicators of financial development. Intensive banking intermediation is result of combined structural factors (restructuring and privatization of the banking sector, entry of foreign banks, improving the legal framework, the excess liquidity in the banking market) macroeconomic and financial policies (monetary policy, fiscal consolidation of the sector) and cyclical factors (cost reduction borrowing, the progress in macroeconomic stabilization, lower interest rate in global financial markets and prices of securities). For banking intermediation is equally important „catch-up effect" of countries with lower levels of financial development and economic development with developed countries. Analyzing banking intermediation in selected countries we can see trend of financial deepening and intensive banking activities. Financial crisis has slowed down banking intermediation in 2008.

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[2] EBRD, Transition Report 2009, 2010.

A high share of foreign capital is the result of the privatization process in the banking sector. In attempts to rescue the banking sector a solution was open banking sector to foreign banks (liberalization) for build strong and stable banking sector and help national governments to create legal regulation and institutional infrastructure. More than 60% banks capital in both banking sectors is owned by Austrian banking groups. The high share of foreign owned banks in total banking sector assets indicates the dependence and sensitivity of the domestic sector to change in policy and decisions of foreign-owned banks.

Concentration can be defined as mergers, acquiring of control or owner influence through majority shares or voting rights in the assembly of the bank. Concentration is one of the basic elements in the analysis of competitiveness and market structure and market power in banking. The issue of concentration of the banking market is interesting from the stand point of competition. The degree of concentration in the banking sector is usually assessed by the share of assets held by one or three or five largest banks in the banking sector assets or the Herfindahl-Hirschman Index (HHI). Measurement of concentration ratios is carried out for the simple determination of the characteristics of the banking market. However, high values of concentration ratios recorded in the banking market do not necessarily indicate decreasing competitiveness. According to research (Beck, Kunt, Levine, 2003) concentration in the banking market has stabilizing effect. In the banking market with a high concentration is less like hood of systemic banking crisis, i.e. the fragility of the sector. Research has not shown the negative impact of concentration on competition (Claessen, Leavin, 2003). HHI for banking sector BH indicates the growth of concentration and show a significant concentration, while in Croatia banking sector is relatively concentrate. Concentration ratios CR5 in BH was 61% in 2009, wile in Croatia CR4 was 65% in banking sectors indicate exposure of banking sector to small number of banks. Specifically the nation economy depends on the activity of BH five largest banks in the sector.

Total assets of the banking sector in BH at the end of 2010 amounted to 10.8 billion euro and compared with the situation at the end of 2009 recorded increase of 0.7%. In Croatia banking sector in 2009 record total assets in amount of 51 billion euro in comparison with previous year that was increasing of 2.4%. In assets structure dominate loans in amount of 69% in BH bank balance, while in Croatia was 65%. Bank in last two year are faced with reduced demand for loans as result of financial crisis which has reduced creditworthiness of existing and potential new customers. During 2010 there has been a weak increase in deposit in amounts of 3.6%, in Croatia 3.2%. Banking sector in BH was faced with withdrawal of deposits in 2009. Important source of fund for banks were borrowings from foreign financial institutions. The structure of assets and liabilities indicate importance of loans in assets and deposits in the banking sources in the banking sector. The loan structure is dominated by loans to other sectors (household), while in the structure of the source dominate deposits in foreign currency. The structure of assets and liabilities are visible sources of risk for banks – credit risk and liquidity.

3. FINANCIAL STABILITY BANKING SECTORS IN BOSNIA AND HERZEGOVINA AND CROATIA

Banking sector with 81% share in total assets of financial sector in BH and 76% in Croatia is dominate source of financing through which is satisfied demand from economy and households. So it is important to have stabile banking sector. Stability of banking sector presents possibility that it will not

get into a situation of insolvency[3] in the future. So it is important to review distribution of assets and liabilities of the banking sector through different indicators.

Banks lending activities in BH and Croatia was grown in resent years with significant share of loans to household. Rate of credit growth recoded in BH a value of over 25% annually. Banks loan activities shows slow growth in period 2008.-2010 in BH and Croatia. Rate of loan growth in 2009 in BH first time from 2000 had negative sing of -3.1%. In 2010 banking sector shows slight improvement by a low rate of credit growth of only 3.4%. Reason for slow growth is in banks reserving in additional exposure to credit risk (graph 1). Impact of financial crisis on banks loan activities is reflecting on assets quality and share non-performing loans in total loans of the banking sector.

Graph 1: Total loans of the banking sector in BH and Croatia (in billion euro)
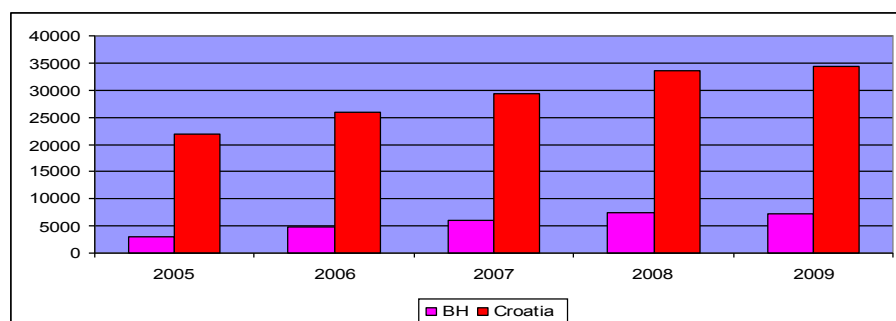
Sources: CBBH, HNB, Annual report, different years

The biggest loans were recorded for consumer loans (personal consumption) and mortgage loans. Banks are in the period before financial crisis recorded strong growth of the loan portfolio funded foreign sources (the credit lines from bank „parent" to bank "daughter"). In period 2008-2010 growth credit activities of the banking sectors to public sector, to finance budget deficit. The largest increase for this sector was record 2008.

Credit risk dominates in banking sector in BH and Croatia is major source of risk for financial stability. Weak economic activity and increasing unemployment resulting in demand for loans and banks faced with new macroeconomic conditions which determinate banks operating. All this determinates rigorous conditions for loan approval. Financial crisis effect banks assets quality and increase share of bad loans[4] in the total loans of the banking sector and share of bad loans in total assets of the banking sector. Bad loans recorded growth trend in the period 2008-2010.

The growth rate of non-performing loans to total loans of the banking sector in BH on an annual basis was in 2010 compared to 2009 51% a year. The reason for the increase is a change in the structure of quality risk assets, with the growth of groups C, D and E.

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[3] Assets of banking sector aren't enough to cover all liabilities.

[4] There isn't unique definition of bad loans, according to G-10 countries bad loand present all loans with late more than 90 days.

Graph 2: Non-performing loans in the total loans of the banking sector of BH and Croatia
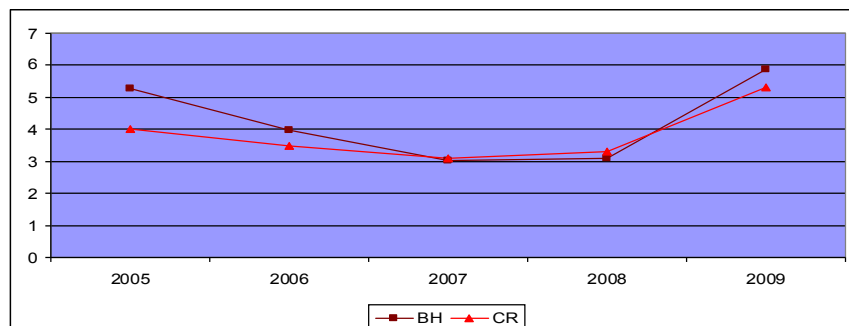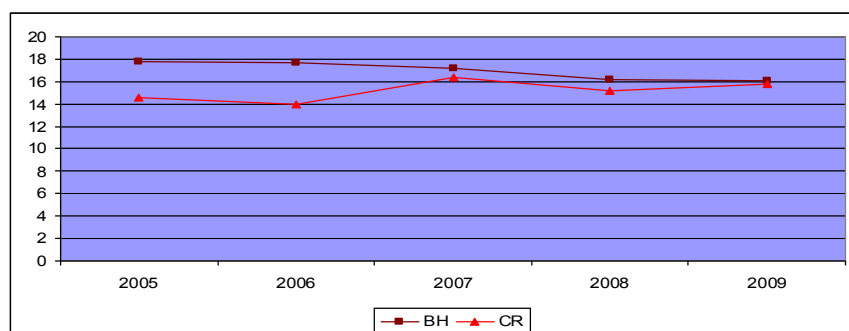

Sources: CBBH, HNB, Annual report, different years.

The capital adequacy ration shows bank ability that with their capital cover risk weighted assets. In 2009 the banking sector recorded rise of risk weighted assets on annual level which lead to decreasing capital adequacy rate. In Croatia we record increasing of capital adequacy as result of increasing capital and changing capital regulation.

Graph 4: Capital adequacy rate of the banking sector BH and Croatia

Source: CBBH, HNB, Annual report, different years.

The banking sector in BH 2010 finished with negative financial results. Decrease in profit had effect on deterioration profitability indicators. In 2009 all banks in banking sector record increase in provision for credit risk losses as a result of the impact of financial crisis. Net income of the banking sector increasing as result of rising non-interest income, while net interest income decline as consequence of increasing price of source of funding.

Research analyses impact of market structure, ownership structure and management, structure of balance sheet and risks related to its position, and macroeconomics (Demirgüc-Kunt, Huizinga, 1998). Deterioration of profitability is result of reduced lending activities and assets quality of banks which had resulted in increasing cost of provision and change in classification of assets.

Graph 5: Indicators of profitability in the banking sector BH and Croatia
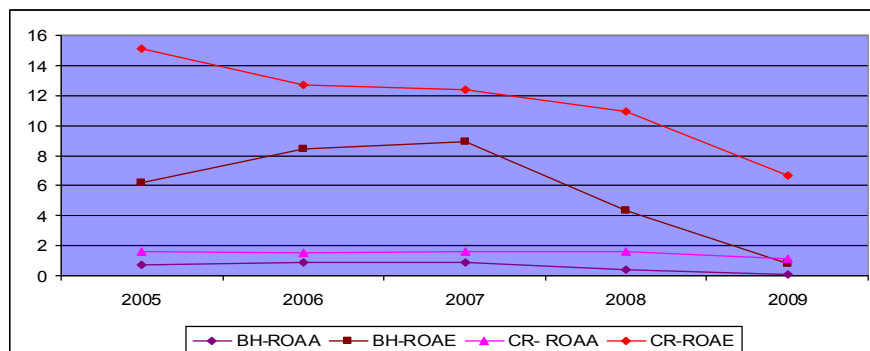
Source: CBBH, HNB, Annual report, different years.

In bank-dominated financial system financial crisis have stronger impact on banks' liquidity. In this situation question of deposit safety is open. Even deposit insurance system exist, banks record withdrawal of deposit as result of losing confidence in stability of banking sector. Reasons for losing confidence are: limited amount of insurance deposit, withdrawal deposits from healthy banks, time need for dispose deposits if banks record failure, suspicion in state credibility and etc. Indicator of liquidity in banking sectors shows decline liquidity. Slight declining is result of faster credit increasing than the deposit growth

Graph 6: Liquidity indicators for banking sector in BH and Croatia
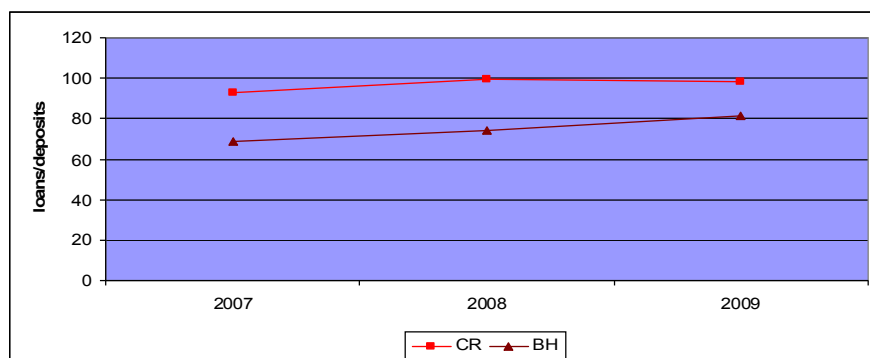
Sources: CBBH, HNB, Annual report, different years.

Global financial crisis faced bank as financial institutions with managing their assets and risks associated with bank lending, capital, liquidity and profitability. Based on presented date in this paper and analyses time series we can conclude how the banking sector BH and Croatia is expose impact of financial crisis and staying stabile and safety in condition of financial crisis. As result of financial crisis banking sector recorded deterioration of all indicators financial stability of the banking sector. Financial crisis decreased profitability of banks as result of slowing credit activities and deterioration liquidity position and borrowing aboard. Weak banks investment function and trust of public in

national central bank are reason not so strong impact of financial crisis on the banking sector. Also, financial crisis has stronger impact on banking sector in Bosnia and Herzegovina then Croatia. Reason is in political instability and uncertain which effect economic stability and increase instability in banking sector. Changes in macroeconomic environment and credit standing are major drivers of credit demand on one side, and factors in bank credit policy and determinate banks' profitability. Slow down of credit activities and insufficient loan supply can have impact on economy. Especially in bank dominate financial system banks presents main source of financing other entities in national economy.

CONCLUSION

At the end of last century South-eastern countries record changes structure of banking market (consolidation, concentration, domination of foreign capital, competition). As major part of financial system it's important to analyses impact of financial crises on banking sector and their performance. Financial crisis has impact on decreasing credit activities of banking sector. Banks are faced with increasing credit risk content in decreased credit standing new and existing borrowers determinate with deteriorate national macroeconomic condition and global economic condition. Also in same period banking sector experienced decline in capital adequacy, profitability and liquidity. Results of analyses show stability of banking sector in BH and Croatia. This relatively weak effects of financial crisis on banking sectors selected countries we can find in strong capital regulation, undeveloped investment activities in banks and adequate measure of national monetary authorities in both countries.

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CORPORATE SOCIAL RESPONSIBILITY BETWEEN MARKETING AND PHILANTHROPY

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Abstract

The article debates the issue of corporate social responsibility and the motivation for the actions made under this umbrella concept. The research methodology uses comparison between critics, classifications, projects and also companies from Romania. Our objectives target the explanation of corporate social responsibility as marketing or, on the contrary, as philanthropy. According to specialists, philanthropy observed especially in East European is not corporate social responsibility. But, according to usual people, philanthropy is the real responsibility and the corporate social responsibility targeting profits and image promotion is like hypocrisy.

Key words: *corporate social responsibility, philanthropy, marketing, Romania, motivation*

1. INTRODUCTION

The European Union defines corporate social responsibility as those programs that companies decide voluntarily to contribute to a better society and a cleaner environment (2000).

Michael Hopkins (2004) in a paper of ILO (International Labour Organisation) considers that corporate social responsibility deals with the treatment of a company stakeholder in an ethical and responsible manner.

From these two definitions, we will try in this article to identify the motivation hidden in corporate social responsibility actions of firms and to answer the question philanthropy or marketing. Although some acts of corporate social responsibility enter the philanthropy category, the impetus or reason pushes all these acts in the sphere of marketing.

2. CORPORATE SOCIAL RESPONSIBILITY PROJECTS CLASSIFICATION

The most Known classification of CORPORATE SOCIAL RESPONSIBILITY projects is made by Philip Kotler and Nancy Lee in the book "Corporate Social Responsibility: Doing the Most Good for Your Company and Your Cause":

- Cause Promotion
- Cause Related Marketing
- Corporate Social Marketing
- Corporate Philanthropy
- Community Volunteering
- Socially Responsible Business Practices

Cause Promotion is a type of program that the company contributes with money or other resources to increase public awareness and concern for a cause, or to mobilize the public to donate, participate or volunteer in support of a cause.

Cause Related Marketing is a type of corporate social responsibility program in which a company engages in favor of a cause to donate an amount that depends on sales made within a certain period. Typically, a CRM campaign ("Cause Related Marketing") involves an "offer", which is valid for a certain period of time, refers to a specific product the company is done for the benefit of an NGO, or a another partner, who has legitimacy in terms of cause and ability to manage money.

Corporate Social Marketing is a corporate social responsibility program through which the company aims to change negative behavior or to persuade the public to adopt positive behavior. Even if the program is used and tactics aimed at increasing awareness or education, the main focus is the change in behavior.

The most cited corporate social marketing projects, highlighted also by the web site www.responsabilitatesociala.ro, refer to:

- Threats to life or safety (e.g. traffic safety, domestic violence, the preparations for natural disasters, accident prevention etc.)

- Health (e.g. breast cancer, eating disorders, diabetes, heart disease, HIV etc.)

- Environment (e.g. pesticides, air pollution, recycling, protection of natural reserves etc.)

- Civic involvement (e.g. volunteering, voting, blood donation, crime prevention or crime etc.)

Corporate Philanthropy is a type of program that helps the company directly, with money or goods to support a cause. Philanthropy is the oldest type of corporate social responsibility initiative. For a long time, companies were dispersed and had random contribution. But lately there is a tendency to align the contributions to overall business strategy. Philanthropic activities can take many forms, including literature mentions:

- Donations of money (e.g. a company gives money within a program to help homeless)

- Financing (e.g., the company launched its own program funding environmental projects of NGOs)

- Scholarships (e.g. company initiated a scholarship program for disadvantaged youth)

- Donations in products or services (e.g., an IT company donates computers to rural schools, a telecommunication company offering special telephone lines to help raise funds)

- Granting of expertise (e.g. a company profile medical help achieve material information about drugs)

- Access to distribution channels, company locations or equipment (e.g. a transport company offers its freight cars to carry supplies to flood victims, a chain of gas stations offering collection containers for used motor oil)

Community Volunteering is a type of initiative that the company encourages its employees to volunteer in support of the community, an NGO or a cause.

Socially Responsible Business Practices are initiatives that a company is making its mark in a voluntary mode, so as to contribute to the general welfare of the community and to protect the environment.

3. CRITICS ON CORPORATE SOCIAL RESPONSABILITY

Jens Trummer, corporate social responsibility consultant, with over 12 years of experience at international level, makes a parallel, in an exclusive interview with Corporate Social Responsibility Romania, between corporate social responsibility practiced in Eastern Europe and that practiced in Western Europe and the U.S. Furthermore, it explains what would be a strong link between corporate social responsibility and public relations. If well implemented, the corporate social responsibility should bring benefits to public relations.

If we look over the definition of corporate social responsibility given by the European Union, this is a business strategy and a business exists only if it makes money at the end of the day. Therefore it should bring benefits both for the company, the community and environment. And if we speak on this issue in terms of public relations, PR should be part of corporate social responsibility.

The famous management consulting agency McKinsey & Company published in February 2008, a global research on how companies relate corporate philanthropy actions. If corporate philanthropy in the past, companies viewed as a gesture of generosity free today, according to the study, approximately 90% of respondents to pursue and achieve business goals when making such an activity.

Projects such as philanthropic donations are corporate philanthropy not corporate social responsibility, the latter being an integration of responsibility held by a company in its strategic management. Multinational companies began to take responsibility for the impact they have on the environment and society and try to diminish it. Acts of charity do not diminish in any way the negative environmental impact and long-term success requires a distribution of corporate profit, considered the primary objective of any business, for the areas affected by their business.

European Commission defines Corporate Social Responsibility as a way to integrate the interests of private companies to society and to the environment in their actions. Philanthropy is seen as a charity of companies for various social causes. While you philanthropy business involvement in activities that do not include their area of interest, and in order to create a good image or to remove the negative effects of their activities, corporate social responsibility encourages companies to go the way that they on, but in a different way of benefiting both themselves and their stakeholders.

But the question is whether corporate social responsibility actions and not those of philanthropy have a hidden motivation or just support the benefit of society or the environment. They do it selflessly or they always aim for promoting through corporate social responsibility and obtain higher earnings. The effect is positive even if there is a selfish motivation? Are the effects diminished by reasons?

4. CASE STUDIES

We will present in detail four case studies of some companies from Romania and their projects of corporate social responsibility: COSMOTE Romania, Arctic, Petrom and BCR. The companies belong to different domains, like telecommunications, electronic appliances, oil and banking.

a. **COSMOTE Romania** is a member of COSMOTE Group. Romanian company was launched in December 2005. His goal is to makes mobile telephony accessible to all. COSMOTE Group is the strongest mobile operator in Southeastern Europe, being present in Greece, Bulgaria, Macedonia and Albania.

On 20 November of 2010, COSMOTE Romania, Germanos and Association More Green (Asociatia Mai mult Verde) have developed an action to reforest a land, near Ploiesti (a Romanian town), an area heavily industrialized. Approximately 150 employees of the two companies, together with Association More Green have planted 10,000 oak trees in an area of 2 ha. Wooded area was elected with support of local authorities from Ploiesti.

Moreover, COSMOTE and its partners have pledged to nurture the trees which were planted over a period of five years, the period required for seedlings to mature early.

The action makes part of a program of environmental responsibility of COSMOTE, launched in 2009 – "Adopt a forest".

This project qualifies as social marketing corporate social responsibility and refers to environmental protection, but the company is involved also in other corporate social responsibility projects, such as philanthropy, by providing scholarships for students.

COSMOTE Romania engages in future of young generation and support education and performance. Thus, the company COSMOTE launches scholarship program, which will provide five scholarships for talented and ambitious teenagers. This social responsibility program organized as a contest aimed at young graduates of high school, which were admitted in a public higher education institution in Romania.

Of course the ultimate goal is to promote the company and attract a larger number of customers, especially among young people. According to Hopkins's definition, corporate social responsibility reflects only those actions dealing with stakeholders, so for those people who have an interest directly or indirectly for the company. The project of forest development would not have to do with the telephone company stakeholder interests. Project of scholarships is to target key customers or potential customers just because the students - a modest social class- are those who prefer the very low-cost operator.

Another project of COSMOTE refers to donations given to sick and underprivileged children. COSMOTE Romania donates 50,000 Euros to five NGOs that provide services to sick or disadvantaged children. The donation is the result of the second edition of the "message of love" that gives a part of the revenues from SMS messages sent by customers in the New Year.

According to criticism brought by various specialists, corporate social responsibility refers to projects that businesses diminish the negative impact of their activities on the environment and community and corporate philanthropy is simply charity, not corporate social responsibility. Thus, any donation of COSMOTE to the five NGOs for child support is not pure corporate social responsibility.

b. With over 37 years experience in the field, **Arctic** is currently leader of the Romanian market of electronics. Initially, the Arctic was known only for refrigerating appliances. But since 2003, the company's portfolio includes: washing machines, cookers, vacuum cleaners, TVs, and hoods. The company's mission is modern electronics design, functional and attractive design at affordable prices.

Arctic offers energy-efficient products, with the latest technology and design. The company offers the best quality / price ratio, a national network of service and extended warranty, the largest consumer electronics market. Arcelik Arctic is part of the third European producer of household appliances. At 50 years of existence, Arcelik Group's products are present in markets of more than 100 countries worldwide. The company has 11 manufacturing facilities in four countries and 17,000 employees.

Arctic company has implemented a social responsibility program, "Believe in U" for students of the leading universities in Bucharest and Targoviste. Through this program, they support students, offering them practical solutions designed to help them develop a successful career (www.arctic.ro).

The "Believe in U" is part of social responsibility campaigns launched over the years by the company Arctic. They were directed to various areas such as health, education, social issues and environment protection. Among them, there was noted Gaesti internet school setting, equipped with modern computers, donation of white goods of hospitals, sponsoring charity events organized by NGOs to raise funds. Also, in summer 2005, Arctic has offered support to families affected by floods, providing them products of 30,000 Euros.

Note that the Arctic company is turning to the social marketing and philanthropy, the corporate social responsibility final stage, that of socially responsible business practices being quite complex and difficult to reach.

c. **Petrom** is the largest Romanian oil and gas, with operations in various areas: Exploration, Production, Marketing, Refining and Petrochemicals. The company is a leader on the Romanian market and the largest company listed on the Bucharest Stock Exchange, after capitalization. Starting from December 2005, Petrom is a member of OMV Group. Together, the two organizations form the largest integrated oil and gas group in Central and Southeastern Europe.

The four largest polluters are those active in the processing and transportation of oil or the manufacture of cement. According to a ranking conducted in Arges, Romania, in 2010, brought by the Environmental Guard of the county, the largest polluter was OMV Petrom.

OMV Petrom SA Company has "won" first place in the top polluters in Arges due to the spill in the activity of oil extraction. The most serious pollution caused by an incident at one of the pipes in Petrom, Arges County, occurred in 2008 on Sabar River when he was polluted on a length of 15 km and a width of one meter. Sabar River pollution occurred as a result of discharges into the river of about 500 gallons of salt water and 400 gallons of oil. The company was then fined with 80,000 lei.

So, there is a justification for such projects which involve Petrom in terms of Corporate Social Responsibility. It's trying to counteract or at least mitigate the negative impact that work has on the environment and community.

Petrom has also a corporate directive on business ethics, a kind of code of conduct for its employees, which integrates the company, primarily in the social medium. One of the objectives of Petrom is to reduce the impact of its operations on the environment by reducing waste, emissions and discharges into the atmosphere and efficient use of energy. The year 2009 represented a major step in clarifying, strengthening and aligning processes and requirements that apply in the company according to regulations of OMV.

Following the regulations of the OMV Group, since 2006, Petrom invested in Refining Division in order to have the capability to produce at European Union standards. Thus, in 2009, a new facility for production of gasoline with low sulfur content was put into operation in Petrobrazi.

In May 2007, Petrom launched the Parks of the Future, one of the largest rehabilitation of green spaces. The company invested 1.5 million Euros in the complete restoration of five parks in Bucharest, Pitesti, Moinesti, Targoviste and Timisoara. In September-November 2007, there were reconstructed the first three "parks of the future".

The creative concepts that were implemented in Parks of the Future are the result of the work of some young architects and landscape specialists, the national winners of the creative solutions launched by Petrom in 2007 which continued each year. "Parks of the Future" are equipped with modern irrigation systems and use alternative energy, thus promoting the concept of responsible use of resources.

d. BCR, member of Erste Group, is a commercial bank and also one of the most important banking institutions in Romania. An important element of responsible corporate operations is represented by the measures taken by the bank to preserve the natural environment. In the business sphere, BCR is interested in developing and modernizing the transportation system, energy sector development, the implementation of environmental protection programs and social infrastructure.

According to the report of BCR - Good Corporate Social Responsibility, published in 2009, the main Corporate Social Responsibility projects in which BCR is involved are: Turceni project - EBRD's participation in financing the rehabilitation of six units in Turceni complex, Craiova Energy Complex financing, one of the largest energy producers in Romania, participation in public acquisition organized by the Aries SA Water Company (a local operator) for the expansion and rehabilitation of water systems and sewage treatment plants in Turda, Cluj County, actively participating in the financing of the National Company of National Roads in Romania.

According to a top made by the Donors Forum in 2009, the amount allocated by large companies in corporate social responsibility projects in 2008, show that first position is occupied by Petrom SA, with 4 million Euros, the corresponding budget. The company is followed by BCR (Romanian Commercial Bank), with 2 million Euros. From the top 10 large companies, five companies are in banking field.

5. CONCLUSIONS

In conclusion, we can say that corporate social responsibility projects aim at creating a favorable image among the community, realizing that only protecting the client and its environment, they can achieve their fundamental objective of any organization, namely profit. Of course, we would say that corporate social responsibility comes from philanthropy, the lack of any interest, out of pure altruism or generosity.

The question that arises is whether the value of social responsibility projects is diminished by this selfish, driven by the economic system. First, companies operate on the principle of economic gain. Philanthropy belongs to NGOs not to profit organizations. The effect is the same, perhaps even larger than in the case of the foundations, because budgets are much higher.

Analysis of the Donors Forum in 2009 in Romania, said that the benefits made by corporate social responsibility projects to the community as a whole have been extensive. The amount allocated by the 50 winners in the category large companies, medium and small companies, corporate foundations, grant making foundations and individuals have reached 31 million Euros in 2008. 70,000 children have benefited from the renovation of hospitals in the country, 44,000 students have learned about ecology and protecting the resources, 12,000 disabled persons were assisted, 7,500 volunteers were involved in social projects, 4,700 Roma children were reintegrated into schools and have received

assistance, 4,200 homes received material aid and medical assistance, 3,000 flood victims received material aid after floods in July 2008, 10,000 children have been awarded or have received material assistance, etc..

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OPPORTUNITIES OF APPLICATION OF SPECIAL EXPORT-FINANCING METHODS IN HUNGARIAN AGRICULTURAL EXPORT

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Abstract

The timeliness of the given topic is made evergreen by the quick development of the financial institutional system, the terms of trade and the changes of their international regulation, the ever stronger international competition and the exposure to the increasingly complex risks. The question is particularly exciting in the aspect of the Hungarian agriculture, which was entrenched in the professional awareness as the economy's only sector with durable export surplus, while agriculture's position as the branch improving the account balance is increasingly insecure. One of the causes of the negative processes is undoubtedly the problem of export-financing of the ventures in poor economic condition. Abroad the overall funding of the export transactions has shifted towards transaction financing. In terms of agriculture, besides the general funding methods some unconventional solutions in the frame of the export transactions are available even in Hungary. The article is examining the application of the unconventional export-financing methods in Hungarian agricultural foreign trade.

Key words: *stronger international competition, transaction financing, alternative financing methods*

1. POSITION OF THE HUNGARIAN AGRICULTURE EXPORT

Examination of the importance of the agricultural foreign trade is justified from several aspects. The most important is the fact, that Hungary is an open economy, which has a high proportion of participation in the international trade. The second major test criterion is what proportion does the agricultural branch share in the foreign trade. As it can be seen from the Figure 1's data, the rate of the agriculture and the food industry in the total foreign trade before EU-entry, and in the couple of post-accession years is showing a downward trend.

There were two reasons for the decline: on one hand the volume of the agricultural export decreased, on the other the total Hungarian export grew dynamically. The lift observed since 2007 is the result of the surge in grain exports and of the crisis (its share grew in the respect of the Hungarian exports that meanwhile has significantly fallen back).

Hungary in the time of EU accession, being the only one of the accessing countries, could take pride in being net agricultural exporter, yet in 2006 our agricultural trade came to a deficit towards both the old and new member countries, our remaining assets could be due to our exports directed towards the non-EU countries. It can also be seen on the Figure 2. that until 2007 this asset is still showing a downward trend: the increase of the agricultural exports towards the countries accessed with or following Hungary was more dynamic, than the country's exports towards the old member countries,

however the agricultural imports originating in the old member states more then doubled, contributing to the push back in the share of the agriculture in Hungarian foreign trade.

Figure 1.

Share of agriculture in total Hungarian export (%)

Year	Value
2000	6,9
2001	7,5
2002	6,8
2003	6,6
2004	6
2005	6,1
2006	6,3
2007	7
2008	7,9
2009	8,6
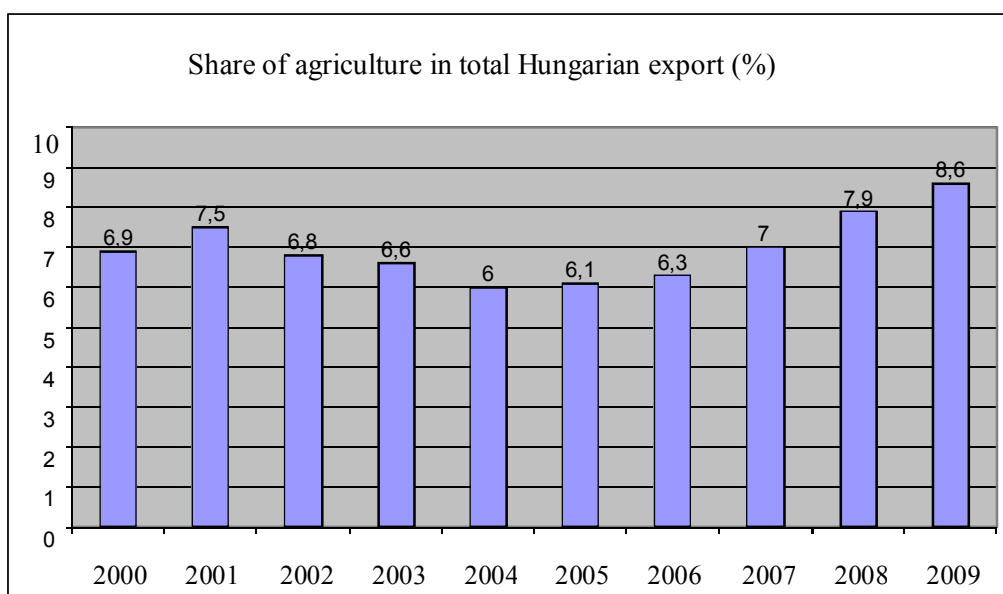
Source: Research Institute of Agricultural Economics

Figure 2.

Foreign trade balance of Hungarian agriculture (mln EUR)

Year	Value
2003	1360
2004	1098
2005	916
2006	995
2007	1599
2008	1915
2009	1716
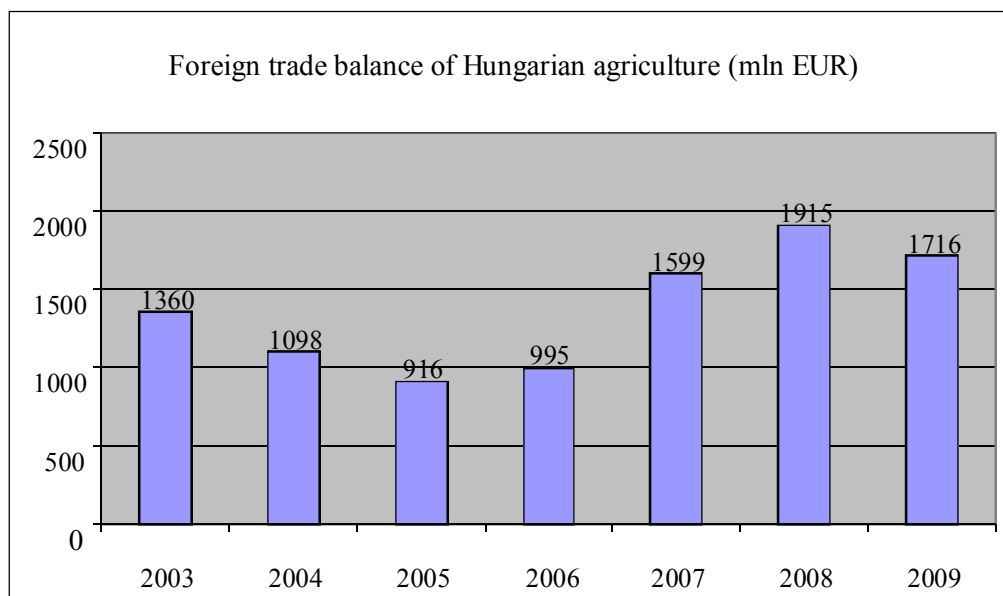
Source: Research Institute of Agricultural Economics

The crisis broken out in 2008, effected the food industry to a lesser extent compared with other sectors, since the drop in demand triggered by it affected the food industry the less. Partly this is the explanation for the rising values from 2008 seen on the Figures1. and 2.

Future has some challenges in store, since the agricultural markets are looking towards further liberalization. Both EU's and Hungary's level of market protection is reduced due to the decreasing agricultural customs duties, the competition is expected to increase both on EU- and Hungarian markets. In terms of the agreement approved on the IV-th WTO ministerial meeting held in December of 2005, in Hong Kong, opportunities of Hungarian products' market access change as the result of a shrinking export subsiding, due to the absence of the export subsiding products remaining in EU are certainly to cause excess supply.

In order to keep pace with the existing and future competitors every available opportunity should be utilized, the production and exports structures are to be tuned towards the processed and high value-added products. While enhancing the competitiveness, exports ability must be improved:

- from the funding side through the strengthening of the direct and indirect bank financing. In the case of the latter, not directly the producer, but an intermediate organization, eg.: leasing company, integrator or a factoring company is to be financed. Among the direct financing modes certain special exports financing arrangements may receive role, while among the indirect ones the factoring companies transitioning exports factoring.

- From the side of the export assisting institutions with the further development of the credit insurance arrangements of subsidies, or with setting up special trading houses for the producers not familiar with the exports activities.

2. SPECIAL METHODS OF EXPORT FINANCING

Exports financing is including the measures taken in order to produce exports goods or to reduce, possibly exclude the risks involved in the transaction. The exports financing methodss are in fact bridges, that span the funding gap between the order and the payment. The practical experience has shown that since the goods and services are most likely to compete on the supply market a prepayment counts as a rare case, the funding of the transactions is mostly incumbent on the supplier, that is on the exporter. My studies have shown that in Hungary the conventional ways dominate the exports financing arrangements and the unconventional ones are less used, which in my view may be one of the explanatory factors for the shrinking exports markets.

During the in-depth interviews with the exporters my experience was, that these alternative methods - forfaiting, export factoring, structured transactions, buyer's and supplier's credits - are not known and there is a number of conceptual and procedural problems. A classification of the concepts, arranging them in a system, furthermore their operation's introduction to the exporters is indispensable in order to spread them in Hungary.

2.1. Forfaiting

In my opinion an unfairly neglected financing form in Hungary, since the exporter is forced to provide for deferred payment to the buyer and faces risks and problems that general funding isn't able to rectify. The loan must be repaid with interest, regardless of the importer's ability to fulfill the payment obligation towards the exporter on due date. In a possible case of non-payment the exporter is doubly stroke: once the good's value falls out of the exporter's turnover, secondly the previously taken

working capital loan is to be repaid. Forfaiting is a better solution for the deferred payment transaction's financing, because after delivery of goods the forfaiter bank pays promtly to the exporter, after discounting of the purchase price (interest is calculated until maturity). Furthermore, it is done without recourse, which means the exporter is free from a contingent non-payment risk. Further advantage is that in case of forfaiting one can't talk about borrowing, the exporter shall be exempt from the borrowing process' bother, and has no foreign exchange risk covering the whole payment (deferred) period.

My studies have also confirmed, that it is worth for the agricultural exporter to ask for banking guaranties from the buyers (deferred payment L/C, bank guarantee, bill of exchange), since these significantly increase the receivables' selling chances in the framework of forfaiting. However the plus cost emerging in the transaction can be compensated in form of a smaller discount to the importer without significantly deteriorating the exporter's profitability.

2.2. Export factoring

Companies from various branches, including agricultural sector use factoring as an extremely versatile financial service, to immediately monetize their open receivables and so to finance a further increase in the turnover. This financial arrangement helps the small and medium-sized companies to access the needed liquidity, achieving a further discount from the transporters, not to mention that the risk of a reported non-payment from customers can be eliminated. Not the last aspect is that with receivable sales the companies can significantly improve their balance sheet structure.

The departmental distribution of the factoring turnover shown on the 1. chart displays, that the agricultural sector is the one to participate the less on the factoring market, despite of the fact, that it's application in the branch is supported by special programs. The in-depth interviews point out the reasons: on one hand, the construction, including the export factoring is hardly known among the exporters. On the other hand, which was surprising even for the researcher, an astonishing rate of the exporters thought factoring and it's international form to be a way of getting rid of the amount overdue.

Table 1.

Share of braches in factoring market in Hungary (%)

	2007	2008	2009
Agriculture	**6**	**4**	**3**
Industry	26	25	32
Building industry	13	10	8
Trade	39	42	35
Services	9	12	9
Others	7	7	13

Source: Hungarian Factoring Association

Factoring is beneficial to those small and medium-sized companies that possess current receivables stock resultant from a relatively large volume freight and service provision. Most of the enterprises in Hungarian agricultural sector could be an excellent factoring subject. The important thing is for the

exporter to command a relatively large receivables stock, wide customer base and the payment maturity is to be between 30-120 days. The account receivables are sold to the export factor involving the import factor, while the export factor advances 70-80% of the assertion and provides for the registration of trade receivables, payment orders, collection and then accounts to the supplier. Along with other benefits as for example greater liquidity, solvency and improvement of the balance sheet structure, this also gives a cost-saving advantage to the transport company.

The economic crisis encourages Hungarian companies to look for other liquidity-enhancing tools, besides traditional bank financing. In case of agricultural companies this need is exacerbated, since for them the access to bank funding is even harder, because of the sector specific risks or exactly because of the existence of insufficient funds. The alternative solutions, including factoring and even more specifically export factoring, are even more urgent in their case. The factoring market, with the end of the economic crisis is expected to expand further in the next couple of years and it has where to, since Hungary's share of the EU market owing 80 percent of the world's factoring turnover is only 0.3%.

2.3. Structured export financing

The structured trade-financing is a method of funding whereby the funders transmit the necessary capital for the transaction from the outside, in order to secure the financing instead of traditional collateral affecting the borrower *they concentrate on transaction's cash-flow and structure*. In case of these transactions the participants jointly with the sponsoring financial institution shape (or structure) the structure of the commercial transaction to as far as possible minimize the transaction risks. The target is, that in case of a participant involving a higher risk a lower, for example only settlement risk would appear, which may be further decreased with the involvement of appropriate institutions (e.g. insurers). In some cases financing bank-owned trading companies participate in the transaction as a trustee. This doesn't appear as a payment risk for the bank because of the ownership concentration. After analyzing these transactions it can be stated that in case of this buildup, in given phases the bank consciously assumes the risk that the transaction's only collateral is the good itself.

Based on my research I came to the conclusion that the Hungarian banks are willing to avoid this collateral as coverage at all costs. Their western European counterparts providing structured export financing on the other hand are aware of the value of the goods, since in many cases those are stock commodities commanding certificates of origin and quality certificates, furthermore eventually the banks' own trading companies are also able to sell those on the market. So a western European or an American commercial bank besides the post-financing would grant a grain-growing farmer an export prefinancing loan, which is covered with the claim to be disposed. It is clear that the financing requirement is solved with transaction financing instead of the general funding solutions familiar in Hungary. Risks originating from weather are also often covered by the insurer often also belonging to the funding bank (payment of claims is assigned to the bank). Furthermore the bank can supervise the trade agreement between the farmer and the limit commanding trader, previously tested at the bank. In this case a range of further covers (quality assurance, transport insurance) guarantees the run-in of the throughout bank-owned goods. The financing bank strictly speaking runs only the farmer's "fulfillment" risk, thus whether the farmer is capable of producing the signed on grain volume in appropriate quality. To estimate this is easier than judging the farmer's credit worthiness.

My studies have shown that a wider range adaption of the structured financing in relation of Hungarian agricultural export would be necessary. For this Hungarian commercial banks should add it to their loan-palette, which can be promoted by the application demand, expressed by the exporters.

2.4. Other state-supported commercial credit types

A state is in many ways capable of supporting, and compared to it's potential supports the given country's exporting. Here I would like to emphasize two financing methods, which can appear highly applicable in case of Hungarian agricultural goods' export in case of not so called "commodity" products (e.g. grain, sunseeds, industrial plants etc.), but complex agricultural production systems that include not only the specific mode of production but also the seeds, machinery and equipment, even to the end of product processing. Hungary commands a number of such advanced systems, that (mainly) eastern countries with a less developed agriculture then Hungary have a great demand for. Since the acquisition of such systems, primarily because of the high-value machinery and equipment means an enormous financial burden for the buyer, it is indispensably necessary to provide a long-term financing attached to the system, with the length adjusted to the system's pay-back time. In case of a maze system or a pig plant it can be as much as 10 years. Not even mentioning that in this case we are talking about importers, whose risks are non-marketable, a not state-owned export insurer or commercial bank wouldn't accept those.

In these cases there is a need for, and in a number of countries there are state-owned, specialized institutions available for the exporters with long-term, often preferential financing slightly better than the market price. This type of financing is the Eximbank supplier's and buyer's loans, both based on the export insurance by Mehib.

My studies have shown that high-value machinery, equipment and complex agricultural systems are almost impossible to sell on the foreign markets without financing attached. In case of such exporting in the western direction (e.g. EU) the buyers don't require financing from their suppliers, since they can get it easier and even more importantly cheaper in place. In case of Hungary's exports to the east or to the developing countries the situation is radically different: the local customers' decisions are often motivated by the financing opportunities. Their possibilities of obtaining this funding and more specifically long-term loans are very limited even compared to Hungary's, not to mention the observable differences in the financing costs. The main problems are the political and economic risks specific for these countries, which top the buyer's payment risk. These risks affecting both the buyer and the country can not be taken by a Hungarian exporter, thus require the state's assistance since the private credit insurers can not underwrite a reinsurance on these on insurance market and so are forced to rule out the underwriting of the credit insurance. The state has to help its exporters and take off their shoulders' these non-marketable risks. Mehib granting an absolute guarantee to the exporters playing a key role here, providing them with a countervalue in case of proper fulfillment. This makes the Hungarian exporter capable of arranging a supplier's credit, or securing a buyer's credit opportunity on the behalf of the foreign partner through one's commercial bank. Both constructions' attractiveness is enhanced by the Eximbank's favorable interest rate refinancing activity, which can be resorted by the contributing local commercial bank, thus reducing the amount of the financing cost settled on the goods. The application is always defined by the given transaction. It is important for the exporter to know exactly the details of constructions' operation, so that he is able to offer any of them tailored to the needs of the importer.

The buyer's and supplier's credits are such specific- funding of relatively large amount, 2-12-year-return projects' implementation-financing solutions developed to the needs, that they are hard to compare with other methods, since these two credit products' replacement in my conclusion is virtually impossible. They can not be considered as project loans, since contrary to the latter in these cases the Hungarian commercial bank and Eximbank are financing only such projects performed by Hungarian companies abroad, where a foreign order as importer is necessary. In case of project loans

we never meet an order. In these transactions the borrower is always a project company created especially for one given project, which in addition is not able to perform the role of the main contractor in case of an export transaction exporter's functions. According to the loan's repayment further differencies of project financing compared to buyer's or supplier's credits are the missing independent guarantees (sovereign, banking or other securities) besides the rights on the project's assets/incomes and on the cash-flow. In case of buyer's and supplier's credits the exporter receives the equivalent of the exported goods or services from the customer (or from its guarantor), which is independent from the risks based on the completed project's working cash-flow. From the exporter's point of view these projects are not regarded as investment, so can not be replaced with investment loans.

The unconventional solutions as forfaiting, export factoring, buyer's and supplier's credits are not only able to supplement the already used methods, but also mean a solution in cases when the regular solutions can't help. During the export transactions analyzed in the research it was proved that in many cases the export transaction itself was only possible through these constructions, since it was the only way to provide the exporters with a deferred payment opportunity, while the emerging liquidity problems and the risks would disappear. A usual funding provides with general solutions, on general problems. In case of export transactions however atypical situations and problems may arise, the exporters may face other types of risks, and the global financing visibly can't provide solution to those. The unconventional methods, which are target orientated and also sufficiently flexible are able to solve these problems.

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MANAGEMENT OF BEACH EVENTS IN CROATIA

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Abstract

Positioning of Croatian tourist offer is only possible in conditions of rapid adaptation to changes, with a key role of building, implementing and maintaining a system of experiences as a part of an integrated tourist offer. Tourist destination thus becomes recognizable only to the extent to which it offers experiential activities which lead to satisfying the needs and motivation for travel.

Experience and desire to travel and experience something new and inexperienced is therefore based on the creation and planning of all activities. Although a tourist destination is placed in the centre of interest when it comes to the elaboration of experience system, in this paper emphasis is put on innovative forms of tourist attractions and offers that are associated with Croatian beaches. Guests now, more than ever before, search for unique experiences and unexpected facilities, special experiences, intense pleasure and fulfilment of desires. On their vacation, they want to experience something new and inexperienced, as opposed to the everyday and ordinary, which is usually associated with activities in nature, the impetus of passion, sensuality, emotion, health, love and freedom. In regard to this, Croatia as a tourist destination with its beautiful beaches provides opportunities that have not sufficiently been evaluated when taking into account the implementation of beach events system.

Key words: *event management, experience system, beach, trends, tourist offer*

1. BEACHES – TOURIST ATTRACTION BASIS

When discussing beaches as a part of tourism attraction base, it is necessary to emphasize the importance which a tourism attraction base occupies as a part of the overall tourist resources. A set of potential and real tourist attractions of every tourist destinations are an integral part of tourism attraction base.

For example, natural beaches form the co-called **real tourist attraction** and an integral part of basic tourism resources. Unlike natural beaches, communal beaches allow tourists to use them after an intervention, with the aim of ensuring tourist accessibility. **Potential tourist attraction** is a component of tourist resource base which has not ensured tourism availability yet.

The beaches as tourist attractions are the most important part of the tourism product, as a set of different products and services that the tourists consume on their trip and during their stay at the destination. They make the vacation interesting and engaging, and influence the tourism consumer to choose a particular destination. Therefore, they must be integrated into the tourism product, be informative and reachable. Regardless the beaches being a potential or an actual tourist attraction, they represent a basic resource and an attractive factor of every tourist offer and as such must be included in the development and marketing plans of tourism destinations.

TOURISM RESOURCE BASIS		
TOURIST ATTRACTION BASIS	OTHER DIRECT TOURIST RESOURCES	NON TOURIST RESOURCES

Picture 1: Structure of tourism resource basis

Beaches' classification – tourist attractions

Relevant classifications of tourist attractions are most commonly tied to travel-related motives and activities, and as such are prone to different interpretations. Ideographic approach to systematization of beach as a tourist attraction (Table 1):

NATURAL	NATURE-HUMAN CONTACTS	HUMAN
General background: **1. Panoramic** • mountains • seacoast • plains, deserts • islands	**4. Observations** • rural / agricultural • science parks, zoos, plants, rocks and archaeology	**7. Settlement infrastructure** • utilitarian types • settlement morphology • settlement functions - commerce • retail sale • finance-government institutions • education and science • religion-people • lifestyle • ethnicity
Specific features: **2. Features** • geographic • biological • flora • fauna • hydrological	**5. The nature of leisure** • quest • parks-beaches, • urban, other • resorts	**8. Tourism infrastructure** • access: to and from destination • route • information and receptivity • basic needs • accommodation • meals
Included surrounding: **3. Ecology** • climate • values • National Parks • nature reserves	**6. Participation** • hiking activities • summer • winter • water activities • other outdoor activities	**9. Leisure superstructure** • Recreation and entertainment - plays, sporting events, entertainment • Culture, history and art - museums and monuments, performances, festivals, gastronomy

Table 1: Composition of ideographic typologies of tourist attractions

World Tourism Organization approach (WTO) sees tourist destinations as a tourist product, and not as a set of its tourist attractions (the identification of France with the Eiffel Tower or the Canada with Maple leaf as the symbol) (Lew, 1987, 554).

Classification of the United Nations (UN) encompasses the distribution of tourist attractions and activities where beaches are linked with the core purpose of the travel undertaken - rest, recreation and holidays.

Functional classification clearly distinguishes tourist attractions from other tourist resources. The importance of this classification is reflected in the promotion of tourist destinations as a space of intense gathering of tourists because of its attraction base and tourist infrastructure. In doing so, the principles of sustainable development and the concept of tourism capacity for rational use and effective protection of tourist attractions and tourist attraction base as a whole, are taken into consideration.

In the present conditions of a global tourism market, new trends lead to carefully shaped management of tourist attractions with the aim of designing and providing tourists a unique experience of a destination or a region.

2. EXPERIENCE SYSTEM DESIGN

Modern tourists are more experienced and more demanding than ever before. Tourist market, at its own pace, makes demand and supply interdependent and to a large extent, mutually conditioned and changed accordingly. Many tourist destinations raise standards and level of expectations of tourists through promotion.

Guest today often does not differentiate destinations according to various services but rather ascribes quality to the destination as a whole. Because of that, destination must develop process orientation for all holders of the destination's tourism product (Magaš 2003, 51).

Favourable attitude *Value for Money* is increasingly included and is no longer sufficient for a successful and a good rest. Tourists also expect *Experience for Money* and *Emotion for Money* (Milohnić 2009, 1883). All destinations are heading that way - they intend to keep their market share. Every destination that wants to become a quality and a competitive destination needs to follow the same path, emphasizing beach as a tourist attraction of a certain destination.

2.1.Universal approach to experiences in tourism

Respecting the trends as the general directions which predict certain future trends in a realistically foreseeable future, trends in tourist demand, which will have an impact in developing, implementing and maintaining a system of experience on Croatian beaches is to be explained. Thus, the general trends in tourism demand in the world reflect through the following:

- ✓ The increasing need of people to travel to other places
- ✓ General need for life and work quality
- ✓ The general trend of environmental awareness and the need for a protected and preserved as a nature and
- ✓ The growing need for adventure - **experience** as the main motive for travelling.

Changes in motives of travel take place very quickly, almost every new tourist season. New forms of tourism demand for new tourism packages based on the experiences, intense pleasure and fulfilment of desires appear. The emphasis is on nature activities and experiences that encourage: sensuality, emotions, health and love for yourself and your body. Theoretical explanations, definitions and general characteristics of the experience in terms of events in tourism are explained in the following paragraph.

O'Sullivan and Spangler outline that three kinds of stakeholders coexist in the "experience economy". The first belong to a group of those who imbue their products their products with experiences (the "inspirers"). Service providers who use experiences to raise level of customer satisfaction point out the differences from the competition are the so called "increasers" and they shape second group. Third group consists of the so called "experience makers" or those whose principal activity is the designing integrity of the experience (Getz 2007, 175).

Experience that is associated with the events includes (O'Sullivan, Spangler 1998, 94):

1. participation and involvement in consumption;

2. state of physical, mental, social, spiritual and emotional involvement;

3. changes in knowledge, skills, memories and feelings;

4. awareness of intentional encounters, visits and experience of an activity or an event; and

5. efforts aimed at psychological or internal needs.

	Parameters' description
1. PHASE	Events or feelings that take place before, during and after events
2. PHASE	Factors or variables that affect the participation and the shaping of results
3. PHASE	Needs to be met
4. PHASE	Roles of participants and other people involved (personality, expectations, behaviour) in the formation of results
5. PHASE	Roles and relations with the experience provider (ability and willingness to creation of special events and their control)

Table 2: Experience parameters

According to cognitive psychology (the psychology of cognition) there are three levels of experience (Getz 2007, 97):

1. KEY EXPERIENCE–sensory response to stimulus, but with insufficient effect to stay long in one's memory;

2. MEMORABLE EXPERIENCE– feelings can be remembered later;

3. TRANSFORMING EXPERIENCE–resulting in permanent changes at the level of attitudes or behaviour.

Experiences therefore often reinforce the existing values and attitudes of the customers. Existence of facilities/content as supplement to surprise or sensory stimuli makes the experience more memorable.

2.2. Types of experience in tourism

It is extremely difficult to describe experience, both the ones with positive effects and those that have negative impacts as a result of certain events. In this sense, the continuation of the paper describes basic characteristics of general and specific experience in tourism.

General experience

General experience is linked to already experienced situations and is more connected with the state of mind of individual tourists as well as the particular circumstances, rather than with selected topics, programs or location of events. Therefore, many tourists attend events guided by the general personal gain and most tourists describe it in this sense (fun, diversity, "quality time", "relaxing", "new", "stimulating" or "enjoyable"). The importance that is given to the general experiences is usually not great and shapes only the overall picture.

Special experience

Special experience is related to special events (cultural celebrations, religious and spiritual, sport, art, etc.). Special experiences are usually discussed in the context of research and the quest for knowledge, learning and understanding something new. Usually they are tourists who emotionally and cognitively "blend in" into places, people and ways of life, including realistic things, such as historical sites, cultural performances, food and drink, or meeting with real people, and surreal aspects, including art symbolism and architecture with respect to "the idea of genuineness."

The search for meaning in life can almost invisibly encourage many leisure activities and travel. Rupture, ecstasy, transcendence, disclosure, are terms used in relation to religious or spiritual experiences and adventures (Timothy & Olsen 2006, 43). For many enthusiasts of art, food or music, the most important thing is the research and sense of discovery. Thus, the specific experiences associated with finding "comfort for the tourist" such as aesthetic values, food, fashion or music. Therefore, this is an intensely personal experience, which leads to the claim "you cannot satisfy everyone." Developers note: the aesthetic experience sets the value of the experience and they motivate a large part of the travel and consumption, but ensure satisfaction in advance is impossible.

Other experiences

Other experiences in tourism to a great extent ensure and provide the tourists the so-called "guaranteed" and safe experiences (special amusement parks and entertainment events). Their predictability, combined with experienced personal safety, generates benefits which are in line with expectations and even then when expectations are limited.

Reviewing and knowing the various types of experience, we can conclude that the general experience is that which can be experienced in any event (eg. entertainment) while specific experience is closely associated with particular types of planned events (eg. the experience of sports viewers) (Travel Industry Association of America 1999, p. 4). To avoid the existence of uncertainties and risks in planning and organizing events, management of system of beach experience must be carefully and thoroughly tackled with.

3. SYSTEM OF EXPERIENCE: BEACHES

Beaches form a part of tourism offer and is one of the basic elements of experience and meeting the needs and expectations that result in satisfaction of tourists. Hence, beaches as "outer space" contain various elements that need to be taken into account when shaping the experience:

Landscape (landscape, region and landscape features);

- climate (sunny days, precipitation, wind);

- flora (plant life-submarine and terrestrial observation, photography, smells, colours)

- fauna (wildlife-submarine and terrestrial observation, photography).

The most common potential clients that meet their needs and motives in the experiences of the beach can be: a) tourists who arrived in a tourist destination and tourists who went on an excursion; b) indigenous (local) population that has needs and motives to participate in the offered programs and facilities.
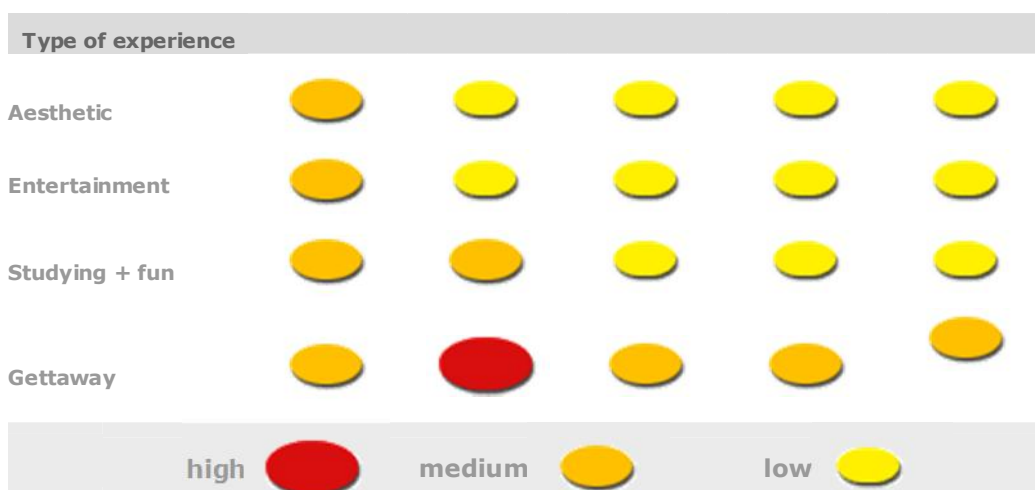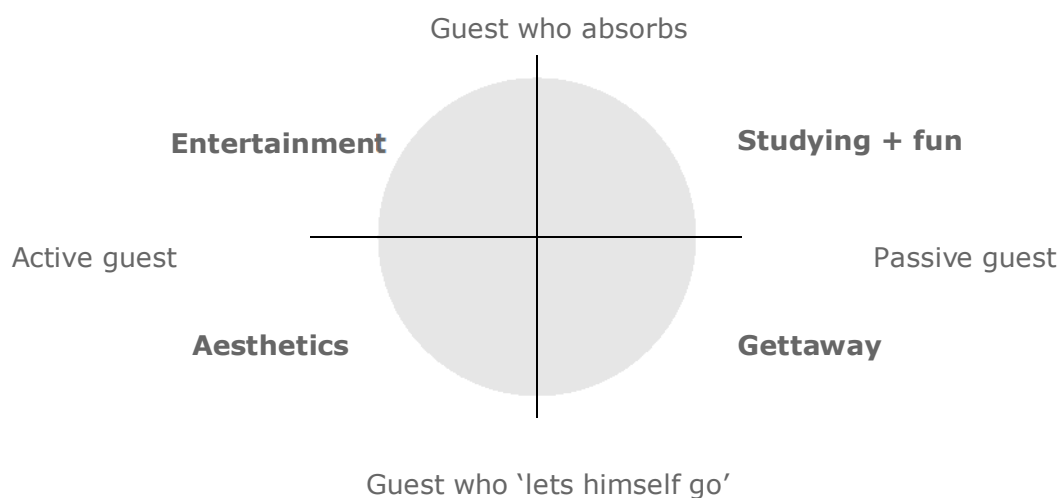
Taking into account the general approach to trends in the tourism market system of beach experience can be seen through the grouping of facilities and programs starting from the basic groups that are offered to tourists. The following stand out (Kripendorf 1986, 56):

- motion (sports, sports games, walks ......)

- socializing (excursions, birthdays, children's games .....)

- creative activities (photography, drawing, collage, workshops, ...)

- education (conferences, lectures, workshops, case study, cultural evening, ...)

- adventure (rafting, scuba diving, free climbing, bungee jumping ....)

- relaxation (yoga, meditation, breathing exercises, meditation .. ..)

Trends prevailing in the tourism market will determine new programs and facilities. Unusual experiences, contents and forms of vacation are appreciated, tourists strive for special experiences that become the main motive for travel: special parties, contact with nature, 'adventure' programs, health and beauty programs etc. The new trend, regardless of age is the desire of tourists to experience something different from the ordinary and the everyday (Cerović 2008, 11).

Contemporary tourism demand is characterized by rapid changes and the need to adapt, along with bidding for every customer, regardless of social status or habits. But of utmost importance is the elaboration of beach experience, through observing the following aspects:

- facilities (sports and recreation, entertainment, cultural events and other programs and facilities)

- age (programs and facilities for adults and children)

- time (seasonal, weekly, daily programs and facilities)

- offer (offered, possible and free programmes and facilities)

- Ownership (own and others' programs and facilities).

Guest who absorbs

Entertainment

Studying + fun

Active guest

Passive guest

Aesthetics

Gettaway

Guest who 'lets himself go'

Type of experience

Aesthetic

Entertainment

Studying + fun

Gettaway

high   medium   low

High concentration and/or degree of a specific type of attractiveness

Picture 2: Experience system

Aspects of experience system: facilities

With the aim of ensuring the experience as a challenge and the opportunities for further learning and development, the following proposal for the system of experience is made, according to the latest market trends in tourism demand. The proposed should be implemented on the model of Croatian beaches.

PROGRAMS AND CONTENT (FACILITIES)			
Sport-recreational	**Entertainment**	**Culture-artistic**	**Other**
water gym	games with music, night swimming	music evenings	workshops, fishing schools
bungee jumping	dance evenings	plays, shows	collecting Mediterranean herbs
water valley	carnival	artistic programs	colouring shells and pebbles – making figurines
wind surfing	fashion shows	artists' performances	gastro evenings
eco walk	fishermen nights	exhibitions	building sandcastles

Table 3: Aspects of the experience on the beach: facilities

4. CONCLUSION

Positioning the Croatian tourist market is only possible in conditions of adaptation to rapid changes in which one of the key roles belongs to the implementation of new facilities and programs. Tourist destination becomes recognizable by offer of facilities which lead to satisfying the needs and motivation for travel. It is certain that, along with the necessary qualitative shift, dominant motive of travel, for the greatest number of tourists, remains: "a summer holiday under the sun and in the sea".

This is directly linked to achieving a more quality tourist destination with a significant role of management of experiences' system of Croatian beaches. Only this type of Croatian tourist offer has opportunities to reshape the design of new facilities and programs according to each individual tourist and offer them the expected experience.

Potential of Croatian beaches with a designed system of experience shapes an additional impulse and the additional offer. It is linked to the enrichment of tourist destinations in terms of defining new content and improving the quality and competitiveness of destinations. Tourist destination becomes recognizable by its offer of experience facilities, available to tourists through the system of experience which has, as a basic purpose, satisfying the needs and motivation for travel.

As the main carrier of the implementation of new trends in management of system of experience, emphasis is put on management of tourist destinations which includes:

- management of accommodation facilities
- management of tourist communities and local government
- management of travel agencies.

The complex process of satisfying tourists' needs on one hand, and objectives of the offer providers on the other hand, cannot be provided in the short term. Meeting the needs of tourists in its essence is a complex, comprehensive and lengthy process. The creation, implementation and maintenance of a system of experience of Croatian beaches makes a complex set of tourism, transport, accommodation and other infrastructure. Tourist destination - Croatia, as a natural, pure, untouched, and safe, has a great chance to implement new systems of experience.

Picture 3: System of experience: beaches

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ELABOLRATION OF THE MACROREGION DEVELOPMENT STRATEGY
IN THE TERRITORIAL MEGAPROJECT FORMAT: PROSPECT FOR RUSSIA

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Abstract

Today the coordination, consolidation and inclusion of the sectoral, regional and macroregional targeted programs into the priority megaprojectos of the territorial development of Russia are prospective as a new type of strategic projecting in macroeconomic and global dimension. Territorial megaproject is an integral selective and targeted program of the interregional scale, of macroeconomic significance and global character, including a set of interrelated projects united by a common goal, resources and period of time.

Key words*: macroregion, federal district, strategy, development, megaproject, risks*

1. INTRODUCTION

The state has the right to consider as a successful a reform that leads to long term capital intensive projects. Megaprojects are the investments projects of a large amount (more than 1 billion $) and psessing a global character (independently from the territorial level of realization). In contrast to financial investments, megaprojects are focused on the specific material result, exerting a considerable and a prolonged influence on the transformation of the economic space.

Russia has accumulated a considerable historic experience of megaprojecting both positive (Transibirian main) and negative (Baikal and Amur main). Nowdays the Russian government has exactly formulated its strategic goals and has developed an integrated system of the institutions for its realization. This fact became an powerful stimulus for the creation of the whole set of megaprojects in Russia. The created by 2008 the project base for megaprojecting is the result of both private initiative and of the new state economic policy (Galkin, 2010).

The problem of Russian megaprojects is their strong accent on the industries that repeat the contemporary industrial and raw material model of the country's development (Leksin, Shvetsov, 1997). According to the amounts of investments among the planned magaprojects prevail fuel – energy complex, metallurgy, infrastructural industries. However for the most part of regions, where these projects are to be realized, the development of the infrastructure and industry is just the first step for the implementation of the projects of a higher materials processing and higher added value.

In the whole world megaprojects generate the development of the adjacent sectors, economy of high raw materials processing, services and knowledge, become the kernel of the modern clusters, consumers and suppliers of the giant number of goods and services, centers for interregional economic development.

Significant part of Russian megaprojects is connected with industries of the new economy. They are big developing projects in the real estate sector, chemical industry, timber industry, tourism, innovative activity organization. In general the planned megaprojects ensure a considerable shift in the economic development of the country into the Asian part of Russia. The Ural, the Siberia and the Far East are macroregions where during the following 15 – 20 years the capital intensive growth will dominate that will be based on the coordinated actions of the state and business on the realization of the big specific investment projects (Mitrofanova I.V., Gasparian, 2008; Marshalova, Novoselov, 2001).

2. MATERIAL AND METHODS

The realization of megaprojects is connected with organizational and legal, administrative and managerial, macroeconomic, financial, engineering, political and other risks. Thus, organizational and legal risks are due to the fact that Russian megaprojects are realized in the constantly changing legal environment. The normative and legal base of the Russian Investment Fund, "Law on Concessions", "Law on Special Economic Areas", legal base of the state companies and corporation work are being endlessly corrected.

Or else, for instance, let's take administrative and managerial risks. Unfortunately the megaprojects, and especially complicated among them integrated territorial megaprojects, that are being realized in Russia in the present time suffer from nonoptimal management, multiplicity of the responsible executives. The "one window" principle is necessary as the investors need that there would be one executive representing both business originators and the state.

International experience confirm that the risks of the routine and low quality engineering decisions are the most influential for any megaprojects. Megaprojects are realized under conditions of the quite visible problems in the Russian engineering industry. In spite of the appearance in the Russian market of a wide range of large engineering and construction giants of the international level, the quality of the engineering and construction services market after a continuous break in the realization of the large projects leaves much to be desired (Galkin, 2010).

There were no new enterprises and infrastructures during last 20 years and this fact has led to a serious degradation of the engineering. The only way out is to restore the engineering industry again by means of private and state efforts. However this process must take place in a close interaction of the world leaders in engineering and to create a set of sectoral construction organizations. For this it is necessary to liberalize a lot in technical regulation and town planning policy as the technical town planning norms approved in Russia are confused and conservative in many ways, are being constantly complicated and there is no their unification and simplification but only complication. More and more different agreements and expertises are needed. It is necessary to follow the line of the convergence of homeland engineering standards with international ones for achieving progress in this important industry.

Clear instruments of state support are needed for the creation of the housing infrastructure, special order of the land disposal, special regime of the subsoil disposal within the realization of the integrated megaproject of the territorial development.

Little experience of the existence of the development institutes in Russia showed the deficit of culture and expertise in both risk analysis and management of the territorial megaprojecting. An important feature of a megaprogect is its publicity and large public reaction (Mitrofanova, Starokozheva, 2009).

The peculiarities typical of the projects of such level, status and scale are the following:

– they ensure the improvement of the existing territorial proportions and the creation of the new ones and the efficient integrative interregional relations for a long term prospect which can determine the unanimity of the regional systems interests. This fact intensifies the opportunities of the rational usage of advantages of each of them for the common goal achievement and growth of the aggregate efficiency functioning of social and economic complex of the district in the whole;

– they provoke the considerable distraction of the capital investments, material, technical and labour resources at the continuing time lag for the obtaining the expected outcomes and this can lead to the arising of the long term inertial tendencies in the distribution of the capital investments and the usage of the production potential of the district subjects;

– they become the source of the origin of the centrifugal forces adjusting the interests of industries and territorial formations that can lead to a chain reaction that will affect numerous adjacent enterprises, taking part in the megaproject realization;

– they contribute to the creation of the powerful infrastructural objects of the strategic (district and federal) significance which later become the condition of the involvement into the economic turnover of the new resources and the creation of the large centers of the economic and social development;

– they need the accumulation of the resources by one common fund holder;

– they make absolutely new demands to the assessment of the multipurpose disposal opportunities of the territorial combinations of the resources and conditions in the interests of the macroregional community;

– they presuppose the participation of the organizations of different department subordination;

– they are based on the combination of the sectoral, territorial and program planning;

– they must reflect all the stages of the tirade "economy (production) – nature – population" beginning with the theoretical and methodological premises of the preplan research and investigations and finishing with real production processes;

– they encourage the development of the mechanism of the integrated non-departamental expertise of large scale correlated projects, being part of a megaproject;

– they have the uniqueness of the temporal and special frontiers within which the problems of the territorial development having "program nature" can be solved most consequently (Shniper, 1989).

Accumulated in Russia administrative experience on the basis of the program and goal approach to the development of territories of different level allows to reveal a number of conditions requiring the application of such an instrument as megaprojects for territorial problem solving.

Firstly, the impartial necessity in the territorial megaprojecting arises in presence of problems which by nature are multipurpose and integrated and the traditional methods of sectoral and territorial administration and planning turn out to be insufficient for the grounded decision taking with an allowance for the situation complicity engendered by varied tangle interests and relations inside a territorial community.

Secondly, the time interval needed for the problem revelation and problem removal does not fit as a rule into the middle term (3 – 5 years) period. Meanwhile it is exceptionally important to analyze in time the whole history of the origin of a particular problem together with the revelation of its

important stages of its intensification. Every problem of the territorial character has it own temporal logic of development.

Thirdly, megaprojects are necessary when the area of the dissemination of the territorial problems does not coincide with the nets of the economic and administrative division into districts. Territorial borders of the decision of these or those social and economic problems depend both on the potential resources capacity and the scale of the factors of production involved into the economic turnover taking into consideration the radius of influence of the program measures.

As the historic and contemporary homeland experience shows there are at least two prevailing limits of the territorial problem solving. In the first case problems of such linkage at their practical realization unite several administrative units bound by the common idea of the problem solving. In the second case the territory within which a problem is being realized, occupies only a part of an oblast, region, district. A rare exception is the situation when the territory having a specific problem completely coincides with the boundaries of this or that administrative territory.

Forth, territorial megaprojects are reasonable in case of occurrence of the necessity of the complex disposal of the natural resources of intersectoral and multipurpose usage. Intensification of the intersectoral significance of the natural resources makes contemporary demands for the assessment of the opportunities on the multipurpose usage of every resource in interest of numerous interested territorial subjects and different organizations. This fact leads to the change of the traditional approaches according to which every interested department approached the prospecting and resource disposal from subjective point of view (for their own problem solving) and corresponding requirements to their qualitative and quantitative features. As a result one and the same resource was examined by numerous organizations autonomously and this led to the duplication of works and consequently to their value increase. In addition at the resource assessment from the point of view of the development of different spheres of the national economy on the strength of their limitedness the contradictoriness of their interests was inevitable. The integrated usage of natural and intellectual resources requires a intersectoral approach. Its usage will allow to create a highly efficient economic structure of a territory, to ensure the formation of a common production and social infrastructure, contributing to a more reasonable disposal of its natural resources.

Fifth, megaprojecting becomes indispensable when existing forms and methods of management prove to be incapable to ensure the reciprocal coordination of a number of projects of sectoral and intersectoral character, united by common goals and objectives. Meanwhile such linkage is absolutely indispensible already on the strength of the fact that coordination of sectoral interests inevitably engenders a chain of inner contradictions. Thus, every industry project must ensure the realization of quite specific production and economic objectives for that terms and the sequence of its stages of realization are determined in compliance with the resource opportunities.

The criterion for the determination of temporal parameters of a project is a purpose orientation of an industry. However optimal sectoral terms of the project realization can not coincide with the terms of the whole problems realization or even can lead to the violation of its temporal logic. It is evident that the creation of a net schedule obligatory for all ministries and departments even within a prospective strategic industrial planning is quite complicated. And only in the process of the development of a territorial and purposeful and targeted program it becomes possible to solve problems connected with the formation of the most reasonable proportions between production and non manufacturing capital investments, various infrastructural sectors, construction industry and investment rates (Inshakov, Frolov, 2007).

Sixth megaprojecting is efficient in case of the necessity of an integrated economic development of new territories especially complicated and hardly accessible ones. It is possible to develop the resources of such territories only at the integrated solving of social and economical and scientific, technical problems an their development, among which the main are:

1) carrying out of multilateral scientific and research works on the study of the components behaviour of the natural environment at various regimen usage of natural resources;

2) analysis of the opportunities usage of technological systems and means of production, ensuring the labour saving and reduction of the influence of the complicated social and weather conditions on the production activity, the way of life of people and contributing to the efficient economic development of natural resources of a territory.

The departing methodological statements which must be put into the basis of the territorial megaprojecting to the study and programmable problems removal of the territorial linkage that have a "program nature" are:

1) pronounced interdisciplinary and systematic character of the preprogrammable research within which the integration of problems of theoretical and applied character is especially clearly revealed. As a result it becomes possible to elaborate a common system of notions, quantitative assessments, permitting to use the obtained partial results for integrated conclusions and generalizations;

2) the importance of the role or preplan research and project study at the direct participation of scientific and project organizations which is conserved and at the elaboration of specific practical decisions taken at the stage of the program realization;

3) multiple choice character of the different aspects elaboration of the territorial goal program for different environmental conditions when the most heterogenous, planned for realization measures must be correlated and agreed upon, ensuring the program integrity. The presence of different variants of a territorial program enlarges the opportunities of the usage of the engendered in it flexible properties;

4) the necessity of the integral solving of the problem connected with the provision of the harmonious interaction of the elements of the production forces of a territory with its natural environment. This requires the application of such technological schemes and means of production which would not lead to the violation of the acceptable "intrusion norms" of people and managed by them manufactures into the natural environment (Mitrofanova, 2009).

Contemporary reality is such that the state regional policy in Russia has a propensity for the objects, processes and proportions of the mezolevel of the national economic space. Urgent necessity of the active adoption of the efficient federalism principles requires the transformation of the existing today ideas about federals districts of Russia into the comprehensive whole of the formation of the strategic management system of their development capable to ensure a high level of the special and temporal coordination and interrelatedness between the systems of territorial management, marketing and different functional properties, measurements of important spheres of macroregional community life. Today regions and federal districts are supposed to play an important role as organizers of the processes of the change of the "economy of resource development" into the "economy of their systematic reproduction (restoration and multiplication)" being the space of the interaction of resource subsystems.

However for the present moment federal districts of Russia are rather mechanical consolidation of regional economies of a conglomerate type in presence of real premises and opportunities for the

improvement of common conditions of the reproduction. The integration of the parts of these conglomerates into harmonious territorial social natural and economic systems is possible only on the base of the strategic management and innovative tools of the territorial adminstration i.e. strategic megaprogramming (Inshakov, 2004).

3. CONCLUSION

Significant territorial strategic plans that are being realized today in Russia in the format of a megaproject ("Complex development of the Southern Yakutia", "The Ural industrial – The Ural polar" etc) are mainly directed on the transformation of the economic space of the eastern part of the country. This activity even in presence of all predictable effects for the subjects of these macroregions cannot but strengthen the asynchronous character, asymmetry and differentiation of the space development. The necessity of the creation of the Russian South macroregion strategy in the format of a megaproject has arisen. This project must become a new way of strategic programming in the macroeconomic and global dimension.

The goal of a megaproject is the development of the South of Russia as megaregion in the global economic space.

Strategic vectors, substantially developing the idea of a megaproject include: the creation in the South of Russia new and development of existing international transport corridors and road nets, modernization of sea and river ports, airdromes, railroad terminals, rationalization of the energy supply structure, widening of the recreational complexes infrastructure, investment support of unique natural reserves of the Northern Caucasus.

However the successful realization of these projects requires the involvement into the strategic programming all the subjects of the South of Russia in a systematic format and is impossible without the support of the federal center. Only the combination of the state directed development with the initiative of subjects of different levels of the spatial hierarchy will allow to realize competitive advantages of southern regions of the country, to raise their importance in global and national economic space.

The given territorial megaproject should be considered as an integral selective targeted program of the interregional scale, macroregional importance and global character, including a number of interrelated projects united by the common goal, dedicated resources and determined for this execution time (Mitrofanova, 2010).

The coordination, consolidation, inclusion, complete or partial inclusion of sectoral, regional, district federal targeted problems into the into the priority megaprojectos of the territorial development of Russia are prospective as a new type of strategic projecting in macroeconomic and global dimension (Ghukov, 2010).

Organizational mechanism of formation and realization of a district megaprojects wants the enforcement of the middle administrative level. The collaborators of the Southern Scientific Center of the Russian Academy of Science and the scientists of the Volgograd State University made proposals on the organizational structure inprovement of a territorial megaproject administration "Development of the South of Russia".

The following measures were supposed to be taken in the South of Russia:

1) The creation of the directorate of the federal targeted programs at the Presidential Missions in the South and North Caucasus federal districts. This direction would be responsible for the strategic program and targeted research and the explanation of practical measures in the given direction working full time.

The design of territorial megaprojects of federal district development is a relatively new, a complicated and a prospective task. Its successful solving is possible only on the basis of the creative cooperation and within of an integrated, well staffed, and qualified group of specialists. The mentioned group was supposed to be created under the scientific and methodological leadership of the Council for the Examination of the Production Forces at the Ministry of the Economic Development of the Russian Federation, the Ministry of the Regional Development of Russia, of the Southern Scientific Center of the Russian Academy of Sciences with the involvement of the scientists from the leading higher education institutions of the South of Russia. The support for such a team must be the Megaproject direction (Ghukov, 2010).

2) The establishment of the Strategic Council of the South of Russia. It is planned to be a constant body for the creation of a set of first priority program projects and its expertise, to carry out a constructive assessment of the taken measures and the achieved results with the aim of their phased yearly adjustment on the basis of the coordination of the interests of the representatives of all level administration, business and public.

The Strategic Council and the apparat of the South and North Caucasus federal districts administration, being based upon the legal resource, given by the President of the Russian Federation to the federal districts and using regional scientific and educational complex must develop basic conceptual directions of the development of the South of Russia as a document and then to inform about its content to regional authorities as a frame for future studies and projects within the megaproject "Development of the South of Russia". And only the receiving of reply strategies of every subject of the South macroregion will allow to adjust the basic target and then to approve the agreed variant of the modernized megaproject, ensuring ipso facto the ordered democratic procedure of the decision making, respecting the balance of the interests of the federal center, of the district, of the regions and economic units.

3) The establishment of the strategic financial fund. The federal targeted program "South of Russia" (2001 – 2007, 2008 – 2012) that has been being realized for these years there is no clear mechanism of the targeted concentration and the efficient distribution of the financial resources for the realization of program steps that leads in many cases to the impossibility of the control for their usage and leads to the dissemination of the financial resources and their misuse. That's why the creation at the macroregional level at the Presidential Mission of the Southern and North Caucus federal districts of Russia of a centralized strategic financial fund would allow to accumulate financial resources, whose formation and usage must be realized on corporate basis, reflecting horizontal and vertical integration of the social and economic complex of the South of Russia.

As an indispensable measure it is advisable to raise the level of the interaction of federal and regional executive authorities including the involvement of territorial departments of the federal ministries and agencies. A substantial aid could come from the Association of the economic interaction of regions ("Northern Caucasus", "Big Volga" and others), and from regional board of the executive authorities (Mitrofanova, Ghukov, 2011).

Thereby an important vector of the modernization of the strategic programming of the regional development of Russian macroregions is the institutional legalization and functional strengthening of

the integrated middle (district) administrative unit of the large interregional targeted programs (megaprojects) at the expense of creation of specialized organizational and administrative structures at the Mission of the Russian President in the district (strategic district council, district directorate, coordination public council, strategic district financial fund) and their allotment with the corresponding powers.

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MODEL OF FORMATION OF INSTITUTES OF INVESTMENT IN INNOVATION MARKET AGENTS

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Abstract

Institute of investing in innovative market agents over the past half century has evolved into a powerful global industry, and established himself as one of the most effective instruments of financial support and development of the real economy. The effectiveness of institutions, venture capital has been proved b in most developed countries. Successful global experience defines the role of state and government programs supporting the development of venture business (such as the SBIC in the U.S., Yozma - in Israel, SITRA - Finland, etc.) as a catalyst for launching a self-sustaining venture capital process /1/. In the world there was no countries have taken the path of innovative development, where the state's role in the formation of this institute was negligible. Analysis of different approaches and models to support venture businesses, which have been used by various countries, enables us to use to achieve them without making their mistakes.

Key words: *investment, innovation, market agents, institutional models, venture, development institute, VC funding.*

1. INTRODUCTION

Under current conditions of the competitive environment one of the main ways of solving economic, social and environmental problems is to use the latest achievements of science and technology. Every company wants to ensure that economic growth was intense, that is a consequence of the application of improved inputs and technologies. Prerequisite for rapid growth is the use in the practice of the company's innovation strategy.

2. MODEL OF FORMATION OF INSTITUTES OF INVESTMENT IN INNOVATION MARKET AGENTS

2.1. History of venture investment and key definitions.

Under current conditions of the competitive environment one of the main ways of solving economic, social and environmental problems is to use the latest achievements of science and technology. Every company wants to ensure that economic growth was intense, that is a consequence of the application of improved inputs and technologies. Prerequisite for rapid growth is the use in the practice of the company's innovation strategy. You must first determine the basic definitions.

Innovation (English innovation) - it's innovation that provides a quality increase in the efficiency of processes or products, demanded by the market. The end result of human intellectual activity, his imagination, creative process, discoveries, inventions and rationalization.

The term "innovation" comes from the Latin «novatio», which means "renewal" (or "change") and the prefix «in», which translates from Latin as "in line" if translated literally «Innovatio» - «in the direction of change" . The very notion of innovation first appeared in scientific research in XIX.

New life to the concept of "innovation" was the beginning of XX century. in scientific work of Austrian economist Schumpeter. He first considered the new combinations of production factors and identified five changes in the development, i.e. issues of innovation:

- use of new technology, processes or new market to ensure production;
- introduction of products with new properties;
- use of new raw materials;
- changes in production organization and logistics;
- emergence of new markets /2/.

In accordance with international standards, innovation is defined as the end result of innovation, receiving the embodiment in the form of new or improved product that is embedded in the market, new or improved process that is used in practice or in a new approach to social services. For further consideration we also need to highlight the concept of venture capital. Venture (born venture - a venture) - Investment company that works exclusively with innovative companies and projects (startups) /3/.

Thus the concept of venture capital investments and investments in innovation are not interchangeable concepts. Would mean that the results of research and development, effective commercialization (entering the stage of commercial production). This access technology companies to financial resources is a key factor in the innovation process. To date, venture capital, as a specific type of financing that has developed to support high risk projects, plays an important role in countries with the technology-oriented economies. In this regard, the growth of production and industrial development is mainly dependent on successful innovations.

Venture capital, by definition, the European Venture Capital Association (EVCA - European Venture Capital Association), is equity capital provided by professional firms, investing and co-managers of starting, developing or transforming private companies that demonstrate potential for significant growth /4/.

2.2. Model of institution-building investments in innovation abroad

Formation of venture capital coincided with the rapid development of computer technology. Modern computer business giants DEC, Apple Computers, Compaq, Sun Microsystems, Microsoft, Lotus, Intel managed to become what they are now, largely thanks to venture capital. Moreover, the rapid growth of new industries, such as personal computers and biotechnology has been possible mainly with the participation of venture capital investment.

The first venture capital fund formed by A. Rock in 1961 was $ 5 million of which was invested only $ 3 million, but the results of the Fund were stunning: Rock, spending only three million, after a short time returned to investors almost ninety. Another coveted memory of venture capitalists is a company Cisco Systems, one of the world's leading manufacturers of telecommunications equipment. In 1987, Don Valentine of Sequoia Capital purchased for $ 2.5 million stake in Cisco. A year later, the value of his package was $ 3 billion.

Most industry has a long history of venture capital investments of the United States with wealthy families, forming the basic amount of investment funds. The rapid growth of venture capital in the

United States, which began in the late 70's, was based on the flow of capital from financial institutions, following in connection with the resolution of the pension funds to place up to 5% of assets in venture capital investments.

Nevertheless, perhaps mistakenly attributed the growth in the venture capital industry in the United States entirely to legislative changes due to significant growth in investment demand at the same time, thanks to the technological revolution in microelectronics, create market opportunities for technology-oriented enterprise /5/.

Silicon Valley has become not just in the geographical center of venture capital activity, but also at the center of deep social change in the direction of the Information Society. Here more intensive forms and the new system of economic relations based not only on a highly competitive, but also new forms of cooperation between enterprises (licensing agreements on new technologies, joint ownership of shares at a level of technical consortia, the development of relationships in which neither party has control over another, etc.) /6/.

To date, it is worth noting that the market for venture capital investments in the U.S. increased in 2010 to 14% and reached 23.7 billion dollars, and the number of transactions of investors with the owners of startups increased compared with the previous year by 13% - to about 2800, showing report data consulting firm CB Insights. According to the survey, the U.S. market investments in startups reached in the fourth quarter of 2010, the maximum over the past two years. In the last quarter of 2010, signed 735 transactions totaling 6.5 billion dollars - a billion more than the same period in 2009.

Most readily in the fourth quarter, venture capitalists invest in Internet projects, which accounted for about 37% of all transactions and nearly 40% of the investment. The volume of investments in start-ups, health-related decreased compared to the same period in 2009, almost 10%, but nevertheless, retained the second place after the Internet project.

It is noteworthy that the amount of venture capital investments in the Internet grew by 21%, while increasing investment in health and energy grew by 7% and 2% respectively. Most attractive to venture capitalists Internet startups are services that sell discount coupons, social networks and online advertising. Top three by assets under management - Groupon, Twitter and LivingSocial. It should be noted that CB Insights report does not account for a record $ 950 million, which Groupon raised during the January round of investment.

Such strong growth in the capitalization of Internet projects raises concerns as some investors and the authorities. When information about investments in private Internet companies has circulated in the media, the interest of potential investors is breaking all records. Themselves, however, investors fear that as a result of evaluation of Internet resources will be a bubble, and the IPO will hold a quite different prices. Groupon, rumored to be planned IPO in 2011, research company, VC Expert estimates of the amount of from 6,4 to 7,8 billion dollars. Among its investors - the fund DST Global, whose president is head of the company Mail.Ru Group Yuri Milner - fund owns more than 5% Groupon. DST showed interest and other leaders to promote investment in the U.S. - service Twitter, but the specific investment plan has not yet reported /7/.

Venture capital in Europe appeared a little more than 15 years ago. The first steps in this direction did the United Kingdom. Very soon, tentative steps have moved into high-spirited gallop. If in 1979 the total amount of venture capital investments in the country amounted to only 20 million pounds, in 1987 he had already exceeded 6 billion pounds.

Market for venture capital investments in the UK is the volume of second place in the world after the United States, the birthplace of venture capital. It is the largest and most developed in Europe, ranking in 2007 46% of total investments (57% - in 2006) /8/. Despite the increase in the share of France, from 14% to 17% and the share of Germany from 5% to 10%, as well as increasing the activity of Scandinavian countries, Britain remains the undisputed leader in the European market for venture capital investment.

According to the Web site www.preqin.com, in the UK are currently registered with 376 companies, managing venture capital funds, including 84 firm in London. Largest - APAX Partners, 3i (a public company whose shares are publicly traded), CVC Capital Partners.

The British venture capital industry has several important features. Chief among them, in our opinion, are three:

- firstly, the British funds often invest in the transaction MBO / MBI, both inside mills, as well as abroad;
- secondly, in terms of methods of "exit" out of business, the British venture capital funds in 9 cases out of 10 use the trade sale, i.e. sale of shares to a strategic investor;

- thirdly, the share of British investment funds abroad is growing. According to the British Association for Equity and Venture Capital (BVCA), in 2007 it had grown to 18% - up from 7% in 2006. The share of investment of British venture capital funds in the country on the amount decreased from 47% to 38% while the share of European investment was 44%.

Perhaps, as a percentage it does not look impressive, but let's look at the absolute figures. In 2007, the British venture capital funds located in the UK, and consisting of members of the BVCA, invested around the world 6.31 billion GBP (21.9 billion in 2006). Within the UK has invested 12 billion GBP (10 billion in 2006) - Companies in 1330, with the average transaction value of about 9 million GBP In continental European countries - 14 million GBP (10 billion in 2006), with the average transaction 56 million GBP What do we do these numbers mean? UK funds invest a little less than half of the funds within their own country, and the second, and, most, half - in Europe.

Global economic crisis has adversely affected the UK venture capital industry. Assets of many British funds significantly "thinner", and some may disappear altogether. One of the UK investment companies, registered on about. Guernsey, specializing in investments in shares of banks, including Russian, has lost 750 million GBP on the bankruptcy of U.S. bank Lehman Brothers. Among the British funds, which operate in Russia and are often mentioned in the Russian press, it is worth to mention two: Aurora Russia Limited - Private Equity Fund, which invests in private Russian companies operating on financial markets and consumer services, and Raven Russia Limited - Investment Company operating in the commercial real estate market in Russia.

Finland also has built one of the most efficient systems in the world of venture financing, which became the basis of the National Fund for Research and Development of Finland (SITRA). The fund was created in collaboration with the Bank of Finland in 1967 to mark the 50 anniversary of independence of Finland, and in 1991 was transferred to the Finnish Parliament. One of his goals is to support innovative companies in Finland and other countries, including through direct investment and investment through venture capital funds. This model differs significantly from the model prevailing in the United States. The main component of the Finnish success was the optimal interaction of government, science and private business through the development of common rules and harmonization of interests.

SITRA purpose is to create new capital investments in companies operating in hi-tech areas. These companies must also have the opportunity, ability and desire to enter international markets. During the first phase, investments are mainly delivered in health care, food and nutrition programs, energy programs and program growth for the mechanical industry. Investment Portfolio SITRA is now about 60 enterprises with total investment of approximately € 126 million. So far, the largest share of these enterprises was in the medical industry, and then appeared ventures in bio and information technologies /9/.

The most interesting experience of innovation in countries whose economy is showing more similarities with Russia. One such example is the economy of Norway. This country, like Russia, is a significant player in the global oil market. In both countries there is a problem of aging resource base depletion, in this connection, the need to develop new oil fields located in remote regions. Increased costs on mining makes for both countries, current issues of development and use of new technologies. Norway is still a raw materials appendage of the European Union, in many ways falling behind neighboring countries. However, the rate of innovation, which was launched in the country a few years ago, gave her the opportunity to become a world leader in several segments of the oil and gas technologies.

Norway was able to ensure that foreign corporations operating in the local market carried out the localization of its technology in the country and gave them to the Norwegian research institutions. For this purpose different promotions and rewards. Thus, Norway has managed to simultaneously create its national innovation system and make it part of the global.

To encourage the development of scientific research and development (R & D) in the industry provides for a system of tax incentives. State tax deduction reduces by 18-20% (depending on the number of employees) with similar R & D expenditures. In Russia, a similar measure is formally exists, but in practice it is difficult to apply.

Problem in 2020 in Norway: to become a leading international center for the oil and gas industry. This will be achieved by attracting international companies to invest and position of Norway as an exporter of new technologies for exploration and production /10/.

Currently, the number of private companies invested in Europe is around 200,000. One-fifth of all equity investments in Europe are investing in beginner (starting) a business. Venture capital financing has become an engine of the economy of developed countries, although the volume of its investments in the general investment flow is relatively small. Venture capital funds and companies live by the formula - high risk (high risk) - advanced technology (high tech) - a high standard of living - (high life).

Venture capital activity is not limited to the U.S. and Europe. Elsewhere, however, there is a tendency to move away from the American model. Very active in promoting innovative business economies of East and Southeast Asia. China, for example, provides custom and tax exemptions for 5-10 years for the organization and development of science-and technology-intensive industries in remote areas, as well as long-term tax holidays in special economic zones. The structure of the venture capital industry in China in many respects unique and has no analogues in other developed and developing countries. In China there are about 86,000 high-tech enterprises, which employ about 5.6 million workers, combined revenues totaling approximately $ 180 billion /11/.

Until 1996, in China there were no commercial venture funds and government did not act very effectively because they do not have sufficient funding and effective system of competitive selection of projects. In 1996 a law was passed authorizing the creation of commercial venture funds (Law

Promoting the Industrialization of China's Technological Achievements). In the same year, the Chinese government has created over 20 public venture capital fund financed by local government. In subsequent years, a number of laws that facilitate the creation of commercial and foreign venture capital funds in China.

Feature of China was the determining role of the state in shaping the industry of venture capital investments. Distinguish three ways in which the state influenced the development of the industry: the decentralization of management, providing direct financial support for venture capital projects, the creation of the institutional environment for the development of venture business. Venture capital funds in China can be divided into four types: state venture funds, university venture funds, corporate venture capital funds and foreign venture capital funds.

The first venture capital fund established in China by the Ministry of Finance together with the Commission on Science and Technology in 1985 was a statesman. However, in the past few years, the share of public funds in the total volume of venture investment in China is steadily declining. A common shortcoming of state venture funds is the lack of managerial skills and profit orientation, to a lesser extent than other types of funds /12/.

Venture capital funds established at universities and research institutes, in a significant number began to appear in 2000, they have a unique opportunity for interaction and cooperation with scientific elite - scientists working in universities and research institutes. It is this opportunity to ensure the success of such funds at the initial stage of their appearance. However, these funds have been characterized by the same problems as for the state of venture funds, chief among them - lack of financial resources. A possible solution to this problem is the cooperation funds to universities and research institutions with corporate and foreign venture capital funds in the implementation of joint projects based on co-financing.

Corporate funds today represent the majority of venture capital funds operating in China. By 2002, 132 public companies, or 11% of publicly listed corporations to invest in venture funds. Corporate funds tend to have a solid financial base, state support and more managerial skills than the state and university venture funds. This allows funds to invest large resources in commercially advantageous projects. On the other hand, corporate funds are not willing to invest in high-risk and long-term projects because of the need to show strong annual financial performance. On a par with corporate venture capital funds of foreign venture capital funds have become since its inception the main source of venture capital investments in China. By the end of 2001, more than 80% of the largest venture capital funds operating in China were foreign. The major advantages of foreign venture capital funds are a solid financial base, availability of skilled managers with extensive experience in venture capital financing and the willingness to take high risks and invest in long-term projects. Lack of knowledge of the specifics of doing business in China is partly compensated by the presence of Chinese managers among top management of the majority of foreign venture capital funds.

While maintaining the openness of the Chinese economy to foreign investors can anticipate the growing importance of foreign venture capital funds in the market of venture capital investments of the country. So, Intel has announced April 8, 2008 on the establishment of a venture fund Intel Capital China Technology Fund II $ 500 million.

The South Korean government helps small investment companies to use the equipment of large corporations and government research institutions. In this country, an extensive network of experimental science and industrial parks with preferential tax treatment to be practiced more time to issue national currency for the state of capital investment in innovative enterprises.

Japan during the second half of XX century was engaged solely investing in better technology - as a result today it is the only country where for a long time there was a slight deflation, i.e., the continuous strengthening of the national currency.

2.3. Predictors of investing in innovative market entities in Russia and development prospects.

Venture capital funds in Russia were established in 1994 at the initiative of the European Bank for Reconstruction and Development (EBRD). Regional Venture Funds (RVF), which now number in the end of 1996, 10, were formed in different regions of Russia. Along with the Bank other large financial institutions - the International Finance Corporation (International Finance Corporation) also decided to participate in the established venture capital structures, together with some well-known in the world of corporate and private investors. In 1997, 12 operating in the Russian venture capital funds formed the Russian Venture Capital Association (RVCA), with headquarters in Moscow. According to the Financial Times in September 1997 in Russia operated 26 specialized funds that invest in Russian corporate assets with a total capitalization of $ 1.6 billion in addition, 16 other Eastern European funds invested in Russia a portion of their portfolios. Russian legislation does not contain regulations governing the activities of venture capital funds and companies. All operating in Russia and working outside of Russia funds are not Russian residents, which, as noted above, is a worldwide practice /13/.

Thus, the venture capital industry in Russia was brought from the outside. Her appearance was a consequence of mismanagement of private initiative, to respond to internal needs of local business development and market, as a result of political and administrative decisions, beyond which stood a desire to instill a transforming economy shoots of the market economy.

The purpose of exports in our country that for her exotic financial instruments have been formulated clearly enough - to assist the privatized enterprises. Were identified dimensions of objects of potential funding (funds for EBRD) and marked their main characteristics (privatized during the mass privatization program of the enterprise). Probably at that time no one in particular did not think about the intricacies of the differences between the stages of development companies and their respective forms and methods of financing. Planck's venture capital was fixed at a given height, but this would inevitably entail the transfer to the Russian soil and management characteristics of this type of fund, and the nature of the interaction of assets and facilities of their investments, and behavioral style of management companies in the emerging Russian market.

The vast majority of working today with Russia fund has a significant share of European investors. In Europe, a venture business is most often understood as development finance companies. Therefore, existing now in the country of the venture capital business has almost no support for the development and implementation of Russian goods and technologies for the XXI century. The current situation in Russia reminds us of the period preceding the rapid development of venture businesses in the U.S. in the early 60's. The main prerequisite for this jerk at the time were:

- emergence of new scientific and technological areas, which over the next few decades has given impetus to the revolutionary changes in technology of production of consumer goods and services. During this time, was the way from development of the first components, electronic equipment prior to the introduction of sophisticated devices created on the basis of these components in a variety of sectors of human activity;

- presence in the U.S. scientific and technological capacity that can support ahead of the competition rate of development of new technological trends;

- presence of private capital in the hands of people able to assess the opening prospects and to take the risk of financing development in new technological directions.

Analyzing the above we can say that now in Russia develops a similar combination necessary for the development of venture business factors:

- coming in the next decade, revolutionary changes in production of a wide range of goods and services influenced the use of these advanced information technologies. The essence of this incipient revolution lies in changing attitudes of consumers and producers of goods and services. To replace the existing main principle - the first manufacturers to produce goods in the calculation for the hypothetical average customer, and then "make" real individuals to acquire this product - comes another. First, manufacturers will have to figure out with the help of information technology in every real buyer, you can do to meet their individual needs, and only then for him to produce the goods. Modern technologies for collecting, processing and transmission of information now available to make these changes begin, which will last for decades, gradually affecting a growing number of industries producing goods and services;

- presence in Russia scientific and technical potential for the development of new applications of telecommunications technologies in the production of a wide range of products and services to the public. And this potential can be, not only, as noted above, the experts working in scientific and technical divisions of the MIC, but also a large number of young programmers with a fairly high skill level (growth rate produced by WEB-sites on the Internet are among the highest in the world);

- potential Russian venture capital, which we estimate for the next year range from $ 20 to $ 30 million, which is 2 - 3% of the volume of Russian venture capital invested in stocks now. This volume of venture capital approximately corresponds to a start in 1979, the United Kingdom. Recall that for eight years after the launch, the venture capital it has increased by 300 times.

Existing assessments of the Russian private capital, located outside the country, which range from $ 100 to $ 300 billion, allows us to hope for a sharp increase in venture capital invested by residents in Russia in the next 5-10 years. The high level of technical education in Russia (1.5 million), which is higher than the level in the USA 2 times, makes a significant probability of having the Russian venture capital people, capable of assessing the prospects of the proposed business ideas /14/.

2.4. The modern model of the Institute of investing in innovation in Russia.

Thus, we can conclude that Russia's transition to an innovative path of development requires the formation of the country's Institute of venture financing. Market for venture capital investments in Russia is at a formative stage and requires public participation to create a model of venture funding and comprehensive development of the venture capital industry. An important task is to determine how public participation in the development of venture investment, as well as the role of the private sector in the development of venture capital industry.

Russian Federation Government /Decree № 838-p from June 7, 20/ founded by JSC "Russian Venture Company (RVC) in order to stimulate the creation of a Russian venture investment industry, development of innovative industries and the promotion of the international market of the Russian high-tech technological products /15/. On the Russian Venture Company assigned two basic functions: selection of the best venture capital management companies on a competitive basis and purchase of shares of venture funds created by these companies.

According to recent reports, the capitalization of funds of the Russian Venture Company has reached 19 billion rubles. Seed Investment Fund, which was established in October 2008 with a capitalization

of two billion rubles (8 th Fund), to date, active, and registered for 47 venture capital partners. Half of them are in Moscow and Moscow region, the rest in other regions. It is expected that in 2011 the partners will fund about 25 projects selected by them /16/.

The main achievements in 2010 toward building an innovative system include the following investment performance of the Russian Venture Company: up to 2010 has been featured in more than a twofold increase compared with 2009 results - both in the number of new portfolio companies, and on volume of investment.

During 2010, the Russian Venture Company "from 7 closed-ends mutual investment funds established with capital of MERs, received 44 projects, which was conducted examination, approved 17 projects. In Seed Fund (DRF) venture partners presented 130 investment applications, of which the investment committee selected 20 projects DRF /17/.

Total amount of investments approved by the transactions of funds for the entire period of the RVC has exceeded 6 billion rubles, including for the year 2010 amounted to 2,7 billion rubles. By industry funds with MERs of capital invested in 2010, mainly in Biopharma, manufacturing and information technology, and began to invest in alternative energy sources and building materials.

In 2010, RVC top international activities. The Russian participants in the innovation process have access to best practices and technologies for the global innovation market. Russian Venture Company created two funds in a foreign jurisdiction Russian Venture Capital I LP and the Russian Venture Capital II LP totaling 600 million rubles have already joined the portfolio of RVC, having made investments in conjunction with the major global players, venture capital investment. In order to promote investment activities in priority areas of infrastructure development and technology business start biopharmaceutical cluster Fund ("BioFond RVC) and the Infrastructure Investment Fund (" InfraFond RVC).

In 2010, RVC is connected to a system of 22 regional venture capital investment in small enterprises in scientific and technical fields, created in 2006-2010. Representatives of the MERs have been introduced in the trustees of these funds. Management companies providing expert support, the results of the Investment Committee of the Fund approved 18 projects (out of 37 submitted) for a total of more than 0,7 billion rubles. RVC is already engaged in promotion of the portfolio companies of these funds on the market. In 2011, the expected significant increase in venture capital investments made by regional funds for expertise and support of the RVC.

Physical activities of the RVC on infrastructure development of venture investment, innovation and technology ecosystem of entrepreneurship will continue in 2011 /18/.

High rates of investment, on the one hand, can be attributed to the high demand for investment resources of the Russian innovative companies and on the other - the fact that the high rate of investment is justified in terms of returns the fund. Existing funds in the constitution of a fully filled with cash and, therefore, interested in the accelerated deployment of funds in the company, since otherwise they have the right to allocate funds only to deposit accounts, which brings the minimum income.

The reverse side of the accelerated investment process is the potential risks associated with low quality of the deals. According to international practice, the investment period is 3 to 5 years. We can assume that for venture capital funds with the Russian Venture Company with the same intensity of investment, as currently, the investment period is only 1 year. Thus, the intensity of investment by Russian ventures capital funds - in 3-5 times higher than the global practice.

If we talk about the Russian model in general, the creation of venture funds - this is only the first step and launch mechanism, however, much more serious is the problem of building partnerships Russian Venture Company with venture funds and market participants, the intensification of collective learning, the creation of a highly qualified market professionals and building world-class competencies. Certainly, the private sector needs a clear cluster success story, so naturally started a chain reaction for the further development of the market.

"We are committed to innovation in all spheres of life, to build the most advanced production, modernize industry and agriculture, to create strong incentives for private investment and generally seek to ensure that Russia firmly establish itself as a leader in technological and intellectual development" /19/.

Analyzing the active state action to stimulate innovation activities and the development of venture capital in 2006-2010, it should be noted as a model of venture financing, which had raised the state. Creating MER based on global experience of successful implementation of such a state of the problem in Finland and Israel, and the special attention of the President of the Russian Federation to the problem of the formation of an innovative economy leaves hope for major improvement and rehabilitation of the sector of innovation and creating a culture of business venture in Russia, the emergence of new jobs and professional experts in the field of venture capital.

3.CONCLUSION

Specificity of the Russian path of development venture funding is a significant state role in the making. The state should assist in the development of venture investment in the following ways:

a) Provision of funds for development of the institute of finance for innovation;

b) Allocation of funds to purchase the results of venture capital companies.

State must learn to include private business into public decision problems by creating an attractive environment: VC infrastructure, changes in legislation governing trust relationship, fiduciary responsibility, the introduction of amendments to the law on investment funds, changing the ratio of risk-return, etc.

In Russia, for the first time creates a model of government innovation and venture business of such magnitude. The Government has established of the Russian Venture Company, held the first competitive selection of legal persons for transfer to the trust management of RVC. Formed by two venture capital fund CUIT VI VTB - Venture Fund "," Bioprocess Capital Ventures". Only in 2011 it is planned to test more than half the capitalization of funds, representing more than 3 billion rubles. It is planned that all funds with MERs during 2007-2011, will create 12.8 new venture capital funds with aggregate capital of 30 billion rubles. These funds will provide venture capital to 200 new innovative companies and will become an indirect catalyst for more about 1000 companies. Private business must adjust and adapt to the Russian Venture Model: Learn how to effectively increase the value of companies focused on capitalization as the main criterion of success, to get experience in the venture business and get off at the world level.

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SOCIAL BUSINESS RESPONSIBILITY AND SUSTAINABLY DEVELOPMENT.
THE PROSPECTS OF MODERN RUSSIA

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Abstract

Social responsibility is traditionally connected with the business reputation of a company and obeys its ethical standards. The evolutional system of economy has resulted in the change of influence of business on the quality of life and creation of a new environment. Until recently, the notion of social responsibility was practically not identified with Russian business, and it worked at the level of one-time social projects, having a more philanthropic effect for the company at the level of its regional interests. Growing social activity of Russian companies is explained by different reasons. Western analysts consider that it might increase capitalization of the companies. Russian economists explain positive tendencies from the direction of the corporations in the field of social responsibility by the tendency to form stable home markets, to make a contribution to the improvement of social and economic position of their employees and the local population. However, due to low informational transparency of the firms' activity, Russian investors do not yet have any real possibility to evaluate the extent of social responsibility of a company in its relationship with personnel, consumers, local community and environment. The paper tells about distinctive features, problems and prospects in the field of corporate social business responsibility in modern Russia.

Key words: *social responsibility, business, social investment, institutionalization*

1. INTRODUCTION

Changes in the development of production and society that have, taken place in the countries of Western Europe and North America during a whole century, have formed the main qualitative result in the world community – the conditions for realization of the universal objective regularity and the necessary conditions of effective development of national economies have been created. This is the social business responsibility.

The world is facing a large amount of global problems, gradually increasing the awareness of the need for the business to take responsibility for its habitat. Russia, which, owing to some objective reasons, had no time to conduct some changes that are relevant today, including the change in the sphere of human capital, got the chance to accelerate the process of intellectualization of social reproduction. Social problem solving in country is at a relatively early stage, and we just have no such large-scale

risks as in other countries. At the same time, when the country participates in the new global space formation, you should use the opportunities and potential resources more effectively.

2. SOCIAL ROLE OF A COMPANY IS THE SIGN OF BEING CIVILIZED AND MODERN

A purposeful strategy of Russian business development for the nearest future is defined by the necessity of a social and economic leap forward to the absolutely new type of country. Every meaningful social development upheaval should be followed by the creation of material, intellectual and informational basis. Effective innovational development, letting this upheaval to be accomplished, is the necessary condition.

Large-scale development of innovation technologies is possible only on the basis of progressive science and highly professional community, which are provided by a worthy life level. Technological innovations are impossible without developing a person and his intellectual capital. The success of technological innovations is impossible without the managing constituent. Talented specialists of the highest level are a prerequisite of success in global competition and building a really modern economy. They do not appear by themselves, they cannot be imported together with progressive foreign models. Leadership abilities, strategic mind, entrepreneurial and functional skills, ability to reach results, attract and inspire other talents − all these key sources of competitive advantages should be developed and formed by Russian business in the personalities of its employees. This concerns not only just training as a part of the development process, but also the consistent increase in professionalism and broadening of the limits of achievements.

All this demands serious investments into development of a person for providing his or her adequately for over-dynamical development of the global economy. The change of demands to business in the conditions of 'the global crisis of development' has brought to awareness of the need not only for charity but also to make investments for the creation of human capital of the nation. In the West a similar evolution yielded mechanisms of social responsibility so quickly that business and theory were not able to save all positive moments of the new phenomenon. For the same reasons, until recently the notion of social responsibility was almost not identified with Russian business and worked at the level of single social projects only, having a more social effect on the company at the level of its regional interests. During the last decade the situation has changed very much. Moreover, the changes in production and social development that took place in European and North American countries during a whole century are happening in Russia in a super brief period (Danilova, 2008, p.41-49).

Turning the intellectual capital into a dominating factor of production the business sector became aware of the fact that one of the fundamental signs of any big company to be civilized and modern is its social role. The stage of regarding social expenses only as investing money in accordance with personal values and ethic principles is changing (although not so quickly as the reality demands) into investments in human capital to be recognized as the most effective investment in the modern period.

The development of social activity of Russian companies (in particular, preparing corporate social reports) is explained by different reasons. Western analysts consider that it can increase capitalization of the companies. The Russian ones explain positive tendencies from the direction of corporations in the field of social responsibility by striving for stable home markets, improving social and economic conditions of their employees and of the local population.

Russian investors do not yet have any real possibilities to evaluate how much the company is responsible for its relationship with its personnel, consumers, local community and environment. It is

due to the fact that low information transparency of the company's activity does not let us judge the extent of its social responsibility. Consequently, society, state and the companies themselves pay attention to and express interest in social, ecological and ethical aspects of the activity sporadically, based on the necessity. For example, as soon as the possibility of IPO (Initial Public Offering) is mentioned, the companies urgently pass on to international standards of accounting, reorganize their not vary transparent business, improve the practice of corporate management and release social reports.

The basis of European and American social consciousness is defined by the policy of combined actions of the state and business on saving social stability. The logic is transparent here: the state is interested in successful and stable society, and, as by far the biggest part of the society are employees, the corporate responsibility of the companies mainly takes the shape of responsibility for the employees (under skillful pressure of the governments). Business sector, in its turn, is interested in creating intellectual human capital both within the limits of the company and in the national economy.

As it has already been mentioned, the competition for attracting talented employees will only grow. In the nearest 20 years, companies will actively rival for a limited quantity of gifted workers. Under these conditions, regarding charity and sponsorship as the main instruments of solving social problems will be a mistake.

The etymology of the term 'charity' is the evidence of its moral but not economic content. The state of affairs in the field of charity and philanthropy (they are equal terms in their essence) shows the level of moral development of the society. Judging by the world experience, Russian business should make a conclusion that investment into human development is the only (at the present moment of time) economic mechanism of solving the problem of forming and developing human intellectual capital. Modern innovative economy needs not just highly qualified economists but developing science intensive branches. Talented scientific staff is needed for accomplishing fundamental scientific discoveries and developments, their successful implementation in practice. The state will not manage this problem alone, and donations will not give the necessary result. A purposeful, long-term system policy directed to solving this socially meaningful task must be the constituent of the general business strategy of the company.

Corporate universities training and retraining specialists for highest to middle team, strengthening their awareness of their company development prospects, take a special place in carrying through the social responsibility policy. "The aim of the corporate university is assisting employees in their studying and applying the latest management technologies for solving tasks, relevant for the company. The training is aimed at the 'career lift' and providing high professional mobility of the staff" (Report, 2008, p.29). At present 64 big corporations have created such universities, but if we include into this list other big corporate educational centres, their number can reach 150 (Malykhin, 2008). The conclusion which the business sector unambiguously is making in the world-wide scale is: the more social the economy is, the more capital can be attracted to it (Danilova, 2008, p.64).

3. ACHIEVEMENTS AND PROBLEMS IN THE FIELD OF CORPORATE SOCIAL RESPONSIBILITY OF RUSSIAN BUSINESS

At the modern stage of Russian economic development, various distinctive features of business responsibility in the problems of society and business participation in their solution should be mentioned.

Responsibility for the society in solving important social issues is admitted in the documents of more than 2/3rd of the companies, although the strategy of social responsibility in which the goals and the ways of their achievement are fixed has not yet been elaborated in Russia.

The main objectives of business strategy realization in the field of corporate social responsibility (CSO), according to the data of Russian Managerial Association (Report, 2008), are:

- Gaining long-term competitive advantages (more than 80% of firms),

- Supporting the reputation in medium-term perspective (approximately 60% of firms),

- Reducing the risks of causing damage to interested parties in a short-term period (more than 40% of firms).

Gradual transition from traditional (from the Soviet period) models of building social policy to modern ones will become a tendency of social business responsibility development in Russia. Social programs started to grow more effective, in several fields faster (raw materials sector), in the others slower (service sphere) (Report, 2008, p.17). The biggest growth of social expenses is observed in the raw materials sector (Table 1), which is due to the market factors − growing prices of oil, the related growth of companies' profits, and their deeper integration into the world economy.

Table 1. Quantitative indices of social investment of Russian enterprises from different sectors of economy in 2003 and 2007

Economic sector	Quantity of social investments per employee, rub		Ratio of social investments to gross sales, %		Ratio of social investments to balance sheet profit, %	
	2003	2007	2003	2007	2003	2007
Raw material sector	38908	83211	1.7	6.1	8.2	5.2
Processing sector	46055	27928	3.8	1.3	24.4	19.3
Service sphere	85190	47403	1.2	2.1	30.6	24.2

Notice: Cost parameters are given in the prices of 2007.

Social expenses are already accepted by businesses not only as 'one-sided charity, but as a mutually beneficial partnership with its employees. Financing of social development programs of the staff is more and more often regarded as a priority and bringing a definite productive effect. The priority directions of social investment (Report, 2008, p.49) are still: staff development, health care, safe working conditions of the staff and conscientious practice (Table 2).

New approaches to social responsibility are still implemented within the framework of old structures. Human resource services keep dominating while realizing social programs. At the same time, many companies, in spite of the deficit of specialists in the given field, begin to realize the need for creating special structures.

Following the worldwide tendencies, organizational provision of social responsibility in companies starts obtaining the characteristics of 'organizational education' as accumulation of all relevant

knowledge and competence. According to the model of Zadek (Zadek, 2004, p.127), five stages of such 'organizational' education can be distinguished (Table 3).

Table 2: Distribution of financing in the main fields of corporate social programs in 2007

Main fields	Volume of subsample	Medium value, %	Minimal value, %	Maximal value, %
Staff development	79	46,7	2,00	100,00
Health care and safe conditions of staff	76	15,6	1,00	70,00
Conscientious business practice in relations with consumers	53	10,3	0,06	85,40
Conscientious business practice in relations with suppliers and other business partners	52	5,8	0,02	32,00
Local community	71	14,6	0,70	75,00
Environmental activity and resource saving	59	46,7	0,01	92,00
Other	7	7	2,40	50,00
Staff development	70	46,9	1,50	93,70
Health care and safety conditions for staff	63	16,2	0,60	63,00
Conscientious business practice in relations with consumers	38	10,5	0,04	92,00
Conscientious business practice in relations with suppliers and other business partners	40	5,5	0,02	32,00
Local community	61	14,1	0,01	77,00
Environmental activity and resource economy	0	19,8	0,10	93,00
Other	8	6,4	0,50	16,00

Source: The Report of Russian Managers' Association (2008). The Index of Social Investments of Russian Business-2008, Moscow, p.68.

Table 3: 5 stages of organizational training to corporate social responsibility

Stage	What organizations do	Why they do it
Defensive	Deny their faults in particulars of breach, do not admit their responsibility for the negative consequences	To defend themselves from the attacks against their business reputation, which can influence the volume of sales, attracting employees, productivity and branding
Obeying rules	Keep to the policy of following rules regarding the costs of running the business	Not to admit the reduction of the cost of the company in the medium-term perspective because of the reputation and legal risks
Managerial	Consider socially significant issues in major managerial	Not to admit the reduction of the cost of the company in the medium-term perspective and gain

	processes	long-term advantages of the pioneer company due to coordinating the strategy and innovations with the needs of society
Strategic	Consider the needs of the society and the strategies of the business	To increase their cost in the long-term perspective and to gain advantages of the pioneer company due to coordinating the strategy and innovations with the needs of the society
Civil	Contributing to spreading the standards of corporate social responsibility in the branch	To increase their cost in long-term perspective and to get profit due to collective activities

Source: Zadek, S. (2004); The Path to Corporate Responsibility, p.127.

Subdivisions which are responsible for corporate social responsibility are managerial departments (in 59% of the companies). Marketing departments (6%) and departments for investment liaison (3%) take much less part in it. 12% of the companies have special departments for social development, and 16% of the companies have departments for ecology and environment saving.

As a rule, companies finance those areas of social policy in which the state investments are insufficient (supporting the needy, families with many children etc.) or which are suffering from the influence of soviet heritage (housing and communal services).

As a result, there is not yet any clear difference between charity and social investment. The former is often perceived as making effective investments in social development.

In consequence of the lack of theoretical developments in making social investment as an objective necessity, the business sector has not yet sufficiently realized real profits from this activity. Most companies seek dividends in the form of image improvement in the first place. 54% of the Russian companies have named improving reputation as an important motif for socially responsible activity.

While evaluating the effectiveness of social programs, many managers still value the potency of expenses by the volume of financing rather than by the effect achieved. Moreover, the assets of human capital are not beyond direct evaluation, and most of the existing ones are very relative and add up to establishment of the importance of the part of human capital for the economy. The effectiveness of corporate social investments is evaluated by 56% of the companies. 17% of the companies do not evaluate the effectiveness, although they define social programs as social investments.

Lack of standards and forms of social accounting. In recent years, Russian companies have been expressing much interest in their own social accounting. However, the form of presenting their social accounting by companies (the international one or national standards) depends on whether the Russian business will be able to use all the advantages which social accounting provides, or the process will follow a scenario inauspicious for the business. The standards according to which the non-financial accounting of Russian companies is prepared (Report, 2008) are presented as:

- Thee principles of the global agreement of UNO – 12%,

- National standards – 16%,

- International standards (GRI -G3, Accountability 1000SES, AS, and others) – 32%,

- In the free form – 48%.

Most of the Russian companies (48%) prepare their non-financial accounting in a free form. 32% of the companies which took part in the research, consider using international standards as a necessary attribute of social activity while entering the international markets. Social activity based on international standards is used only by 1/3 of the big companies. For comparison, in developed countries it is used by 50-60 % of the companies. It goes without saying that Russian activities are below the line. The main problem for Russian companies is the necessity of presenting 'transparent information' and significant resources for 'expensive auditors'.

4. CORPORATE CHARITY IS AN INSTRUMENT OF PUBLIC POLICY OF A COMPANY

In Russia the main driving forces in the development process of social business responsibility are represented by a not very large amount of more 'progressive' companies, big companies set up as a result of the process of privatization, the state. And all this is natural because the responsibility exceptionally adds up to business ethics, reputation and growth of trust in business by the society. Social sphere and charity today is the most beneficial zone, by investing in which big businesses can effectively build their relations with the population.

Precise statistics on monetary funds aimed at charity are missing in Russia. According to various calculations, the sum of annual donations by big Russian corporations amounts to 500 million Euros (Danilova, 2005). More than 50% of these donations are made by 50% of the biggest companies: *Lukoil, Sual, Gasprom, Severstal* and others. Each of these companies annually spends on social aims 10–50 million Euros on average. In most cases it is the 'voluntary-compulsory' transfer of resources for the purpose of accomplishing social sphere projects initiated by the administration of the region where the company is located.

One of the reasons for such a situation is that many big enterprises were historically funding the municipality. The life of the entire town depended on how fully and regularly the social sphere was financed by the biggest enterprise in town. And, in spite of the restructuring and abandoning of nonproductive objects from the enterprise's balance, this dependence is still preserved. Whether town funding companies want it or not, they constantly have to prepare the 'nets' for the heating season, carry out construction and reconstruction of the objects of social infrastructure, administrative buildings, clear debts on child supports, render 'voluntary' assistance to veterans and invalids. As a rule, local organs of power consider such 'help' as a norm, and business gets used to perverted forms of taxation. And while all over the world social responsibility is seen as 'the only way which will allow creating the strong basis for stable and strong business' (Actions, 2005), Russian business, at best, sees in it corporate philanthropy and the instrument of public policy of the company.

Undoubtedly both charity and sponsorship as the forms of social business responsibility have the right to exist and are the only possible forms for carrying out single actions of providing individual material help. Russian business should understand and accept its new role in the society. Putting forward exceptionally short-term financial results as the priority ones, getting profits at any price at the cost of customers, suppliers or the environment cannot be regarded as prospective ones. Business more often pays attention to non-financial sources of cost growth, and, primarily, to creation and development of intellectual human capital.

Without any doubt, only highly profitable companies can afford to invest in social projects. However, successful development of both medium-sized and small businesses is also impossible without highly qualified, healthy professionals who do their favourite work and are sure of the near future. World

experience proves: the better the company's attitude toward its employees and the environment, the better financial results it achieves (Suchanek, 2008, pp.4, 8).

Of all kinds of investments in human capital, investments into education and health care are the most important ones. According to the data of UNESCO, 60% of the differences in people's income are caused by education and 40% by all other factors (health, natural abilities, social origin). A serious obstacle to effective realization of a socially responsible strategy of the company in Russia is the still existing opinion of many employees (the Soviet legacy) that their company is responsible for their fortune. Often excessive pretensions of the employees are additionally justified by that until recently everybody was equal, that privatization went wrong, that all real assets had been created in the Soviet time already, and that is why everybody has equal rights to them. Moreover, the period of neglecting social programs, which was accompanied by the initial forming of the class of proprietors, also made the attitude of employees toward employers significantly worse. Therefore, the dialogue between the management of the company, employees, trade unions and local organizations is extremely complicated.

An important problem in analyzing social business responsibility in Russia is the collaboration between the business sector, power authorities and society while working out and implementing social programs. In the research spent by Association of the Russian managers (2009), it is noticed that:

- Regional officials define CSR (corporate social responsibility) as socially oriented to business behaviour because of wide-spread poverty;

- Point out the necessity of legally enforcing the business sector to social responsibility;

- Define that the enterprise and the wages and salaries of its employees (refuse from the payment under the table depriving employees from their pension benefits) should be the object of social responsibility;

- Consider it necessary to stimulate the interest of a socially responsible business through access to benefits and credits;

- Suppose that mass media are not interested in propagandizing positive experiences of social responsibility, and the main instrument of promoting social business responsibility by the state is to 'frighten' business;

- Notice inability of federal power to promote the principle of social responsibility, because it has 'grown together' with big business and advocates its interests.

The national policy in the sphere of financing social programs is only at the stage of reforming. Substitution of deductions in the fund of employment, the fund of obligatory medical insurance and the pension fund by the only social tax has not been completely brought to the effect, which the government had counted on. Even application of the regressive scale for this tax could not compensate for its significant volume, and many enterprises do not yet show the real payroll fund; financing of social programs is suffering from this; the state is responsible for this, and this intensifies the pressure on the private sector.

5. THE DYNAMICS OF SOCIAL INVESTMENT BY RUSSIAN COMPANIES

During the last two decades there has been a tendency that the growth and volume of social investments by Russian businesses have not increased substantially, and the state has not found an

acceptable model for relations with the business sector and the society, and is trying to solve social problems administratively. Russia's specificity makes the realization of the principles of social business responsibility extremely complicated. However, in many companies the situation is starting to change, and the period of neglecting social problems has already changed into awareness of the reciprocal dependence of interests of business and society. Corporations are not just demonstrating the responsibility, but make real investments in implementing concrete social projects.

The dynamics of social investment by Russian companies can be observed with the help of the index calculated as direct investment in an employee, and then as a share of these investments in gross sales of the company and separately in the balance sheet profit (Nikolaeva, 2008, p.93).

Effectiveness of social investment by the native business (Report, 2008) can be estimated with the help of quantitative indices calculated by aggregated activities (Table 4).

Table 4. The Indices of Social Investment

The indices of social investment	2003	2007
The quantity of social investments per employee, rubles.	42807	54335
The ratio of social investments to gross sales, %	1,96	3,76
The ratio of social investments to balance sheet profit, %	11,25	6,25

Note: Cost indices are in prices of 2007

On average, the annual amount of social investments per employee in 2007 was 54.3 thousand rubles, the ratio of the value of social investments to gross sales was 3.76 %, and the ratio of social investments to balance sheet profit − 6.25. Here we can notice a big branch differentiation in investment.

The burden of social expenses is borne mainly by 'hard' branches of the economy − enterprises of chemical and ferrous metallurgy and big transportation companies. Strategy and productive specificity has much greater significance for the companies in making social investments than its belonging to this or that form of property, the size of the business and other operation factors.

There have been no major changes in the volumes of social investment over the period 2003−2007. The negative dynamics of the index of the position of social investments in the balance sheet profit, which has fallen almost two times (from 11.25% to 6.25%), may refer to negative tendencies. Similar results have been received by the *Charities Aid Foundation*, according to the data of which Russian companies spend from 10 to 17% of their net profit on average on foreign social programs (Kashtan, 2007).

Social responsibility is traditionally connected to business reputation of the company and following the ethical norms. In the sphere of social responsibility Russian businesses are not always ready to voluntarily accept financial liabilities of accomplishing social programs for the local community. This unavailability is due to the misunderstanding of the necessity of social responsibility practice. The forms in which it is realized often bring a short-term effect. The frame of reference which will allow evaluating the effectiveness of social business responsibility is being formed extremely slowly, significantly behind western countries and with contradictions (Danilova, 2008. p.101-104).

According to the data of expert evaluation (Report, 2008, p.68), most of the Russian companies choose financing of native social problems, development of human capital of the companies as the priority program. Almost no companies make big investments in the development of social sphere. The accent is on creating new jobs, training employees, their health care. The main purpose of social investments remains to be staff development − on average 40% to 60%. All these investments are finally working for the increase in the level and quality of life of the employees and this, in turn, will lead to favourable conditions for the creation and development of the intellectual human capital.

6. THE BRANCH SPECIFICITY OF SOCIAL INVESTMENT

Branch specificity exerts the main influence on the strategy of social investment of companies. Labour-intensive branches are mainly oriented to local social investments − staff development and health care; power consuming and raw material intensive industries − to foreign investments. They have to bear considerable expenses for resource saving and environmental protection, which account for more than one-third of their social investments. For example (Report, 2008, p.26), in ferrous metallurgy there are 32% of such expenses, in non-ferrous metallurgy − 37.7%, in power industry − 75%. On the whole, in all industries the expenses on resource saving and environmental protection are the second most significant article of social investments, which account for 26% of total investments. Additionally, most of the expenses on staff are wages and salaries − 92.9% in management companies, 95.8% in wholesale trade, 96.1% in manufacturing and 96.1% in retail trade.

It is interesting and even a little unexpected that only machine-building companies and, partially, service companies pay decent attention to social investments. The expenses for these purposes account for 15.5% and 9.9%, respectively in these industries. This, once again, proves the fact that the companies with advanced technology production and activities, which are oriented directly to consumers, regard financing of social projects as an effective resource spending (Table 5).

Research has proved that the staff development programs in practice make budgeting, controlling and performance evaluation easier. A lot of attention is being paid to social support of those working in enterprises after finishing the period of working activity, and also to solving housing problems.

In modern marketing conditions of Russian economic development, additional corporate systems of professional pension provision and corporate programs for home mortgage refer to such social programs.

Table 5. The structure of sectoral social investments based on the area of usage in 2007, in % from total social investments

Sector	Staff development	Health care and safe working conditions	Conscientious business practice regarding consumers	Conscientious business practice regarding partners	Development of local community	Nature-conservative activity and resource saving
Primary sector						
Fuel complex	37	17,5	0,0	0,0	31,1	14,3
Metallurgy	51,0	7,6	2,8	0,2	17,8	20,5
Power industry	66,1	8,9	0,8	0,2	11,5	12,5

Total	**54,8**	**9,7**	**1,6**	**0,2**	**17,4**	**16,3**
Processing sector						
Manufacture of wood products and wood processing	24,2	7,4	0,0	0,4	10,8	57,1
Machine-building	69,0	19,3	0,2	0,7	6,7	4,0
Manufacture of consumer goods	71,5	2,4	0,1	2,0	23,0	1,1
Chemical industry	22,9	10,0	1,3	0,2	7,5	58,0
Construction	34,2	14,5	3,9	2,3	7,3	37,8
Total	**44,9**	**12,5**	**1,3**	**1,0**	**9,4**	**30,9**
Human services						
Financial sector	58,3	3,2	4,7	1,1	29,5	3,2
Prof. Services	27,2	23,7	3,7	4,3	25,9	15,2
Services (incl. h &	11,7	10,2	3,9	2,8	3,8	67,7
Communication and telecommunication	17,3	7,0	71,0	2,6	1,6	0,5
Trade	73,0	11,1	9,5	3,2	3,2	0,0
Transport	87,4	4,8	2,8	0,0	4,3	0,7
Total	**46,3**	**8,5**	**16,8**	**2,0**	**15,3**	**11,0**

Source: Federal State Statistics Service (2008)

Although such programs go beyond the limits of production oriented social priorities of an enterprise, they influence the reproduction of workforce in a positive way.

Yet only the fuel handling complex, production of professional services, financial sector and consumer goods industry are oriented to development of local communities.

In Russia, the forms, directions and volumes of social investment far exceed the bounds of economic abilities for the absolute majority of enterprises. The exceptions are only big corporations (mainly in the primary sector) where enterprises are natural monopolies, and which produce competitive products in foreign markets because they conform to the world's social and ecological standards. Annual growth of investments in fixed assets for the preservation of the environment and rational use of natural resources has been no more than 1.5% in 2003-2007 (Federal, 2008). Under the contemporary conditions of productive fixed assets, such volumes of investment seem to be extremely insignificant.

One more problem is the lack of transparency of social activity: information given in colourful brochures and press releases is often unsystematic and abrupt, and are beyond analyzing. Acceptance of the corporate behaviour codex and declaration of adherence to corporate philanthropy are often the superficial aspects of social responsibility. It is not surprising that most of the Russian companies use their own criteria for evaluating the effectiveness of the social problem solving.

7. SOCIAL REPORTS AS THE REFLECTIONS OF PRIORITIES AND VALUES OF CORPORATIONS

The most important economic task of big Russian businesses is integration into the world economy and positioning in global competition. Corporations are to carry out scrupulous work at building business, organizing effective management, regulating corporate management and attracting investments. As it has already been mentioned, the lack of conventional standards of public social accounting of companies also prevents creating an optimal model of collaboration between business, society and the state.

Social accounting of corporations is a public instrument of informing shareholders, employees, partners and all the community how and at what rate the company realizes the goals of economic stability, social welfare and ecological stability in its mission or strategic plans of development. The account reveals information about priorities and values of the company, its relations to the circle of organizations and social groups connected to it, and also about the extent of integration of social responsibility principles into the activity of the company. Social accounts are made in 3 types:

1) Free form;

2) Based on the triple bottom line, where three aspects of the company's activity − economic, social and ecological − are assessed;

3) Standardized forms (AA1000, SA 8000, GRI).

The first social account in Russia was made in 2002 by *British American Tobacco (BAT)*. As there is an acute problem of collaboration of tobacco companies with the community, similar accounts were prepared simultaneously in all the countries of *BAT* location. The account was made in conformity to the standard AA 1000 and had a mainly descriptive character; figures were practically missing in it. As the *British American Tobacco* was the first company to present the social account according to international standards, this document became a precedent of a social account release for Russian business.

In 2003, *BAT Russia Company* also published a social account. In 2004, the accounts were presented by the companies *Lukoil-Perm* (in accordance with accounting standard SA 8000), *Russian Communal Systems, Alfa-Bank, NK UKOS, NK Sibneft*. Having yet celebrated a year of its existence, *OAO Russian Communal Systems* declared to begin preparing its social account according to international standards: in 2004, the accounts on Moscow, Tambov and Tomsk regions were composed as the piloting ones. After that, during the year 2005, a number of companies, *GMK Norilsky Nikel, Lukoil, Rusal, Tatneft*, prepared and published the documents-social reports, principally new for Russian accounting system. *Rosbank, SUAL Severstal* and others issued their accounts using the recommendations of Reporting on Stable Development.

So far social accounts have been made by more than 40 companies in our country. More than half of the companies (52%) use their own criteria and less than half (40%) international ones for evaluating the effectiveness of social investments.

The analysis of the tendencies of Russian business participation in the life of the community allows to affirm that business is getting aware that social investments are the most pragmatic form of social responsibility (Danilova, 2005). However, there are many problems even under the rather high level of interest in successful development of the present form of social responsibility.

(1) Social investment should not be made; it should be understood by business as the only possible

way of getting competitive advantages in the modern world. This process should have a dynamic character, but not take years and affect only the companies which are preparing to enter foreign markets.

(2) You must get determined about the voluntary or compulsory rendering of the social account. This question is being widely discussed both in Russia and in other countries. Nowadays only France has a strict legislative regulation, obliging all the corporations, being highly thought of at the French stock market, to reveal the shareholders and other interested groups the information on wide series of issues of stable development, including ecology, personnel, local communities and international labour norms. For comparison, in the USA only revealing the information about investments in local communities is compulsory, and in Great Britain −the information on financing political parties.

(3) The form in which the accounts should be made is international standards or national recommendations, independently or with the help of consultants; in the format offered by international standards (e.g. GRI, AA1000) and certified by independent auditors (e.g. auditor's company *PricewaterhouseCoopers* or bureaus specializing in such kind of audit). Or, in the initial stage it is possible to follow the definite code of recommendations on social account preparation developed specially for Russia.

(4) A big business can make investments in social programs within the limits of its social programs and get real and predicted return from its actions. Small business has not enough power to do it, but within the limits of some joined social institutions they can sponsor local social projects by targeted or personified social investments in specific people or organizations.

8. CORPORATE CITIZENSHIP AND SOCIAL INVESTMENT INSTITUTES

A new institution reflecting the needs of the community (state) and the business sector to minimize the contradictions between domestic and foreign activities of the firms is corporate citizenship. Domestic sources of development in the form of social investment institutes can be used for simultaneous problem solving both inside the firm and in the regions they are located in. Such social investment institutes support creation of corporate funds for an enterprise from the organizational point of view. Corporate fund is one of the widely used ways of organizing corporate philanthropy in the world. It is made using the assets of the company. In most cases (95%) it is the fund of one company, fully financed by it (at the same time, there are some examples where the funds are made from money of several companies in the same region).

There are two models of corporate fund financing in the world:

- Annual deductions from the company's profit accumulated in the corporate fund;
- Combining the deductions and creating constant capital.

In the first case, corporate fund is not very much different from annual corporate social programs of the company − it is the managing structure for charitable activity of the company and spends all the assets during the year. As a rule, such a fund deals only with charitable projects, sponsorship activity is carried out separately.

In recent years, most of the big companies have chosen the second model of corporate fund − supporting the creation of capital. In this case the company allocate a part of the profit for creating the capital; these assets are invested and the interests are spent on charitable programs of the company. Sometimes companies allot their stocks for the corporate fund. An advantage of such a model is that

even in a not very successful year the company has a possibility not to reduce the volumes of its social programs at the expense of the capital of the corporate fund, which is very important for many companies, especially town constructing. While making the capital in a profitable year the company allocates a bigger sum for the capital, in a non-profitable year it adds the assets for social programs at the expense of interest on the capital.

An advantage of corporate funds is also that a company which has subsidiaries and representative offices in different regions, can finance social programs of the subsidiaries if they have not yet a proper level of profitability to carry out social policy independently. For instance, charitable programs of many western companies in Russia are implemented under the support of corporate funds of these companies.

A disadvantage of creating a corporate fund in Russia is the taxation of the capital as a commercial activity. Corporate fund is closely connected to the policy, branding and regional priorities of the company. Its activity is fulfilled under complete control of the management of the company. In Russia commercial funds only start being created. One of the first Russian brands of such kind is the fund of *Lukoil Company*, which is carrying out a significant part of charitable and social programs of the company. The funds to the programs are annually apportioned from the company's profit.

Hence, the prospects of social investment in modern Russia are dependent on the functioning of economic systems, when business systems, based on the resource balance, switch over to functioning in the surroundings of property intellectualization and human capital. Partnership in realization of projects of a socially responsible business becomes the mechanism of reaching this goal. That is why, besides the motives of value growth and protecting the ownership rights, business faces the necessity of moving on to the market of social investments.

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PUBLIC-PRIVATE PARTNERSHIP AS A COMMUNITY AND INVESTMENT RESOURCE OF SOCIO-ECONOMIC DEVELOPMENT IN RUSSIA TODAY

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Abstract

Modern economic development requires a search for effective mechanisms to solve innovation and social problems. Public-private partnership is one of such mechanisms; it is an alliance of government and business to implement social and public projects. This article focuses on the analysis of international experience in implementing public-private partnerships, risks of partnership and its investment potential. The characteristics of the formation of public-private partnership national institution are described.

Key words: *public-private partnership, an alliance of government and business, sectoral structure of the partnership, risks of PPP, public resources.*

1. INTRODUCTION

The optimum way of country development in the globalized world requires today not only the reliance on original national experience but also taking into account global political and economic trends, the possibility of borrowing a critical effective socio-economic mechanisms, tools and technologies to achieve public policy goals.

One of these mechanisms to solve the set of problems for example the life level and quality increasing, satisfaction of needs is the interaction between state authorities and business which characterizes as a partnership between the state and the private sector Public-Private Partnership (PPP). Private business and government are entering into cooperation to find effective ways to solve social problems and PPP is considered as an essential public resource of innovative economic development (Shakhovskaya, 2010). PPP is an economic, organizational and institutional interaction between government and business; its main purpose is to mobilize financial resources for the implementation of social investment projects in various sectors of the economy.

Generally there are several public-private partnership definitions. In our opinion, the most complete definition is the following: Public-private partnership is an institutional and organizational alliance between government and business to implement the most important social projects and programs in different sectors of industries and R&D even is service industries.

It seems to us it is important to start from the interpretation of the PPP as a constructive interaction between government and business not only in economy but also in other spheres of public life like politics, culture, science, etc. In this case we agree with the definition of PPP as different forms of partnership between the state and the businesses (Varnavsky,2005). In this case delegation of powers and control is not limited only by property rights; it should also include the delegation of certain

functions of decision-making while examination, consultation and joint development of regulations and task programs.

In Russia PPP has been known only for 10 years although it has a significant history since the days of Tsarist Russia. In developed Western countries public-private partnership has been widely developed in 80th of the last century because of the enterprises liberalization like natural monopolies (utilities, transport and electricity). The most active supporters of the conveyance of public property and rights to provide public services to private companies during this period were the Government of Great Britain, Sweden, Ireland; they are the first in Europe began to create the institutional principles and the PPP control. All information is on the Table 1.

Table 1. Geographic and sectoral pattern of transactions in the PPP to the beginning of the 20th century (PricaWaterhouseCoopers,2001)

	Roads	Railway	Water pipes	Housing and communal services	Energy (sector)	Medicine	Education	Prisons	Military defence	Commercial real estate
Australia	V	V	V			V	O	V	V	
Belgium	V	O	V	V		V	O			
Canada	V	V	V	V		O	O	V	O	V
Finland	V	O				V	O			V
France	V		V						O	
Germany	V	O	V	O					O	
Greece	V	V				O	O			
Netherlands	V	O	O							
Ireland	V	O	V	O	V		O	V		V
Italy	O	V	O	V						
Portugal	V	O	V			O			O	
South Africa	V		V			O	O	V		
Spainя	V	V	V			V				
Great Britain	V	V	V	V		V	V	V	V	V
USA	V		V						V	O
V – arranged bargains O – declared contracts										

The suitability of public-private partnership development in Russia has several reasons. There are some gaps in the system of relations "authority - business - society" and the cardinal changes in the state economy (private property dominance, its effective use requires the partnership between government, business and society); the separation of administrative resources of power from the direct involvement in the private property, weak business involvement.

The system of partnerships between the private sector and the state is based on two postulates of the liberal concept of development:

- The formation of private property institutions to speed up the process of economic growth;
- An economy based on private ownership is more effective in comparison with the economy based on state ownership and direct state control.

PPP has its economic "nature" and it is the development of the traditional mechanisms of economic relations interaction between public authorities and private sector to design, plan, finance, construct and operate infrastructure facilities (Figure 1).
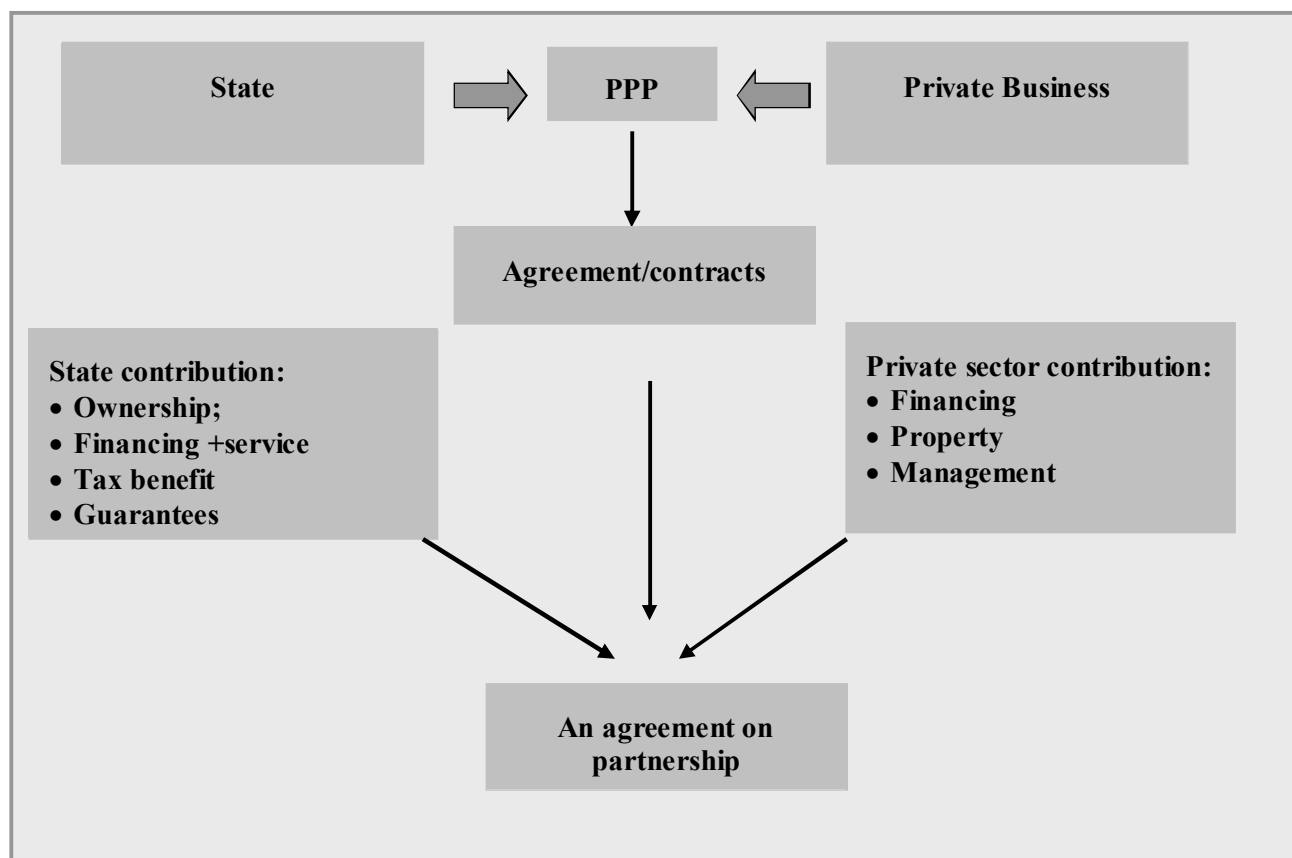

Fig.1. PPP mechanism (Mehrikov,2009)

The main purpose of PPP is the financing of capital-intensive or low-profit economic sectors like infrastructure industries. The main features of PPP in comparison with other funding mechanisms are

that the partners have different goals, they solve their specific problems and the parties have different motivations. The state is interested in increasing volumes and improving the quality of services in social sectors for people and economic agents. The private sector tends to get a stable profit and increase it. Moreover business has strategic thinking and it its own priorities; it is not just the size of the profits, it is the interest of revenue stability from the projects. In this case both sides are interested in the successful implementation of projects in general. PPP projects often facilitate access to world capital markets; attract foreign investment into the real economy. PPP has particular significance for regional economies where the development of local capital markets, goods and services are based on the PPP.

It is necessary just to mention about the development of corporate social responsibility which is directly connected with the development of public-private partnership. Factors that forced the business to think about social responsibility are the desire to get the return on each monetary unit allocated in wages of their employees and the need to maintain social stability in society as a condition for the successful business. Considering these factors the development of corporate social responsibility should be seen as the result of objectively existing progressive evolution of a market economic system and new business nature (CSR in the context of globalization of world economic relations is not only simply the most appropriate form of business, it is a form of survival and further development of any national economy) (Shakhovskaya, 2010).

However the interests of government and business can be different and also conflicting; so the partnership must be preceded by negotiations of the parties. Negotiations balance interests and objectives of the projects. (Gerratd, 2008)

Each of the parties contributes to the general project. Contributions of businesses are: financial resources, professional experience, effective management, flexibility and efficiency in decision making, ability to innovate, etc. The participation of the business sector in joint projects is usually accompanied by the more efficient working methods, improved techniques and technologies new forms of production organization development, creation of new enterprises (with foreign capital), developing an effective cooperative relationships with suppliers and contractors. The demand for highly skilled and well-paid professions on the labor market increases.

State's responsibilities in PPP projects are proprietary rights, tax benefit, guarantees and an opportunity to get some financial resources. The state as the main regulator has the right to reallocate resources as necessary from a production programs to social purposes (education, health care, science, culture); it contributes to the improvement of socio-economic environment and improves investment rating of the country and also directly affects the partner projects. Moreover in the PPP projects government gets an opportunity to control, regulate and maintain public interest. So with the development of PPPs in the infrastructure the state can shift the focus from the specific problems of building and operating facilities to administrative and supervisory functions. It is important that the unavoidable business risks are reallocated. Public importance of PPP is that the society as a consumer gets higher quality services. (Savas, 2007)

Implementation of projects based on PPP favors the formation of mutually beneficial cooperation of government and business; but at the same time PPP creates additional. It has advantages and disadvantages (Table 2).

Table 2. Advantages and disadvantages of PPPs

Advantages	Disadvantages
Competitive procedures to choose the company for PPP	Complex procedures of realization
Business becomes more "pure"	High transaction costs
Appropriate allocation of risk between parties	Holdings are higher that public financing
Taking into account both parties interests	Experience in infrastructure objects management is insufficient in some cases
Effective and innovatory approaches of public sector are used to manage state ownership	The risks of structure formation of corporate management
	Mixed appraisal of society and political consequences

We can say that public-private partnership is a risky project. More than one risk can be for the both sides of the partnership:

- Technical risks in engineering and design of the facility;
- Construction risks are the errors in engineering design, mistakes in budget and construction schedule;
- The risks associated with the operational control are the high cost of management or expensive facility maintaining;
- Profitability risks depend on many factors (as there is an activity of market mechanisms);

    Financial risks are growing because of the incorrect ways of finance and financial management;
- Force majeure;
- Political / regulatory risks associated with changes in government planning, legislation or political manifestations;
- Environmental risk;
- The risk of project failure in general (a combination of several risks) (Ayzaan, 2005).

For some specific industries (projects, businesses) must be used their own classification of risks. But in general there are few major types of risks (Uvarova, 2009).

The main types of project risks for PPP:

- Market risk (demand reduction, etc.);
- Reduction of revenuer;
- The risks of defaulted payment;
- Very high cost of construction;
- Very high operating costs;
- Underestimation of the long-term investments;
- Credit risk (the inability to pay the required amount);
- Terms of compensation and exit from the project;
- Changes in legislation;
- Changes in the economy;

- Foreign exchange risks;
- Tax risks;
- Loss of asset management;
- Political risk (volatility, protectionism rejection of project by society);
- Environmental risks;
- Transaction costs;
- Management / contract risks.

Thus for PPP projects there is a question on the structuring of transactions, identification and assessment of possible risks and also there is a question about plan development to minimize risks including the redistribution of risks between project participants.

The risk management system should be an integral component of managing the large projects based on PPP. Risks should be transferred to the side which is able to manage them well.

Risks of the public sector (Solovei,2006):

- To obtain planning permission;
- Discriminatory regulation risk;
- Size risk;
- To obtain land rights.

Risks of the private sector:

- To obtain a licence for detailed planning;
- To obtain a right for design;
- To obtain a licence for construction;
- Risk of commissioning;
- -Effectiveness of operating;
- -Financing;
- -Technology obsolescence.

  Joint Risk:

- Force majeure.

World experience in PPP projects shows that the state often takes on market risk under certain basic conditions. The functions of the state depend on the distribution of risks and opportunities. If the private investor has most of the risks the State has a limited right to intervene in the project or basically controls him.

The state gets benefits from increasing budget revenues as well as from indirect effects: the increase in business activity and growth of regions' investment attractiveness. Optimal structuring of PPP gives an opportunity to get the benefits like:

- Faster implementation of the most important infrastructure projects;
- Accelerated development of regions;
- National economic performance improving (often unreported in the economic analysis);
- Improvement of mechanisms and models of services;
- Reduction of investment costs (the savings can reach 30%);

- Optimization of the financing structure through the use of national and (or) international support and access to new sources of funding.

Thus risk management is an important part of PPP projects realization.

It should be understood that public-private partnership has an internal conflict which exacerbated by the negative effects from economic and political environment. There is an addition goal of the state to get an advantage in monitoring the project (its resource strength a priori is larger comparing with the private sector) and also there are internal contradictions in the resource allocation (it is usually left to the private sector) (PPP as a form of partnership between power and business in Russia, 2009). In addition the project team (the Partnership) is faced with the realities of the market that regulates the demand for services; it has to deal with a highly competitive environment and fluctuations in macroeconomic indicators.

At the same time it is obvious that this public-private partnership which is a mutually beneficial medium- and long-term cooperation between government and business and it has different forms; its main purpose to solve the political and social problems at the national, regional and local levels. It should be considered as a powerful investment resource and a new effective mechanism of resource potential use of state and private business.

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RESEARCH AND EDUCATION INTEGRATING IN RUSSIA:
PROBLEMS AND PROSPECTS

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Abstract

Research and educational sphere is one of the most important branches of post-industrial economy that has several important functions: providing qualified personnel in all branches of the economy, creating new technologies and research. At the same time there are a significant numbers of problems in this area of the Russian economy, the low correlation between the educational services market and the labor market, an updating and modernization of traditional forms of learning have to be done. These problems require greater attention to the innovative aspects of scientific and educational activities. This article is about problems and trends analysis of scientific and educational complex associated with increased innovation aspect, institutional diversification and integration.

Key words: scientific and educational sphere, knowledge economy, interaction mechanisms, innovative economy, a new educational paradigm, integration

1. INTRODUCTION

The main sources and carriers of knowledge still are science and practice even with sufficient diversity of institutional forms of knowledge production and marketing It is necessary just to mention the specifics of the institutional national science structure, the nation science core are legally independent specialized research organizations. Primary orientation of their creation can be considered as one of the historical traditions that emerged in the early 18th century with the establishment of a Russian Academy of Sciences. It had been fully established during the Soviet era when along with an extensive network of academic institutions a system of science management has developed. To solve the political problems of accelerated development to strengthening national defense and industrialization further expansion of a research institutes was required.

Today we can see an abrupt reduction of the design and planning organizations, pilot plants, research and technical services; those are structures to ensure the transfer of scientific results in innovation sphere. Until the early 2000's research institutes build-up occurred through the establishment or disaggregation of some new organizations (Table 1).

It is important that this occurred through the formation of new legal entities rather than strengthen the research base of universities and enterprises, which in fact are the backbone of innovation systems in the developed market economies countries (Gokhberg, 2003). As a result disparities are increased in the institutional structure of science: in 1990, the independent research institutes and design department had slightly more than half of the personnel that were involved in research and development work, in 2006 - over 83% (Kitova, 2003).

Table 1. Organizations involvement in the research and development

	1990	**1995**	**2000**	**2005**	**2006**	**2009**
Total	4646	4059	4099	3566	3622	3536
Research organizations	1762	2284	2686	2115	2049	1878
Design departments	937	548	318	489	482	377
Design and survey organizations	593	207	85	61	59	36
Pilot plants	28	23	33	30	49	57
Institutes of higher education	453	395	390	406	417	506
Industrial organizations	449	325	284	231	255	228
Other organizations	424	277	303	234	312	454

The formal separation of science and education that was as a institutional, organizational, managerial, legal and financial isolation of these areas; it has caused substantial damage to the scientific authority of higher education. Researches in universities are usually insignificant (except for a few elite universities). It explains the almost marginal role of the higher education sector in science and technology sector of the country and the national innovation system as a whole; at least we can say they are insignificant because research and development costs are low.

Scientific activities, research and development (R & D) related to core activities focused on information production. The result of scientific activity is to obtain new knowledge that can be used for practical purposes or provide a basis for future basic and applied research. R & D intended for creating intellectual products that provide technology and technologies development, production of goods and services that have different characteristic, new organizational solutions. Application of knowledge in the production is done by introducing innovations as the results of the creation and dissemination of information and intellectual products produced by R&D.

In Russia today different forms and mechanisms of interaction between science and education coexist, they exist in a radically different socio-economic, institutional, financial and legal conditions. In this area dominates the Soviet "heritage", which somehow was managed to adapt to ongoing changes. It is represented mainly by structural elements of high school science which arose "on the base or with the help" of universities or research institutions to solve specific problems and challenges (Kitova,2003). In the post-perestroika period there were many of integrated scientific and educational structures, they pursued their goal not only to have qualitatively new educational programs and research areas, but also their founders' survival in a crisis situation.

Recent events were the reorganization of several universities by the scientific organizations takeover, the formation of federal universities and the adoption of the federal statue on integration. The possibility of research institutions takeover are limited by organizational and legal forms of the institute of higher education.

One of the main carriers of knowledge is certainly a high school. The most important characteristic of higher education as a social institution is its professional mission and focus on the acquisition and dissemination of scientific knowledge within the entire economy.

Institutes of higher education carry on training and research in cooperation with academic and industrial research organizations and enterprises using various forms of interaction including the

formation of associations, unions, scientific, technical, educational centers, temporary creative collectives, science and technology parks and other associations.

In institutes of higher education science sector carries out fundamental and applied research, i.e. knowledge is produced on a wide range of sciences: social sciences, exact sciences, engineering and applied sciences, industries, industry-wide and complex problem. Universities are involved in the federal, regional and research programs, work with public and private sectors of economy, corporations and individuals. It indicates that demand for scientific and innovative potential of the scientific sector of higher education is high.

Dissemination of new knowledge gained in a high school system and outside proceeds successfully by sharing of teachers' knowledge, which studied basic professional programs of higher and postgraduate education and additional training programs. Scientific developments and innovative products are transferred to specific customers of scientific and technical products, as well as with their consent to students and the general scientific community. Thus high school has more opportunities to share knowledge compared with academic and industrial research organizations.

At the same time like statistics says there is a small part of research and development that takes place in institutes of higher education. The number of universities performing research and development declined in 1990 from 453 to 387. Since then it has increased slightly: 417 - 2006 (11.5% of organizations involved in scientific activities) (Lapin, 2008). However private universities do not do any research work, so that is why in the beginning of 2007 only in 38% of Russian higher educational institutions research work was carried out (Statistics Report, 2007).

Comparing with International experience the situation with Russian research work in institutes of higher education doesn't look really good. The share of research sector in the total number of scientific workers is 14-15% compared to 30% in Britain, 26-27% in Germany and Japan, 35% in France, 21-22% in China. Domestic costs per researcher in the U.S. are $181.6 thousand. In other countries this rate is lower. 71,9% of the U.S. level in Germany, 60,1% in France, 22,5% in China and only 6.1% in Russia.

It is necessary just to mention that higher education is unable to finance research. Table 2 shows how small internal costs and even this small share decreases.

Table 2. Gross internal costs on research and development (in % from total)

Sector	1990г.	2000г.	2006г.	2009г.
Public sector	15,9	24,4	25,3	30,3
Entrepreneurial sector	77,2	70,8	68,4	62,4
Higher education sector	6,8	4,5	6,1	7,1
Private non-profit sector	0,1	0,2	0,2	0,2

Thus the situation in the Russian higher education science contrasts sharply with the practice of the leading countries where universities concentrate the main potential for fundamental research and large-scale applied research and development are carried out. According to the amount of costs from all sources for research and development Russian higher education science (2006 - 1.1 billion dollars per purchasing-power parity)is located approximately at the level of Finland, Norway, Denmark and

Israel (1,1-1 , $ 3 billion). So it is inferior not only to the leaders of the world economy but also to the countries with developing economy such as Turkey ($2.5 billion), Taiwan ($1.7 billion) and Mexico ($1,6 billion). China university science had $13.3 as investment in 2006 (Kitova, 2003).

Despite the nominal increase in the cost of research and development in the higher education sector from 657.4 million rubles in 1995 to 17.6 billion rubles in 2006 (that is 2.2 times at constant prices), its growth is clearly insufficient to enter the pre-reform level (Kitova, 2003).

The most important factor in creating an effective knowledge management system at the university is an appropriate organizational structure that provides for the successful interaction of its units to public and private sectors to attract resources for research and training, i.e. production and dissemination of scientific knowledge.

Now there is a modernization of the existing system of higher education consisting of two subsystems of education - continuing post-graduation education and phased training providing educational programs with getting graduate Bachelor degree (qualification) and Master degree. A characteristic feature of the master degree program is their focus on training to provide skilled personnel in the sphere of research and scientific-pedagogical activity so that is why there is a need to create and deepen the students' skills including knowledge and skills in research, organization of scientific and educational work.

There is a competition between educational institutions (corporate universities and other educational centers). They were organized by business entities, corporations, whose functioning is characterized by a clear applied focus on training, combining education and work in their specialty. At the same time support and scientific connections development with the real sector of the economy are very important for universities. It creates a basis for improving the effectiveness of training, the possibility of testing the results of teaching and research.

Conversion from economy based on natural resources to the knowledge economy requires a revision of traditional views on the content of education, the transition from the old education model where students get established knowledge to the model of a joint study and acquiring new knowledge by the teachers and students. As the result there is an increased teachers' work time because of the scientific research including students on one hand, on the other there is a wide application of information technology in education, faculty training in this area. There is a need of differentiation and individualization of the learning process under these circumstances.

It should be understood that economy today is not only a knowledge economy it is also an innovative economy. In today's society it is necessary to understand that knowledge sector is a machine to solve problems. Flow of problems is varied and intense so the sector organization of knowledge must be flexible and dynamic. But it requires a special type of specialist, called the innovation manager. He has to "feel" the new direction and area. Innovative managers are needed; they know how to make the fundamental knowledge into money.

Assumed, and we associate ourselves with this opinion, that an innovation economy, "knowledge economy" has four pillars: the institutional and informational structures, innovative and educational systems.

Institutional structure. It involves the creation of appropriate economic incentives and institutional regime that support widespread and effective use of local and global knowledge in all sectors of the economy; it helps business and promotes economic and social transformation, generated by the revolution of knowledge.

Innovation system. There are an effective institutional forms and business environment in this system that support innovation and entrepreneurship, including firms, academic and research centers, universities, "thinking tanks" and other institutions that operate in the development of global knowledge and at the same time adapting to local needs, use knowledge to produce new products, services and ways to implement business transactions.

Education and training. It favors a society of skilled, dynamic and creative people with the possibilities of a good education and lifelong learning for all and meets the interests of the cause of rational combination of public and private funding.

Information Infrastructure. Formation of a dynamic infrastructure, competitiveness and innovation in the information sector provides a variety of efficient and competitive services and tools for all sectors of society. It includes not only high technology such as the Internet and mobile communications but also radio, television and various media, computers and other facilities for storage, operations and use of information, as well as a range of communications services.

As we think academic institutions also can be considered as "supporting point" of innovative economy. There are also some advances especially in the field of applied science. Many obstacles and restrictions are removed on contracting research institutes, design bureaus to develop and implement scientific and technological results. Now you can receive funding for these purposes simultaneously from multiple sources: private and public; for example participating in competitions organized by the Fund for Promotion of Small Enterprises in Science and Technology (Fund established by the Government of the Russian Federation in 1994 and has at its disposal 5% of the federal budget for civil science).

Remain conflicting assessment of the basic science role in innovation processes. On the one hand it is obvious that without fundamental discoveries achievements with applied characters can't exist; the Russian Federation Law "On Science and State Science and Technology Policy" (1996) provides for the allocation of not less than 4% of budget expenditure on the maintenance and development of science. On the other hand some representatives of the executive authorities approved contempt for the basic science; this attitude is obvious in the fact that contrary to the law actually less than 2% of budget expenditures is allocated on science and it dooms her to a miserable existence.

Universities and other worldwide institutes of higher education are active agents of innovation processes. In recent years in Russia a number of universities had their new mission and some introduced their national programs. One of the largest universities in the country St. Petersburg State Technical University (STU) in the mid 90-ies of the twentieth century suggested a strategy of innovative development of Russia. This strategy has the form of a program "Engineering is a Network of Russia" which was designed for 1995-2005 and approved by the Government of the Russian Federation in 1995. The main goal of this program is to create and develop an engineering innovation network of federal, regional and sectoral levels; this network distributes over all subjects and provides on-site competitive implementation of innovative projects on a "turnkey" basis.

Many universities in the country (primarily technical) implement their innovative programs. Each institution takes its own initiative; this initiative was not punished but it is not consolidated in national synergies.

As a result we have no sustainable innovation trend of economic development. To illustrate the current position of Russia in the global technological environment we use two sets of indicators: research intensity (at the entrance) and research efficiency (parameters on the output i.e. the efficiency and competitiveness) (Table 3).

Indicators of research intensity:

- In consideration of the share of R & D costs in GDP; Russia is at the level of China and Italy;

- In consideration of the absolute number of scientists we have traditionally held the first place. Today we are on third position after the U.S. and Japan. China is getting closer.

The resulting research parameters:

- A factor of GDP per worker which characterizes the performance of the national economy. Russia is approximately 4 times lower than the U.S and 3 times lower than Europe.

- The index of competitiveness calculated by the World Economic Forum; we rolled back to 70 place behind China and India; it is substantially lower than our rate of GDP per head;

- The share of high-tech exports in merchandise exports; Russia ahead of India but is lagging behind Italy and China.

-

Table 3. Research intensity and research efficiency comparison

	R&D costs in GDP(%)	The number of scientists and engineers involved in R & D (per 10000 people)	Current Competitiveness Index (position)	The share of high-tech products in merchandise exports,%	Share of the informatization equipment in world exports,%	Productivity of labour, $ per person employed
USA	2,69	41,0	2	32	13,0	73,1000
China	1,00	5,5	44	20	7,1	7,2000
Japan	2,98	51,0	11	26	9,7	56,0000
India	1,23	1,6	56	6	0,07	4,9000
Germany	2,48	31,6	13	18	4,8	56,0000
France	2,15	27,2	26	23	3,4	56,5000
Great Britain	1,87	26,7	15	31	5,3	54,5000
Italy	1,04	11,3	41	10	1,1	56,5000
Russia	1,00	34,8	70	8	0,04	18,0000
Canada	1,84	29,9	16	15	1,2	60,0000

We think that American system of education can be considered as an example of an effective institutional organization for research and educational process (as is known most scientists that got Nobel prizes after the Second World War were associated with American universities) (Belokrulova, 2003).

There are two characteristics of American university system (Mowery, 1990). The first is that the rapid development of American science is in the second half of 20th century. When after World War II

the federal government began to support actively the university; it became the world's largest source of funding for scientific purposes. The role of private industrial research laboratories is no less important, they are investing to develop high-tech products. Structure of the American research system of 20 century is changing now; research complex used to be a basic component of this system. Many U.S. companies are seeking alternatives to in-plant studies. The sharp increase in public funding for applied research recent years and for cooperation between university and industrial research complexes tendency reflect a trend of financial flows increasing from business to science and education.

The second characteristic of the American educational system is that American universities are flexible to adapt to changing economic conditions. American universities as research institutions are not only focused on basic research but also on the production of prototypes sometimes contributing to commercial deployment of technologies by sale licenses for patents. The so-called hybrid centers are organized:

- University research centers that get funds from both central and local authorities; as well as from the private sector;

- Large industrial corporations laboratories financed wholly or partly by the central budget sources (contracts, grants, etc.);

- State agricultural station additionally funded by various companies, industrial companies that are interested in their research output.

In addition the American university system distinguishes the ability to develop new disciplines such as chemical engineering, computer science, microelectronics and the ability to open on their basis scientific research centers as well as the rapidly change educational programs to disseminate new knowledge. Thus American universities should be considered as economic institutions which are successfully operating in the production and dissemination of economically useful knowledge and innovation.

It seems to us that the most rational approach to further institutional development of science and education in Russia today is the creation of conditions for the organization of integrated structures to ensure the advanced nature and a high level of training, retraining and advanced training in the promising areas of science and technology, improving Education Quality and efficiency of scientific research.

There are some promising areas of integration that are appropriate to this approach:

1. Expanding the network of scientific and educational associations as legal entities or on a contractual basis for educational programs and / or research. These include for example a variety of advanced research centers (centers of excellence) created by combining the most productive high school, academic and industrial research teams providing them with necessary resources and funded on a competitive basis.

2. Further development of the "project integration" to form effective interrelation between universities and research organizations. It favors the organization of sustainable alliances between research institutes, design offices, universities and enterprises. This form is particularly attractive for businesses that can participate in joint projects in science, innovation and training. Such integration support does not include non-cooperation and non-merge of research institutes and universities.

3. Expanding the practice of research institutes and universities participatory in competition for grants and contracts for research and development in publishing, joint scholarships, international programs

and projects, scientific council organization to disscus scientific topics, specialized councils for awarding degrees on the basis of scientific research institutes and universities. This will provide with environment conducive for any integration initiatives in the scientific and educational community.

4. Creation, development and priority support of the system of leading research universities as a major scientific and educational organization. As the world experience shows these are the universities that provide the fundamental connection of education values and the flexibility to satisfy a need in the promising areas of scientific and labor-intensive technologies.

5. Integration as organizational and economic process means first of all the pooling of resources of scientific and educational complexes including their innovative potentials to gain socio-economic and commercial effects. This implies that the State will encourage the development of both simple and more advanced forms of integration. These forms are innovative consortium of universities, research organizations, businesses and possibly financial institutions, followed by the formation on this basis of sustainable innovation clusters.

Development in these and other areas will help create a balanced scientific and educational complex in Russia which provides socio-economic problems solving. Integration support is a real chance for the Russian government to overcome the long-term stagnation of the national science and education and achieve understanding and cooperation that are so necessary for their development.

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THE PREFERENCE OF DOMESTIC PRODUCT
ANALYSIS OF CONSUMER BEHAVIOUR IN HUNGARY

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Abstract

The current business globalization has created increased competition on domestic and international markets. Research has shown that there is a bias (preference) against their own country's products. The presence of local preferences will always be. The judgement of products also depends on what the consumer feel about and for his/her country. Primary standard questionnaires have been used in our research. The questions were grouped around the issue of the Hungarian products' preference. This topic is particularly interesting because it brings economic, sociological and political implications as well.

Key words: *consumer's behaviour, food, etnocentrism, marketing reseach*

1. INTRODUCTION

Nowadays globalisation of commerce created an ever increasing competition on both local and international markets. Consumers may find goods in their local shops basically from any country. One of the oldest problems for actors on the international market is how customers perceive the fact that a product is of 'foreign' origin.

Researches showed that there is an existing partiality towards a country's locally produced products. Stereotypes about foreigners may have impact on the actual judgement of a product or in other words on the consumer ethnocentrism. Ethnocentric consumers opt not to buy foreign products due to their possible social and economic implications. We might say that cultural differences may never fully disappear as the presence of local preferences can never be ruled out in the international commerce. Perception of local and foreign products greatly depends on the customers' feelings towards their own country. Part of this emotional experience is how one loves his or her home country or if he or she feels the country superior to others. Therefore, it is important to assess customer habits not only on local but on international markets too (Berde, Juhász, 2006).

Due to the globalisation of commerce it is more and more necessary to measure customer habits and preferences.

The ever growing competition requires manufacturers to lay great emphasis on quality. They need to ensure steady and reliable quality and it shall be communicated towards customers as well.

Image of the country of origin is an important influence on how customers perceive goods from other countries. Researches show that customers evaluated similar and fully corresponding products differently because of their country of origin.

Consumer ethnocentrism is not only interesting because it is a global tendency but also because political influences on customer behaviour are particularly evident. Although, political attitude is one of the most important social criteria, contrary to other similar factors such as age, sex, education and social status its influence on customer decisions - other than patriotic purchase - is hardly detectable. We might say that it is such a determinant that buyers are not aware of when they make the customer decisions.

This topic bears special interest as beside its evident economic influences it also has social, psychological and political implications. How it forms a complex and how some of these factors become prominent as a result of various influences have significant actuality in our days. In a world where social issues like sustainable development or fair trade have major impact on forming public attitudes thus economic behaviour of people. Moreover, it characteristically became a political grouping criterion not only globally but also here – or especially here - in Hungary where views on buying local products are often confronting.

2. BACKGROUND OF DEFINTIONS

2.1. Country image

According to *Roth* (2006) country image is the entirety of an individual's presumable descriptive and informative knowledge about a given country. It not only refers to the country's industrial, technological and political perception but also to emotions towards the country and pride.

Malota (2004) summarised this as follows: "Country image is all the descriptive, concluded and informational belief that we create about a country. It is the entirety of different beliefs, ideas, impressions that people hold about a given country."

Country image is a picture in our consciousness about a country. Country image indirectly includes the products as well; based on the country image we have preconceptions about the products too. The following factors may influence our attitude positively or negatively:

- Geographic and natural conditions: Having excellent natural conditions agriculture is a dominant sector in Hungary. Owing to natural factors the country is rich in unique regional products such as ground paprika from Szeged or Kalocsa

- Historic factors: historic relations between countries are determinative factor which may influence the formation of customer ethnocentrism. Nowadays this factor became important as well.

- Social factors, including demographics. Age distribution is a significant factor in connection with shaping country the image as younger generation is not able to create ideal image about the country.

- Economic – commercial factors: in this case not only the hard, measurable data such as a country's GDP or unemployment rate shall be considered but also non-measurable factors such as hungaricum type goods that plays also important role in creating the country image.

2.2. Country image

Country of origin image shall be taken into consideration when examining country image. The two concepts are in close connection, there is no distinct boundary between them.

According to *Malota* (2004) country of origin image is part of the overall image of a product and it is formed based on the country of origin. Accordingly, country of origin image arises from stereotypes associated with the product merely because it was made in a given country.

Country of origin image already comprises the images about products originated from that country. Let's think about our purchasing habits when we make decisions based on land of origin of the product. Germans are known for the exceptional meticulousness, their products are reliable, therefore, we happily buy German products.

Locally produced agricultural products and foodstuffs are especially sensitive to country of origin image, as product quality is influenced by several factors such as habitat, natural and human factors. Hungarian agricultural goods, particularly some products (e.g. Szegedi ground paprika, Makó onion, Egri Bikavér (red wine), Gyulai sausage) obtained fame and good reputation. This enables Hungarians living abroad to buy products made in their home country.

In order to comprehensively satisfy customer needs regional products shall comply with various qualifications and regulations. Marking ensures customers that they buy superior quality goods and due to regular controls they get the same quality on long term too.

3. CONSUMER BEHAVIOUR

When launching a new product manufacturers develop a marketing strategy aiming to ensure the long term success of the goods. According to *Vágási* (2007) this strategy includes the following marketing functions:
- analysing customer behaviour and market
- determining the range of products and services to be produced and marketed
- informing potential buyers about the products and services
- organising sales
- influencing customers to buy the goods
- promoting customer relations

Each factor plays important part in the success of products. Probably the most important factor, however, is analysing customer behaviour and market. Profound knowledge on customer behaviour is essential to create good long term relations with them. The factors influencing customer behaviour can be seen on Table 1.

Hofmeister-Tóth (2003) define customer behaviour as range of activities performed during acquiring and utilisation of products aiming to enhance customer satisfaction.

The notion of „customer ethnocentrism" was introduced by Shimp et al. Based on their observations they found that several customers think that French wines are of better quality than local ones, although, it was seldom chosen due to economic reasons.

In connection with *Balabanis*'s (2004) researches we can say that the bigger a country's economic competitiveness the weaker the customers' resistance against its products. It was also found that the more similar two countries' cultures are the bigger the customer's acceptance towards the products made in that country.

In US research *Shimp* et al (1987) asked 800 customers the following question: "Is it right if Americans buy foreign made products?" In another survey they sent emails to 850 households and 1000 questionnaires to Denver and Los Angeles studying CETSCALE's efficiency and validity.

They came to the conclusion that further researches are needed to gather more information about how demographic, geographic, regional economic factors influence customer ethnocentric values and what roles these factors play in adulthood.

Table 1. Factors influencing customer behaviour

Cultural	Social	Personal	Psychological
Characteristics			
- Culture - Subculture - Social class	- Reference groups - Status and roles	- Age, sex, family lifecycle - Occupation - Income - Lifestyle	- Motivation - Attitude - Personality and self-image - Perception, learning

Source: Author's editing based on Vágási (2007

It also needs to be further researched how intimidation affects customer's attitude towards foreign products. Most intimidated manufacturers are those operating on economically less developed areas and in regions where presence of foreign competitors are more evident.

Roth (2006) definition of national identity is the following: all ideas that distinguish a given country from other cultures. National identity relates to customer ethnocentrism, therefore, it possibly has the same effects. Hence, stronger national identity may have negative effect towards foreign countries' image, thus negative impact on purchase intentions.

4. MATERIAL AND METHOD

We made primary examinations in 2010. The sample is almost representative, 862 questionnaires in total. The questionnaires reached all parts of Hungary, and made sure the distribution age, qualification, occupation and residence.

The questionnaire is the most important device of the primary market research methods. During our quantitative research we used standardised questionnaires, which suited to give numerical data. The standard characteristic of the questionnaire makes it possible that the answers of different consumers are comparable.

We have used SPSS 14.0 program for analysing the data obtained with questionnaire. From the various calculation options of the program we used the followings: descriptive and diagnostic data analysis, cross table analysis, cluster analysis, factor analysis.

When creating descriptive statistics the goal is to characterise the observations. We may evaluate results numerically or by using diagrams. Program helps analysing variables of different scales.

We can group the available mass data by cluster analysis. The point is to adequately differentiate the different groups and also to form such groups that bear common characteristics within the set. Grouping may be performed by various methods. I chose hierarchic method at the processing.

4. RESULTS

Where do you shop?

Results show that 47 respondents prefer smaller shops or discount shops; their group represents 29% of the total population (Figure 1). For us the most astonishing finding was to learn that almost the same amount of people goes shopping to hypermarkets (21%) and to farmers' markets (20%). On farmer's markets buyers are most probably find Hungarian products.
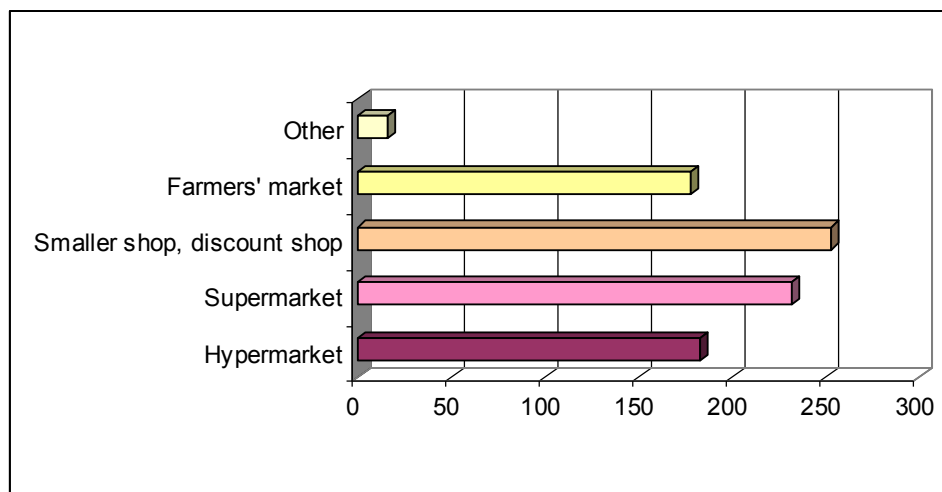
Fig. 1. Where do you shop?

What are the characteristics of official Hungarian product (according to respondents)?

Respondents could chose more than one answer. Figure 2 shows that 45 people (28%) chose "Made from Hungarian materials", "Made in Hungary" and "Made by Hungarian manufacturer", which - we think - characterises the definition of official Hungarian product the best. According to 43% of the respondents the most important characteristic is "Made from Hungarian materials"; this shows that people considers relevant if a product is made from local materials. In this way they support their home country's economy. Other factors" received, however, the most answers. This made us think that more researches shall be made in order to learn which other factors are important for customers. Unfortunately, the structure of our questionnaire did not allow respondents to express their opinion in a more detailed manner.
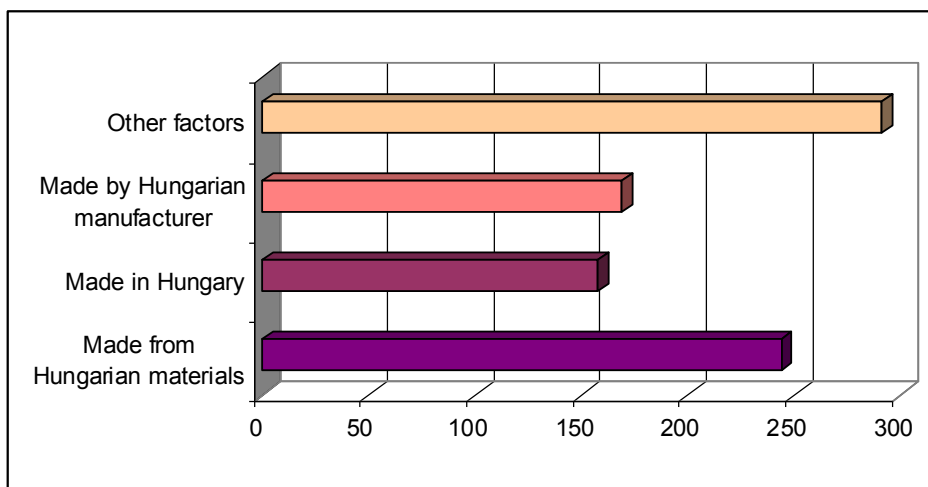
Fig. 2. What are the characteristics of official Hungarian product (according to respondents)?

Fig. 3. summarises the thoughts of Hungary given by the respondents of our survey. The beliefs and ideas of a country always influence the final opinion of a product from the country.
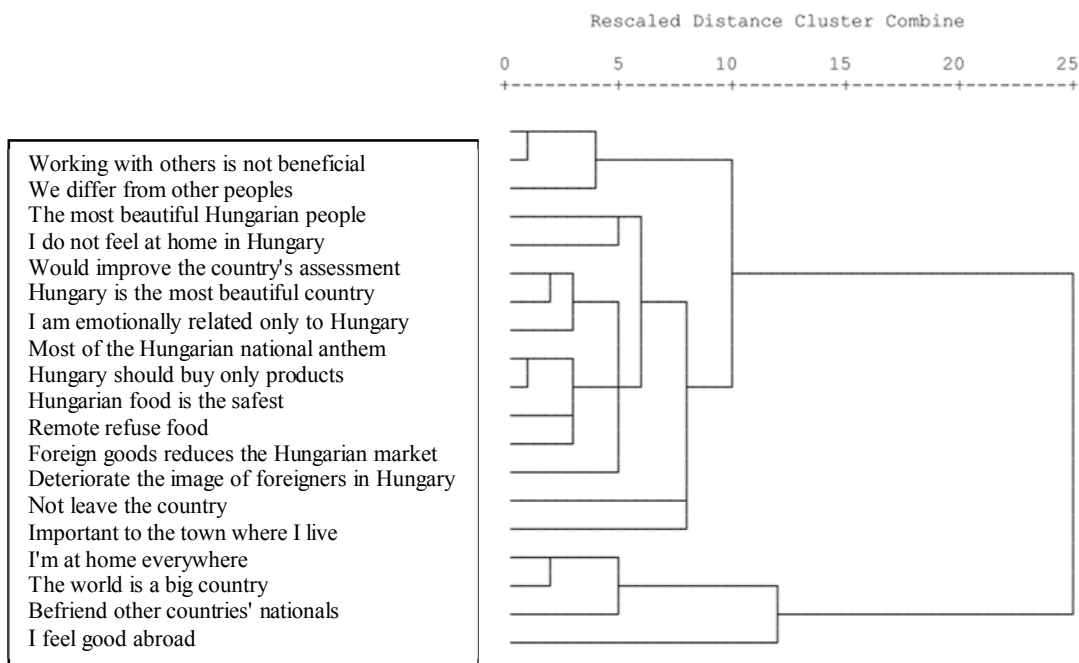

Fig. 3. Thoughts of Hungary

Analysing product groups

Our next question referred to product groups ranging from foodstuffs through clothes to toys. We highlighted those product groups that are - deriving from their nature - regularly purchased by customers, in other words flow products.

As a result of the performed cluster analysis 5 bigger groups could be formed. The first includes: frozen products; sweets, chocolates; muesli, corn flakes; tea, coffee; cosmetics; chinaware, glassware; toys; clothes; and other categories. Next group includes: spices, seasonings; pastas; alcoholic beverages. Fruit juices, soft drinks, mineral waters form a separate group. Fourth group includes milk, dairy products; egg, meat and sausages while bakery products, vegetables and fruit form the fifth group. The cluster including the most product groups contains "luxury products", whereas the last two the basic foodstuffs.

Analysis of shopping habits

When analysing customer habits (Fig. 4 and Fig. 5.) respondents were asked to describe themselves on a scale 1 to 8 where 1 meant "not important at all" and 8 meant "very important". Based on the answers received we can break up the questions into 4 groups by using factor analysis; these groups are: "Well informed, conscious customer", "Characteristics of Hungarian products", "External factors, opinions" and "Design, product image, brand". In the first factor the second question is the most significant (with 0.858 co-efficient), in the second factor packaging gets the biggest emphasis. Among "External factors, opinion" family members' opinion proved to be the most important whereas in the last group the brand name of the given product is the most influential factor.

Respondents needed to evaluate factors on a scale 1 to 5 where 1: "not influenced by that at all" and 5: "very much influenced by that". Fig. 4. was prepared by averaging.

According to Figure 4 customers make insinificant distinction between traditional Hungarian foods and other foodstuffs. The largest difference was found in product prices. Trademarks are more often required for traditional products because such labelling represents excellent quality. However, their availability is not as good as their competitors.
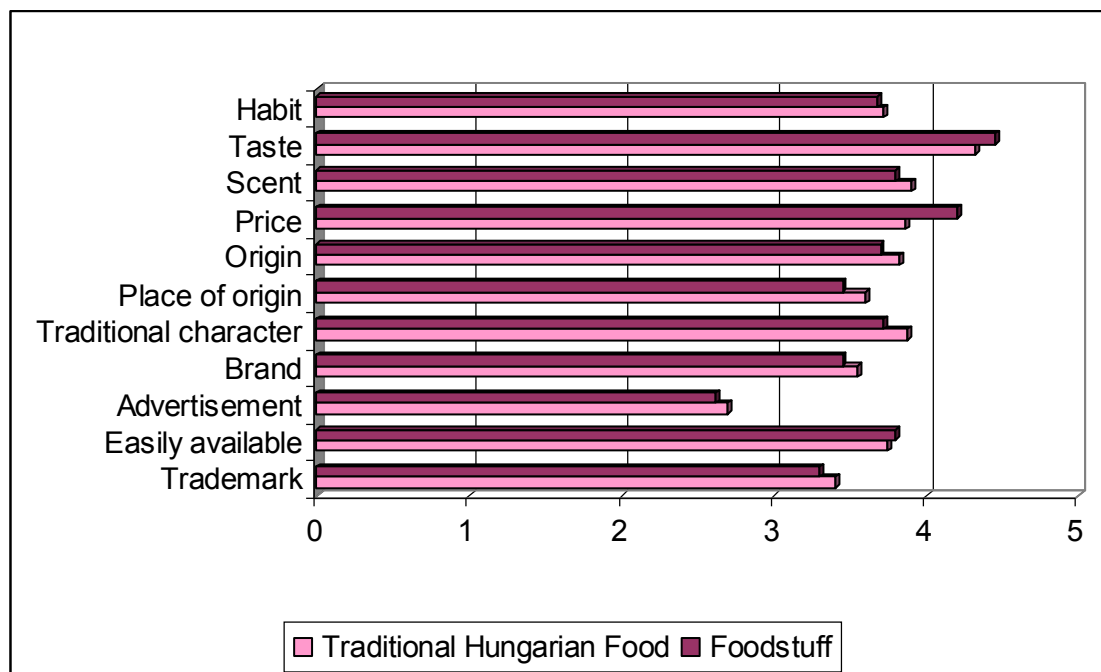

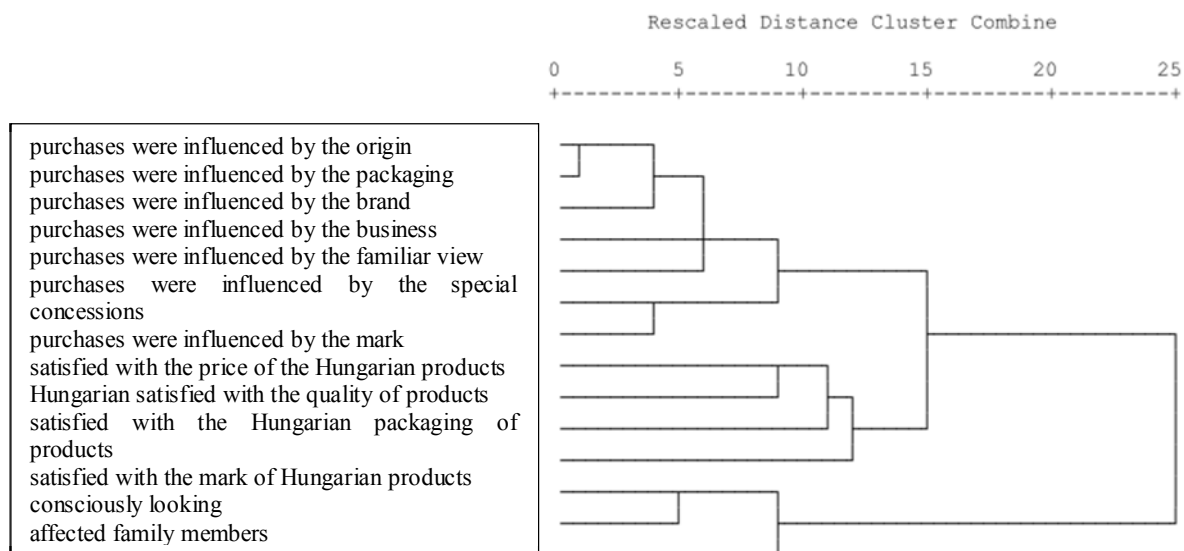**Figure 4**. Comparison of traditional food and other foodstuff based on shopping decision

Fig. 5. Hungarian consumer products characterization

Cluster analysis for protected geographical indication

By using cluster analysis we may sort Hungarian foods with protected geographical indication in 5 groups. First group includes hajdúsági horseradish, gönci apricot brandy a apricot, the second békési plum brandy, szatmári plum brandy and szabolcsi apple brandy, the third: makó onion, szegedi winter salami, szegedi and kalocsai ground paprika, csabai and gyulai sausages. Budapesti winter salami and kecskeméti apricot brandy both form a group on their own.

5. CONCLUSIONS, RECOMMENDATION

Price of traditional Hungarian products could be decreased if vendors were left out of market chain since if we were able to buy directly from the producer we did not need to pay the traders' profit. Therefore, I think Shop of Hungarian Products network is an excellent initiation, here excellent quality products are available directly from the producer.

Traditional Hungarian products need effective communication network. Improvement of information flow would be the most important objective. The research showed that 22% of respondents searched Hungarian spices on the shop shelves. If communication of traditional Hungarian products was more effective demand for e.g. szegedi ground paprika would be bigger.

Communication of labels protecting Hungarian foodstuffs should be more efficient as the aforementioned trademarks are not widely known. Media publicity could be more appropriate as customers use media outlets such as newspapers, radio and television on daily basis. Not only the reputation of locally acknowledged trademarks should be improved but also those used in the European Union, as reputation of protected geographical indication was very low.

Overall, respondents consider Hungarian products average or good. Customers' ethnocentric behaviour needs to be reinforced; if a customer is satisfied with a Hungarian product he or she will chose locally produced goods.

For me it was positive outcome that 82% of respondents replied to be proud of Hungary. In each age bracket nearly same amount of people replied not to be proud of his or her home country. After mentioning the country's successes they reflected positively to the achievements of this small country.

72% of respondents expressed that they would not want to live in other country. The younger generation, however, thinks that their professional knowledge worth more abroad than in Hungary. Therefore, career-starters should be assisted with various grants.

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ACCOUNTING INCURSIONS INTO THE COMPLEMENTARY FINANCING OF HIGHER EDUCATION INSTITUTIONS

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Abstract

Higher education is a form of training/education that shapes personality and helps acquire a behaviour specific for the profession. The complex missions undertaken by universities, which is to provide education and research at a high standard of quality at national and international levels, requires adequate funding.

Complementary financing is found among the components of university funding. This paper approaches the following aspects regarding complementary financing: its place and role within the funding of higher education institutions, the accounting technique used within cash and accrual accounting, the opportunity of recognizing liabilities, the exploitation of the informational valences of accounting.

Depending on the quality of information regarding complementary financing, the university may improve its forecasting of the necessary financial resources, their management and, implicitly, the quality of the provided public services.

Key words: *accounting, complementary financing, higher education institutions*

1. INTRODUCTION

The importance of education, as an act of conscience, upon whose quality largely depends not only the future welfare of the nation, but also the power, influence and its very own existence as distinct entity in the regional and global configuration, is unanimously accepted in all environments.

It is also an increasingly accepted fact that, in any circumstances, economic knowledge involves the certitude of figures, and accounting is the objective basis of any judgement in this regard. Accounting is able to explain the purpose of the entire management accounting of resources activity, including those coming from the complementary financing of higher education institutions, as well as the means used to achieve economic and social progress.

The very ideal of science in the area of accounting is cultivated by education, but it is also the biggest and most complex problem, noble and delicate as well as difficult, in many ways.

The last decades have led to developments in the area of budgeting and accounting, targeting the result orientated approach, clear accounting structures and marketing mechanisms, so that the general logic of budgeting and accounting has shifted from inward orientation to results and performance.

In recent years we have witnessed the frequent sequence changes in accounting, which are given great ampleness at certain periods of time. The motivations that determine the manifestation of the mentioned phenomenon are related to compliance with essential requirements for internationalization,

namely establishing accounting regulations convergent with European directives and international accounting standards. One of these changes led to supplementing cash flow accounting with accrual accounting.

Accrual accounting provides the possibility to identify current commitments, as well as potential commitments, which contributes to knowing and planning all recognized commitments for payment, to obtaining information regarding the impact of current commitments over future sources, etc.

What novelty regarding the complementary financing of higher education institutions is accrual accounting bringing? To what extent did accrual accounting generate changes within the technique of bookkeeping the operations generated by this type of funding? Is commitment perceived in its real sense? These are some of the questions we intend to answer in this article.

2. THE COMPLEMENTARY FINANCING OF HIGHER EDUCATION INSTITUTIONS

Funding represents "the process of ensuring the necessary monetary fund to translate into practice economic, social or other pre-established objectives" (Banc, 2001), "the action to ensure the necessary monetary fund to cover the expenses required by implementing an economic project, an economic and social activity" (Dictionary of Economics, 2001).

Therefore, through funding, public institutions are granted monetary funds from certain sources and in well-defined conditions, for precise purposes and in accordance with the achievement level of the objectives established previously.

The financing of public institutions' expenses may be achieved (article 65 of Law 500/2002) entirely from the budget, from own revenues or from grants given from the "budget", or financing may be achieved integrally from own revenues.

State higher education institutions function as institutions financed from funds allotted from the state budget, from the extra-budgetary income and from other sources (art. 223, paragraph 1 of law no. 1/2011). In relation with the provenance of the financing sources, we identify internal and external funding, and in terms of the time period, there is long-term and short-term funding.

Regardless of the criterion, the funding of state higher education is ensured from public funds, in accordance with the following requirements:

- the development of higher education is considered a public responsibility, and the development of education, in general, is considered a national priority;

- quality assurance for higher education at the level of the standards in the European Higher Education Area for human resources training and personal development as citizens of a democratic society based on knowledge;

- professionalization of human resources in accordance with the labour market diversification;

- the development of higher education, of scientific research and of artistic creation in universities for the top integration in the global scientific life (art. 22, paragraph 3 of law no. 1/2011)

Meeting these requirements depends on the growth of the absolute level of funding, on diversifying the income sources of universities, on the adequate use of resources (increasing the efficiency level); ensuring additional sources of funding for research excellence and professional training in order to

improve international attractiveness; providing student aid in the form of allowances, grants and credits.

There are three forms of financing based on contract for higher education institutions: basic financing (material expenses, wages), complementary financing and additional financing (a new type of funding, introduced by law 1/2011, with the purpose to stimulate excellence of institutions and study programs within state universities, as well as private universities).

These may be supplemented by own incomes, income from interests, donations, sponsorships and fees charged under the law from natural and legal persons, Romanian or foreign, and from other sources.

Complementary financing is done by the Ministry of Education, Research, Youth and Sports through:

- subsidies for housing and food;

- funds allotted on the basis of priorities and specific norms for endowments and other expenses for investments and capital repairs;

- funds allocated on competitive basis for university scientific research (art. 223, paragraph 6 of law no. 1/2011).

Basic funding for the scholarship and social protection fund for students, for the institutional development fund, as well as for financing investment objectives is done on the basis of an institutional contract signed between each university and the main credit officer (Ministry of Education, Research, Youth and Sports). A complementary contract between the same parties is signed to finance capital repairs, endowments and other investment expenditure, as well as subsidies for housing and food. The component of endowments and other investment expenditure includes: consolidations, rehabilitations of dorms and classrooms, education facilities, projects, acquisitions, other expenses with investments.

Efficient management requires the allotment of resources primary towards the departments and structures with the best performances. An efficient structure has the ability to progress thanks to its constant efforts. Performance is also associated with economy (procuring the necessary resources at the lowest cost), efficiency (maximizing the obtained results by starting from a given quantity of resources or minimizing the quantity of resources for a predetermined outcome) and effectiveness (the obtained results should be the same with the foreseen results).

Integrating the financing system within the overall conception of the Romanian higher education reform consists of increasing the underlying level of decisions regarding the size of the amounts allotted from the budget for each institution of higher education and increasing financial autonomy in terms of the budgetary allocations and own incomes included in the institutional strategic plan and the revenue and expenditure budget (Briciu, 2001).

3. ACCOUNTING OPERATIONS GENERATED BY COMPLEMENTARY FINANCING

Despite "institutionalization", the decisions that ensure achieving the objective of higher education institutions carry a certain economic burden, direct or collateral, but indispensable. Therefore, decisions require to always assessing the ability of each institution to generate cash (revenues, fundraising, funds, etc.) or cash equivalents, including the period and the certainty that it will be generated.

The key indicator that establishes how scholarships, transport discounts, subsidies for housing and food are granted is the number of equivalent students.

Next, we will present the accounting of operations generated by complementary financing in higher education institutions for two accounting periods, namely before 2006, when public institutions used cash accounting, and after 2006, when accrual accounting became operable.

A. Student scholarships

According to cash accounting (before 2006)

- receiving financial resources for the payment of scholarships:

192.04.40.02	=	592.04
„ Available from special budgetary allocations		„ Revenues from special budgetary allocations"

- highlighting expenses with scholarships:

492.04.40.02	=	236.05
„Costs of complementary financing higher education institutions"		„Scholars and PhD candidates"

- payment of scholarships:

236.05	=	192.04.40.02
„ Scholars and PhD candidates"		Available from special budgetary allocations

According to accrual accounting (after 2006)

- receiving financial resources for the payment of scholarships:

551.04.59.01	=	773.04
"Available from special budgetary allocations"		„ Revenues from special budgetary allocations"

- highlighting expenses with scholarships:

679.05.59.01	=	429.05
„Other expenditure"		„ Scholars and PhD candidates"

- payment of scholarships:

429.05	=	551.04.59.01
„ Scholars and PhD candidates"		„ Available from special budgetary allocations"

The funds for scholarships and social protection of students are allotted in accordance with the number of full-time learning students, who don't pay tuition. Students benefit of the following categories of scholarships: merit-based, to stimulate excellence, as well as need-based scholarships to financially support the students with low incomes. In addition to these categories there are also performance scholarships and scholarships for students who are recipients of awards at school competitions, which are covered from own incomes.

B. Transport

According to cash accounting		
- receiving financing for expenses with transport discounts for students		
192.05.21.02 „Available from special budgetary allocations"	=	592.05 „Revenues from special budgetary allocations"
		According to accrual accounting
- receiving financing for expenses with transport discounts for students		
551.05.57.02.02 „ Available from special budgetary allocations"	=	= 773.05 Revenues from special budgetary allocations"

C. Housing and food subsidies

According to cash accounting		
- the encashment of housing and food subsidies		
192.05.21.02 Available from special budgetary allocations	=	592.05 „ Revenues from special budgetary allocations"
- using the subsidies for the payment of various utilities		
401 Suppliers		192.05.21.02 Available from special budgetary allocations
		According to accrual accounting
- the encashment of housing and food subsidies		
551.05.57.02.02 „ Available from special budgetary allocations"	=	= 773.05 Revenues from special budgetary allocations

- using the subsidies for the payment of various utilities		
401 Suppliers	=	551.05.57.02.02 „ Available from special budgetary allocations"

D. Investments (capital expenditure)

According to cash accounting		
- receiving financing for investments / rehabilitation works		
192.03.74 Available from special budgetary allocations	=	592.03 „ Revenues from special budgetary allocations"
- implementing investments / rehabilitation works		
492.03.74 „ Costs of complementary financing higher education institutions"	=	234.01.05 Suppliers
- the payments of the supplier		
234.01.05 Suppliers	=	192.03.74 Available from special budgetary allocations
Performance bond		
- retaining the performance bond		
492.03.74 „ Costs of complementary financing higher education institutions "	=	220.06.05 „Debtors"
- returning the performance bond		
220.06.05 „Debtors"	=	192.03.74 Available from special budgetary allocations
- paying the commission associated with the investment		
492.03.74 „ Costs of complementary financing higher education institutions"	=	192.03.74 Available from special budgetary allocations
According to accrual accounting		
- receiving financing for rehabilitation works		
551.03.99 „ Available from special budgetary allocations"	=	773.03 Revenues from special budgetary allocations

- payment of rehabilitation works		
231.05.03 Fixed assets in progress	=	404.05 Suppliers of fixed assets
- debt payment to the supplier		
404.05 Suppliers of fixed assets		551.03.71.01.01 „ Available from special budgetary allocations”
- implementing new investments		
213 Plant and machinery	=	404.05 Suppliers of fixed assets
- paying the supplier		
404.05 Suppliers of fixed assets		551.03.71.01.02 „ Available from special budgetary allocations”
- retaining the performance bond		
231.05.03.02/404.05 Fixed assets in progress/ Suppliers of fixed assets	=	462.19.05.04 Sundry creditors
- returning the performance bond		
462.19.05.04 Sundry creditors	=	551.03.71.01.01 „ Available from special budgetary allocations”
- paying the commission associated with the investment		
231.05.03.02 Fixed assets in progress	=	551.03.71.01.01 „ Available from special budgetary allocations”

In terms of investments, it's necessary to distinguish between: investments in constructions, works of consolidation and independent endowments. Investment funds for new objectives and endowments are allotted separately, depending on the strategic priorities of education development.

The performance bond of the contract is established by the contracting-party to guarantee the quantitative, qualitative and on time completion of the contract (Art. 89 paragraph (1) of Government Decision no. 925/2006 for the approval of the rules of implementation of the provisions referring to the assignment of public procurement contracts of Government Emergency Ordinance no. 34/2006). The contracting authority is required to stipulate in the tender documentation how the performance bond is issued and its amount, which shouldn't exceed 10% of the contract price.

Higher education institutions have to pay a commission to the State Construction Inspection for the quality control of the construction works. This institution exercises state control on the observance of

city planning and the building permit system, as well as the uniform application of legal provisions on quality constructions.

E. Capital repairs

According to cash accounting		
- receiving the bill for capital repairs		
492.02.28 „ Costs of complementary financing higher education institutions"	=	234.01.05 Suppliers
- paying the supplier		
234.01.05 Suppliers	=	192.02.28 Available from special budgetary allocations
- highlighting the performance bond		
492.02.28 „ Costs of complementary financing higher education institutions"	=	220.06.05 Debtors
- returning the performance bond		
220.06.05 Debtors	=	192.02.28 Available from special budgetary allocations
Commission		
492.02.28 „ Costs of complementary financing higher education institutions"	=	192.02.28 Available from special budgetary allocations
According to accrual accounting		
- receiving the bill for capital repairs		
231.05.01.03 Fixed assets in progress	=	404.05 Suppliers of fixed assets
404.05 Suppliers of fixed assets	=	551.01.03.71.01.30 „ Available from special budgetary allocations"
- paying the bill		
551.01.03.71.01.30 „ Available from special budgetary allocations"	=	773.01 Revenues from special budgetary allocations
- retaining the performance bond		

231 Fixed assets in progress	=	462.19.05.04 Sundry creditors
- returning the performance bond		
462.19.05.04 Sundry creditors	=	551.01.03.71.01.30 „ Available from special budgetary allocations"
- commission payment		
231.05.01.03 Fixed assets in progress	=	551.01.03.71.01.30 „ Available from special budgetary allocations"

Distributing the funds approved for capital repairs on buildings and constructions takes into account the following criteria: the current technical state of the buildings and constructions for which are solicited funds for capital repairs; to consider as priority the sites with the longest periods of time since the last overhaul.

If we relate strictly to accounting technique, it may be noted there are no profound differences in terms of recognizing transactions before and after the accounting reform in the public sector. The symbols of the accounts are a formal change, but very useful in creating a common framework of accounts with the one used by non-financial entities, in order to facilitate the systematization and centralization of information with similar content and the calculus of macroeconomic indicators.

As stated, the accounting reform has occurred in several stages. One of these stages is the instauration starting with 2003 (OMPF 1792/2002) of the obligation of public institutions to respect the procedures of engaging, liquidating, passing for payment and paying expenses, as well as the requirement to organize, manage records and report budgetary and legal commitments.

These stages involve the following (adaptation after Stefan, 2008, p. 91):

- engaging expenses: preparing budgetary and legal commitments, approval of the preventive financial control, and approval from the credit release authority;

- liquidating expenses: checking the eligibility conditions, granting the "good for payment" cheque;

- passing expenses for payment: issuing the payment order, approval of the preventive financial control, approval from the credit release authority, payment transmission to the head of the financial accounting department;

- payment of public expenses: preparing the payment instruments, registering the payment order, and deleting the commitment.

We also note that the digital codes indicating the nature of revenues/expenditure that compose complementary financing have been kept, as follows: 01 – capital repairs, 02 – housing and food subsidies, 03 – endowments and other investments, 4 – scholarships, 5 – other types of social protection for students, 6 – amounts/expenses allotted for investment objectives, 7 – funding for projects co-financed from budgetary allocations and external sources, 8 – individual housing subsidies according to Government Emergency Ordinance no. 73/2004 expenses for individual housing, 9 –

financial support/expenses for purchasing computers according to Government Decision no. 1294/2004.

The element that starts discussions about the moment when it should be recognized by accounting is the commitment. Many times it was erroneously understood and it didn't reveal the accounting valences that bear its name. The commitment represents a promise, a pledge to do something [DEX].

We want to analyse commitment in terms of budgetary and accounting procedures, but also in terms of its recognition opportunity.

A legal commitment is any legal document from which results or could result a commitment related to public funds. Before taking any measure that might lead to an expense, the credit release authorities should ensure that the taken measures comply with the principles of a good, healthy financial management, especially in terms of economy and efficiency of spending.

Through a budgetary commitment, a competent authority apportions public funds to certain destinations, within the limits of approved budgetary credits.

The credit release authorities are forbidden to approve legal commitments without making sure that the public funds necessary for their payment have been reserved in the budget year, except multi-annual actions.

In terms of accounting, given their structure, the expenses covered by complementary financing should be recognized when employing resources. The employment takes place when contracting the monetary liability that generates payments or consumes resources. Therefore, expenses are delimited as a qualitative structure and are recorded as they are employed (a debt is created for the received – used resource).

Based on previous viewpoints, we believe that in terms of perception, there are no differences between the accounting and the financial (budgetary) approaches. But where does commitment stand in relation with the possibility to contribute to the improvement of the forecast information?

The size of the obligation generated by student scholarships is known at the beginning of the semester, as a result, in our opinion, the expenditure should be employed at this time of the entire period. But, in reality, the expenses with scholarships are employed monthly by the Social Service on the basis of the document Summary report of scholarship payments.

The expenses with transport discounts for students are employed on the basis of the Statement with students benefiting of a 50% discount for transport within and outside of town (it includes student identification data and the amount to be returned to each). Therefore, the expense is employed at the same time with the payment.

Housing and food subsidies are granted depending on the number of students who live in dorms, in an amount that varies from one period to the next (increasing during the cold season). They are intended to cover expenses with various utilities: water, energy, gas, etc. These expenses are also recognized and paid in the same period.

In terms of capital repairs, endowments and other investment expenses, employing expenses is based on bills/economic contracts received/signed from/with investors.

With the exception of capital repairs, endowments and other investments, we note the formal feature of the commitment, recognizing expenses at the same period when the payment is done. We should highlight in this case too the need to recognize commitments when signing the contract, not when

billing the works, but the probable nature of forecasts and the additional work volume spread this practice.

The institutional and complementary contract should become operational after approving the budget (according to the budgetary calendar) and should generate the recognition of commitments in accounting from that moment. This way, the role of forecasts in obtaining accounting information would increase and how they are justified would improve. All "the adjustments rule" does is attach a formal feature to commitment and not promote exigency and rigour in budgetary forecasting.

We underline that the stages of reforming higher education institutions were interposed with the stages that targeted the reform of the education system. Therefore, accounting law no. 82/1991, which was the starting point in reforming accounting, was followed by education law no. 84/1995. During the following period were issued a series of legal documents that aimed to improve the reporting system of public institutions, the management of public financial resources, aimed to pave the way for adding accrual accounting to cash flow accounting, etc. Among these laws are: Order of the Ministry of Public Finance 1792/2002 for the approval of Methodological norms regarding the employment, liquidation, passing for payment and payment of expenses of public institutions, as well as the organization, recording and reporting of budgetary and legal commitments, OMPF 1746/2002 for the approval of Methodological norms regarding the organization and governance of public institutions patrimonial accounting, OMPF 1954/2005 approving the Classification of indicators related to public finances, OMPF 1917/2005 approving the Methodological norms regarding the organization and governance of public institutions accounting.

It is the period when the generation and management of public money gained new meanings, in which the internationalisation of accounting in the public sector makes its presence increasingly more felt, and the need to report financial positions and not just expenses is becoming more obvious.

For now, the "circle" ends with the national education law, passed earlier this year.

In terms of higher education, inductive accounting regulation (based on a general accounting plan) tried to unify accounting terminology and to accomplish a systematic accounting. The internationalisation of economy has led to the reconciliation of the accounting plan with another instrument of accounting regulation, namely the conceptual accounting framework (the reference point of the deductive regulation), represented by a system of objectives and fundamental principles, whose purpose is to indicate the role and limits of accounting and of financial statements.

This is why the issue of accounting for operations generated by complementary financing should be seen beyond accounts, so that it allows the exploitation and desirable capitalization of accounting information.

Currently, the practical solutions of the accounting of any entity are interlinked, with many crossroads and intersections. The great value of European/modern accounting is that it provides different solutions and alternatives for each problem, so that studying policies, principles and rules, as they are stated by the community aquis, becomes just as important as studying the fundamentals of accounting.

Accounting is a virtual factor of progress. But this is true only to the extent that all those called to participate in its implementation are fully aware of their mission.

The act of leading requires, in essence, the ability to decide. Any leader, regardless of the place held in the hierarchy, is forced to recognize the size of expenses, the funding sources and their size in order to act accordingly.

4. CONCLUSIONS

The importance of higher education is becoming increasingly more evident in Romanian society. University is an institutional resource that is absolutely indispensable to economy and Romanian society in order to build a knowledge-based society and to achieve the objectives that redefine the grounds of competitiveness.

Extended as scope, captivating and complex as issue, accounting takes place in space and time in the direction and with the meaning given by human action.

Complementary financing is intended to cover social expenses (scholarships, transport, housing and food subsidies), but also investment expenses and capital repairs, which are absolutely necessary for creating the framework necessary for progress in education. Adopting accrual accounting generated (for some destinations of complementary financing) formal changes of the accounting technique that refer to the symbols of the accounts, to using accounts where payment obligations are recorded. For other destinations (capital repairs and investments), the employment period is different than the payment, but the role of the economic contract as generating document of payment obligations is diminished here also. In the case of funding, the principles of cash accounting are dominating, in terms that they are recognized only upon encashment.

Thus, the complementarity of cash accounting with accrual accounting should be supplied with a forecasting type of accounting. This would lead to increased responsibility in complying with deadlines and streamlining the information circuit, and to the timely identification of financial difficulties.

Scientific progress in accounting, as in any other field, may be ensured only with the help of a collective and permanent effort, manifested both theoretically and practically. Currently, accounting has evolved to another stage of knowledge, a process that is caused by deep changes that had taken place in economy, under the influence of the globalisation and internationalisation of economies. Accounting experts call the recent dynamic of accounting: accounting postmodernism (Ionascu, 2003).

Inherently, accounting in universities should adapt to the accounting changes that have taken place in recent years at international level. The adaptation process involves: the ability to find solutions and alternatives; efficient human tutoring, self-control, moral order; the relevance of authentic moral values, meaning and significance of human acts taken on in a responsible manner in the hopes of progress; spirit of sacrifice, self-abandonment and constant search.

A learning institution is more interesting and attractive if it knows how to justify its budget and how to motivate its request for funds, if it is bold to request and win a financing program, if it renders scientific and legal support to the size and gathering of own incomes from fees, additional activities, collateral resources, and then, if it knows how to manage expenses by balancing between needs and resources – all these within a context where efficiency and perspective are not overlooked.

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1.

IMPACT OF CORPORATE INCOME TAX ACT ON INVENTORIES OF MERCHANDISE IN CROATIAN COMPANIES

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Abstract

With this paper the authors are trying to prove that Corporate Income tax Act has great impact on inventories of merchandise and their evaluation. The conducted research among Croatian companies will prove that when it comes to evaluation of merchandise, companies are choosing solutions given by Corporate income tax Act rather than solutions given by International financial reporting standards (if they are big companies ,listed companies) or Croatian financial reporting standards (if they are small and medium sized company, not listed companies). The reason for that anomaly could be that the companies are interested in paying less corporate income tax or just the impossibility in managing extensive accounting regulations. The research (questionnaire) was conducted among 100 Croatian companies whose main activity is to buy and sell merchandise. 31 companies has answered the questionnaire.

Key words: *corporate income tax Act, IFRS, CFRS, evaluation of merchandise, inventories of merchandise*

1. INTRODUCTION

The term inventories is used to designate merchandise held for sale in the normal course of business and also materials in the process of production or held for such use. This discussion is devoted to problems arising in the determination of the inventory of merchandise purchased for resale, commonly called merchandise inventory. Merchandise is one of the most active elements in the operation of wholesale and retail businesses, being continuously purchased and sold. The sale of merchandise provides the principal source of revenue for such companies. In determining net income, the cost of merchandise sold is the largest deduction from sales; in fact, it is customarily larger than all other deductions combined. In addition, a substantial portion of merchandising companies' resources is invested in inventory; it is frequently the largest of the current assets. Inventory determination plays an important role in matching expired costs with revenues of the period. The total cost of merchandise available for sale during a period of time must be divided into two elements at the end of the period. The cost of the merchandise determined to be in the inventory will appear on the balance sheet as a current asset. The other element, which is the cost of the merchandise sold, will be reported in the income statement as a deduction from net sales to yield gross profit on sales. So, inventories of merchandise as a part of current asset are a significant item in asset of companies who are performing trading activity. Because of that evaluation of merchandise and consumption of merchandise has important role in expressing realistic financial position in the balance sheet and in successful business activity and business conduct in income statement as a basic request for financial reporting. Each company's management can prepare financial statements for their own use in different ways which are

the most appropriate for internal needs of management. When the financial statements are issued for others, like shareholders, employees, creditors and general public they should be prepared in accordance with general accepted accounting standards (e.g. International Financial Reporting Standards) and when the financial statements are prepared for tax purposes they should be in accordance with tax legislation. The objective of this paper is to determine in which way companies are determining value of merchandise inventories and to define whether it is done under accounting standards and accounting regulation or do companies, especially smaller companies rather evaluate merchandise of inventory under Income Tax Act. Main hypothesis of this paper was set up:

H1: Income Tax Act has a great impact on evaluation of merchandise inventories in Croatian companies.

2. MERCHANDISE AND TRADING ACTIVITY

Trading activity has an important role in Croatian economy since there is little of production companies. Distributive trade is an important economic activity that can be defined as the totality of all forms of trade, from the procurement of goods from the manufacturer to delivery to the consumer. Distributive trade holds a significant place in Croatian economy as in this business 35% of economic agents operate; it employs about 18% of workforce. Its share of GDP amounted to 10.6% in 2008. and 2009. it was 9,5% which is 1,1 percentage points less than in 2008 and all in context of financial crisis. Trade is facing major challenges, such as stronger competition in the local market, concentration and take-over's, introduction of new technology, new forms of retail trade, e-commerce and globalization. The future development of distributive trade will depend on its ability to adapt to market demands and to legislation, which is constantly updated with the aim of creating a legal framework for trade development.(www.hgk.hr. Accessed at 20.10.2010.)

The share of 32% in the retail market in Croatia is held by small shops, which is decreasing. On the other hand, hypermarkets and supermarkets are steadily increasing their market share; their share in 2008 was 31% for supermarkets and 18% of hypermarkets. Wholesale has 40% of total turnover in distributive trade and the other activities held 28% of total turnover for 2008. This number has decreased for 2009 due to the crisis and closing down in businesses.

With regard to new trends in the Croatian retail network, it is anticipated that trade concentration and consolidation will inevitably continue both through growth of individual traders as well as through acquisitions, strategic and capital alliances; the growth of the usable net area of outlets and the total turnover is also anticipated: competition will intensify and stronger connection of production and trade will occur especially through private brands. In accordance with European and international practice in the distributive trade, which seeks to more efficiently and more effectively respond to the needs of customers, local trade follows both the trends. It is shown by the construction of the modern trade network, which can by range and quality of supply and services, as well as by price equally participate in market competition in which it is exposed to wide competition. .(www.hgk.hr. Accessed at 20.10.2010.)

3. ACCOUNTING RECORDING OF MERCHANDISE INVENTORIES

Accounting recording of merchandise inventories is dealt by International Accounting Standards 2 – Inventories (hereinafter IAS 2) for large companies and small and medium companies are obligated by Accounting Act[5] to apply Croatian Financial Reporting Standard 10 – Inventories (hereinafter CFRS 10). Companies are classified as small, medium-sized and large entrepreneurs on the basis of the indicators determined at the last day of the financial year preceding the financial year in respect of which financial statements are drawn up according to the total assets, revenue and average number of employees in the course of the financial year as defined by the Accounting Act.

Small entrepreneurs are those which do not exceed any two of the following conditions:

– total assets of HRK 32,500,000.00;

– revenue of HRK 65,000,000.00;

– average number of employees in the course of the financial year: 50.

Medium-sized entrepreneurs are those which exceed any two of the conditions referred to in paragraph 2 of this Article, but do not exceed two of the following conditions:

– total assets of HRK 130,000,000.00;

– revenue of HRK 260,000,000.00;

– average number of employees in the course of the financial year: 250.

Large entrepreneurs are those which exceed any two of the conditions referred and banks, savings banks, building societies, electronic money institutions, insurance companies, leasing companies, investment funds management companies and separate assets without legal personality under their management, investment funds management companies and assets under management of investment funds with legal personality, compulsory- and voluntary pension funds management companies and separate assets under their management, and pension insurance companies (Accounting Act). In accordance with IAS 2 and CFRS 10 we need to define some terms for better understanding inventories and merchandise inventories. Inventories are assets: (a) held for sale in the ordinary course of business; (b) in the process of production for such sale; or (c) in the form of materials or supplies to be consumed in the production process or in the rendering of services (IAS 2). Inventories include: goods purchased and held for resale including, for example, merchandise purchased by a retailer and held for resale, or land and other property held for resale, finished goods produced, or work in progress being produced, by the entity and - materials and supplies awaiting use in the production process (IAS 2). In the case of a service provider, inventories include the costs of the service, for which the entity has not yet recognized the related revenue. *Initial recognition of merchandise inventories* (IAS 2) is done under the costs of purchase of inventories that comprise the purchase price, import duties and other taxes (other than those subsequently recoverable by the entity from the taxing authorities), and transport, handling and other costs directly attributable to the acquisition of goods. Trade discounts, rebates and other similar items are deducted in determining the costs of purchase. Examples of costs excluded from the cost of inventories and recognized as expenses in the period in which they are incurred are: (a) abnormal amounts of wasted materials, labor or other production costs; (b) storage costs, unless those costs are necessary in the production process before a further

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[5] Accounting Act, Official Gazette 109/07

production stage; (c) administrative overheads that do not contribute to bringing inventories to their present location and condition; and (d) selling costs. As alternative, initial recognition of merchandise inventories can be done under standard costs and retail method. Retail method is often used in the retail industry for measuring inventories of large numbers of rapidly changing items with similar margins for which it is impracticable to use other costing methods. The cost of the inventory is determined by reducing the sales value of the inventory by the appropriate percentage gross margin. The percentage used takes into consideration inventory that has been marked down to below its original selling price. An average percentage for each retail department is often used. Methods for consumption of merchandise inventories under IAS 2 and CFRS 10 are specific identification of costs, FIFO method and weithed average cost method.

- Specific identification of cost means that specific costs are attributed to identified items of inventory. This is the appropriate treatment for items that are segregated for a specific project, regardless of whether they have been bought or produced. However, specific identification of costs is inappropriate when there are large numbers of items of inventory that are ordinarily interchangeable. In such circumstances, the method of selecting those items that remain in inventories could be used to obtain predetermined effects on profit or loss.

- The FIFO method assumes that the items of inventory that were purchased first are sold first, and consequently the items remaining in inventory at the end of the period are those most recently purchased.

- Weighted average cost method, the cost of each item is determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased during the period. The average may be calculated on a periodic basis, or as each additional shipment is received, depending upon the circumstances of the entity.

Each of the three alternative methods of costing inventories under the periodic system is based on a different assumption as to the flow of costs. If the cost of commodities and the prices at which they were sold remained perfectly stable, all three methods would yield the same results. Prices do fluctuate, however, and as a consequence the three methods will ordinarily yield different amounts for both (1) the inventory at the end of the period and (2) the cost of the merchandise sold and net income reported for the period. *Measurement subsequent to initial recognition of merchandise inventories* (IAS 2) is done under net realizable value or fair value and compared with the cost and use lower of two.

- Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. Net realizable value refers to the net amount that an entity expects to realize from the sale of inventory in the ordinary course of business.

- Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Fair value reflects the amount for which the same inventory could be exchanged between knowledgeable and willing buyers and sellers in the marketplace. Net realizable value for inventories may not equal fair value less costs to sell.

The cost of inventories may not be recoverable if those inventories are damaged, if they have become wholly or partially obsolete, or if their selling prices have declined. The cost of inventories may also not be recoverable if the estimated costs of completion or the estimated costs to be incurred to make

the sale have increased. The practice of writing inventories down below cost to net realizable value is consistent with the view that assets should not be carried in excess of amounts expected to be realized from their sale or use. Inventories are usually written down to net realizable value item by item. In some circumstances, however, it may be appropriate to group similar or related items. It would be possible to apply the lower of cost or net realizable value (1) to each item in the inventory, (2) to major classes or categories, or (3) to the inventory as a whole. This may be the case with items of inventory relating to the same commodity line that have similar purposes or and uses, are marketed in the same geographical area, and cannot be practicably evaluated separately from other items in that line. Estimates of net realizable value also take into consideration the purpose for which the inventory is held. A new assessment is made of net realizable value in each subsequent period. When the circumstances that previously caused inventories to be written down below cost no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of the write-down is reversed (i.e the reversal is limited to the amount of the original write-down) so that the new carrying amount is the lower of the cost and the revised net realizable value. This occurs, for example, when an item of inventory that is carried at net realizable value, because its selling price has declined, is still on hand in a subsequent period and its selling price has increased. When inventories are sold, the carrying amount of those inventories shall be recognized as an expense in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories shall be recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, shall be recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs. Regarding Croatian Income Tax Act there is a difference especially regarding writing - down merchandise inventories and recognition of those incurred expenses in income tax return.

4. MAIN RESULTS FROM EMPIRICAL RESEARCH

The questionnaire was send to the 100 randomly selected trading companies in 2010. Total number of trading companies which has responded to the questionnaire was 31. From the total number of trading companies which has participated in research, 71% of companies were small companies, 16% were medium companies and 13% were large companies. Under Accounting Act companies are classified under certain criteria on small, medium and large companies. Small and medium companies are liable to prepare and disclose their financial statements under CFRS and large companies (also companies which are listed in stock exchange) are liable to prepare and disclose their financial statement under IFRS.
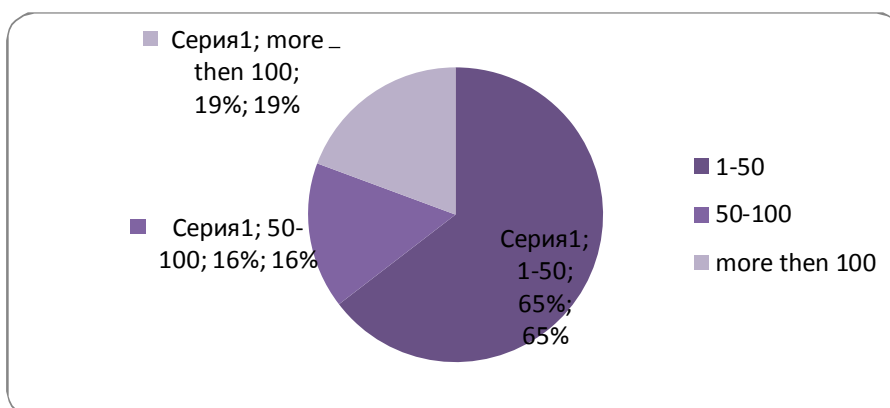
Further, from 31 trading companies 94% are limited liability companies and 6% are Joint Stock Company. The highest number of trading companies which has participated in questionnaire has head office in County of Zagreb.
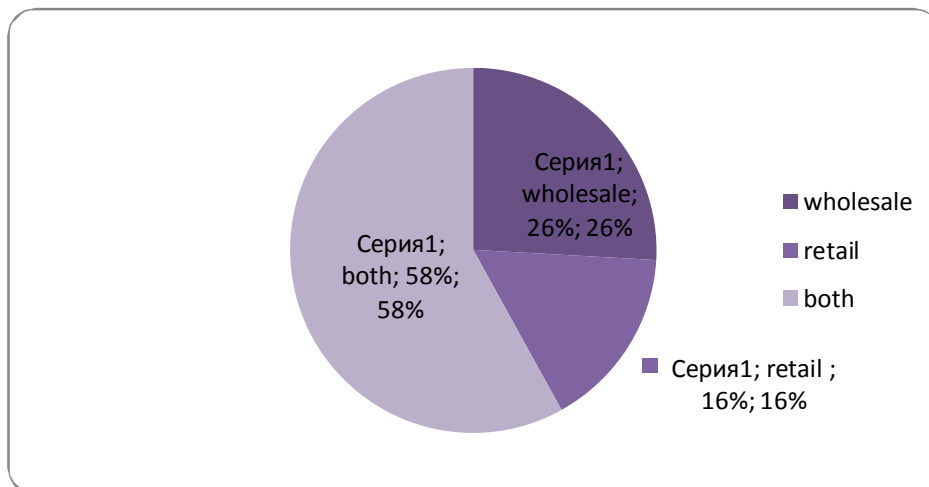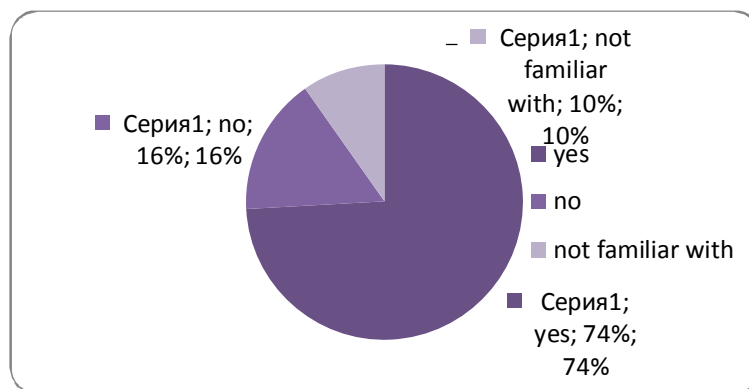
Trading activities
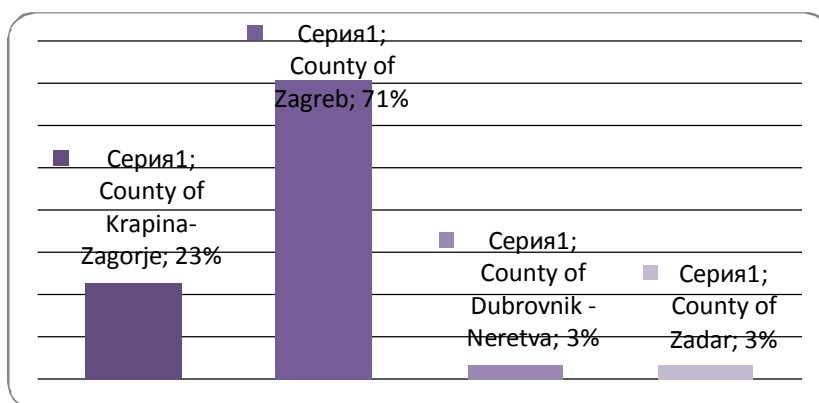
Head offices of questioned trading companies

Number of employees

On question "does the company has accounting policies", 74% of companies has answered that they have accounting policies, 16% of companies has answered that they don't have accounting policies and even 10% of companies isn't familiar with accounting policies.


Does your company has accounting policies?

Those data about 10% of companies which are not familiar with accounting policies are little bit disturbing since it is necessary under accounting regulation to disclose accounting policies and to act in accordance with them. Among those 74% of companies which has answered that they have accounting policies 42% companies have answered that their accounting policies are made in accordance with IFRS or CFRS. Around 32% has answered that their accounting policies are made in accordance with Income Tax Act. Under accounting regulations it is not acceptable to use Income Tax Act while creating accounting policies. Domination of tax regulation is little bit lower in companies that are obligated to conduct audit of financial statements because auditors are much more concerned with right application of accounting standards.[6] Situation in other companies (that aren't obligated to have their financial statements audited) is different. In this companies influence of tax regulation is higher and much more important. This is result of the fact that usage of accounting standards in these companies isn't supervised and usage of tax regulation is supervised by Ministry of finance – Tax department. Trying to simplify the reporting these companies use tax regulation in measurement of financial statement elements because on this way they can eliminate differences between financial statements and profit tax return. The result of this is existence of hidden temporary differences (Dražić Lutilsky, Čevizović, Remenarić, 2007).

Around 68% of questioned companies has answered that accounting practice of dealing with inventories of merchandise in their company is arranged by CFRS 10 or IAS 2 and other 31% has answered that it is done by Income Tax Act. So, now it can be concluded that it is completely wrong to use Income Tax Act as accounting practice and that some Croatian SME's are mostly using Income Tax Act because it is simpler and then they are not obligated to prepare two sets[7] of financial statements but only one which can be used in both purposes: state purpose and owner purpose.
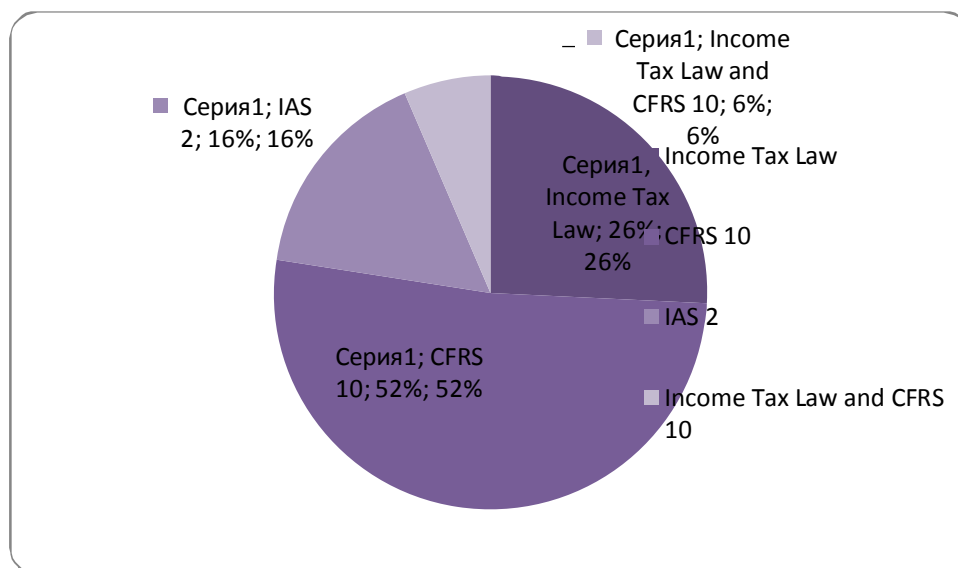
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[6] Croatian Audit law proscribes using of International Standards on Auditing (ISA).

[7] Dual concept of financial reporting.

Respectively, it would be better to say that tax legislation has a strong fingerprint over accounting legislation (Dražić Lutilsky, Čevizović, Remenarić, 2007).
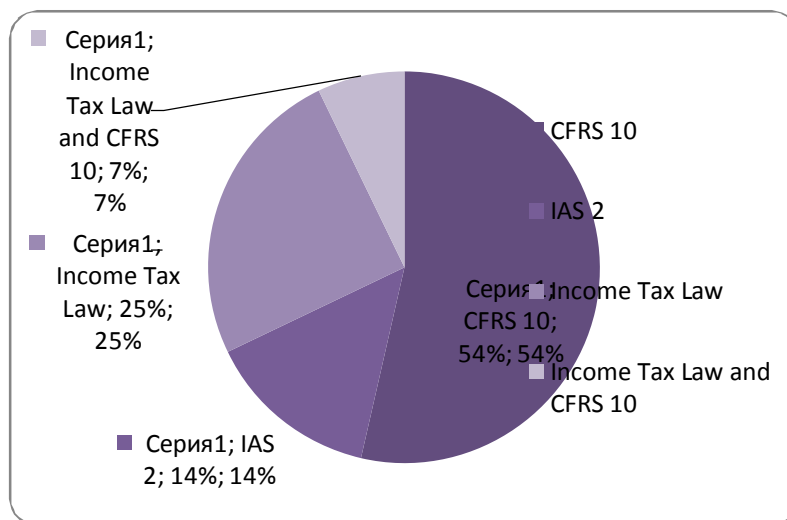

Accounting policies are made in according to:

Accounting practice of dealing with merchandise inventory

Portion of merchandise inventory in total asset of the companies for 45% of companies is 20% of total asset value, for 42% of companies is between 20 and 50% of total asset value, for 3% of companies this value is between 50 and 70% and for 10% of companies the share in total asset is higher than 70%. Those 10% of companies with higher value of merchandise inventory in total value of asset

surely has issues with liquidity, since the high amount of working capital is captive in inventories. If they have a high turnover ratio, meaning that those inventories are transformed in receivables in a short period of time and that a company doesn't have problem in collecting money from those receivables (but in this time of crisis who doesn't) then liquidity is not in jeopardy. But it is important to take some efforts regarding conducting the inventories of merchandise. It is important to start with the department of supply which often doesn't think about consequences of wrong and too large orders which can endanger company liquidity. So, with different analyses, ratios and planning of inventories the companies could significantly influence on holding "optimal" inventories of merchandise.
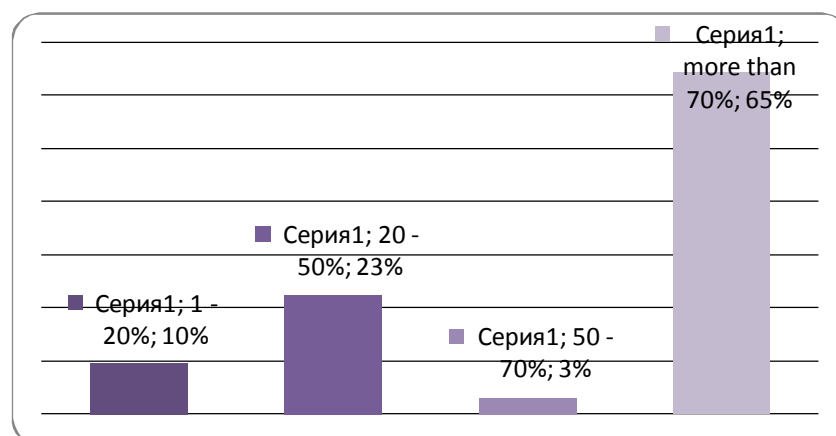

Revenue structure

In all companies with trading activities as a basic business activity, revenues from sold goods should have the most significant part in total revenues. So, for 33% of companies in which revenues from sold goods represent only 50% of total revenues it could be that trading activity is not the main one or that companies has sold some long term asset in 2009 and that because of that revenues from sold goods have a smaller portion in total revenues. For initial recognition 90% of companies have answered that they are using purchase cost and that they record merchandise inventory under that value in their business books and 10% of companies have answered that they are using retail method. Around 65% of retail companies record merchandise inventories under retail price (with calculated margin and VAT) while the other 35% of companies record merchandise inventories under purchased price. Croatian practice is to record merchandise under retail price (for retail activity) but big foreign retail chains which entered on Croatian market record their merchandise under purchased price. Around 88% of wholesale companies record merchandise under purchased price while only 12% record merchandise under retail price. FIFO method is used by 35% of companies, 39% of companies are using weighted average price method, 6% of companies are using specific identification cost method, 13% of companies retail method and even 6% of companies are not familiar with the method because the accounting software is doing it for them. The question that is rising is how do those 6% of companies disclose their accounting policies if they don't know which method is used for consumption of merchandise?
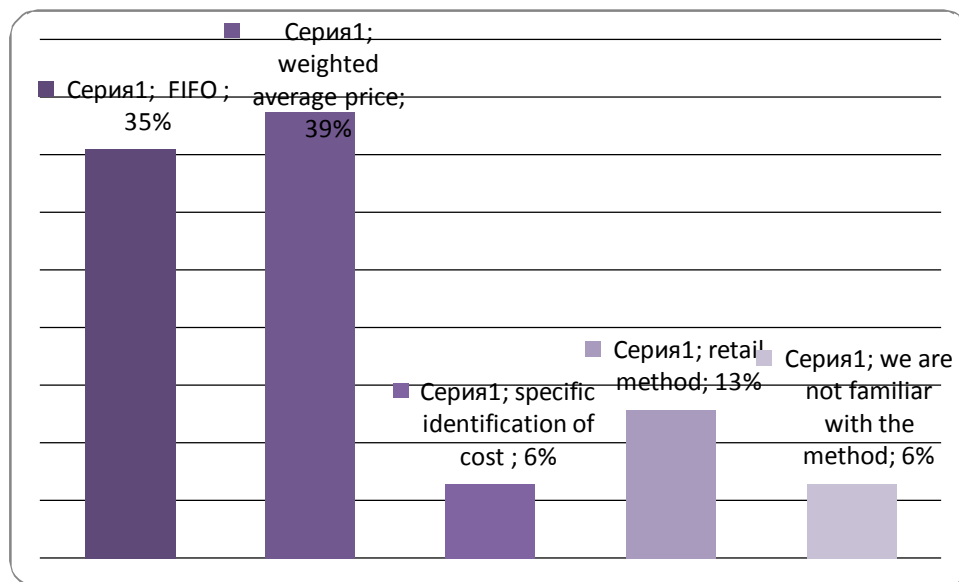
Methods for merchandise consumption

On question "are they familiar with the impact of each method on financial result" even 13% of companies have answered that they aren't. Around 67% of companies have answered that in case of increase purchased cost they would use weighted average price method to obtain lower financial result but 33% of companies has answered wrongly and they have stated that they would use FIFO method. The conclusion that could be drawn not only from that question is that accountants should always educate themselves in their area of expertise.
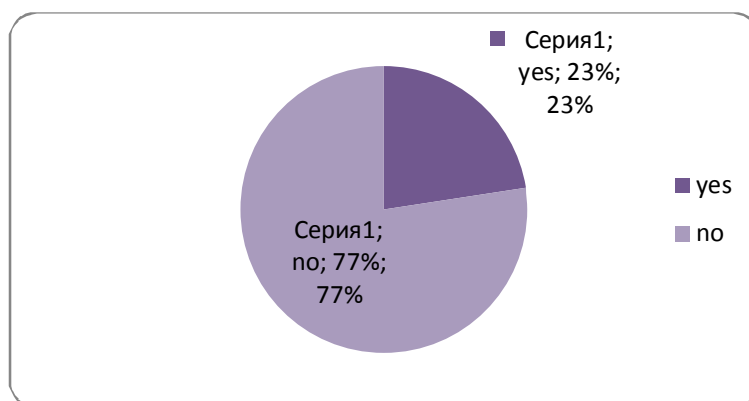
Impact of Income Tax Act on consumption method of merchandise

77% of companies have answered that on their decision about accounting policies in merchandise consumption Income Tax Act had no influence while on decision of 23% of companies Income Tax Act had influence. Under Income Tax Act it is possible to recognize expenses of sold goods by FIFO method or weighted average price method. Other methods are not eligible under Croatian Tax Act.
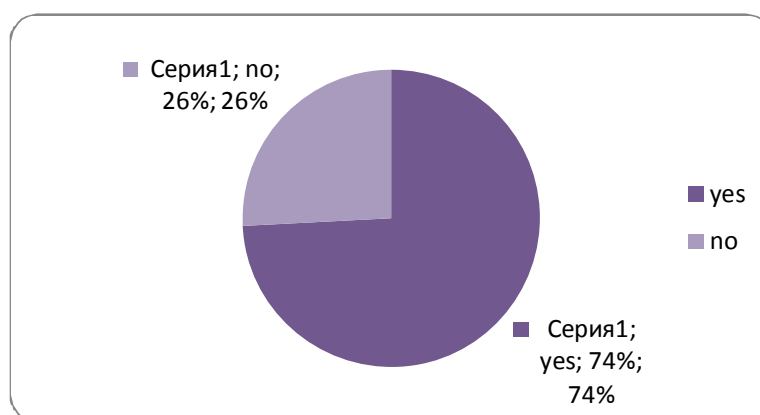

Structure of companies which are revaluating inventories

Revaluation or writing – down of merchandise inventories is done by 74% of companies while even 26% of companies do not perform it. That would mean that those 26% of companies are not conducting merchandise in according with accounting standards, that they have overrated financial result and inventories of merchandise since they didn't revaluate them. Even 35% of companies has answered that on decision about revaluation Income Tax Act has great influence which could mean that they are writing-down merchandise only when they are sure that expense will be tax deductible and not when there is a sincere need for that. The tax base shall be the profit determined pursuant to the accounting regulations as the difference between revenues and expenses before the profit tax assessment, increased and reduced in accordance with the discrepancies of Profit Tax Act. According to that discrepancies determined to the accounting regulations can be divided into two groups:

1. permanently non-recognised expenses/revenues (permanent differences)
2. temporarily non-recognised expenses/revenues (temporary differences)

Permanent discrepancies between accounting profit and the tax base in revenue most frequently emerge in inclusion into the revenue of a company of the amounts which were already taxed, such as dividends and shares in profit. Each taxpayer has to provide in his accounting the necessary data on expenses and revenue which have a characteristic of permanent discrepancies. Permanent discrepancies in expenses emerge because the amounts of expenses reported in profit and loss statement for tax purposes are permanently tax non-deductible expenses. In the procedure of determining the profit tax base the amounts of permanently tax non-deductible expenses increase the accounting profit. The effect of tax non-deductible expenses is also evident in the higher rate of the share of profit tax in accounting profits in comparison with the prescribed profit tax rate. Tax basis before temporary differences is the amount of the profit determined pursuant to the accounting regulations corrected with the above stated revenues and expenses, which have characteristic of permanently non-recognised revenues/expenses. When this amount, tax basis before temporary

differences, is corrected with temporary differences and decreased for tax relief, exemptions and incentives tax basis is derived. Calculated tax basis is defined as basis for the calculation of profit tax, which amounts 20% of tax basis. In tax regulations in Croatia "temporary differences which result in tax impacts reported in liabilities as *deferred payment of profit tax* are not allowed. This arises from the provisions which specify that only the amounts of expenses reported in accounting as operating expenses may be recognized as expenses for tax purposes. In revenue those are the provisions according to which all amounts of revenue reported in accounting as operational revenue are considered as revenue for tax purposes" (Spajić, 2006). Revaluation or writting –down inventories of merchandise will be recognized and tax deductible under Croatian Income Tax Act in the same period in which the inventories are sold, destroyed, or used otherwise. If revaluation is done when it is necessary but those merchandise were not sold, destroyed or used otherwise then it is necessary to increase tax base in profit tax return and to show financial effects of those non deductible expenses as temporary difference in financial accounting of the company as deferred cover of profit tax.
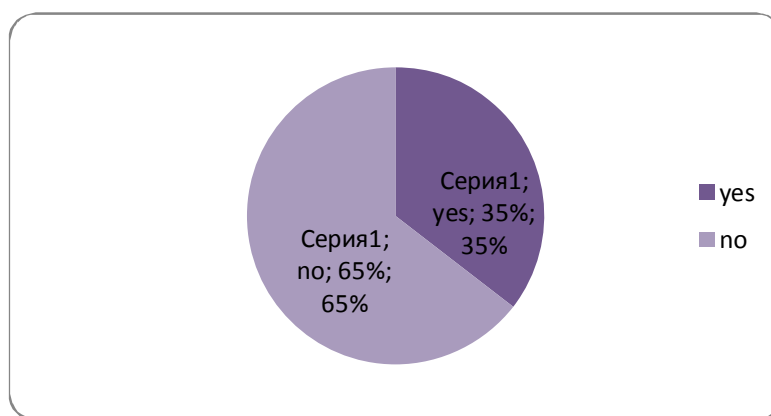
Influence of Income Tax Act on revaluation

Around 81% of companies have answered that if they are writing-down merchandise that wasn't sold or used otherwise, in that case they are increasing income tax base in profit tax return, but other 19% of companies have answered that they don't do that or that they aren't familiar with the fact that they have to increase income tax base. Again, knowledge of the accountants could be questioned. On question "do they record deferred cover of profit tax if the written of merchandise is still on inventory" only 23% of companies have answered that they record that event while 61% of companies isn't recording that event and 16% of companies isn't familiar with that kind of recording. Only 42% of companies consider that recording of deferred cover of profit tax will influence on realistic exposure of financial result, while 19% of companies believe that recording of that event has no purpose. It should be mentioned that writing-down and recording of deferred cover of profit tax will contribute in realistic exposure of financial result. But, making evidence of deferred cover of profit tax will make apparently better financial result in a period of origination temporary differences which will be suitable for owners of the company since they will have a higher profit for distribution. Even 81% of companies consider that it is important that measurement subsequent to initial recognition is done under net realizable value or purchased cost, dependably what is lower but 19% of companies think that it is important to pay less income tax. Regarding to the all stated the above; the conclusion of the

conducted empirical research could be that most of the companies are greatly influenced by Income Tax Act during treatment of inventories of merchandise and not by accounting standards as they are supposed to. Income Tax Act has a great impact on evaluation of merchandise inventories in Croatian companies, but mostly in SME's. Sample of companies that has answered the questionaire is too small to be representative for the whole Croatian economy but it is representative to drawn such conclusion in whole.

5. CONCLUSION

Inventories of merchandise in Croatian companies are handled in accordance with demands of accounting standards (IAS 2 and CFRS 10) but it is visible from the results of empirical research that Income Tax Act has a great impact on some aspects of recognition of merchandise inventories. The problem appears when the owners strive to pay as less income tax as possible and because of that sometimes the requests given by the accounting standards are slightly avoided. Every company is driven by its own goals but due to the demands by accounting standards should determine which method for merchandise consumption it will use expecting that they should know the effect of methods on financial results. On long run expenses of sold goods at the end when all merchandise is sold, are always the same no matter what consumption method is used. But on a short run different methods of consumption are influencing on a current financial result and on a current financial position of the company. Some companies, if they are not in position to sell or to use merchandise in some other way for which it is necessary to be written off, will not proceed it in accordance with accounting standards because in that case expense will not be tax deductible for that period. But the amount of income tax is the same whether the companies are recording writing-down or not. But if they are recording writing-down of merchandise then a temporary difference will occur and they must record financial effects of that difference in their business books because of showing realistic financial result in the period of temporary difference occurrence and in the period of cancellation the same temporary difference. With recording of written –off merchandise the companies would increase expenses in income statement or decrease net profit which is in the best interest of the owner of the company. Otherwise, the company will show unrealistic profit for distribution to the owners.

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ESTIMATION OF THE MARKET POWER IN THE CZECH BANKING SECTOR

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Abstract

This paper estimates the market power in the Czech banking industry during the period 2000-2009. To measure the degree of market power in the Czech banking sector we use the Lerner index. The Lerner index is applied on data from 15 banks, which covered about 90% of the banking market. The paper describes the theoretical framework of the competition, especially the Lerner index. Development of the Czech banking system is also reviewed in the paper. The estimations of the Lerner index do not confirm either monopoly or perfect competition structure in the Czech banking sector over the analysed period. The competition decreased in the period 2000-2005 which was affected by decreasing of price of funds and capital, and competition increased in the period 2005-2009 which was influenced by increasing of price of funds and capital.

Key words: *market power, Lerner index, Herfindahl-Hirschman index, competition, Czech banking sector, total assets*

1. INTRODUCTION

The microeconomic theory of the banking firm offers different aspects on the conduct of banks and their pricing strategies. In particular, the existence of pure profits which arises from exercise of market power depicts the banks' long-run equilibrium configuration in an imperfect market situation (Simpasa, 2010). Market power, depicted by the Lerner Index, is measured as a relative mark-up of price over marginal cost divided by price (Lerner, 1934). Coccorese (2009) argues that the Lerner index is a true reflection of the banks' degree of market power because it represents the behavioural departure from monopoly and perfect competition. Market power is especially prevalent in industries dominated by a few large firms, which serve as market leaders through collusive conduct.

The aim of this paper is to estimate the market power in the Czech banking industry during the period 2000-2009. To measure of the market power is using the Lerner index, which is applied on data from the Czech banks covered about 90% of the banking sector. The structure of the paper is follow. First part describes the empirical literature about competition in the banking industry. Next, the Czech banking sector is presented and we also describe the theoretical methodology, especially the Lerner index. In results the estimation output is shown, we compute Herfindahl-Hirschman index and Lerner index for the Czech banking sector.

2. LITERATURE REVIEW

Measuring the degree of competition has always been a problem in economics. Previous literature has shown that there have been a number of ways of observing and measuring bank competition. It is generally accepted that these methods can be categorised as structural and non-structural approaches.

The structural approach to the measurement of competition includes the Structure-Conduct-Performance paradigm (SCP) and the efficiency hypothesis. The SCP paradigm attempts to infer the degree of competition in an industry from its structural features establishing a direct link from industry structure to firm conduct, and from firm conduct to industry performance. The SCP paradigm is challenged by other theoretical approaches. The first challenge comes from the Efficient Structure (Efficiency) Hypothesis (EH). EH suggests that the positive relationship is not a consequence of market power but of the greater efficiency of firms with larger market share (Demsetz, 1973).

The most commonly used non-structural models in banking sector studies are Iwata (1974), Bresnahan (1982) and Panzar and Rosse (1987) models. Non-structural measures of competition are mainly based on the Lerner (1934) measure of monopoly power. The non-structural approach tries to measure competitive conduct directly and does not rely on a relationship between structure, conduct and performance. Bikker et al. (2009) show that Panzar-Rosse and Bresnahan methods can be formally derived from profit-maximizing equilibrium conditions, which is their main advantage relative to more heuristic approaches. Iwata's model has only been applied once to banking by Shaffer and DiSalvo (1994), due to the lack of micro data needed for empirical estimation. The Iwata model consists in the estimation of conjectural variation values for individual firms supplying a homogeneous product in an oligopolistic market. Bresnahan approach is a general market equilibrium model and it is based on maximising firms' profits at equilibrium. The first instrument issued from the new theory of industrial organisation applied to banking is the Panzar and Rosse (1987) model. The Panzar and Rosse (PR) technique is based on the H statistic. The PR method examines the relationship between price variations and the revenue of a specific bank.

Several empirical studies examined the competition in the Czech banking market. Pruteanu-Podpiera et al. (2007) applied Lerner index in the Czech credit market in period 1995-2005. They found a decrease in competition between the periods 1995–1998 and 1999–2000 followed by an increase lasting until 2002. The period 2003–2004 saw a decrease in competition with a slight revival in 2005. Other empirical analysis used Panzar-Rosse model for estimating competitive conditions in the Czech banking sector. Staikouras and Koutsomanoli-Fillipaki (2006) indicated the monopolistic competition in period 1998–2002. Bikker et al. (2007), Bikker and Spierdijk (2008) and Bikker et al. (2009) were identifying the monopolistic competition during the period 1986–2004.

3. OVERVIEW OF THE CZECH BANKING SECTOR

The Czech financial system can be characterized as bank-based system and banks play an important role in the economy on the side of corporations and business as well as households. The transformation and consolidation of the Czech banking sector was realized during 1990s. In years 1998-2001 the second round of privatization were occurred with the sale to foreigners of majority equity interests in four large Czech banks: Československá obchodní banka (ČSOB), Česká spořitelna (ČS), Komerční banka (KB) and Investiční a poštovní banka (IPB). Subsequent to IPB's privatization in 1998 to Nomura Securities, the bank became insolvent, was placed under state receivership, and finally merged with ČSOB in 2000 (Stavárek, 2003, p. 4). These Big Three (ČSOB, ČS and KB) are still the dominant players in the market. Their combined market share in terms of assets is about 50% and they have extensive detail branch networks.

The Czech Republic joined the European Union (EU) in 2004. The provisions of Act No. 21/1992 Coll., on Banks, as amended by Act No. 126/2002 Coll., regarding the single banking licence came into effect upon the accession of the Czech Republic to the European Union on 1 May 2004. The

single licence principle is based on freedom to provide services and freedom of establishment as basic principles of the EU. The single licence principle thus fosters greater liberalisation of banking business and increased pan-European competition (CNB, 2004). The Czech Republic's accession to the EU had no immediate impact on Czech banks, because their integration into the European financial system had been going on in previous years, especially after the privatisation of large banks was completed (CNB, 2004).

In 2009, the small and open Czech economy was hit hard by the global financial and economic crisis. Thanks to its very strong deposit base and the very small percentage of loans denominated in foreign currency, the banking sector remained stable throughout the global financial crisis. However, in the economic downturn company revenues deteriorated and unemployment increased sharply, leading to an increase in non-performing loans. Over 50% of the outstanding value in nonperforming loans is attributable to corporate loans (RZB Group, 2010).

Structure of the Czech banking sector is presented in Table 1, where the development of the number of banks in the analyzed period 2000-2009 is shown.

Table 1. Number of banks by ownership in the years 2000-2009

Number of banks by ownership								
		of which:						
		Czech-controlled banks				foreign-controlled banks		
Year	Banks total	total	state financial services	banks with state ownership	Czech-controlled banks	total	foreign-controlled banks	foreign bank branches
2000	40	14	1	4	8	26	16	10
2001	38	12	0	3	8	26	16	10
2002	37	11	0	2	9	26	17	9
2003	35	9	0	2	7	26	17	9
2004	35	9	0	2	7	26	17	9
2005	36	9	0	2	7	27	15	12
2006	37	9	0	2	7	28	15	13
2007	37	8	0	2	6	29	15	14
2008	37	7	0	2	5	30	14	16
2009	39	7	0	2	5	32	14	18

Source: Author's compilation based on data from CNB. <http://www.cnb.cz/cs/dohled_financni_trh/souhrnne_informace_fin_trhy/zakladni_ukazatele_fin_trh u/banky/bs_ukazatele_tab01.html> [cit. 10. 01. 2011]

In years 2000-2009 the number of banks is almost constant. There were several mergers and acquisitions in the Czech banking market during analysed years. The banking institutions include 16

banks (four large banks, four medium-sized banks and eight small banks), five building societies and 18 foreign bank branches in 2009.

The Czech banking sector has almost a stable shareholder structure. At the end of 2009, foreign capital dominated the sector's capital, with a direct share of 80.3% (i.e. direct shareholders holding shares directly, not through other entities). Foreign capital predominates in 14 banks, nine of them being wholly owned by foreign capital. Seven banks are majority owned by Czech shareholders. Five banks are still wholly Czech-owned (CNB, 2009).

4. METHODOLOGY AND DATA

We used the dataset of 15 Czech banks, which covered about 90% of the Czech banking sector. Due to entry and mergers, the sample is an unbalanced panel of 150 observations of non-consolidated banking firms. The bank-level financial data are obtained from the annual reports of individual banks and the BankScope database. In the paper we apply the Lerner index for testing the market power in the Czech banking industry during the period 2000-2009.

For the analysis, we compute the Lerner indexes for the Czech banking sector. We compute the Lerner index to get an individual measure of competition for each year of our time sample. The Lerner index is used to measure the evolution of market power. In addition to these more accurate measures of market power, we also examine standard concentration variable Herfindahl-Hirschman index (HHI).

4.1. Hefindahl-Hirschmann index

The Herfindahl-Hirschman Index is the most widely treated summary measure of concentration in the theoretical literature and often serves as a benchmark for the evaluation of other concentration indices. Bikker and Haaf (2000) defined HHI as the sum of the squares of the bank sizes measured as market shares. Often called the full-information index because it captures features of the entire distribution of bank sizes, it takes the form:

$$HHI = \sum_{k=1}^{n} \left(\frac{q_k}{Q} \right)^2 = \sum_{k=1}^{n} r_k^2 \, , \tag{2}$$

where n is the number of banks in the banking sector,

q_k is the volume of the output of bank k, $k = 1, 2,…,$n,

Q is the volume of the output of the banking sector,

r_k is the share of the output of the bank k to the output of the banking sector.

The Herfindahl-Hirschman index stresses the importance of larger banks by assigning them a greater weight than smaller banks, and it incorporates each bank individually, so that arbitrary cut-offs and insensitivity to the share distribution are avoided. The HHI index ranges between 1/n and 1, reaching its lowest value, the reciprocal of the number of banks, when all banks in a market are of equal size, and reaching unity in the case of monopoly (in a market with only one bank). Sometimes the value of

HHI is multiplied by 10000 and then HHI indices in the range below 1000 show a very low concentration, in the range 1000–1800 show a moderate concentration, in the range above 1800 show a very high concentration of the banking system, whereas the index value equal to 10000 shows a full concentration (monopoly).

4.2. Lerner index

Market power (or firms' ability to price above marginal cost) is a powerful concept in economics because, among other things, it illustrates how and whether imperfectly competitive markets depart from the perfect competition benchmark; as such, this concept arises in many economic courses, especially those with a microeconomics focus (Rojas, 2010).

Casu and Girardone (2009) claim that the Lerner index of monopoly power is an indicator of the degree of market power and it is a well established measure of competition in the banking literature. It represents the extent to which market power allows firms to fix a price below marginal cost (MC).

Demirguc-Kunt and Peria (2010) show an alternative way to examine competition in banking is to compute direct measures of market power, since greater market power implies less competition. A frequently used measure of market power in banking is the Lerner index, defined as the difference between output prices and marginal costs (relative to prices).

The Lerner Index is a direct measure of competition because it focuses on the pricing power apparent in the difference between price and marginal cost thereby capturing the degree to which a firm can increase its marginal price beyond marginal cost (Berger et al., 2009).

Theoretically, a key determinant of market power is demand elasticity; a popular measure of such relationship is the Lerner index (Lerner, 1934). A number located in the unit interval that is usually depicted as having an inverse relationship with (the absolute value of) demand price elasticity. The Lerner index is appealing because it shows where a firm's market power is located between perfect competition and maximal market power, and the role that demand elasticity plays in determining a firm's mark-up (Rojas, 2010).

Fernandez de Guevara (2005) show the interpretation of the Lerner index as market power is often made too mechanically, as it is necessary to take into account several problems that are posed in the empirical estimation when valuing its significance.

Firstly, the value of the Lerner index is influenced by the criteria followed when more or fewer concepts are included in the calculation of revenue and costs. Thus it is not infrequent to consider only financial revenue and costs and to omit other revenue and trading costs (so that the margin varies and the value of the index changes). When only the traditional intermediation activity of loans-deposits is considered, the model does not consider the banking activity of providing services. The substantial growth in this type of activity in recent years has led to a change in the revenue structure of banking firms; the relative importance of net financial revenue has decreased, and revenue from items other than interest (mainly commissions) has increased.

Secondly, it is general practice not to consider the cost of risk, even though its effect on the profit and loss account of banking systems is on average very important. There are various reasons for the continuance of these practices: the lack of sufficient data, the difficulties of calculation, and in the case of the cost of risk, the problem of its posting in time, as banking risk often appears only at a certain moment of the life of the investments made.

It is important to point out that, although the cost of risk is not included in the estimation of the cost function, this problem is present in two ways: 1) if the cost of risk is not taken into account, the interpretation of the Lerner index as market power may be wrong because it overestimates the margin; and 2) if the cost of risk is only computed when the corresponding provisions are made, its time profile will be skewed, as it can be said that these are costs that were latent in other periods but whose recognition has been delayed. In this last case, the Lerner index is likely to increase in an expanding phase of the cycle (in which there are few problems of bad debt and insolvency) and decrease in a low phase of the cycle (in which bad debt and provisions increase) without affecting market power.

Thirdly, the empirical estimation of separate prices or rates for loans and deposits is not without problems. Thus, in the case of loans the profit and loss account does not give separately the financial income associated with them, as it appears jointly with other financial products (fixed income investments, for example). In the case of deposits, the financial costs are included with those of other liability products (Fernandez de Guevara, 2005).

The Lerner index is a more accurate measure of market power than the standard concentration measures. Berger et al. (2009) claim that the Lerner index is averaged over time for each bank i for inclusion in the regression model. It should be noted that the constructed Lerner index does not capture risk premia in the prices of banks' product and services, breaking down its positive association with the size of monopoly rents. However, it is the only measure of competition that is computed at the bank level. Demirguc-Kunt and Peria (2010) show the advantage of the Lerner index, opposite (against) the Panzar-Rosse H statistic, is that it is not a long-run equilibrium measure of competition. Also, because of this, the Lerner index can be calculated at each point in time.

In practice, an important weakness of the Lerner index approach is that available bank balance-sheet data do not correspond to the prices and costs required to calculate the index, so that many debatable choices are needed to proxy prices and costs (Bikker et al., 2007).

The index is defined as the difference between price and marginal cost, divided by price. It is a level indicator of the proportion by which price exceeds marginal cost, and is calculated as:

$$LI_{it} = \frac{P_{it} - MC_{it}}{P_{it}} \tag{1}$$

where P_{it} is the price of banking outputs for bank i at time t,

MC_{it} is the marginal costs for bank i at time t.

The resulting LI_{it} is averaged over the period under study for each bank i. P_{it} is the price of total assets proxied by the ratio of total revenues (interest and noninterest income) to total assets for bank i at time t. MC_{it} is derived from the translog cost function Eq. (2).

Following the approach in Fernandez de Guevara et al. (2005), Berger et al. (2009), Demirguc-Kunt and Peria (2010) or Fungáčová et al. (2010), who proxy banking production by total assets, P is calculated as ratio of total bank revenues to total assets. MC is estimated on the basis of a translog cost function with one output (total assets) and three input prices (price of labor, price of physical capital, and price of borrowed funds). Symmetry and linear homogeneity restrictions in input prices are imposed. The cost function is specified as follows:

$$\ln TC = \alpha_0 + \alpha_1 \ln y + \frac{1}{2}\alpha_2 (\ln y)^2 + \sum_{j=1}^{3}\beta_j \ln w_j + \sum_{j=1}^{3}\sum_{k=1}^{3}\beta_{jk}\ln w_j \ln w_k + \sum_{j=1}^{3}\gamma_j \ln y \ln w_j + \varepsilon$$
$$(2)$$

where TC denotes total costs,

y total assets,

w_{jk} (w_1, w_2 and w_3) indicate three input prices (i.e. labor, capital and funds),

W_1 indicate the price of labor, which is the ratio of personnel expenses to total assets, w_2 is the price of physical capital, which is the ratio of other non-interest expenses to fixed assets and w_3 is the price of borrowed funds, which is the ratio of interest expenses to total funds.

Total cost is the sum of personnel expenses, other non-interest expenses and interest expenses. The indices for each bank have been excluded from the equation for the sake of simplicity. The estimated coefficients of the cost function are then used for computing the marginal cost. Indeed, as marginal cost is the derivative of total cost to output, it can be derived that the derivative of the logarithm of total cost to logarithm of output is the ratio of marginal cost to total cost multiplied by output. As a consequence, marginal cost is equal to the product of the derivative of the logarithm of total cost to output multiplied by the ratio of total cost to output. The derivative of the logarithm of the total cost with respect to the logarithm of output is computed using the cost function specified in Eq. (2). The marginal cost is based on the estimation of the cost function. We estimate a translog cost function with one output and three input prices.

The estimated coefficients of the cost function are then used to compute the marginal cost (MC):

$$MC = \frac{TC}{y}\left(\alpha_1 + \alpha_2 \ln y + \sum_{j=1}^{3}\gamma_j \ln w_j\right) \tag{3}$$

Once marginal cost is estimated and price of output computed, we can calculate Lerner index for each bank and obtain a direct measure of bank competition. It should be noted that the constructed Lerner index does not capture risk premia in the prices of banks' product and services, breaking down its positive association with the size of monopoly rents. However, it is the only measure of competition that is computed at the bank level (Berger et al., 2009).

The interpretation of the Lerner index as an indicator of market power may incur some problems: a) it is influenced by the criteria followed in the definition of revenue and costs; b) it is general practice not to consider the cost of risk, despite its relevance on bank costs and revenues; c) banking output is usually proxied by the total assets of each firm mainly because of data problems; finally, d) the Lerner index may not be an appropriate measure of market power when a firm solves a dynamic problem (Pindyck, 1985).

The Lerner index ranges between zero and one. When $P = MC$, the Lerner index is zero and the firm has no pricing power. A Lerner index closer to one indicates the higher mark-up of price over marginal costs and hence market power for the firm (Ariss, 2010). In general, $LI = 0$ it indicates

perfect competition, while $LI = 1$ indicates monopoly. The Lerner index is an inverse measure of competition, i.e., a greater Lerner index means lower competition (Pruteanu-Podpiera et al., 2007).

5. ESTIMATION OUTPUT AND RESULTS

The result is presented regarding the computation of the Lerner index. First, descriptive statistics of individual variables are presented in Table 2.

Table 2. Descriptive statistics

	y	TC	P	w_1	w_2	w_3
Mean	164063.7	9177.955	0.065960	0.026296	3.087703	0.755483
Median	52410.00	2333.000	0.059811	0.020812	1.393309	0.671734
Maximum	788177.0	107533.2	0.261843	0.121896	79.10968	2.262295
Minimum	930.7000	36.00000	0.022673	0.002849	0.256955	0.256955
Std. Dev.	218016.0	14878.66	0.029763	0.019905	6.854949	0.304061

Source: Author's calculations

5.1. Herfindahl-Hirschman index

First, the Herfindahl-Hirschman index (HHI) is computed and the values of the HHI are presents in Table 3. The HHI is more traditional measures of the degree of market power. Similar to the Lerner index and essentially to all measures of market power commonly used in the literature, the HHI index are also based on a single-product assumption.

Table 3. Herfindahl-Hirschman index

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
HHI	1000	1300	1200	1170	1120	1150	1100	1140	1010	1030

Source: Author's calculation

In general, the values of HHI show a trend of modest decrease, meaning that market concentration changed appreciably over the sample period. The Czech banking market could be described as a moderately concentrated market over the period of 2000–2009. The HHI continuously decreased from 2001 to 2009, and the number of banks also continuously decreased over this time period (Table 1).

As argue Chan et al. (2007) increases in the HHI generally indicate a loss of pricing power and a decrease in competition, whereas increases imply the opposite. HHI was continuously decreasing from 2001 to 2009. Thus, we can say that the competition was slightly increasing after 2001.

5.2. Lerner index

First, we estimate Eq. (2) and Eq. (3), and then we can calculate the Lerner index as in Eq. (1). The cost function is estimated for each year so as to allow the coefficients of the cost function to evolve over time. The cost function is estimated introducing fixed effects for banks. The results for each year are presented in Table 4. We compute mean and median of the Lerner index. Pruteanu-Podpiera et al. (2007) argues that the Lerner index is an inverse measure of competition, i.e. a greater Lerner index means lower competition (Pruteanu-Podpiera et al., 2007). The statistics of Lerner indices per year concern all the Lerner indices of the year for all analysed banks, where the banks have equal weights.

Table 4. Lerner index

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Mean	0.3654	0.4712	0.4935	0.5670	0.5011	0.5742	0.5392	0.5307	0.4703	0.3761	0.4825
Median	0.4293	0.4331	0.4589	0.5250	0.5068	0.5592	0.5224	0.5483	0.5003	0.3252	0.5003
Std. Dev.	0.3818	0.1705	0.1343	0.1600	0.1640	0.1170	0.1031	0.1065	0.0742	0.1215	0.1883

Source: Author's calculation

At first sight the results cannot distinguish a clear-cut trend in the evolution of the Lerner index. During the period 2000-2005 the Lerner index increased, signalling a slight decrease in competition. This episode was followed by a decrease in the Lerner index; hence a slight increase in competition, during 2006–2009.

Our results is confirmed by Pruteanu-Podpiera et al. (2007) that found the evolution became more regular with a clear increase from 2002 to 2005. They pointed out that the entry of foreign investors in the Czech banking industry, which considerably increased from 1999 with the launching of the privatization of major banks, does not seem to favor a strong increase in banking competition. It led to an increase in competition until 2002, but then the results show a drastic decrease in competition. They argued that as this entry meant a strong change in the ownership of banks. However, they stressed that the empirical literature on banking sectors in developed economies concludes in favor of imperfect competition. Therefore, the strong foreign ownership in Czech banks may have favored a process of convergence of banking performance towards the normal functioning of a market economy, even if a strong level of banking competition is not observed.

Figure 1 shows the evolution of the output price, the marginal cost and the Lerner index of the Czech banking sector. Marginal costs were decreasing during the period 2000-2005 and then marginal costs were increasing during the period 2005-2009. It can be seen that as a result of the joint evolution of marginal costs, the value of the Lerner index increased from 36.54% in 2000 to 57.42% in 2005 and then the value of the Lerner index were decreasing from 57.42 % in 2005 to 37.61% in 2009. It can be argued that this evolution of the Lerner index is influenced by decreasing of price of funds and price of capital in period 2000-2005 and then price of funds and capital increased in period 2005-2009.

The mean of the Lerner index computed for the full sample is 48.25%, which do not confirm either monopoly or perfect competition. This result is confirmed by e.g. Bikker et al. (2007), Bikker and Spierdijk (2008) and Bikker et al. (2009) who revealed the monopolistic competition until 2004.

Thus, we can conclude that the competition in the Czech banking market stands somewhere between the two extremes – monopoly and perfect competition. The competition decreased in the period 2000-2005 which was affected by decreasing of price of funds and capital. And competition increased in the period 2005-2009 which was influenced by increasing of price of funds and capital.

Fig. 1. Evolution of the output price, the marginal costs and the Lerner index
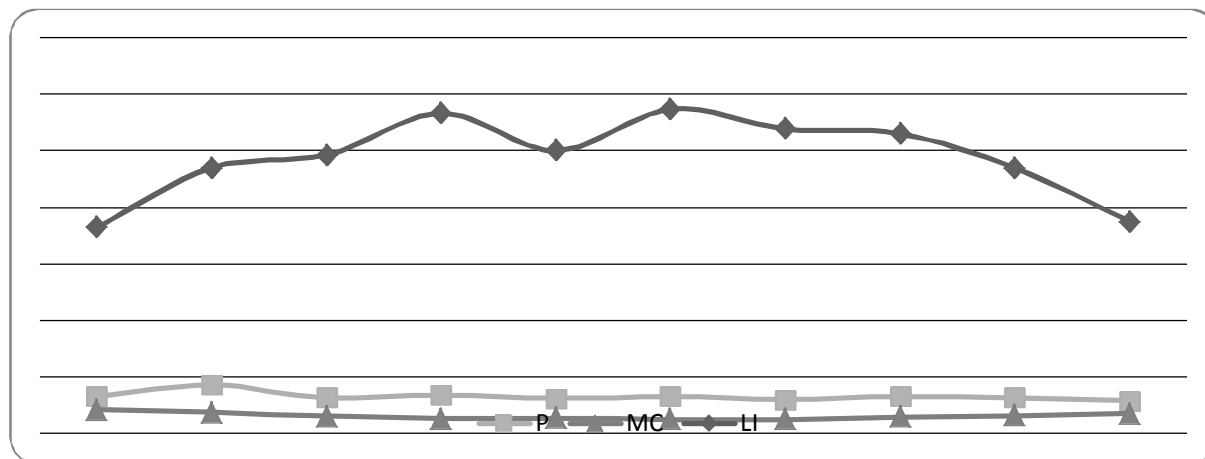
Source: Author's calculation

5. CONCLUSION

The aim of this paper was to estimate the market power in the Czech banking industry during the period 2000-2009. We used the Lerner index applied on data from the Czech banks covered about 90% of the banking sector. We came to conclusion that the Lerner index computed for the full sample is 48.25%, which do not confirm either monopoly or perfect competition. In addition, we can identify two sub-periods of divergent development of market competition. Whereas the competition decreased during 2000-2005 it increased during the period 2005-2009. More concretely, mean of the Lerner index for the first periods is 47.97% and for the second period is 49.81%.

ACKNOWLEDGEMENT:

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DEVELOPMENT OF METHODOLOGY FOR MEASURING THE ECONOMIC EFFICIENCY AND SYSTEM INTEGRATED ANALYSIS IN ESTONIA: HISTORICAL RESEARCH

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Abstract

The period from 1970 to 1991 merits a special attention in the historical development of business analysis in Estonia. This period is characterised by formation of the Estonian school of business analysis headed by Academician Uno Mereste.

This article is a part of large-scale research the aim of which is to examine the historical development of the theory and practice of business analysis in Estonia since the early nineteenth century up to 2011. This article seeks to identify the most important developments and improvements of the unique technique for measuring the business efficiency developed by Academician Uno Mereste. In this article we focus on developments and improvements of the technique using dissertations published in Estonia as our data. The study focuses on the period from 1970 to 1991 when Estonia was a part of the Soviet Union.

Key words: *business analysis, theory of index numbers, economic efficiency.*

2. INTRODUCTION

The period from 1970 to 1991 has seen a remarkable amount of progress in both theory and using the index numbers and the closely related problems associated with the measurement of output, input and productivity. During the period of analysis, the Estonian school of business analysis headed by Academician Uno Mereste was founded.

It should be noted that the historical development of business analysis in Estonia is scarcely-studied. This article is a part of large-scale research the aim of which is to examine the historical development of the theory and practice of business analysis in Estonia since the early nineteenth century until today.

This article seeks to identify the most important developments and improvements of the unique methodology for measuring the business efficiency developed by Academician Uno Mereste. In this article we focus on developments and improvements of the technique, using dissertations published in Estonia as our data. The paper briefly reviews the methodology for measuring the business efficiency and system integrated analysis. Our research focus is on economic/business application rather than statistical theory.

The study focuses on the period from 1970 to 1991 when Estonia was a part of the Soviet Union. During this period Estonia had enacted a two-tier system of dissertations. The lower level was named "candidate" (equivalent to PhD) and the higher Doctor of Science (DSc). Today dissertations of both

levels have been recognized as belonging to the PhD level. This paper analyses four PhD level dissertations.

Mereste's works are not well-known in 'English-speaking world' since they are available only in Russian (1969) and Estonian (1975, 1984, 1987a, 1987b).

3. APPLICATION OF THE INDEX NUMBERS IN BUSINESS ANALYSIS

The indexes are important tools of economic and business analysis. An index number is a statistical measure to show average changes in one or more related variables between two periods of time or two places. Index numbers are the indicators of various trends. There is a substantial body of economic analysis concerning the construction of index numbers, desirable properties of index numbers and the relationship between index numbers and economic theory.

Mereste developed an alternative branch of index number theory application in business analysis, but for various reasons, his approach has been mostly forgotten by present-day economists.

Mereste's main scientific research area was development of the theory of index numbers. In 1961 he obtained his PhD degree for the thesis 'The Decomposition of the Absolute Increment in Economic Statistics: Problem and Its Solution'.

In 1970 Mereste obtained his DSc for the thesis 'Index Number Theory in Business/Economic Analysis (theoretical and methodological issues)'. In his dissertation, Mereste paid special attention to considering the basic concepts of the theory of indexes, and to defining and standardizing terminology. He also proposed a version of scientific classification of indexes (1970).

In his doctoral dissertation U. Mereste developed a theory of the analytical indexes (so named Super Indexes). This approach was originally developed in the 19th century by famous German economist Etienne Laspeyres. It is necessary to emphasize that from 1869 to 1873 Laspeyres served as Professor of Geography, Ethnography, Statistics and Political Economy at Dorpat (now Tartu, Estonia).

In the then current practice of business analysis, indexes were used either in the form of stand-alone, or as a systemic factor indexes. Mereste noticed that there is a third variant, qualitatively different from the mentioned possibilities of indexes, namely in the form of the index matrices. In the final part of his doctoral dissertation, Mereste developed a method that allows us to study the interaction and mutual influence of any number of interrelated economic phenomena using analytical indexes of factor. This original method is known as the 'theory of efficiency field', which is based on combining the systems analysis with matrix modelling (1970).

Mereste's doctoral thesis established the foundation for methodology of system integrated analysis that needed to be further developed for use in practice. In 1984 Mereste's monograph *The System Integrated Analysis and Efficiency* was published. This monograph presents a formalized methodology of system integrated analysis suitable for use in practice. The methodology of system integrated analysis was further developed in PhD theses by the following authors: Harry Luur (1982), Andres Root (1983), Maire Sarap (1988), Rein Volt (1989).

4. METHODOLOGY FOR MEASURING THE business EFFICIENCY AND SYSTEM INTEGRATED ANALYSIS

3.1 The concept of efficiency and matrix modelling

The efficiency of a company is normally associated with the control of costs and expenses and with the productive use of all the available resources of a company to deliver its products or services to the market place at a competitive price. Efficiency can be defined as the relationship between the output of products and/or services and the input of resources necessary for their delivery. According to Mereste, the relationships between the results (or output) of business activities of enterprises, should be reflected with the help of the matrix modelling. The matrix model is suitable for a thorough analysis of the results of business activities, and to reflect the level and dynamics of efficiency8.

The matrix approach to measuring economic efficiency comes from the fact that economic efficiency, as a multifaceted economic phenomenon, cannot be reflected in the form of a single index. To measure economic efficiency, such an approach is needed that would allow, with the help of a complete system model of the relationships, to cover all so called individual quality indicators, which are formed between the most important results of activities of a business unit. Such way of modelling allows to cover the entire area where the level of economic efficiency is formed, and to reflect all relations acting in it without exception.

Description of the formation of such model is shown in Fig. 1. It is a general model, which is suitable for a system integrated analysis of the results of business activities.

Graphic representation of the relations is very clear, but for large sets of indicators it is technically inconvenient. It is much more reasonable to present the same relations in the form of a matrix (Fig 2). The matrix connects a number of quantitative input parameters (α_i is an extensive parameter) through qualitative indicators (β_{ij} is an intensive parameter) and covers the entire area where economic efficiency is formed. Therefore, it can be considered as a matrix model of economic efficiency, which reflects economic efficiency in the context of all the relations of the given set or the level of detail that affects a change in economic efficiency.

The matrix consists of five initial quantitative parameters (sales, equipment, profit, units produced and number of employees). They are located in the header of table columns (γ_j) and header of table rows (α_i) (Fig. 2). Consequently the model of matrix's elements relationship is as follows:

$$\beta_{ij} = \gamma_j / \alpha_i \ (3.1),$$

where β_{ij} –   element of row *i* and column *j*;

      i –   row number of sell location (*i* = 1, 2, 3,...., *m*);

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[8] Distinction is made between the static and dynamic approaches to defining business efficiency. Efficiency within a certain period of time is referred to as the level of efficiency. The level of efficiency can be characterised by means of a certain number of intensity indicators. The variation or dynamics of business efficiency in time is expressed in terms of dynamics indices.

j –   column number of cell location (j = 1, 2, 3, ..., n).

Each matrix of economic efficiency is a square matrix in the form of $m = n$, in which m denotes the number of rows and n is the number of columns. The formula (3.1) can be written as $\alpha_i \beta_{ij} = \gamma_j$, then γ_j is a resultant phenomenon affected by parameters α_i and β_{ij}.
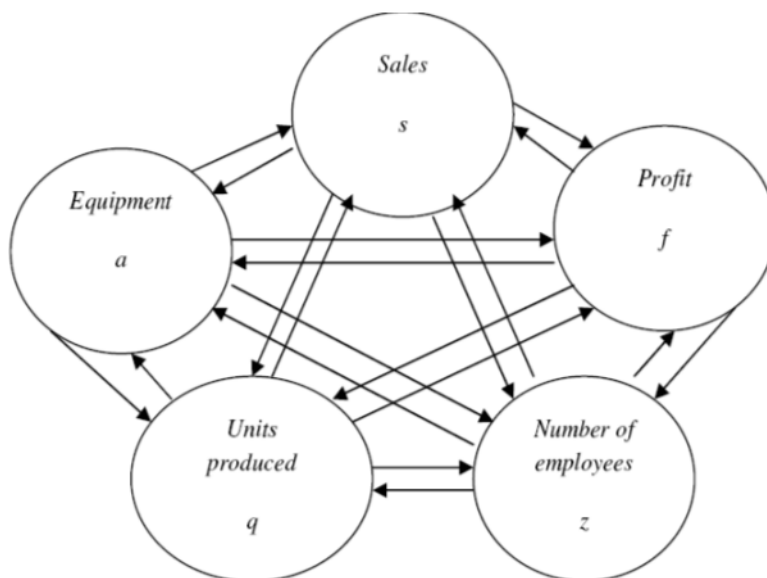

Fig 1. A matrix model reflecting relations between the indicators of business activity of enterprise.

		Resultant phenomenon γ_j				
	j / i	q	a	s	f	z
	q	1.0	a/q	s/q	f/q	z/q
	a	q/a	1.0	s/a	f/a	z/a
α_i	s	q/s	a/s	1.0	f/s	z/s
	f	q/f	a/f	s/f	1.0	z/f
	z	q/z	a/z	s/z	f/z	1.0
		Intensive parameter β_{ij}				

(Extensive parameter α_i)

$$\alpha_i \beta_{ij} = \gamma_j$$

Fig 2.   A matrix of relations between intensive parameters (Mereste 1984).

The degree of detail of the matrix model reflecting the level of economic efficiency depends on the number of initial parameters 'i'. A sufficiently large matrix of economic efficiency adequately reflects economic efficiency as a versatile complex phenomenon that is as versatile as it happens in reality.

The overall efficiency indicator of economic activities is the arithmetic or geometric mean of the indexes of the indicators found below the main diagonal of the matrix model.

3.2 On ordering the initial parameters of the matrix model

Let us dwell on the question of ordering the initial parameters of the matrix model, which have extremely important methodological significance. By placing the indicators in a certain sequence, we do not have an arbitrary set of indicators of business activities of the object in question, but its economic and mathematical model. In Mereste's research, ordering of the initial parameters is overlooked.

According to J. Alver (Alver 1989, Alver and Järve 1992; 1993) the initial parameters in the matrix should be arranged in the desired decrease of growth rate (to be read from left to right), and then the indexes, the numeric value of which should increase along with the activity efficiency according to general theoretical considerations, will be placed below the main diagonal of the matrix model.

Alver (1989) suggests grouping of the original parameters into three groups and ordering them in the matrix in descending order of growth as follows: *results → expenses → resources* (Alver 1989). Thus, the growth rate of performance indicators should be greater than the growth rate of expenses, and expenses should grow at a greater rate than resources.

Company is regarded as a mechanism for the transformation of resources through the expenses (labour, capital and natural resources) in the final outcome, which represent the goods and services produced to satisfy human needs.

3.3 The factor and tiered indexes and their economic content

Any statistical, mathematical or other method, suitable for describing relations among observed variables, can be used in system integrated analysis. The methodology developed by Mereste is based on combining the systems analysis with matrix modelling and theory of index numbers.

According to Mereste the classification distinguishes the following types of index numbers: the composite index, the index of quantitative factor, the index of qualitative factor, the index of variable composition, the index of constant composition and the index of structural change. Figure 3 summarizes the formulas (the main characteristics) of each type of index number.

The composite index is the index that expresses the effect of changes in both factors (variables), i.e. the change of aggregate amount under the influence of both factors involved. It is not an analytical index, but a synthetic one, as it reflects the relative change in one quantity influenced by changes in two factors.
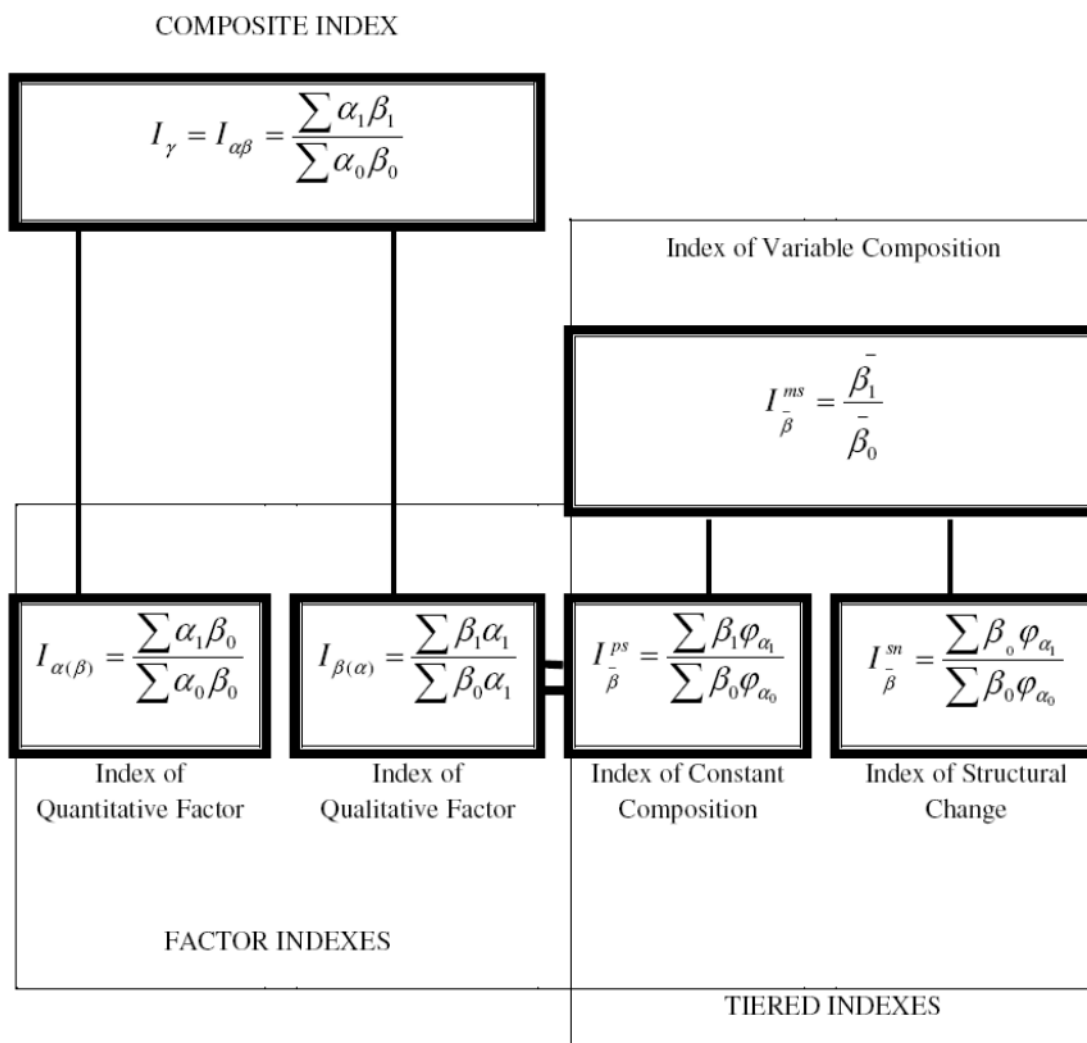
COMPOSITE INDEX

$$I_\gamma = I_{\alpha\beta} = \frac{\sum \alpha_1 \beta_1}{\sum \alpha_0 \beta_0}$$

Index of Variable Composition

$$I_{\bar{\beta}}^{ms} = \frac{\bar{\beta}_1}{\bar{\beta}_0}$$

$$I_{\alpha(\beta)} = \frac{\sum \alpha_1 \beta_0}{\sum \alpha_0 \beta_0}$$

$$I_{\beta(\alpha)} = \frac{\sum \beta_1 \alpha_1}{\sum \beta_0 \alpha_1}$$

$$I_{\bar{\beta}}^{ps} = \frac{\sum \beta_1 \varphi_{\alpha_1}}{\sum \beta_0 \varphi_{\alpha_0}}$$

$$I_{\bar{\beta}}^{sn} = \frac{\sum \beta_0 \varphi_{\alpha_1}}{\sum \beta_0 \varphi_{\alpha_0}}$$

Index of
Quantitative Factor

Index of
Qualitative Factor

Index of Constant
Composition

Index of Structural
Change

FACTOR INDEXES

TIERED INDEXES

Fig. 3. The classification of indexes proposed by U. Mereste (Mereste 1984).

$$I_{\gamma_1} = I_{\alpha\beta} = \sum \alpha_1 \beta_1 / \sum \alpha_0 \beta_0 \quad (3.2)$$

where

α_1 – the extensive parameter in the period 1 for which comparison is made;

α_0 – the extensive parameter in the base or reference period (period 0);

β_1 – the intensive parameter in the period 1 for which comparison is made;

β_0 – the intensive parameter in the base or reference period (period 0).

The value of the composite index in the aggregated form is that it is the basis for the construction of analytical factor indexes, and along with them, it belongs to the same index system.

The composite index can be converted into an index reflecting the influence of only one factor (variable) with the help of the so-called logical isolation mode. If the index formula 3.2 is to be converted so that only one variable factor remains in it, and the second factor in the numerator and the denominator will have the same value, then it can be assumed that the effect of changing the item with the same value in the numerator and the denominator will be eliminated from the index value.

The indexes of quantitative factor can be calculated according to the well known Laspeyres formula:

$$\mathrm{I}_\alpha = \sum \alpha_1 \beta_0 \Big/ \sum \alpha_0 \beta_0 \quad (3.3)$$

The indexes of qualitative factor can be calculated using the Paasche formula:

$$\mathrm{I}_\beta = \sum \alpha_1 \beta_1 \Big/ \sum \alpha_1 \beta_0 \quad (3.4)$$

There is a connection between indexes:

$$\mathrm{I}_\alpha \times \mathrm{I}_\beta = \mathrm{I}_{\alpha\beta} = \mathrm{I}_\gamma \quad (3.5)$$

The index I_α (3.3) shows impact of the change in the quantitative factor on the aggregated amount $\sum \alpha\beta$. The index I_β (3.4) shows impact of the change in the qualitative factor on the aggregated amount $\sum \alpha\beta$.

The index number can be interpreted in two different ways: in an analytical and generalising value. The system integrated analysis is basically based on analytical value of index numbers. The index value in the analytical interpretation shows how big impact the change in the changing value has on the resultant phenomenon whose value is expressed in the aggregated amount.

The tiered indexes are understood as indexes with the value expressing change in the average value of a feature or as a whole, or influenced by any other factor. For the purpose of this paper, structural changes are changes in the ways different parameters of structure relate to each other. Structural changes are expressed in increasing the proportion of one or more components of a specified phenomenon and the simultaneous decrease in the share of other components.

The tier index opens the opportunity to study the influence of changes in the structure of the phenomenon. The importance of studying structural changes in the system integrated analysis is determined by the following:

- structural changes have a profound impact on many results of operations of the enterprise
- structural changes occur in a more or less disguised form.

The index of variable composition is the change in the average value of all attributes:

$$\mathrm{I}_{\bar{\beta}} = \bar{\beta}_1 / \bar{\beta}_0 \ \ (3.6)$$

Applying (3.6) the formula is:

$$\mathrm{I}_{\bar{\beta}} = \sum (\beta_1 (\alpha_1 / \sum \alpha_1)) / \sum (\beta_0 (\alpha_0 / \sum \alpha_0)) = \sum \beta_1 \varphi_{\alpha_1} / \sum \beta_0 \varphi_{\alpha_0} \ \ (3.7)$$

where $\varphi_\alpha = \alpha / \sum \alpha$

In the index of constant composition, to eliminate the influence of elements' structure, it remains constant and the change of the indexed attribute is detected directly.

$$\mathrm{I}_{\bar{\beta}}^{ps} = \sum \beta_1 \varphi_{\alpha_1} / \sum \beta_0 \varphi_{\alpha_1} \ \ (3.8)$$

The index of structural change is the change in the average value due to the change in the proportion of elements having different values of the average.

$$\mathrm{I}_{\bar{\beta}}^{sn} = \sum (\beta_0 (\alpha_1 / \sum \alpha_1)) / \sum (\beta_0 (\alpha_0 / \sum \alpha_0)) = \sum \beta_0 \varphi_{\alpha_1} / \sum \beta_0 \varphi_{\alpha_0} \ \ (3.9)$$

In the index of structural changes, the indexed attribute remains the same, and only the change in the structure of the elements of the phenomenon is considered.

3.4 The synthetic efficiency index

If the business efficiency has improved during the period under review, then the quantitative increase is reflected in the average value of matrix elements of efficiency, whose value, according to general theoretical requirements, should increase under the change of efficiency.

The matrix values of the variable structure indexes are used as the basis for calculating the synthetic efficiency index. According to Mereste the synthetic efficiency index can be calculated as:

$$\mathrm{I}_{E_f} = 2 \sum I^*{}_{\beta_{ij}} / (n^2 - n) \ \ (3.10)$$

where *n* is the number of initial parameters of the model.

The synthetic efficiency index is the index which synthesizes and summarizes all the changes in many individual components of the level of efficiency into one.

5. DISSERTATIONS ON METHODOLOGY FOR MEASURING THE BUSINESS EFFICIENCY AND SYSTEM INTEGRATED ANALYSIS

4.1 Harry Luur (1982) "Challenges to the Effectiveness of Operational Management"

The aim of H. Luur's work is to study the process of operational management, the definition of the role and importance of operative management in the management of industry. Luur's contribution into the development of methodology of system integrated analysis is as follows:

- developed and implemented on a computer, the matrix method of evaluation of business efficiency that allowed analyzing and evaluating the efficiency by a unified methodology for management of objects of various levels and in a tight schedule;

- designed and implemented on a computer, the method of integrated evaluation of the performance efficiency, and ranking of companies was performed;

- proposed a system of names formation for local indicators of efficiency performance;

- proposed a basis for ordering the initial parameters of the matrix model.

The methodology of ranking management objects based on the overall synthetic intensity coefficient and on partial coefficient of efficiency is also set out.

4.2Andres Root (1983) "The Concept of Production Efficiency and Matrix Modelling"

A. Root's research was based on the concept of matrix modelling of production efficiency. The aim of the thesis was to create a system of related qualitative indicators and aggregated indicators, which would allow achieving the basic types of management objectives.

The scientific novelty of the research was as follows:

- the variety of management tasks are formulated and theoretically substantiated;

- a system of studying the effectiveness is created;

- a specific system of efficiency indicators is developed;

- the guiding principles of selecting initial quantitative parameters are identified;

- the theoretical foundations of ordering the key matrix are systematically set out for the first time;

- a system of interrelated and aggregated indicators is developed;

- a quantitative measure of balanced development is designed;

- methods for analysis of the dynamics of efficiency are established.

To set various tasks of studying efficiency in the dissertation, the analysis of the efficiency in the passive and active functions is differentiated. The first of these is aimed at identifying the effects of various factors on the efficiency as the resultant phenomenon. The analysis in the active function should reveal how individual components influenced the other economic phenomena.

The established system of indicators allows revealing the direction and pace of the intensification of various aspects of production activities, the proportions between them, as well as imbalances impeding the increase of efficiency. With the aggregated indicators it is possible to provide a synthetic assessment of the production results of various business units, to compare them with each other, and to rank business units.

Root introduced the concept of 'the degree of extremity effect'. The more increasingly the final result of production is embodied in the degree of extremity effect, the higher the degree of extremity of a phenomenon. Production efficiency is defined as the total field of all relations β_{ij} between the major bulk results of economic activity a_i.

The principles of the sequence formation of initial parameters α_i are outlined. Foremost among these is the principle according to which the indicators should reflect all of the most significant aspects of the production process.

To apply the matrix model in practice, it is advisable to put initial parameters in some order. The organized matrix is such a model in which all the direct measures (прямые показатели) are put in one block either above the main diagonal, or below it.

This method reduces to a ranking of the parameters of the original sequence to their increasing or decreasing degrees of extremity. All direct indicators (прямые показатели) are below the main diagonal. Trends in the development of production can be regarded as favourable in all parts of the field of efficiency, if the values of all direct indicators of performance increase. Production efficiency is amended to read: some phenomena influence in the direction of increasing the efficiency, the others toward its reduction.

To measure the synthesis of a balance of the development, the correlation coefficient of ranks should be applied:

$$K_\delta = 1 - 6 \sum d^2 / n(n^2 - 1) \quad (4.1)$$

where K_δ – the coefficient of a balance of development; d – ranks' difference of indexes of initial parameters; n – the number of initial parameters.

The value K_δ can vary $-1.0 \le K_\delta \le +1.0$. If $K_\delta = 1.0$, then the change in production efficiency is balanced. If $K_\delta = -1.0$, then the development is not balanced.

Under the matrix approach the most important condition for a fair solution of ranking is to comply with the requirements of a balanced structure of the matrix model. The sequence of input parameters should include an equal number of indicators, usually interpreted as a production effect, and indicators traditionally interpreted as a cost or resources.

4.3Maire Sarap (1988) "Formation and Functioning of the Business Analysis System of a Branch of Industry"

M. Sarap's thesis aims to reconcile the system integrated analysis of the business activity with the managerial process on the level of the branch of industry. According to Sarap, the most appropriate for the task is to use the matrix method of system integrated analysis of key results of business activity.

Sarap developed the theoretical basis for building a system of business analysis of the industry branch in conjunction with solving problems of improving the management.

Significant contributions of Sarap into the development of methodology of integrated analysis are as follows:

- a system of business analysis of the branch of industry based on the system integrated analysis is developed;

- a methodology for a comparative analysis and for ranking companies of the branch of industry is created.

A prerequisite for the comparative analysis is to ensure comparability of the investigated objects. The requirement of comparability of objects is satisfied if the matrix models of the same type for effectiveness of various enterprises in the branch of industry are compared. The industry averages are taken as a basis for comparison. Having divided each element of the matrix of business performance efficiency by the corresponding element of the branch of industry matrix, the matrix of the

comparative coefficients of enterprises' business efficiency in relation to industry averages is obtained. Based on comparable coefficients, the synthetic efficiency ratio is calculated.

The methodology of ranking companies based on the synthetic intensity coefficient, taking into account the rate of change at the level of business performance efficiency for any period is also set out.

4.4Rein Volt (1989) "Developing Models for Assessing the Results of Business Management of the Enterprise and its Application in the Management"

Mereste focuses on the development of the very methodology; at the same time, the possibility of using analysis data in the practical management performance has only been mentioned in his works. In his dissertation, R. Volt linked the methodology based on system integrated analysis and adaptive predictive models to management decision making. Volt pointed out that the employees evaluating the results of business activities of the company, are no longer expected to submit long reports, but specific solutions that can be implemented in reality.

A significant contribution of Volt into the development of the methodology of integrated analysis is as follows:

- a system of analytic matrices for an assessment of each area of business management has been developed;

- a methodology of constructing seasonal matrices has been developed;

- a methodology for analysis of company's current assets has been developed;

- a methodology of short-term adaptive forecasting of development of economic phenomena within matrix modelling has been suggested;

- suggestions to make analytic matrices more informative are provided.

For a more detailed assessment of an enterprise's business activities, Volt has developed a system of analytic matrices. He pointed out that for a detailed assessment of each area of business management, which differs from each other; it was more preferable to apply the analytical matrices, containing five-six quantitative indicators. This allows a detailed assessment of various aspects of the business problem under study.

The novelty of Volt's dissertation is that he developed a method of constructing seasonal matrices to determine the impact of seasonality in the operational analysis of enterprise's business performance. Seasonality is modelled as a matrix of structural shifts. If interferences in business activity are detected in the matrices of seasonality, it is possible to determine their factors and measure their impact.

Volt was the first to develop and test in practice the analytical matrices for analysing of company's current assets. For a more detailed assessment of current assets it is expedient to build analytical matrices that are different from each other, one of which would investigate the sources of current assets, the second – the structure of current assets, and the third would assess the use of current assets.

The methodology of short-term adaptive forecasting of development of economic phenomena within matrix modelling is suggested. In modelling, it is necessary to consider closer relationship of forecasts with the strategy of the company; for this, along with adaptive prediction, a model can be applied, in which the planning trend of the period is added to the actual results.

5.CONCLUSION

In the current practice of business analysis, indexes were used either in the form of stand-alone, or as a systemic factor indexes. Estonian Academician U. Mereste noticed that there is a third variant, qualitatively different from the mentioned possibilities of indexes, namely in the form of the index matrices. Mereste developed a method that allows us to study the interaction and mutual influence of any number of interrelated economic phenomena using analytical indexes of factor. This original method is known as the 'theory of efficiency field', which is based on combining the systems analysis with matrix modelling and theory of index numbers. Based on the theory of efficiency field Mereste developed the unique methodology for measuring the economic efficiency. The most important developments and improvements of this methodology using six doctoral dissertations defended in Estonia between 1970 and 1991 have been analysed. Our work is intended to provide the interested reader the ability to further study the observed methodology for measuring the business efficiency and system integrated analysis.

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MEASUREMENT AND ANALYSIS OF PROFITABILITY IN ESTONIAN COMPANIES

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Abstract

The present paper scrutinises whether and how the Estonian companies use and analyse the profitability measures. On the one hand, the profitability measures should be a central component of the management control systems, and on the other hand, they should be linked to the wealth measurement objective. Hence the importance of a quality analysis in the companies in the aforementioned area cannot be overestimated. The activities of Estonian companies and their attitudes to the profitability analysis are considered by using the data of the survey companies have organised for that purpose, with the goal to attract attention to the instances begging for improvement. It has been found out how the companies use the traditional income statement in the analysis and whether its adjustment is needed; whether profit merits attention as manifesting the value of the company; whether attention is accorded to capital maintenance problem and price of capital – hence the real growth of the wealth; whether cash-based profit and contribution margin etc. are analysed. An accountant's role in the analysis process has also been under consideration.

Key words: *growth in company value, income statement items, profitability analysis, profitability measures, Estonian companies.*

1. INTRODUCTION

Profit is one of the key elements of information upon which the functioning of a private, free enterprise economy depends. A considerable amount of time has been spent discussing various definitions of profit. One definition of profit is that it represents the surplus of income over expenditure (Vause, 1997). It has been long time of interest of economists as well as accountants and financial analysts. E. O. Edwards's and P. W. Bell's classic treatise *The Theory and Measurement of Business Income* (1961) has attained a reputation as a major contribution to the accounting literature. The issues that Edwards and Bell addressed still underlie many of the contemporary debates, such as that on the conceptual framework of financial reporting.

The term 'profit' may mean different things, not only to economists and accountants but also to a company's various interest groups, each of which view the profit a company makes from a different perspective. In general, the term 'profit' stands for the difference between revenue and expenses. It has been emphasised that in a free enterprise economy the measurement of profit is a major consideration (Bray, 1949). Profitability measures are essential and very important components of the management control systems of businesses. They must also motivate managers and employees at all levels of an organisation to strive to achieve the organisation's goals. Performance evaluation and rewards are key

elements for motivating individuals in an organisation. Profitability measures should also be linked to the objectives of wealth measurement.

This study intends to analyse using the profitability indicators in Estonian business practices, with recourses to the survey of the respective topic, carried out at companies, with the goal to present the methods, to which preference is given in Estonian companies when the efficiency of business activities is analysed, and for the wealth measurement purposes. Generally the application of quality analysis could not be overestimated for company as well as for all of society.

Under consideration are internal and external financial measures based on accounting figures, which are routinely reported by legal business entities are under consideration.

The companies were submitted a questionnaire, with the purpose to find out:

- Which figures are needed from regular income statement?

- Are some indicators of income statement and balance sheet adjusted, for obtaining necessary information for analysis?

- Is the capital maintenance issue taken into regard?

- Is profit as indicator of change in company value valuated?

- Are the profit and the investments made compared, in order to find out the actual growth in wealth?

- Is the cash based profit analysed etc.

2. SURVEY RESULTS

2.1 Methodology

The questionnaire survey method was applied for data collection with the survey subjects in the Estonian companies. The survey questionnaire was distributed to accountants and finance managers.

The questionnaire has been composed as follows.

Three blocks of questions, altogether 17 statements, have been constructed with Likert-type scale answers. For every statement, there are five replay options. Depending on a question, the options are:

- always, frequently, sometimes, very rarely, never at all

or

- fully agree, agree, rather agree, rather not agree, not agree.

Hence, a 5-grade scale is used, where full consent with the statement is rated as '5' and full non-consent is rated as 1.

In addition, the questionnaire contained six questions with selected responses, mainly to classify the companies and respondents. The companies surveyed have been classified: a) by number of employees – 250 and more; 50–249; 10–49; 1–9. b) by area of activity of the company – industry, building, service, trade.

The types of questions are as follows: two first groups include closed ended questions + open-ended question; the remaining are closed ended questions.

The sample includes 90 Estonian businesses.

The distribution of the sample as per number of employees is as follows:

250 and more employees – 22 companies;

50–249 employees – 32 companies;

10–49 employees – 20 companies;

1–9 employees – 16 companies.

According to areas of activity the companies of the sample break down as follows:

industry – 33 companies;

trade – 15 companies;

building and real estate development – 10 companies;

service – 32 companies.

Sample as per offices held by respondents distributes as follows:

finance manager (finance analyst) – 41 people;

(chief) accountant – 49 people.

The analysis has been carried out:

- with regard to the whole sample;

- grouped as per size of the company – large, medium, small and micro entities;

- grouped as per position of the respondent – finance managers (-analysts) and accountants.

2.2 Summaries and analysis

The first group of questions included in the survey identified whether and how the companies use the regular income statement in their financial analysis. The statements in the questionnaire were as follows:

I use the income statement when analysing the performance of the company as follows: a) I calculate profitability indicators; b) for comparison with competitors; c) for other purposes (please specify).

Table 1 presents the mean scores, modes and medians. For illustrative purposes the questions of the first and second study are featured in the figures 1 and 2. The distribution of estimates given to the first and second question, respectively are featured in figures 1 and 2.

Table 1. Usage of income statement when analysing the company performance (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

Manner of use of the Income statement	Arithmetic mean	Mode	Median
Calculation of profitability indicators	3.76	5	4
Comparison with competitors	2.99	2	3
For other purposes	2.32	1	1
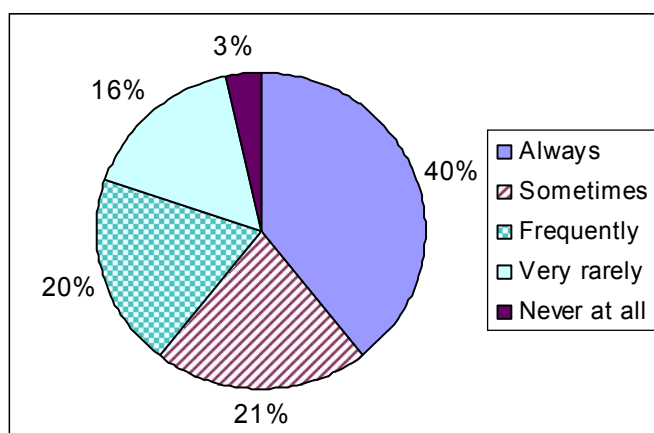
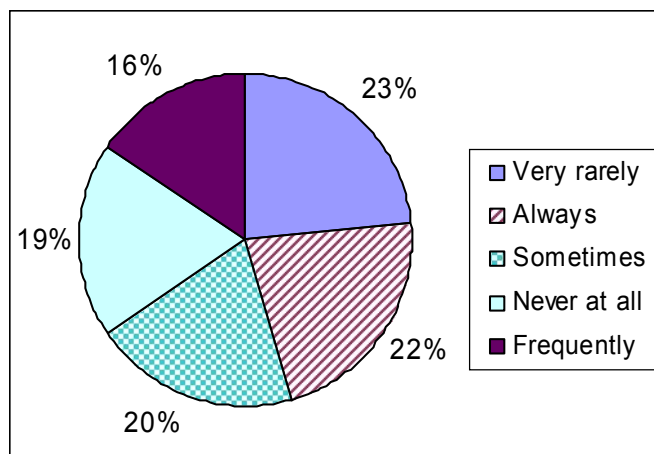**Figure 1.** Usage of Income statement for calculation of profitability indicators

Figure 2. Usage of Income statement for comparison with competitors

a) Calculation of profitability indicators.

Average estimate is 3.76, i.e. the closest to estimate 'frequently'. Calculation of profitability indicators takes place in the majority of companies, whereas 40% of respondents calculate profitability indicators always and 20% frequently. Altogether only 3% of the respondent companies are not calculating.

b) Comparison with profits of competitors.

Average estimate is 2.99, i.e. close to estimate 'sometimes'. Comparison with data of competitors takes place always in 22 % of respondent companies and frequently in 16% companies. In 19% of the companies it never takes place.

c) Open-ended question: For other purposes (please specify).

Average estimate is 2.32, hence 'very rarely'. Respondents more often specified performance of analysis of subunits and comparison with budget and plan indicators.

The second group of questions surveys preferences of the companies when using various profit figures in economic analysis.

The question was posed to 8 profit figures: *a) Operating profit; b) Gross profit; c) Earnings before taxes (EBT); d) Net profit; e) EBITDA; f) Contribution margin; g) Cash based profit; h) Other (please specify).*

Table 2 presents the means, modes and medians of the responses. Figures 3–9 present distribution of estimates with regard to use of all profit indicators.

Table 2. Usage of various profit numbers in the analysis (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

Profit indicator	Arithmetic mean	Mode	Median
Net profit	4.06	5	4
Operating profit	4.03	5	4
Gross profit	3.76	5	4
EBITDA	3.34	5	3
Earnings before taxes	3.12	3	3
Contribution margin	2.25	1	2
Cash based profit	1.92	1	1
Other	1.55	1	1

As revealed from Table 2, the most popular indicator is the net profit (average 4.06; mode 5; median 4). 46% of the respondents use net profit always and 26% frequently.
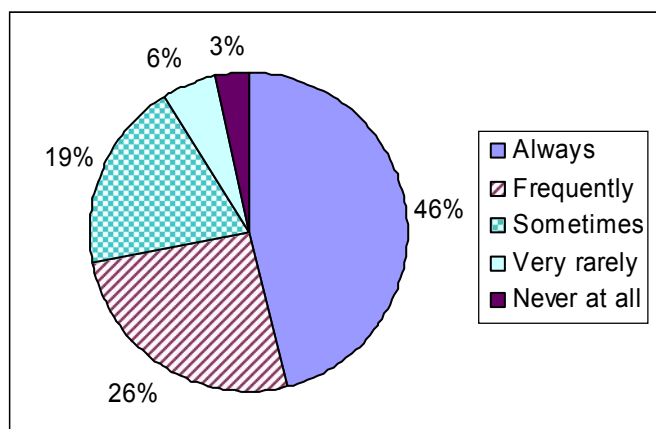
Figure 3. Usage of net profit by respondents

Operating profit is of a slightly lower average (average 4.03; mode 5; median 4) and gross profit (average 3.76; mode 5; median 4). Operating profit is used always by 47% of the respondent companies and frequently by 25%. Gross profit is used always by 37% of companies and frequently by 26%.

The three profit indicators mentioned above have probably been preferred due to their simplicity and familiarity and also by the fact that several well known profitability ratios base just on those profit indicators.
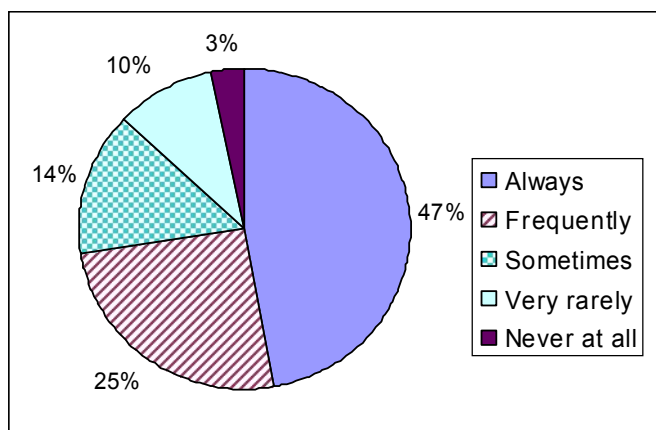
Figure 4. Usage of operating profit by respondents
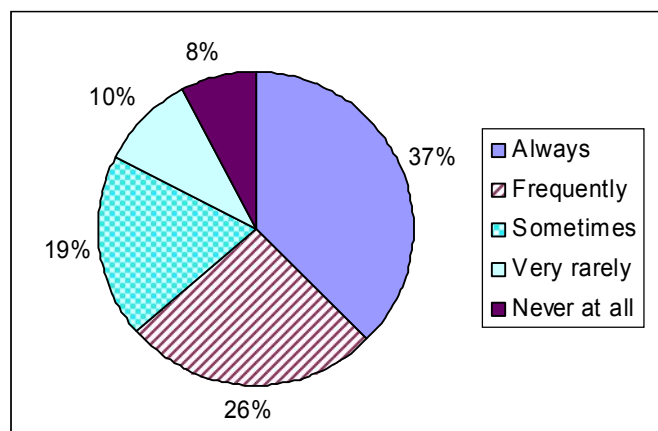
Figure 5. Usage of gross profit by respondents

The analysis of the cash based profit is not so popular (mean score 1.92, falling in between estimates 'very rarely' and 'never at all; mode 1; median 1). 52% of respondents never use the cash based profit, 22% use it very rarely, and always as few as 8%. Dismissing the cash based profit i.e. quality of profit ratio is a significant shortcoming in estimating the company's business activities. Company's managers frequently are not able to distinguish accrual based profit and cash (cash based profit), failing to study the actual receipt of cash. That may result in insolvency. An opinion has been expressed that the use of cash based profit instead of accrual based profit would provide a more accurate picture of a company.
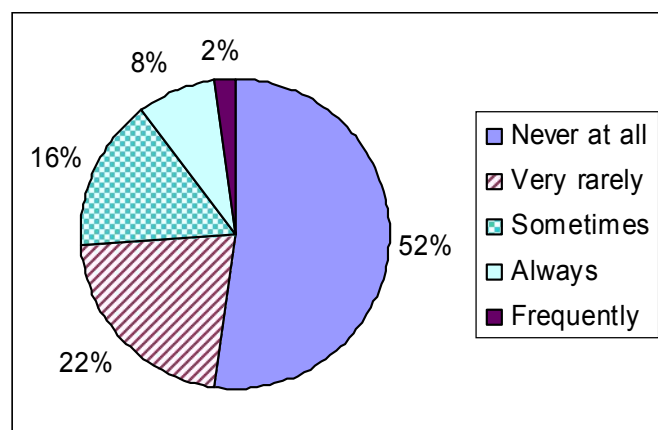
Figure 6. Usage of cash based profit by respondents.

The contribution margin as indicator is hardly ever used (average 2.25; mode 1; median 2). Contribution margin has never been used by 41% of respondents, 24% use it very rarely. It would pay off to accord more attention to contribution margin, because e.g. when drawing the budget estimate, the income statement in the contribution margin format is overly necessary. Contribution margin also

has a significant role in the issue of how the cost behaviour impacts on profitability and adopting pricing decisions (Spaller, 2006).
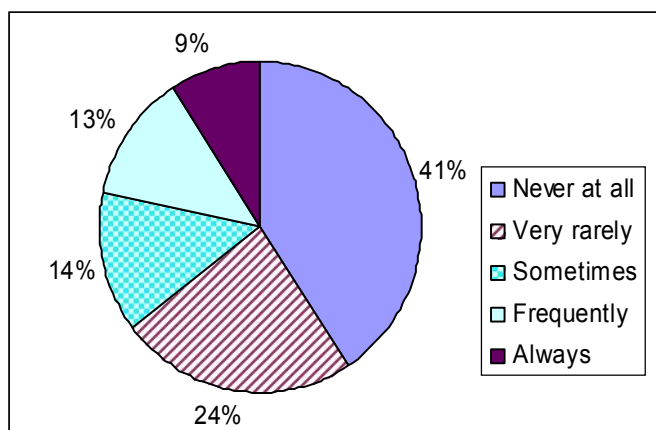

Figure 7. Usage of contribution margin by respondents.

EBITDA has been appreciated by the companies as middlemost (average 3.34; mode 5; median 3). Estimates distribute between possible variants: always' 31%, 'frequently' 16%, 'sometimes' 21%, 'very rarely' 21% and 'never at all' 11%. EBITDA should still merit more attention on part of the Estonian companies. Under international estimates, EBITDA is viewed by analysts as the most informative profit indicator (Mosso, 2010). Hence it would be worth considering establishing it as an interim outcome in income statements.
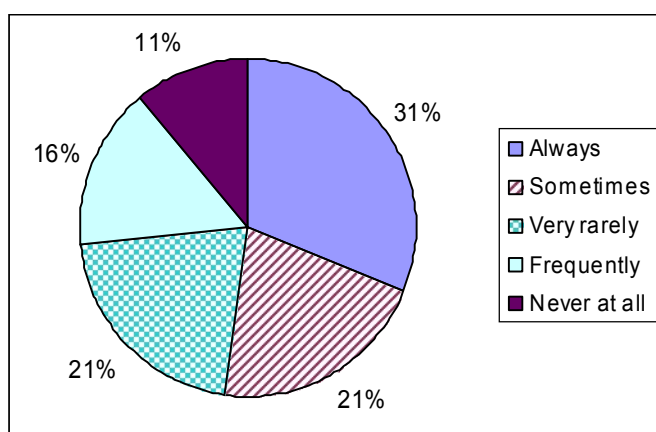
Figure 8. Usage of EBITDA by respondents.
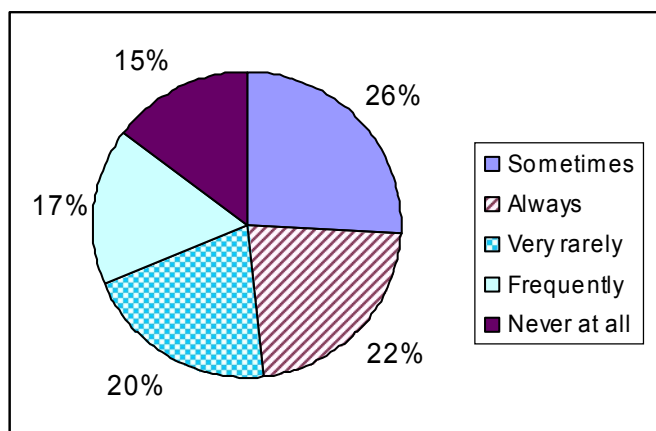
Figure 9. Usage of EBT by respondents.

The open-ended question 'Other' was given as an answer in exceedingly few cases. There was a curious indicator catching the eye: Gross profit – marketing expense as per production types.
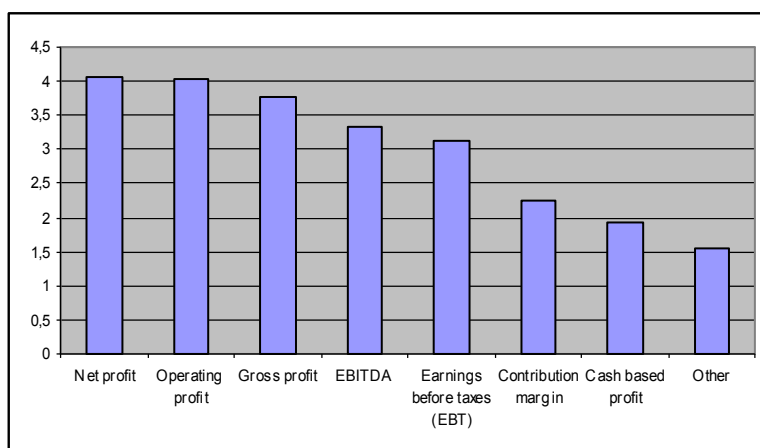

Figure 10. Frequency of use of different profit figures (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

According to the Estonian Accounting Act every company can choose whether to prepare their annual accounts in accordance with International Financial Reporting Standards (*IFRS*s) or in accordance with the Estonian accounting guidelines (*Estonian GAAP*). These companies which have decided to follow *Estonian GAAP* must use one of the two income statement layouts: *Format 1* (where items are classified by nature) or *Format 2* (where items are classified by functions).

Regarding the usage of income statement *Format 1* respondents identified 55% and for the *Format 2* 40% level. There are also companies which use both formats (5% of respondents). In the latter case one of the formats is in use for reporting and the other one for intra-company analysis.

Table 3 presents the data on how the use of profit figures differs between those drawing *Format 1* and *Format 2*. The use of all figures of income statement is higher with those drawing *Format 2*. Hence the conclusion that the companies, attaching value to analysis, have selected *Format 2*, which is generally considered more informative for the analysis. While regarding the off-income statement figures, i.e. contribution margin and cash-basis profit, *Format 1* users display somewhat higher indicators.

Table 3. Usage of different profit indicators among users of *Format 1* and *Format 2*

Profit figure	Arithmetic mean among *Format 1* users	Arithmetic mean among *Format 2* users
Operating profit	3.85	4.39
Gross profit	3.69	4.00
EBT	2.91	3.43
Net profit	3.87	4.51
EBITDA	3.13	3.78
Contribution margin	2.54	2.15
Cash based profit	2.02	1.90

The third question: *For the analysis needed by the company I adjust the regular income statement (and balance sheet).*

The responses reveal that adjustment of reports occurs moderately (average 2.84; mode 3; median 3). Hence the law-makers should consider the possibility to complement the reports, because the necessity in respect of grouping otherwise etc. exists.

The fourth group of questions studies, whether and what indicators the companies calculate for reporting profit + investments made therefore.

I calculate the following financial indicators:

    a) *RI (Residual Income),*

    b) *EVA (Economic Value Added),*

    c) *ROI (Return on Investment).*

The frequency of use of the indicators is characterised by Table 4.

Table 4. Calculation of different indicators among the companies surveyed (5 – always; 4 – frequently; 3 – sometimes; 2 – very rarely; 1 – never at all)

Financial indicator	Arithmetic mean	Mode	Median
ROI (*Return on investment*)	2.88	3	3
EVA (*Economic value added*)	2.03	1	2
RI (*Residual income*)	1.81	1	1

Table 4 reveals that with respect thereto, most often used among the indicators studied is *ROI* (average 2.88; mode 3; median 3). In case of *EVA* the average is 2.03; mode 1 and median 2 and in case of *RI* respectively 1.81; 1; 1.

Low values of *EVA* and *RI* show that companies do not pay attention to actual growth of wealth. This is also corroborated by responses to the question:

Differentiation between return on capital and return of capital will significantly improve the management decisions.

Response variants are: 5 – fully agree, 4 – agree, 3 – rather agree, 2 – rather not agree, 1 – not agree.

The aforementioned question has been dismissed by 11% of companies, testifying to the fact that the substance of the question has not been properly understood. Dominating among the respondents is the opinion in between 'rather agree' and 'rather not agree' (average 1.71; mode 1; median 1).

It thence transpires that analysis of the value-based financial performance is weak in Estonian enterprises. This is most deplorable, because *EVA* could be of much wider use than just a performance measure. At its best, *EVA* serves as the centrepiece of a completely integrated framework of financial management and incentive compensation (Stern, Stewart, 1996).

Companies' attitude to the importance of profit when making investment decisions has also been studied.

Statement: Profit indicators of other companies are the main basis for passing decisions on investment.

Variants of response are: 5 – fully agree, 4 – agree, 3 – rather agree, 2 – rather not agree, 1 – not agree.

Frequency of estimates presented is as follows: average 2.59, in-between 'rather agree', and 'rather not agree', mode 2 and median 3. Fluctuation of estimates is related to failed investments made by Estonian companies.

The survey carried out also seeks an answer to the questions, whether and to what extent the performance analysis differs in companies, where it is carried out by an accountant or a financial analyst, and what the results are like, as dependent on the size of the company.

Tables 5 and 6 present mean values of responses to all questions surveyed, respectively to compare estimates of companies with number of employees ≥ 250, 50–249 and 1–49 and all respondent companies and to compare estimates of accountants, finance managers and all respondents together.

Subjected to check (*z*-test) have been the hypotheses: 1. In large companies the analysis is stronger than that in small ones. 2. Finance manager (analyst) handles the analysis more thoroughly than the accountant.

Table 5 reveals that the medium value of all indicators are the lowest in the group of companies with employees numbering 1–49. The average through all indicators is 2.77, falling between the assessments 'sometimes' and 'very rarely', while the use of unsophisticated and wider-spread indicators is close to 'frequently'. Hence analysis is also carried out in smaller companies. When comparing large and mid-size companies, there is the difference too – the average values of all indicators are respectively 3.21 and 2.99 and the values of majority of indicators are higher in large companies. The following *z*-tests however do not highlight a major statistical difference – hence the null-hypotheses hold valid.

Alternative hypothesis: Large companies, having 250 or more employees, use different financial indicators significantly more that the companies of average size, keeping 50–249 employees on payroll.

The arithmetic mean of frequency of use of different indicators of large companies on Likert scale is 3.21. With companies of average size that indicator is 2.99. Z-test's empirical value is 0.60, which however does not, on the significance level 5%, exceed *z*-test's critical value 1.645 in case of unilateral hypothesis. Hence there are no grounds to reject the null hypothesis: the extent of use of finance indicators does not differ significantly with large and medium-size companies.

Alternative hypothesis: Large companies having 250 or more employees use different financial indicators significantly more that small companies with 1–49 employees.

Table 5. Average values of all indicators, using estimates of different size companies

Indicator	Arithmetic mean among all companies surveyed	Arithmetic mean among companies with number of employees ≥ 250	Arithmetic mean among companies with 50–249 employees	Arithmetic mean among companies with 1–49 employees
Calculation of efficiency indicators	3.76	4.23	3.88	3.39
Use of income statement for comparison with competitors	2.99	3.18	2.84	2.95
Usage of operating profit	4.03	4.32	4.16	3.76
Usage of gross profit	3.76	4.14	3.88	3.45
Usage of EBT (pre-income tax profit)	3.12	3.14	3.29	3.00
Usage of net profit	4.06	4.27	3.90	4.05
Usage of EBITDA	3.24	3.91	3.47	2.92
Usage of contribution margin	2,25	2,64	2,37	1,97

Usage of cash based profit	1.92	2.00	1.62	2.08
Adjustment of income statement	2.84	3.14	2.84	2.70
Usage of RI	1.81	2.00	1.87	1.62
Usage of EVA	2.03	2.23	2.27	1.71
Usage of ROI	2.88	3.14	2.97	2.61
Consent to the statement that profit indicators of other companies are the main basis for making the investment decisions	2.59	2.55	2.56	2.59
Arithmetic average across all indicators	2.96	3.21	2.99	2.77

The arithmetic average of frequency of use of different indicators of large companies on Likert scale is 3.21, in case of small companies that indicators is 2.77. Z-test's empirical value is 1.27. On substantiality level 5% does not exceed the z-test's critical value 1.645 in case of a unilateral hypothesis. Hence the alternative hypothesis could not be accepted: the extent of financial indicators does not differ significantly in case of companies with large number of employees (> 250) and with those of small number of employees (1–49).

Table 6 shows that the use of all indicators is higher, when analysis is carried out by finance managers.

That corroborates the surmise that the Estonian companies have historically developed an opinion, under which the accountant is generally not required to carry out the analysis. The companies which have instituted a separate office of the finance analyst to perform that task, display higher level of analysis.

Alternative hypothesis: Finance managers use different financial indicators more often than accountants (arithmetic average of range of use of all indicators on Likert scale is significantly higher in case of finance managers).

Table 6. Average values of all indicators, using estimates of accountants and finance analysts

Indicator	Arithmetic mean among all respondents	Arithmetic mean among finance managers surveyed	Arithmetic mean among accountants surveyed
Calculation of efficiency indicators	3.76	4.50	3.16
Usage of income statement for comparison with competitors	2.99	3.32	2.73
Usage of operating profit	4.03	4.31	3.80
Usage of gross profit	3.76	4.07	3.49
Usage of EBT (profit before income	3.12	3.29	2,98

tax)			
Usage of net profit	4.06	4.22	3.96
Usage of EBITDA	3.34	3.95	2.83
Usage of contribution margin	2.25	2.41	1.79
Usage of cash base profit	1.92	2.02	1.84
Adjustment of income statement	2.84	2.95	2.73
Usage of RI	1.81	1.85	1.77
Usage of *EVA*	2.03	2.24	1.85
Usage of *ROI*	2.88	3.26	2.58
Agreement with the statement that profit indicators of other companies are the main basis for making investment decisions	2.59	2.60	2.54
Arithmetic mean across all indicators	2.96	3.21	2.74

Arithmetic mean of range of use of all indicators by finance managers on Likert scale is 3.21, by accountants 2.74. Z-test's empiric value is 1.86, higher on significance level 5% than the unilateral hypothesis z-test's critical value 1.645. Therefore there are no grounds to reject the alternative hypothesis: the range of use of different financial indicators with finance mangers and accountants differs significantly.

Z-test suggests the need to change the attitude to the role of accountants – accountant should be engaged in the analysis. On the one hand, it would improve the level of analysis in the companies, lacking a respective separate office. On the other hand, involvement of accountant in the process of analysis would enlarge his/her view on finance data and financial statements, which would spur in the Estonian society the accounting-related discussion and would enhance the conceptual level of practice of financial accounting.

3. CONCLUSIONS

When assessing the activities of Estonian companies and their attitude to profitability analysis, it is necessary to point out that companies should pay more attention to indicators, allowing to monitor the actual growth of wealth in the company. That would mean comparison of indicators, expressing the profit and the investments price, and involvement in the capital maintenance problem. The importance of profit, as the indicator of change of the company value has presently gained prominence in the world, ever more so given the current economic predicament.

Also the cash based profit is calling for due attention in Estonian companies. Dismissing the cash based profit analysis may all of a sudden end up with the company's insolvency. The latter attitude can be accounted for by the misconception deeply rooted in the companies that accrual profit is of equal value to the amount-of-money encashed.

As regards to organisation of analysis in the companies, it would be advisable to increase the role of an accountant as an analyst. That would allow the accountant to see the accounting issues from

different aspects and have a say in conceptual deliberations, enhancing in the society the level of accounting practice and its prestige.

In 67% of the respondent companies the results of their profitability analysis are actually used in the management process. 14% of the respondents hold, however that the analysis deplorably does not meet with actual use.

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DIVERSIFICATION AND STABILITY OF DISTRIBUTION OF SETS
IN THE EUROPEAN PARLIAMENT

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Abstract

The principle of digressive proportionality distribution of seats in the European Parliament was established in the Treaty of Lisbon. There are many solutions satisfying this condition. In order to narrow the search we must specify additional conditions. Diversification and demographic stability are good examples of those conditions. The main aim of the article is presentation of distribution of sets on such limitations.

Key words: *degressive proportionality, demographic changes, elections, European Parliament, fair division*

1. INTRODUCTION

Throughout ages in democratic societies some principles of distribution of goods, benefits and debts have been formulated. Most commonly used in practice are the equal and proportionate divisions. In accordance with the principle of equal allocation, everyone receives benefit or is charged with duties in the same way. Proportional divisions are characterized not by equal but proportionate, in relation to the specific characteristics, distribution of goods and charges. Classic examples of such solutions are electoral and tax laws.

Problems of the proportional divisions on a wider scale sparked interest in the 18th century in the context of elections to the U.S. House of Representatives. Developed, mainly by politicians, the principles of the divisions function until today in electoral laws of many countries. They exist in original versions in such, which have been formed in the 20th century thanks to extensive research and publications. For the time being, this issue has a rich literature, and permanently become one of the main areas of global research (Young, 2003).

The state, which is strived for in the case of the proportional distribution of seats is such a status, where for each mandate falls the same number of voters, regardless of the size of electoral districts. In practice such a State could not be achieved due to the fact that there shall be no fractional parts of the mandate, and the population of the electoral districts is much greater than the number of seats allocated to the distribution. In such cases rounding up or down has to be implemented, it means that some districts have bigger and some smaller representations than those based on a simple ratio. The specific ways of rounding the values is the main problem concerning proportional divisions.

2. DEGRESSIVE PROPORTIONALITY

Proportional divisions cannot be applied if there are large disparities in the population of the electoral districts. In such situations, it may happen that certain districts after rounding will not have any representation. This situation is in many cases, it is not a desirable situation, because in a democracy it is crucial to ensure that each group has a representation in deliberative assemblies. A good example of this can be the division of the seats between the Member States in the European Parliament. Taking into account current population in the countries of the European Union using methods which are proportional in the extreme case, Germany would get 122 seats and Malta and Luxembourg, would not have any representation.

This issue has been written in the article. 9a. 2 of the Lisbon Treaty, which set out the principle of the so-called degressive proportionality,. This article says that: "The European Parliament shall be composed of representatives of the Union's citizens. They shall not exceed seven hundred and fifty in number, plus the President. Representation of citizens shall be **degressively proportional**, with a minimum threshold of six members per Member State. No Member State shall be allocated more than ninety-six seats" (The Lisbon Treaty, 2007).

The Treaty does not, however, specify the concept of degressive proportionality. Doubts in interpretation are partly solved by the annex to the draft of the European Parliament resolution. There can be found two requirements, which may serve as an indication to the understanding of the concept of degressive proportionality. The first one, called the principle of fair distribution says that a country with a greater number of the population cannot receive less mandates than a country less populated. The second, referred to as the principle of relative proportionality, concludes that the larger the country, the larger number of voters should be represented by one member of parliament (Lamassoure and Severin, 2007).

Formalizing these recommendations a following definition of degressively proportional division can be concluded: Division $m_1, m_2, \ldots, m_n$ seats between countries of population number $l_1, l_2, \ldots, l_n$ is degressively proportional if and only if when $l_1 > l_2 > \cdots > l_n$, is

$$m_1 \geq m_2 \geq \cdots \geq m_n \quad \text{and} \quad \frac{l_1}{m_1} > \frac{l_2}{m_2} > \cdots > \frac{l_n}{m_n}.$$

There are many divisions which fulfil these conditions by a fixed number of member countries. The extreme and the simplest of these is the division of allocating to each Member State the same number of seats. This division favours small countries. At the other end there are divisions resulting from the application of proportional methods. These in turn favour countries with large population. Taking this into consideration, the division being looked for is between those two solutions.

The said resolution also contains additional guidance concerning the distribution of seats between the Member States of the European Union. Inter alia, it stipulates that:

"The minimum and maximum numbers set by the Treaty must be fully utilised to ensure that the allocation of seats in the European Parliament reflects as closely as possible the range of populations of the Member States."

Undoubtedly the best solution for determining the number of seats in the European Parliament for each Member State would be to enter a specific formula or algorithm, which would perform a division at any number of people in Member States. This type of solutions are applied in the case of proportional methods. Attempting to use similar solutions in the field of degressive proportionality will always be vulnerable to criticism (Ramirez, Palomarez, Marquez, 2006; Słomczyński,

Życzkowski, 2007). This is because each of the solutions adopted will be, either closer to equal division, i.e. favouring small countries, or closer to proportional division, which is more beneficial for the more populated countries. This observation in combination with the lack of developed and proven methods of degressively proportional division resulted in determining the composition of the European Parliament on the grounds of political negotiations.

The current composition of the European Parliament does not fulfill the rules of degressive proportionality. It was approved before the entry into force of the Lisbon Treaty and therefore there was no legal obligation to apply the degressive proportionality. The Rapporteurs of the Committee on Constitutional Affairs Lamassoure and Severin made a proposal of distribution which meets the requirements of degressive proportionality, but does not solve the problem of ambiguity of the method, as well as sustainability in terms of the possibility of applying to consecutive parliamentary terms. A major problem is the lack of stability in the composition of the European Parliament already with regard to small changes in the demographic. The authors of the draft resolution of the EP stated that:

"A clear, comprehensible and transparent system must also be applicable to future changes in the size of the populations of the Member States without substantial new negotiations" (Lamassoure, Severin, 2007).

They forget, however, that even in situations where the composition of the European Union does not change, the small demographic of the Member States can violate the fundamental principle of degressive proportionality. Their proposal of division contained in the annex to the draft of the European Parliament resolution developed in 2007 does not comply with the principles of degressive proportionality already for demographic data from the year 2009. As a consequence this should lead to a new distribution of seats.

3. DIVERSIFICATION AND DEMOGRAPHIC STABILITY OF DEGRESSIVELY PROPORTIONAL DIVISIONS

The two citations from the Report on the Composition of the European Parliament presented previously designate certain directions of exploration among degressively proportional divisions, such that intuitively correspond to the thoughts of the creators of this document. The first listed reference refers to the appropriate diversification of the division. In fact, to obtain the greatest possible number of countries with different number of allocated seats. Of course, the greatest dispersal can be seen in the case proportional divisions, and the designation of countries to whom, due to the similar population, the same number of seats must be given is not difficult. (Łyko, Misztal, 2011). Considered principle therefore directs the search towards the classic, proportionate divisions. This is, however, in contradiction with the idea of digressive proportionality and view expressed in the other referenced rule. It, in turn, puts emphasis on demographic stability of the solution. The issue is that the division once proposed should meet, despite demographic changes, the terms of degressive proportionality as long as it is possible. This shifts the search in the direction of equal division, since it is the most stable. You can see, therefore, that an appropriate solution must be a compromise between equality and proportionality.

Applying the assumption of using the extreme values of the six and ninety-six seats allocated, respectively, to the smallest and greatest country of the European Union, indicated in the Lisbon Treaty, prevents the usage of equal division. Having this in mind, we should expect small demographic stability of solutions indicated in this way. It appears that is so indeed. Taking into

consideration the demographic data from 2009 and forecasts for the years 2015 and 2020, you can construct only eight degressively proportional divisions allocating 750 seats and complying with the said conditions for the allocation of six and ninety-six seats to the smallest and the biggest country. (Cegiełka, 2011). Moreover, if the period of analysis is lengthened until the year 2024 there will be no such division. Therefore, there is no degressively proportional division with properties indicated in the Lisbon Treaty, the division which in accordance with the demographic projections could be used simultaneously in the seventh, eighth and ninth term of the European Parliament. Accordingly, the lack of prospects for identifying specific solutions in isolation from consistent rules and algorithms is understandable. The current solution based on appointing a specific number of seats to each country cannot be utilized for a longer period of time.

Diversification of the division is also determined by demographic conditions. You can identify the countries, or in fact groups of countries which because of similar population or an estimate of the population must have or will have to have, the same number of seats awarded in the future (Maciuk, 2011). It automatically restricts the maximum number of countries with different number of allocated seats, i.e. diversification of division. In the case of divisions analysed above out of all eight possible, five have a maximum diversification of fourteen. In other words, only fourteen numbers define the mandates granted to twenty-seven countries. It appears that the diversification of the remaining three is thirteen, and so correctly from the point of view of the different number of allocated mandates all divisions differ only slightly and are close to the diversification imposed by determining the minimum and maximum number of allocated seats.

Table. Degressively proportional divisions in the years 2009-2020

Division / Country	I	II	III	IV	V	VI	VII	VIII
Malta	6	6	6	6	6	6	6	6
Luxembourg	6	6	6	6	6	6	6	6
Cyprus	6	7	6	6	6	6	6	6
Estonia	6	7	7	7	7	6	6	6
Slovenia	8	7	7	7	7	7	7	7
Latvia	8	7	7	7	7	7	7	7
Lithuania	10	10	10	10	10	10	10	10
Ireland	13	13	13	13	13	13	13	13
Finland	13	13	13	13	13	13	13	13
Slovakia	13	13	13	13	13	13	13	13
Denmark	13	13	13	13	13	13	13	13
Bulgaria	16	16	16	16	16	16	16	16
Austria	17	17	17	17	17	17	17	17
Sweden	18	18	18	18	18	18	18	18

Hungary	18	18	18	18	18	18	18	18
Czech Republic	18	18	18	18	18	18	18	18
Portugal	18	18	18	18	18	18	18	18
Belgium	18	18	18	18	18	18	18	18
Greece	18	18	18	18	18	18	18	18
Netherlands	26	26	26	26	26	26	26	26
Romania	32	32	32	32	32	32	32	32
Poland	55	55	55	55	56	55	56	56
Spain	65	65	65	66	65	66	65	66
Italy	77	77	78	77	77	78	78	77
U.K.	78	78	78	78	78	78	78	78
France	78	78	78	78	78	78	78	78
Germany	96	96	96	96	96	96	96	96

Source: Cegiełka, 2011.

When viewed in the perspective of the years 2009-2020 the largest group of countries with similar population and therefore the need to grant the same amount of mandates are: Sweden, Hungary, Czech Republic, Portugal, Belgium and Greece. This is, of course, the result of the assurance of fulfillment of degressive proportionality conditions throughout the whole analysis period. Taking into account only one parliamentary term or its beginning, you can get a much greater diversification. Regarding, for example, only the year 2009 we can achieve a division, as a result of which up to twenty-one countries will be able to be allocated a different number of seats (Maciuk, 2011). More demographic stability can thus be obtained only by reducing the diversification of the division.

4. CONCLUSIONS

Currently used system of distribution of seats in the European Parliament between the Member States cannot not be a long-term solution. Indication of the number of seats available to the country without the algorithm, on the basis of which such a solution is created, results in a lack of repeatability in the case of successive parliamentary terms. Establishing a single division into several terms is practically impossible. In the short term, this reduces the diversification of the division, which is not compatible with principles set out in the resolution on the European Parliament, in the longer term, it eliminates such allocations entirely. This leads to the conclusion that to fully preserve the idea of division presented in the Lisbon Treaty, one should avoid detailed solutions and instead start seeking a universal algorithm that could be used for any population of the Member States. It is necessary to devise solutions similar to the ones applied in proportional divisions. Possible defects of these solutions that could consist in preferring particular groups of smaller or larger countries seem to be less significant than the lack of stability of the solutions created by indicating the allocation on the basis of political negotiations.

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KNOWLEDGE SHARING CULTURE FOR THE NET GENERATION

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Abstract

This paper deals with two important changes which strongly influence current business and the competitiveness of the organizations. The way how to react to these changes is to build and to support participatory culture as a qualitatively higher level of knowledge sharing culture. The first change is the shrinking job pool in Europe. The second one is a specific value judgment, habits and the job expectations of the young generation (Net Generation) just entering the workplace. These people are interacting in a very transparent manner across internet social networks and expect to engage in similar interaction within the business environment. We suggest how to built participatory organizational culture to attract and to retain talented young knowledge workers to gain all advantages and to avoid possible pitfalls from the mentioned changes.

Key words: *Net Generation, social network, participatory culture*

1. INTRODUCTION

Social networks provide a platform for contact between large numbers of people for unlimited time. Just these features make the big difference from the traditional ways of communication and cooperation and represent the greatest potential for business applications. This new collaborative framework enables to involve more participants than traditional ways of cooperation. Social networking empowers the communication between the people who barely or not a bit know each other.

The collaboration shifts from document-focused to conversation centric. A slow circulation of documents is replaced by interactive form of collaboration, in which the participants share freely ideas in forums, chats and other interactive web technologies. This communication proceeds quickly, nearly in the real time. A related change is a move from individual linear-thinking behavior to group-thinking behavior. The output of this collaboration is also a group-product. This way of collaboration supports the synergy of interactive feedback, creativity and innovation. The final product embodies the knowledge of all the participants. We witness cultural shift toward connectivity and transparency. In this paper we document how the two current simultaneous changes, the lack of young talent at one side and the availability of social networks and other Web 2.0 tools on the other side, influence the companies. We suggest developing of a qualitatively new organizational culture, called participatory culture. This culture seems appropriate for efficient work of a new type of young knowledge worker, so-called Social Network Knowledge Worker. First, we specify some terms used in the text.

Social network is a file of relationships; formally sad, network contains objects (called also nodes) and reflects relationships among objects. The objects are individuals, eventually organizations. If we have on mind the social networks on the internet, it is the combination of a webhosting service and specialized browser. Most popular is Facebook, which is used by 51 % of social networks users.

Prominent professional social network LinkedIn has over 65 million members, which is 9 % of all users. (Van Belleghem, 2010)

Web 2.0 is current internet infrastructure that includes social networking, mass collaboration and interactive web technologies such as wikis, blogs, tagging and effective management of content. Enterprise 2.0 is generally an organization, which have made the cultural and behavioral shifts and adopted Web 2.0 technologies to enhance the social and collaborative structure of its business.

Net Generation is the youngest group of people at the labor market. They are also called Generation Y, Digital Generation or Millennials. Their birth period is approximately 1980 – 1995, people born after 1995 are called Generation Z. As it is obvious from the next chapter, they are scarce resource for the employers.

2. THE SHRINKING POOL OF YOUNG TALENTS

In the EU 27 countries the fertility rate in 2008 was 1.60 (number of children that would be born alive to a woman during her lifetime). A rate of 2.1 is considered to be the replacement level fertility rate. This level was achieved by 1975 and after it the fertility rate went down. (Eurostat, 2011) This development will lead to an unprecedented shortage of young workers around the world as the situation is similar not only in the Europe or USA bud also in China, India and South America. The lack of talented employees is considered as a big threat across the world in recent years. Only during the period of economic recession other problems were the priorities for managements of companies; however in 2011 the availability of key skills is again of growing importance – see table 1.

Table 1. Deep-going threats to business growth in view of CEOs (PwC, 2011)

Rank/Year	2008	2009	2010	2011
1.	**Availability of key skills**	Recession, economy	Recession, economy	Recession, economy
2.	Recession, economy	Unstable capital markets	Overregulation	Public deficit
3.	Overregulation	Overregulation	Unstable capital markets	Overregulation
4.	Low-cost competition	Energy costs	Currency volatility	**Availability of key skills**
5.	Energy security	Inflation	Economic imbalances	Increasing tax burden
6.	Scarcity of resources	Low-cost competition	Low-cost competition	Exchange rate volatility
7.	Protectionism	**Availability of key skills**	Energy costs	Unstable capital markets
8.	Security of supply chain	Protectionism	**Availability of key skills**	Shift in consumers
9.	Technology disruption	Security of supply chain	Protectionism	Energy costs

According to the 14th Annual Global CEO Survey 83 % of global CEOs anticipate change in people management as a response to changes in the global business environment. Although different labor markets have their own unique characteristics, motivating and retaining talent worldwide is high on the CEOs agenda.

A large majority share concerns about finding candidates with the right skills. Having access to the best talent is a challenge for the companies, 97 % of CEOs in PwC's annual global CEO survey say that having the right talent is the most critical factor for their business growth. (PwC, 2011) The winners and losers of the upcoming decade will be defined by those who are able to attract, retain, and deploy their key talent globally. The lack of talent and continuously changing business needs put pressure on the HR function to evolve its talent management strategy.

Global mobility of talent is essential to maintain the talent supply in the organization. Companies need to accept the implications of social networking and use it to attract and retain the best knowledge workers. Companies that innovate in this area and have the right technology platforms have big competitive advantage.

It is expectable that talented young people will be in high demand and this way they have the power to influence the way they work. Net Generation with its social networking sites and technological abilities will shape companies which use technology innovatively to attract employee, build teams around the world and to share and create knowledge. (PwC, 2010) It is useful to know what job expectation the young generation has.

Net Generation members expect job mobility and to speak other than native language during their career (mainly English). They strongly value corporate responsibility, nearly 90 % of them choose employers who have CSR values that reflect their own values and are prepared to leave if the employers' values no longer matched their expectations. Three-quarters of Net Generation suppose having between two and five employers in a lifetime and the some part of them expects working from different location, not only in the office or from their home office.

Nearly all of Net Generation members (98 %) consider training and development as the most valued employee benefit. Their second choice is cash bonus and the third one flexible working hours. In terms of professional development the Net Generation prefers working with strong coaches and mentors. To meet this need it is inevitable to make possible face to face cooperation minimally in the first stage of the relationship. (Bendová, 2009) Apparently, finding the optimal proportion between face-to-face team work and virtual work is one of crucial factors of competitive advantage of the company.

According to Net Generation technologies will be at the centre of all work activities in ways that may by unimaginable nowadays. Technology advances will change the way people work and everyone has to keep up the pace with the change in modern technology. Net Generation sees the technology as a tool for enhancing the ability to work and before at all to network. The young workers need to network and to share knowledge via internet networking can bring benefits to a business in terms of sharing best practice.

3 NET GENERATION AS SOCIAL GROUP

Net Generation (also Millennials), which is the youngest age group of workers just beginning to enter the workplace, is the most technically sophisticated generation in history. (Humle, 2007) Their lives are immersed in technology, using computers, cell phones, and all the other toys and tools of the 21st century. They expect organizational information and records, along with the applications and systems

used to manage them, to be instantly available, even on their handheld devices. They start establishing new rules and launching a radical transformation of technology in the workplace, and those changes come dramatically faster than any previous changes witnessed by their bosses.

Social researchers Howe and Strauss (Howe, Strauss, 2000) find the Millennials to be confident, optimistic, and team-oriented achievers. They are more diverse than any generation that has come before them. More than a half of Millennials were born into single-parent families. When working with them, many will appear to be strikingly impatient, needy, overconfident, and emotionally frustrated. Managing, training, and retaining them will present management challenges in the coming years.

They prefer to be part of group effort and collective problem solving rather than working alone and they are uncomfortable with inflexible or rigid management hierarchies. They seek meaningful work, immediate responses to their questions or problems, frequent oversight and feedback, and prompt recognition. Millennials seem strongly interested in harmonizing their jobs with the family and personal lives. On the other hand the separation between work and life is blurred as Millennials seek flexibility and variation in the workplace.

Millennials consider themselves to be excellent multitaskers. That corresponds with their desire of flexibility in their jobs so that they can be everywhere and do everything at the same time. For Millennials, multitasking goes beyond proficiently doing several tasks at once; it has saturated their entire perception of interactions with others. Their perception of networking is to interrelate simultaneously and link people, technology, data, and ideas together. Flexibility in where, how, and when they do their work is more important to them than a high salary.

Millennials do not understand the 'punch clock' system and push for flexible work days with a focus on increased productivity. They do not accept flexibility as a bonus; they expect it from their first day on the job. We have to realize, that for Millennials it is standard way of life to be connected with internet and smart phones where they can talk, text, and surf in buses, parks, coffee shops or schools and no wonder they demand the same for their work. Some times we can hear the question if the Millennials passion for internet based social networking is not even an addiction.

In connection with above mentioned facts it is interesting to monitor the increase of Facebook users in the same period when the CEOs were questioned in the 14th Annual Global CEO Survey 2011 – see table 2.

Table 2. Facebook: Millions Users (From Wikipedia, the free encyclopedia, 2011)

Date	2008/08/26	2009/04/09	2009/09/15	2010/02/05	2010/06/10	2011/01/05
Users (mil.)	100	200	300	400	500	600

Ever since Facebook was launched in 2004, it has become extremely popular especially among young adults and the number of users is still steeply growing.

The next table 3 shows the characteristics of the Facebook (the most popular social network) users and for comparison also the characteristics of LinkedIn (the most prestigious professional social network).

Table 3: Facebook ans LinkedIn Users (Chappell, 2011)

Characteristic	Facebook	LinkedIn
Male	45 %	60 %
Female	55 %	40 %
Graduate degree	8 %	18 %
Bachelors degree	19 %	41 %
College	52 %	33 %
High school	20%	8 %
Age		
0 – 17	7 %	1 %
18 – 24	12 %	3 %
25 – 34	24 %	23 %
35 – 44	22 %	33 %
45 – 54	24 %	25 %
55 – 64	9%	12 %
65 and more	2 %	3 %
Household income (USD a year)		
0 – 24 999	12%	9 %
25 000 – 49 999	32 %	21 %
50 000 – 74 999	32 %	25 %
75 000 – 99 999	12 %	21 %
100 000 – 149 999	7 %	14 %
150 000 and more	4 %	10 %

We can see that social networking is not only young people matter. However, this statistics say nothing about the activities of the users, how often and for how long they are connected and for what reasons they use the social media. Nevertheless, the immense increase in Facebook users clearly documents the growing popularity of social networking.

To learn more about the young people internet activities, we examined a small group of students in February 2011. The students are participants of our research seminars Live in Second Life and Virtual Work. These seminars are focused on research of virtual work in cyberspace. The purpose of the research was to get basic information about the internet usage and the importance of internet for the students. The results of this enquiry are shown in table 4.

Table 4. Internet activities of the students

Number of participants: 21
Male/Female: 6/15
Average age: 21
Do you use internet every day? YES/NO : 21/0
How many hours do you spend using internet (hours/day)? In average: 4
What are your main activities on the internet? E-mails, social networking, blog reading (related to the study), chats, information gathering for school work, news reading, books reading (to mention the most common)
What type of hardware do you use to access internet? 20 notebooks, 1 table PC, sometimes also mobile devices
How long are you able to spend without internet and still feel comfortable? In average: 1 week
Have you ever think about that people can be internet addicted? YES/NO: 21/0

The students are typical Millennials, born around 1990, they use internet every day for many purposes often connected to their study but also for social networking. They are able to live without internet for one week and in the some time they realize people can become internet addicted. While the Millennials´ parents and grandparents rely on face-to-face connections, their children/grandchildren are comfortable with virtual relationships supported via Facebook, LinkedIn, blogs, collaborative tools, wikis, Skype, Google talk or Google docs etc.

Research suggests that Millennials will use social networking technology in ways that will transfigure business over the next decade. According to Symonds, "They don't just use the new technology that has revolutionized business over the past decade - they eat, sleep and breathe it". (Symonds, 2010) On the negative side, this generation generally has poor adaptive skills, trouble accepting authority and criticism, and difficulty dealing with the hardships as a result of the way they were brought up.

4. SOCIAL NETWORKING BENEFITS AND RISKS

Social networking can be for the company extremely beneficial but it represents also significant risk if not controlled carefully.

There are three main areas of social networking positive impacts and benefits:

Efficiency – the productivity of knowledge workers rises

Relationships reach – knowledge workers can build relationships with the wide range of specialists inside and also outside the organization

Innovation – The process of new ideas developing, inventions and creative thinking, which leads to innovative solutions, is extremely strong thanks to synergy between the participants. We have to admit that it is greatly difficult if not impossible to quantify the financial revenues of social networking. It is recognition of the shift in workers behavior, their willingness to work virtually, transparently and as

the members of the groups which is important for an effective business strategy. To ignore this development is a significant risk to the long-term sustainable development of the company.

As mentioned above, the openness in knowledge sharing via social networks presents also significant risks for the companies. The main risks are as follows:

- The damage of employer brand due to public criticism by the employees

- Information leaking

    - Openness in spontaneous communication (Facebook, Twitter…)

    - Targeted Social Media Intelligence

    - Knowledge sharing via community discussions, forums or websites (i.e. www.stackoverflow.com, www.stackexchange.com)

One of the most serious risks for the companies is information leak through the social networks on the internet. A new sector of competitive intelligence is developing around social media. It seeks and gathers information about competitors' know-how, aims, strategies etc. (Venkataraman, Supriya, 2010)

It is recommended for the company to have both offline and online competitive intelligence. Offline competitive intelligence helps in ensuring that the social media intelligence gives the right clues in understanding the trajectory of competition and the steps necessary to develop sustainable competitive advantage. This translates into value driven relationships. As the company is constantly attuned towards social media, live feedback on the brand's performance can be obtained. This brings continuous evolution of the products/service and the growth of real linkages in the some time.

Social Media Intelligence comprises of three major components

a) Lead Generation Intelligence

b) Recruitment and Selection Process Intelligence

c) Buzz Creation and Brand Intelligence.

In essence, the valuable information from the various key social platforms is distilled into these three components which are then driven to build sustainable competitive advantage for the company (fig. 1).

It is obvious, that it is a big strength of a company to have developed social media intelligence but it is a threat to be an object of social media intelligence of competitors. Awareness of this danger is the first step to avoid it.

Let's give also an example of the internet user's openness and willingness to cooperate and to help each other – Stack Exchange (http://stackexchange.com/). As the print-screen (fig. 2) shows Stack Exchange is a network of question and answer sites on diverse topics.

In 2008 Jeff Atwood and Joel Spolsky created a site called Stack Overflow and brought together millions of computer programmers from around the world to help each other with detailed technical questions. That site was a success, so they created the Stack Exchange Network and started launching new sites in August of 2010. There are now 46 separate sites and over 19 million unique visitors (as of January, 2011). There is no other reason for experts to answer the question than willingness and may by professional ambition to achieve reputation in the community. The reputation is the only

measurable benefit for Stack Exchange users; it is generated when fellow users vote up somebody's questions and answers on a Stack Exchange site.
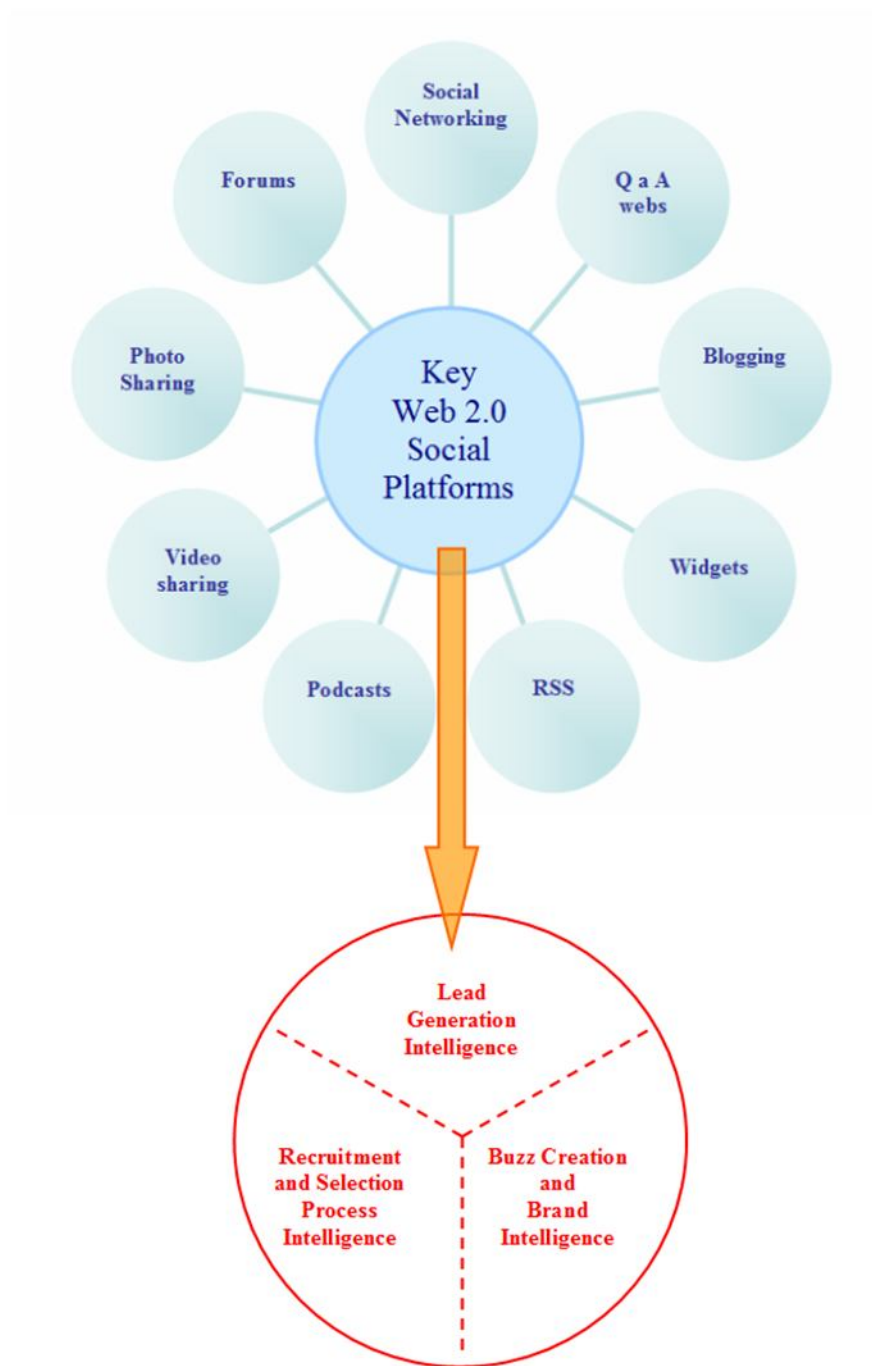

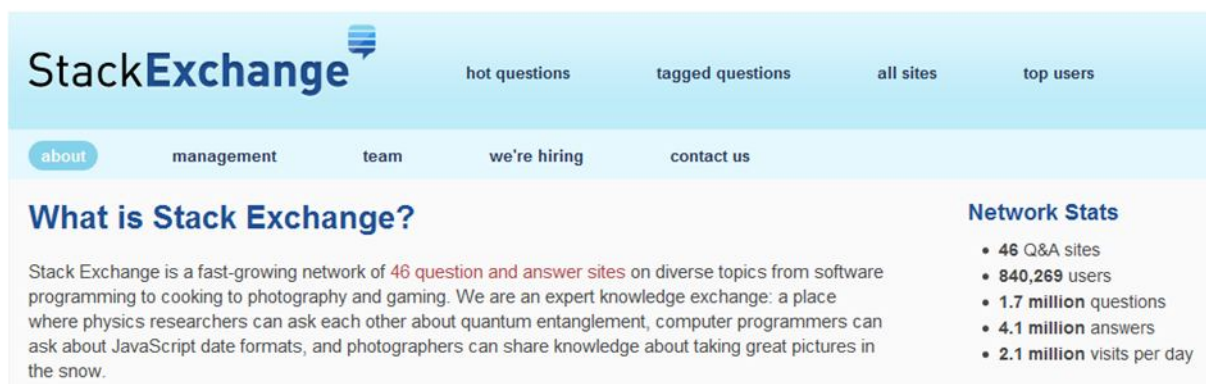**Fig. 1.** Social Media Intelligence - three major components
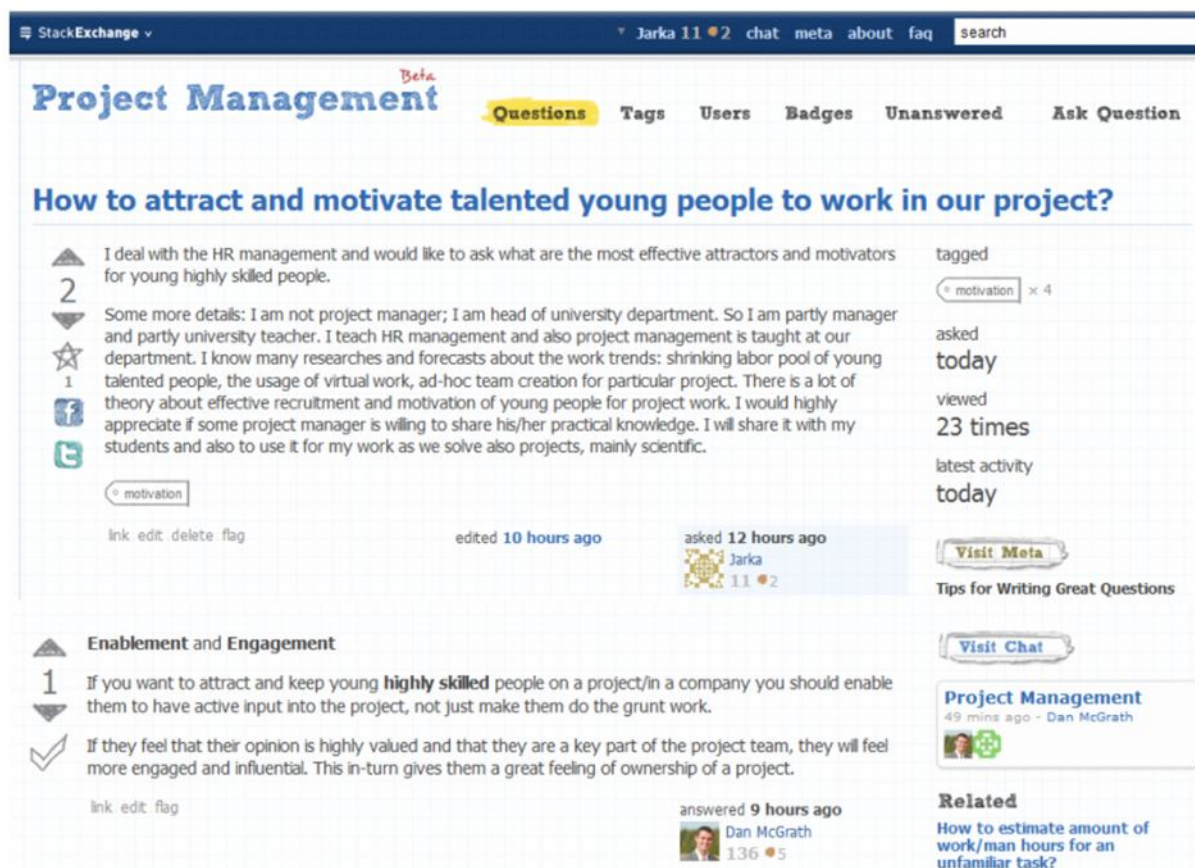
Fig. 2. Stack Exchange print-screen

Fig. 3. Project Management question and answer site

To illustrate how Stack Exchange works we conducted a small experiment. We used the Project Management site (http://pm.stackexchange.com) and asked a question related to the topic of this paper. First, it was only the short version. After one hour we were asked by web page moderator to add some more details. That means there is a supervision of the activities at the web page. We added more details and received first answer a few hours later. The process is recorded in the fig. 3.

If the company is able to use social media in a clever and safe way it can take advantage from so called Medici effect. Poets, philosophers, scientists, architects, painters and sculptors from many parts of the world came together in Florence between the 13th and 17th centuries thanks to the patronage of the wealthy Medici family. By attracting talented people from so many different fields and cultures, the Medicis got all these creative people in contact with one another to trade ideas and collaborate. This intersection of concepts and diverse backgrounds kicked off the Renaissance, one of the most innovative eras in human history. Nowadays, there is very similar possibility to get many talented people together without big expenditure. People can easily meet thanks to social media and to exchange their knowledge and ideas. An innovative content often comes about when some seemingly unrelated ideas or topics are connected. For the companies it cannot be a discussion if to use social networks and other tools of Web 2.0 nowadays. It is an imperative to utilize human capital in an organization efficiently and to leverage its assets this way. To avoid all the risks connected with these activities is a connected task.

5. PARTICIPATORY CULTURE

Participatory culture is the emerging culture, which absorbs and responds to the explosion of new Web 2.0 based technologies and enables to use the content published there in powerful new ways. (Jenkins, 2007) Companies must devote more attention to fostering what can be called the new media literacy: a set of cultural competencies and social skills and also security awareness that people need in the new media landscape. Participatory culture shifts the focus from one of individual expression to community involvement. This new ability involves social skills developed through collaboration and networking and also the knowledge how to behave safely as a member of internet social network.

Participatory culture can be defined as one:

1. With low barriers to expression and personal engagement

2. With strong support for creating and sharing one's knowledge and ideas with others

3. With some type of informal mentorship whereby what is known by the most experienced is passed along to novices

4. Where members believe that their contributions matter

5. Where members feel some degree of social connection with one another (at the least they care what other people think about what they have created)

The characteristics of participatory culture are as follows:

Affiliations: Memberships, formal and informal, in online communities is centered around various forms of media, such as Facebook, LinkedIn, forums, question and answers webs pages etc.

Expressions: Producing new creative forms, such as digital sampling, video-making, fan writing, zines, blogs etc. is common.

Collaborative Problem-solving: People work together in teams, formal and informal, to complete tasks and develop new knowledge (they use meetings and discussions in virtual worlds, question and answers webs pages, collaborative applications like Capsa etc.).

Circulations: The content of Web 2.0 applications is enriched by users (creation and sharing of podcasts, webinars, wikis etc.).

To take advantage of Web 2.0 requires fostering of the skills and cultural knowledge of the employees. The young generation of the workers is keen to use all the technologies available and if there are no official company tools they use the common public ones like Facebook, Google talk, Stack Exchange and many others. The senior generation can be more conservative and it may cause moderation in Web 2.0 tools application. To align the Web 2.0 technologies access across the company is now very important task for HR management and of course from the technical point of view also for IT departments.

Let's mention two successful examples of Web 2.0 usage – companies Pfizer and AT&T. These companies realize that the best solutions to business problems not always come from the researchers on the front lines. Often someone in another department or another country branch could hold the missing piece to a particular problem solution.

The pharmaceutical company Pfizer decided to take advantage of the collective intelligence of its 86.000 employees to address its business challenge and created (in conjunction with IBM) a software platform Idea Farm. Idea Farm enables Pfizer employees submitting ideas for new products or process improvements. Several millions USD every year is saved in Pfizer thanks to connecting people and their ideas on Idea Farm.

AT&T uses an innovation management platform to provide a forum for its employees to share information and ideas on how to improve products and services. The forum is open to all managers globally, and the company is starting to build prototypes based on some of the ideas that have been proposed. Currently the program is open to the telecommunications company's 120.000 management personnel, but it will be open for non-management staff as well. (Rosencrance, 2010)

6. GENERATION Z FOLLOWS NET GENERATION

The companies have to be prepared that the trends and impacts of social media usage will strengthen with the Generation Z entering workplace. The Generation Z birth period is between 1995 and 2005, which means they attend schools at this time. Generation Z are true digital natives, there is no period without internet even in their babyhood. Generation Z lives for speed. Google with its emphasis on performance and speed is well positioned to meet the high-demands of this Generation Z segment. Generation Z will be so good at processing information that they will open doors we can only knock on today. (Lyon, 2009)

Generation Z has grown up with social communities, such as Facebook or Twitter. Meeting, befriending and interacting with the online community is for them completely natural. They are able to spread messages to vast sums of internet users. Generation Z is extremely open. Personal information is only sensitive when it comes to money. This is big difference between these young people and their

parents (not to mention grandparents). Privacy is less of a concern with the more tech-savvy generations.

To share their ideas Generation Z condenses information into its very essence. The usual length of Facebook message (Status update, What's on your mind? 420 characters) is a stylistic work for them. Generation Z does not like e-mail and considers it passé, they prefer short instant messages or social media status updates. (Lyon, 2010) All the described trends mean, that Generation Z apply a new way of creativity, based on cooperation and openness. They will behave in this manner also in their work and the companies have to be prepared.

We can call the members of generations Y and Z with their needs and customs of Web 2.0 applications usage Social Media Knowledge Workers or Knowledge Workers 2.0. (Bruining, Spenser, 2010) Young talented workers are interested in jobs where it is possible to use social networks and other Web 2.0 tools and where the participatory culture is supported. If the company is not able or willing to apply its own Web 2.0 solution, two scenarios are possible. The first one, young people will be not interested in working in such company, which means competitive disadvantage. The second one, young people will be interested in working for such company, however they will find their own ways of social networking. In this case the probability of a leak of information tends to one. When the company decides to find its own Web 2.0 solution it has to take into account that the market of Web 2.0 tools is highly fractionated. Organizations have to decide carefully when choose their own solution to gain the best value and meet the needs for their usage scenarios. Also training of the staff how to use social media is important part of Web 2.0 strategy.

7. CONCLUSION

We can assume, that the movement toward social networking is the most significant technology driven change for the business world since the internet diffusion in the nineties. It is not so long time ago so we can realize we were not able to foresee its implication we have witnessed continuously. And we also know that the companies which underestimated the worth of internet for the business lost their competitiveness whereas the early adopters of internet gained competitive advantage. There is no reason the situation is different with the Web 2.0 and its social networks and other cooperative tools. The vision and strategy of the companies as well as human resource management have to take these technologies into account.

Thanks to Web 2.0 people and computers can be connected so that, collectively, they can be more intelligent than can any individual. So called collective intelligence has been around for a very long time, in families, companies, countries etc. However, in the past few years, there have been some interesting examples of a new kind of collective intelligence. Google as a system or Wikipedia, to mention only two examples, have developed an organizational design that allows thousands of people from all over the world to collectively create an intellectual product without centralized control and with almost all of those people being volunteers. It is amazing that Web 2.0 with its platforms combines people and computers in a way that never existed on our planet before. (Theater, 2007)

The words like solve, explore, understand, listen have now taken on a whole new meaning. Thanks to recent technologies, including many Web 2.0 platforms and applications, companies can use the wisdom of more people than ever in the history before. The use of social networks, collaborative software and other Web-based tools constitutes a technological paradigm shift in the way that companies make decisions. We can call it the emerging era of Decisions 2.0. (Bonabeau, 2009) In Decision 2.0 era the managers have great responsibility to increase the level of participation in the

Enterprise 2.0 environments. A big opportunity for the companies are young people, who are not only willing but literally keen to use collaborative platforms and social networks. Well developed participatory culture is a challenging and stimulating background and increases the engagement of the workers in collective intelligence contribution. Taking care of know-how security is a related task not only for IT people but also for HR managers as the training of cooperative platforms utilization is of big importance.

We can conclude that we witness a unique combination of two epochal shifts: the emergence of new communicative and cooperative internet platforms and the change in value judgments and working behavior of the young generation. Moreover, due to decreasing fertility rate it will be gradually more difficult to attract and to retain the talented young experts. These young educated people with their values and habits can be called Social Network Knowledge Workers. The companies need to know the characteristics of these young workers and create appropriate conditions to be able to use fully the human capital of these new generations, the Net Generation and the coming Z Generation.

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OPPORTUNITIES CREATED BY LOGISTIC COMPETENCE CENTERS IN THE REGIONAL ECONOMY USING VALGA LOGISTIC COMPETENCE CENTRE AS AN EXAMPLE

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Abstract

A Logistic Competence Centre (LCC) promotes use of logistics competence in formation and implementation of strategies and policies in the fields of transport, infrastructure, education, entrepreneurship, innovation, information technologies and environment also it helps to raise the competiveness of regions or countries in the transport and logistics sector. New trends in economics and management are guiding public administrations, education and the business world towards new cooperation fields and systems: logistics is one of these fields where such kind of cooperation has been widely used: LCCs, Logistics Clusters. The purpose of this paper is to introduce significance and benefits created by LCC and also to outline the advantages and opportunities in the regional economy establishing LCC in Valga region in Estonia, based on a research conducted in 2010.

Key words: *logistics, competence centre, Valga region, Estonia transport and logistics sector, Rail Baltika, transit.*

1. INTRODUCTION

Nowadays logistics has increasingly attracted much attention and made great contributions to the economic development in worldwide background, which has been proved by practices in many countries. Modern logistics activities have been gradually divorced from industrial sections and become an independent sector. It's not a simple continuation of traditional industry, and it should be a newly sprouted and compound basic industry. Modern logistics is a social and specialized aggregation of logistics organizations, which is dominated by logistics enterprises and characterized by the logistics activities of the logistics sectors in non-logistics companies. It has become not only an important component of the national economy but a vital force for the development of industrial economy and a useful tool for promoting the enterprises' international competence as well. Meanwhile, modern logistics is also an important symbol for comprehensive strength of a country or a region.

Facing the trend of economic globalization and integration of regional economy, the economic relations among regions have been greatly improved. In regional economic system, logistics has becomes a sub system whose main function is to realize the integration, harmony and consistency of logistics activities inside an industrial organization and among the different industries as well as to improve the efficiency and benefit of industrial organizations in this region and enforce the comprehensive force of regional economy. Therefore the construction and development of regional logistics system should be in accordance with the general direction of regional economic development.

Generally speaking, the construction of logistics system mainly consists of logistics network (i.e. transportation infrastructure network) and the logistics node (i.e. logistics district, logistics center and distribution center).

However, different economic region have different requests for its own logistics system owing to the existing differences such as geographic environment, logistics infrastructure, industrial structure, industrial organizations and their linkage strength, industrial allocation, the regional industries' affiliation and the difference between material origin and product consumption area. Therefore, on the basis of present situation of regional economic development, how to construct the regional logistics network and node, especially the possible logistics management models in logistics node has become a vital problem for efficient operation of regional logistics system.

Countries wishing to improve trade logistics may need to reform and modernize border management institutions, change transport regulation policy, and, in some cases, invest significantly in trade-related infrastructure.

A Logistic Competence Centre is a network-oriented promoter of the economic development for logistics at regional level. It works together with other Institutions for economic development allowing an innovative system of cooperation and coordination between public and private bodies. In order to develop logistics and its networks at regional, national and international level, regional public authorities have to match a "government" & top-down approach with a "governance" & bottom-up one, understanding operators' needs, supporting the cooperation among private companies and operators in order to optimize transport and logistics behaviors and management. Private and public spheres have had some relationship frictions and cooperation obstacles: a LCC can be the concrete solution to ease public-private joint activities in transport and logistics facilitating the integration between different kind of bodies and supporting the creation of specific public policies. This paper aims to give an overview of the competitiveness of Estonian's transport and logistics sector and to bring out the advantages and opportunities in establishing LCC in Valga region in Estonia, based on a research conducted in 2010.

2. THE COMPETITIVENESS OF ESTONIAN TRANSPORT AND LOGISTICS SECTOR

2.1. Current economic situation in Estonia

2010 was the year of recovery from economic crises in Estonia as well as in the European Union as a whole. According to Statistics Estonia the Estonian GDP growth rate increased to 6,7% in the forth quarter of 2010 compared to the same period 2009, which was the third consecutive quarter of growth after nine successive quarters of decline.

The locomotive of the upturn has been industrial production, which grew by 23% in 2010 compared to the previous year, but oscillated between 35-39% in the last three months. This was influenced most by the branches holding bigger shares – manufacturing of electronic products, where production increased nearly two times and manufacturing of wood where production grew by more than a quarter.

When Estonia was the country with the largest decrease in manufacturing production amongst EU Member States in the middle of 2009, with the decline exceeding 30%, then since the second quarter of 2010 it has become the country with the fastest growth in industrial production. The growth of industrial production was mainly influenced by external demand – more than two thirds of the whole production of manufacturing was sold on external market. Demand on the domestic market was significantly lower, but also increased continually during the year.

Prospects are good for the current year, which is demonstrated by the upward correction of the expected GDP growth by analysts. The European Bank of Research and development (EBRD) has raised its growth expectation to 3,6% assumed for 2011 compared to the 3,2% assumed for 2011 in October 2010. Danske Bank has put its most recent mark to 3,9%. The institutions with a stronger local presence seem to be even more optimistic. Swedbanks prediction in January 2011 for the current year was 4,2% and in April they raised their forecast to 4,5%. LHV bank is even more optimistic setting the prognosis to 4,8%.

2.2. *An overview of transport and logistics sector in Estonia*

Transport and logistics play a vital role in the Estonian economy. The Estonian transport system comprises railway, road, sea, inland water and air transport, electric public transport in cities and transport via pipelines. The transport sector employs around 50,000 people (over 8 per cent of the working population) and accounts for more than 12% of Estonian GDP (2010) Transport contributes considerably to Estonian export revenues and balance of trade. The national transit infrastructure is generally well established, rail infrastructure is solidly in place, there are several convenient ports, and international airports are available as well. Due to high levels of competition local logistics and transport companies are comparable to their Western counterparts in terms of service and quality.

According to the Word Bank´s Logistics Performance Index Estonia holds 43th place amongst 155 countries. The country's favorable geographic location, along with its well-developed infrastructure, offers excellent opportunities for all transport and logistics related activities. Estonia is uniquely positioned to capture a significant share of the transit market between Russia and Scandinavia, Western Europe and Baltic States. Today Estonia has become a transit centre between the East and the West as well as the North and the South. Its location is ideal for the creation of efficient transportation links and distribution chains of goods and services for companies in Europe and in other parts of the world. Estonia's transit industry continues to show double digit growth in 2011. This is a very encouraging sign for the economy, and leads analysts to speculate that the transit sector would be lucrative investment in the future.

In transportation everything very much depends on the state of the economy. The latest figures of Estonian transportation sector are impressive. Tallinn's airport is accommodating more flights and carriers while Tartu airport was renovated in 2009 to provide regular international flights. In January 2011 a total of 3.05 million tons of cargo was transported on Eesti Raudtee (Estonian Railways) infrastructure, which exceeds the results of January 2010 by 18,9%. Oil and oil products were the biggest cargo group, with 2,09 million tons in January a growth of nearly 16% a year. Oil shale followed 560,000 tons, an annual growth of 80%. The cargo turnover of ports managed by Tallinna Sadam (Port of Tallinn) has grown 16,8% during last year, and growth was noted in all cargo types.

In 2010, the world economy affected by the economic-financial recession has recovered. In this context, the economic growth has generated new development opportunities for the transport & logistics sector, as well as for the industrial sector. Hence, the technological innovations have brought new elements, leading to the improvement of services that influence global market competitiveness. The investments allocated for the implementation of new generation technological systems contribute to the development of the entire transport & logistics sector. This development has also been supported by the companies that activate in this field. IT investments are once again on the agenda of transport & logistics service suppliers, 54% of which stating that they have long-term IT investments for transport management systems. This increase is due to the fact that the economic environment has recorded positive results. This can also be seen in the transport & logistics sector. Hence, 75% of the companies have recovered or are currently going through a post-crisis recovery process and only 12.6% are still

affected by the economic recession, concludes a study developed by Transport Intelligence (TI).

The only sector in Estonia in services that has reached high export levels is transport and logistics services. Growth of other services should be accelerated, boosted by an increase in economic activity and an opening of the European services market.

Between the years 2006-2013 737 million Euros will be invested in different infrastructure developments. In total there are 24 different projects where the money is invested including airports, railroad ports and roads. In the year 2011 there are expected to be investments in the amount of 130,98 mln Euros.

The total length of the Estonian railway network is 1026 km, from which the length operated railway tracks is 968 km. All rail infrastructure and operations on railways are privatized in Estonia. In the ownership of Estonian Railway Ltd there are 685 km of railways, including 107 km of double-track and 132 km of electrified railways (from which 74 km is double track). In addition 361 km of railways is owned by Edelaraudtee Ltd. The operator for public passenger transport on electrified tracks is Elektriraudtee Ltd. In addition there are the oil-shale mines, which use railways (not public) to transport oil-shale form mines to power-plants (ca 200 km of tracks). The railway network is one of the least dense in EU with 21 km/ 1000 km2. Estonia compares well to the EU average in term of network per inhabitant. Rail passenger transport is of modest importance in Estonia. The share of rail in total passenger kilometers is 2%, which is far below the EU average. The limited public transportation by rail is due to the increase in motorization of the Estonian population, due to very short distances and density of population, density of railway network. Freight transport by rail shod a dominant position in Estonia before the economic crises.

Figure 1. shows the steady increase in volumes 1994-2002, a stable situation in 2003-2007 and a very severe decline in 2008 and 2009, when the levels of freight carried on railroad reached even lower levels than 1994. The 22% increase in 2010 started a rapid improvement and the forecasts of 2011 are expected to raise the volumes back to the pre-crises amounts.

In the first quarter of 2011 the amount of container freight moved on the railways was 8046 TEU, which exceeded the amount of freight carried during the same period last year by 74%. In March the amount carried was 3001 TEU which is the all freight record on Estonian Railways.

The total length of roads in Estonia was 58412 km (2010), from which 16 500 km were in the ownership of the Central Government, 38 759 km of the Local Governments and 3153 km are streets and roads of cities. The Density of national roads is 364 km per 1000 km2 and the density of the entire registered road network is 1290 km per 1 000 km2 of the territory. The funding for road management is allocated in a total sum equivalent to 75 % (with the exception of fuels with fiscal marking) of the fuel excise tax and 25% of the excise tax imposed on fuels with fiscal marking. Distribution of the funding between local and national roads is determined by the Roads Act. Since 2003, the state budget has been composed on the principle that all sources of financing- public revenue and foreign assistance have been included within the equivalent rate of the fuel excise tax. In fact foreign assistance may also be used in excess of the equivalent rate. Since 2009, the profit from services rendered by regional road administrations to other institutions considered as an additional source to the equivalent rate, and is allowed to use for managing costs. To finance renovations of national roads it has been possible to apply for support to the Cohesion Fund (CF) of the EU, to the Regional Development Fund and to the INTERREG program. The basis for utilization for foreign assistance is the strategic plan for the years 2006-2013 approved by the directive of the Government. (Annual Report 2010, Estonian Road Administration)
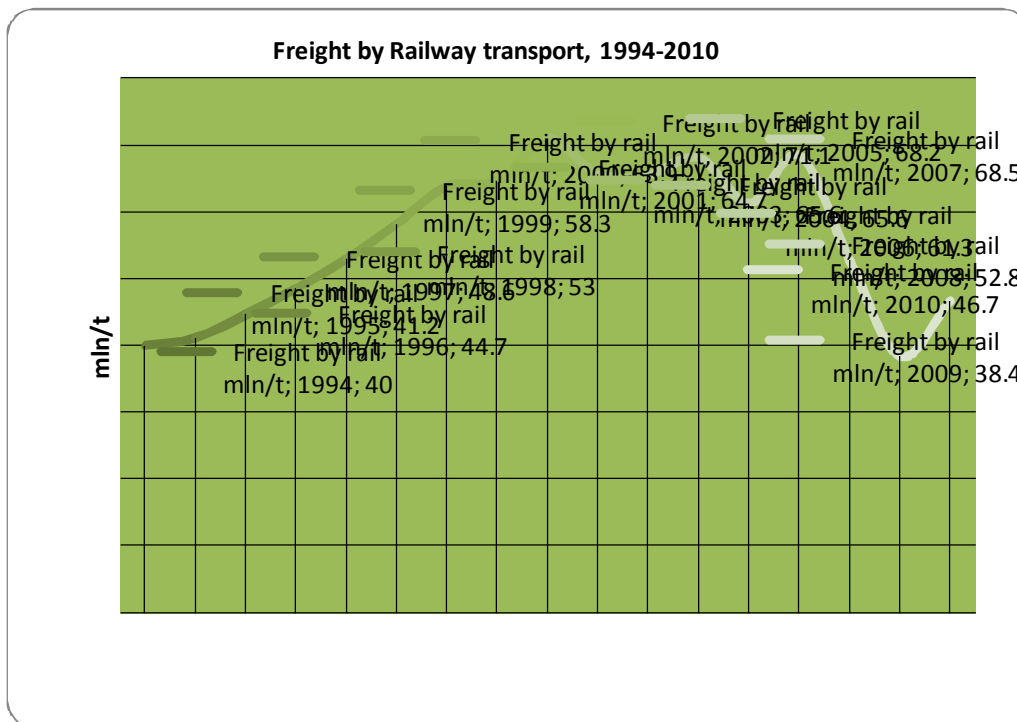
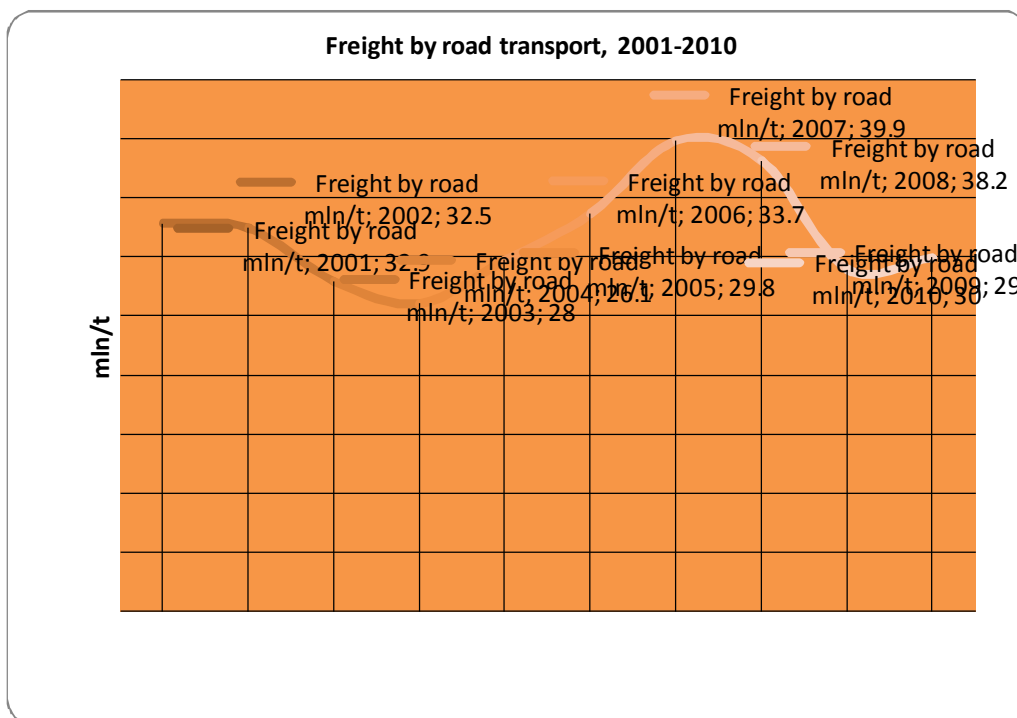**Fig.1.** Freight by Railway transport, 1994-2010

Fig.2. Freight by Road transport, 2001-2010

Road freight amounts and road transportation companies developed well during the years 2003-2007 and also were hit strongly by the economic crises when inner demand and exports declined (see Figure 2.). In 2010 the situation stabilized and volumes started growing in the second half of 2010. From the end of year 2010 and during 2011 the demand for road freight services is exceeding the supply.

In 2010 the number of larger sea ports was around 30 and numerous smaller ports; the number of inland waterways ports was 8. In Tallinn the number of ports is 11 and 5 private owned harbors are in here (Estonian Maritime Administration, 2010). The length of navigable inland waterways was 320 km, but there has no significant cargo transport and passenger traffic in inland waterways. The inland waterways transport has only a very limited number of ships with Gross Weight over 100 tons. The majority of infrastructure of the ports belongs to state-or municipality-owned companies (Port of Tallinn, Saarte Liinid, Pärnu Sadam data, 2010) which operate as the landlord's and grant rights to use their infrastructure to the private operators. Some larger privately owned ports have emerged as well (Port of Sillamäe, for example, yet overwhelming majority of goods and passengers are transported through state-owned ports. Port of Tallinn includes 4 different harbors – so inside of Tallinn city (Old City Harbour and Paljassaare Harbour) and outside of city (Muuga Harbor and Paldiski South Harbor). Saarte Liinid operates the ports which are significant links between the biggest islands (Virtsu Harbor and Kuivastu Harbor are the greatest).

Transport of goods has increased relatively fast. Port of Tallinn and most of other North-Estonian harbors have significant intermodal transport links between railway and sea transport, with main cargo segments – dry bulk, liquid petroleum products and containers. Most of the cargo concerns liquid goods (specifically oil). Russian refineries are using Estonian ports for exporting the oil to western European countries, though the opening of Ust- Luga port have significantly. Port of Tallinn carries around 13 per cent (2004) of total cargo in the Baltic Sea east coast (Russia, Finland, Baltic States and Poland). Some decline is caused by increase in traffic through Russian port. In the ports of Estonia the total cargo to and from ports is 46.1 million tons in 2010, among which dry bulk (11.9 million tons; 26%) and liquid petroleum products (29.6 million tons; 64%). In the Port of Tallinn four harbors, the cargo amount has 37,2 million tons in 2010, in which dry bulk 5,7 million tons (15%), liquid petroleum products 25,8 million tons (69%), containers 1 million tons (3%) and other general cargo 4,8 million tons (13%). By transport directions, transit (83%), exports (9%) and imports (8%) made up the cargo volume in the Port of Tallinn.

Overall passenger traffic in sea transport has increased rapidly during the last decade. The increase has been fuelled with passenger traffic between Estonia and Finland and lately the cruise passengers have also contributed to that account. In 2010 Estonia reached 1 113 732 million passenger kilometers. 96% of the passengers moved via the Port of Tallinn which is the busiest ports of Tallinn having 7,9 million passenger in 2010. The main traffic in sea waterways is in following routes: Tallinn-Helsinki (85%), Tallinn- Stockholm (8%), Virtsu-Kuivastu.

Increased living standard has boosted the internal tourism; the direct reflection of this trend has been increased traffic via waterways to the islands. According to latest data of Ferry Carrier Saaremaa Laevakompanii, approximately 1.6 million passengers visited the islands in 2010. Given that the comparable number was some 500 thousand visitors at the beginning of 1990s, the growth has been more than 3 times.
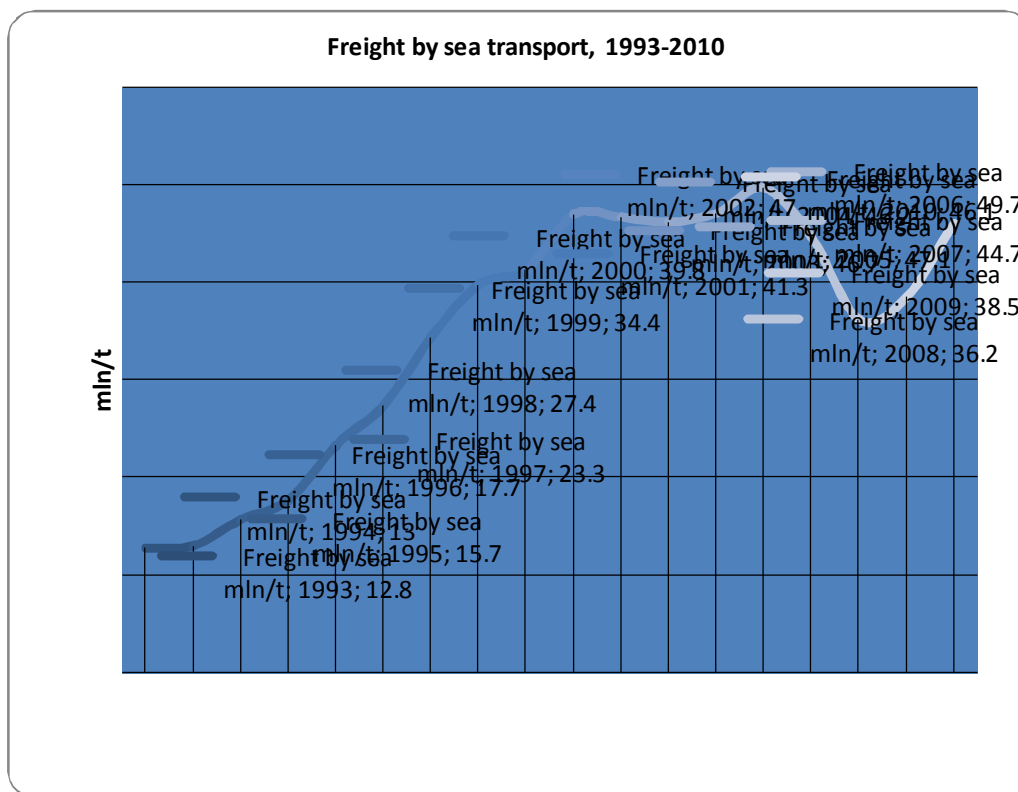
Freight by sea transport, 1993-2010

Freight by sea mln/t; 2002; 47
Freight by sea mln/t; 2006; 49.7
Freight by sea mln/t; 2000; 39.8
Freight by sea mln/t; 2005; 45.7
Freight by sea mln/t; 2007; 44.7
Freight by sea mln/t; 2001; 41.3
Freight by sea mln/t; 2009; 38.5
Freight by sea mln/t; 1999; 34.4
Freight by sea mln/t; 2008; 36.2
Freight by sea mln/t; 1998; 27.4
Freight by sea mln/t; 1997; 23.3
Freight by sea mln/t; 1996; 17.7
Freight by sea mln/t; 1994; 13
Freight by sea mln/t; 1995; 15.7
Freight by sea mln/t; 1993; 12.8

mln/t

Fig.3. Freight by Sea transport, 1993-2010

There are 8 airports in Estonia, 6 of which are acknowledged as acceptable airports, 2 being grass covered runways (mainly used among amateur pilots). The biggest airport is Tallinn Airport, which is run by Tallinn Airport Ltd. (100% Government owned company) and is a managing company for 4 regional airports (Tartu, Kuressaare, Pärnu and Kärdla). In addition to classic airports, there is also one heliport for helicopters flying between Estonia i.e. Tallinn and Finland i.e. Helsinki. The airport of Tallinn has a capacity of 2 million passengers per year starting from the year 2000 (until 2000 the capacity was 1 million) and from 2008 2,3 million passengers per year.. The number of passengers served at the Tallinn Airport in 2004 was about 1,1 million passengers and in 2010 it was 1,44 million. The peak year was 2008 with 1,87 million passengers, but due to the opening of new routes it is believed that in 2011 the number will be exceeded. The first quarter of 2011 showed a 25,2% bigger passenger volume (compared to first quarter of 2010) already.

Freight transport via air was 21 001 tons in 2009, but declined 43% to 11 960 tons in 2010 and is still declining in the first quarter of 2011 (40% decline compared to the first quarter of 2011).

Estonia main export partners in year 2010 are: Sweden 20%, Finland (17%), Russia (10%) and main import partners (2010) are Finland (15%), Sweden (11%), Germany(11%), for detailed view see Table 1.

Table 1. Main export and import partners for Estonia, 2010

Export partner	Eksport, mln EUR	% of Total	The difference in comparacy with the last year same period, %	Import partner	Import, mln EUR	% of Total	The difference in comparacy with the last year same period, %
Total	**861**	**100**	**48**	**Total**	**901**	**100**	**38**
EL27	594	69	49	EL27	719	80	30
Eurozone	246	29	18	Eurozone	342	38	38
CIS	114	13	54	CIS	97	11	87
1.Sweden	168	20	137	1.Finland	132	15	43
2.Finland	143	17	31	2.Sweden	101	11	77
3.Russia	88	10	47	3.Germany	100	11	35
4.Latvia	72	8	44	4.Latvia	88	10	9
5.Germany	43	5	39	5.Russia	81	9	103
6.Lithuania	40	5	48	6.Lithuania	67	7	-28
7.Norwegia	35	4	67	7.Poland	63	7	70
8.USA	30	3	7	8.Holland	33	4	50
9.Guatemala	24	3	-	9.China	30	3	173
10. Denmark	21	2	31	10. GB	22	2	83

Figure 4 and Figure 5 illustrate main Exports and Imports in 2010 (as a % of total trade).

2.3. Transport corridors across Estonia

Many factors influence the development of the infrastructure of Estonian transport:

- the geographical situation of Estonian territory in respect of the most important pulling centres of European Union and Russia;

- the development of new logistical thinking and the resulting transformation of distribution networks;

- the very low average density of Estonian population, the concentration of main population settlements around Tartu and Tallinn and in North-East of Estonia;

- the rapid growth of the number of cars in Estonia, due to what in the coming years the load of main roads will increase considerably as a result of job travelling;

- the unemployment in rural areas and the concentration of economic activity and jobs into the centers.
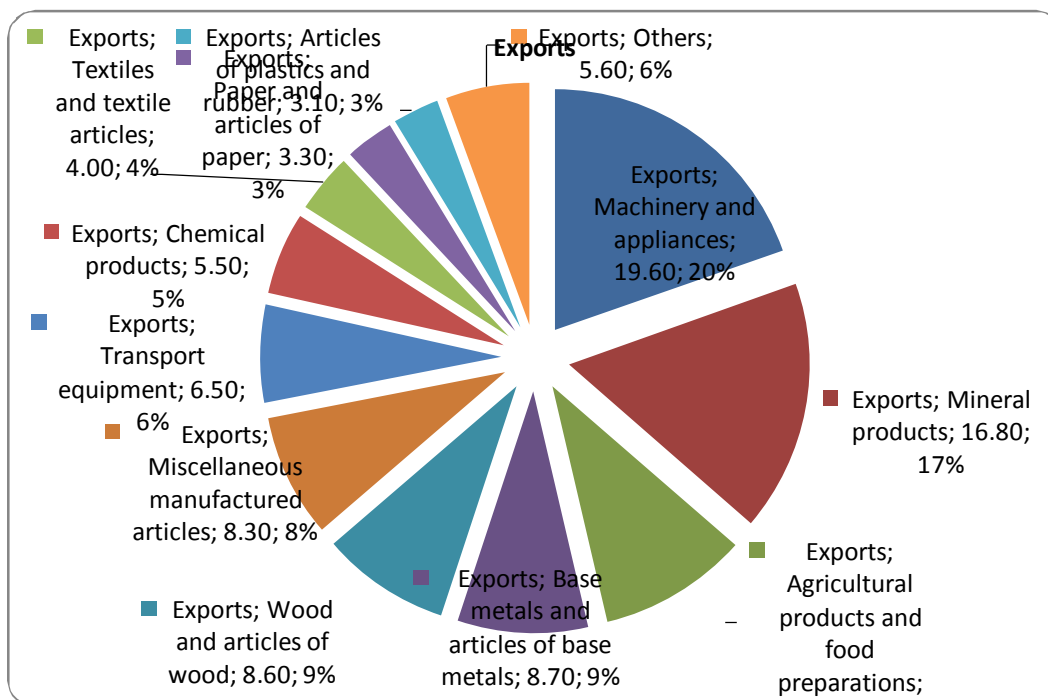
Fig.4. Main Exports, 2010
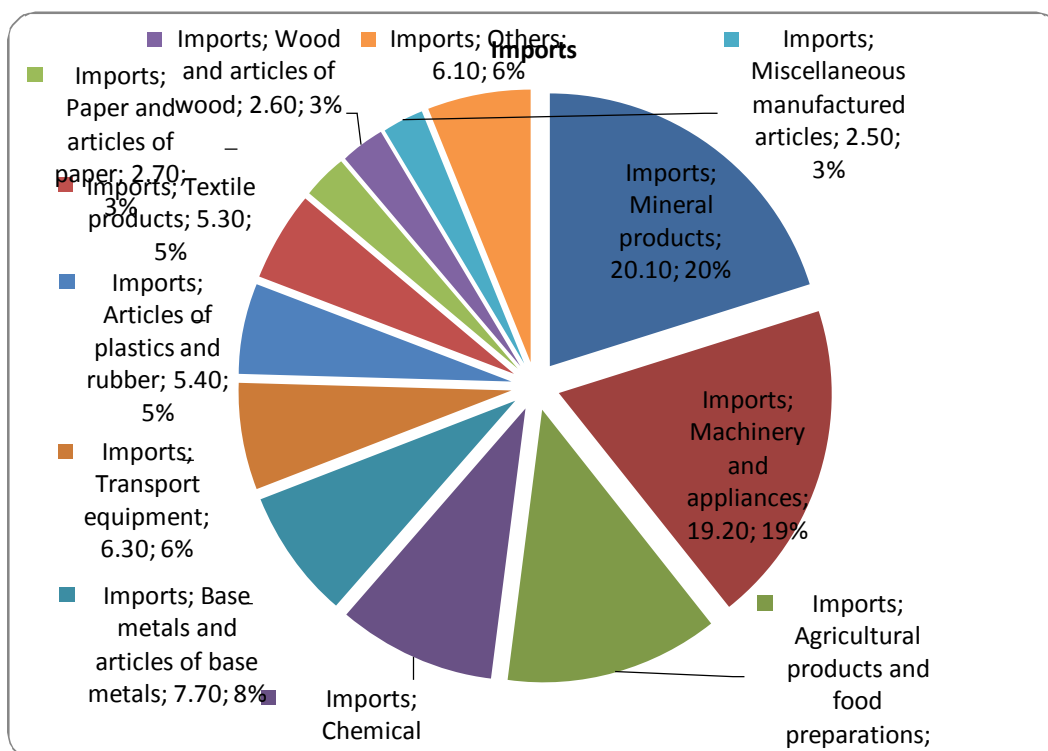
Fig.5. Main Imports, 2010

The Transport Corridors include cross-border road and rail traffic routes between the EU15 and the Central and Eastern European countries as well as airport, sea and river ports along the routes serving as intermodal nodes. The main transport corridors in Estonia have developed in accordance with the traffic streams. The Pan-European transport corridor (see Figure 6.) passing through Warsaw through Lithuania and Latvia to Tallinn crosses Estonia, where it is divided into two: northern branch (1A) is directed to Helsinki and eastern branch (1B) to St. Petersburg. This corridor is part of the TINA program transport network. The corridor consists of:

- Ikla - Pärnu - Tallinn highway,

- Valga - Tartu - Tapa - Tallinn railway,

- Tallinn - Narva highway,

- Tallinn - Tapa - Narva railway.

-

Countries	Finland, Estonia, Latvia, Lithuania, Poland, Russia
Transport modes	Railway, road, aviation, navigation
Infrastructure figures:	
Roads	1630 km
Railways	1655 km
Number of airports	6
Number of seaports and inner harbours	11
Alignment	***Helsinki – Tallinn – Riga – Kaunas – Warsaw***
Road (Via Baltica)	*Tallinn – Ikla/Ainazi – Riga – Grenstale/Salociai – Panevezys – Kaunas – Kalvarija/Budzisko – Bialystok – Warsaw*
Rail (Rail Baltica)	*Tallinn – Tapa – Tartu – Valga/Valka – Riga – Jelgava – Meitene/Kalviai – Siauliai – Kaunas – Mockava/Trakiszki – Bialystok – Warsaw*
	Branch A to Kaliningrad - Gdansk
Road	*Riga – Meitene/Kalviai – Siauliai –Panemune/Pagegiai – Kaliningrad –Grzechotki – Elblag – Gdansk*
Rail	*Siauliai – Pagegiai/Sovjetsk – Kaliningrad – Mamonovo/Braniewo – Elblag – Gdansk*

Fig.6. Corridor 1

The idea of developing of a north-south corridor was initialized by the Finnish industry and was strongly supported by the road authorities of Estonia, Latvia and Lithuania. After significant

political changes at the beginning of the 90s the development accelerated. The corridor became one of the Pan-European Transport Corridors. The steering committee and secretariat were established with strong support of Ministry of Transport and Communications Finland and DG TREN. The Memorandum of Understanding has been signed by the Ministers of Transport of the respective countries and by the European Commission in July 1996.

At present the Corridor is divided into three separate components:

- Via Baltica (road component): Via Baltica (E67) stretches from Tallinn to Warsaw. The objective is to create a European quality road and to facilitate trade and communications between Finland, Estonia, Latvia, Lithuania and Poland and to other eastern and western European countries. The aim is to eliminate the current bottlenecks and reduce the number of road accidents by increasing the overall capacity of Via Baltica which is being developed on the basis of existing roads by gradually reconstructing and widening its sections, building bypasses, increasing the number of traffic lanes, constructing viaducts and intersections. The overall goal of Via Baltica is to improve traffic conditions, shorten travel time and reduce the accident rate.

- Rail Baltica. The main issues of current rail traffic on the Rail Baltica are: 1) Interoperability problems at the borders, due to different track gauges: sections in Poland and Germany are 1435 mm; in Lithuania, Latvia and Estonia 1520 mm; this results in time consuming operations; 2)Low technical standards and speeds on the line (some sections: 40 – 60 km/h); Suboptimal alignment in comparison with road and sea connections; 3) Low quality of service for passenger operations; 4) Problematic sections

- Branch A to Kaliningrad (Via Hanseatica): Branch A of Corridor I runs from the coastal area (Gdynia- Gdansk – Elblag) through the Oblast Kaliningrad and Lithuania (Siaulai) to Latvia (Jelgava, Riga). The road component of Branch A is part of the larger Via Hanseatica.

2.3. The competitiveness of Estonia in transport and logistics sector

The concept of competitiveness is widely used in literature, yet, there is no general agreement on the definition of competitiveness and the concept itself is somewhat ambiguous. There is a disagreement not only about its correct definition, but also about its measurement, as well as the interpretation of whatever results would emerge from measurements. The multiplicity of different definitions and ambiguity around the competitiveness is partly due to the fact that competitiveness is a broad concept and can be considered at different levels – country (macro level), industry or sector, firm (these constitute micro level), and commodity level. Each of these levels of analysis can be undertaken within different spatial levels, indicating regional, national and international competitiveness (O'Donnell, 1997). Competitiveness of an industry belongs to microeconomic concept, which focuses on the "characteristics of producers in competition for market share and profits or ability to export internationally" (Siggel, 2003). Most of the studies on competitiveness assess the performance of an industry by using an aggregate of all the outputs produced in this industry, or by considering its most important commodities (Frohberg, Hartmann, 1997a).

There is a large variety of definitions of competitiveness at micro level (e.g., Frohberg and Hartmann, 1997a; Ezeala-Harrison, 1999; Martin et al., 1991; Miner, 1994). However, the two keywords for measuring and monitoring export competitiveness seem to be "profits" and "market share" on export markets, and especially their dynamics. However, market share as an indicator of competitiveness must be used carefully, since it relates the size of market with the size of an industry. So, if the total market is increasing, the market share measure could indicate a loss in competitiveness even if the

output of an industry is actually increasing (but slower than total market)(Ash, Brink, 1994). This is especially the case of export competitiveness of a small country like Estonia, which industry's shares in world trade or even in EU market are minor and any change in other countries' output can affect the market share of Estonian industries considerably. Furthermore, as emphasized by Buckley et al. (1988), export market share as a measure of competitiveness (especially at the firm level) fails in the case when market share is maintained through drastic price cutting which could have a negative effect on profitability and long term performance. Therefore, in considering export competitiveness, export patterns rather than market share should be taken into account especially in the case of a small country. Profitability, on the other hand, directly relates to the performance of an industry firms' on domestic and foreign markets, irrespective of the changes in market size. Buckley et al. (1988) even argue that profitability could be "the single most important measure of competitive success" and "long run profitability is essential for survival". However, firms may be willing to undergo short-run loss in profits in order to achieve long-run growth. Furthermore, the measuring of profitability is often a difficult task.

Martin et al. (1991) suggest for agribusiness industry, that buys raw materials, processes them, and resells them in different forms, value added as a proper, although indirect measure of profits. This approach has been followed by many other authors. However, profits and market size are only indicators of competitiveness, which depend on certain factors. There are two main factors underlying international competitiveness: price competitiveness and product quality. Most studies on competitiveness have focused on price competitiveness directly or indirectly through cost competitiveness and productivity. However, this approach has some caveats. First of all, it is a question of which prices/costs to consider as the measure of competitiveness. Second, the importance of prices has decreased as the determinants of export performance, and the role of non-price factors such as product quality has increased. For instance, concerning the product competition in home markets, Swann and Taghavi (1992) argue that consumers buy imported goods mainly because of some aspect of quality that is superior to domestic products, rather than because imports are cheaper. Sachwald (1994) defines the non-price aspect as structural competitiveness, whereas this term summarizes all the non-price characteristics attached to the product such as quality, degree of novelty or innovativeness, the design, distribution networks and after-sales service.

Countries wishing to improve trade logistics may need to reform and modernize border management institutions, change transport regulation policy, and, in some cases, invest significantly in trade-related infrastructure. The World Bank's Logistics Performance Index (LPI) summarizes the performance of countries in six areas that capture the most important aspects of the current logistics environment:

- Efficiency of the customs clearance process;

- Quality of trade and transport-related infrastructure;

- Ease of arranging competitively priced shipments;

- Competence and quality of logistics services;

- Ability to track and trace consignments;

- Frequency with which shipments reach the consignee within the scheduled or expected time.

The LPI combines quantitative and qualitative assessments within dual international and domestic perspectives on logistics performance. Part 1 of the survey (international) relies on qualitative indicators—private sector experts rating performance of their trading partners on the basis of their own

opinions and experience—across a range of indicators on various dimensions of logistics performance. In contrast, part 2 (domestic) contains both qualitative assessments of the domestic logistics environment and quantitative data on performance of domestic supply chains and core logistics processes (time, cost) by international professionals located in the country evaluated. On the figure 7, there can be seen how Estonia compete with the other countries.
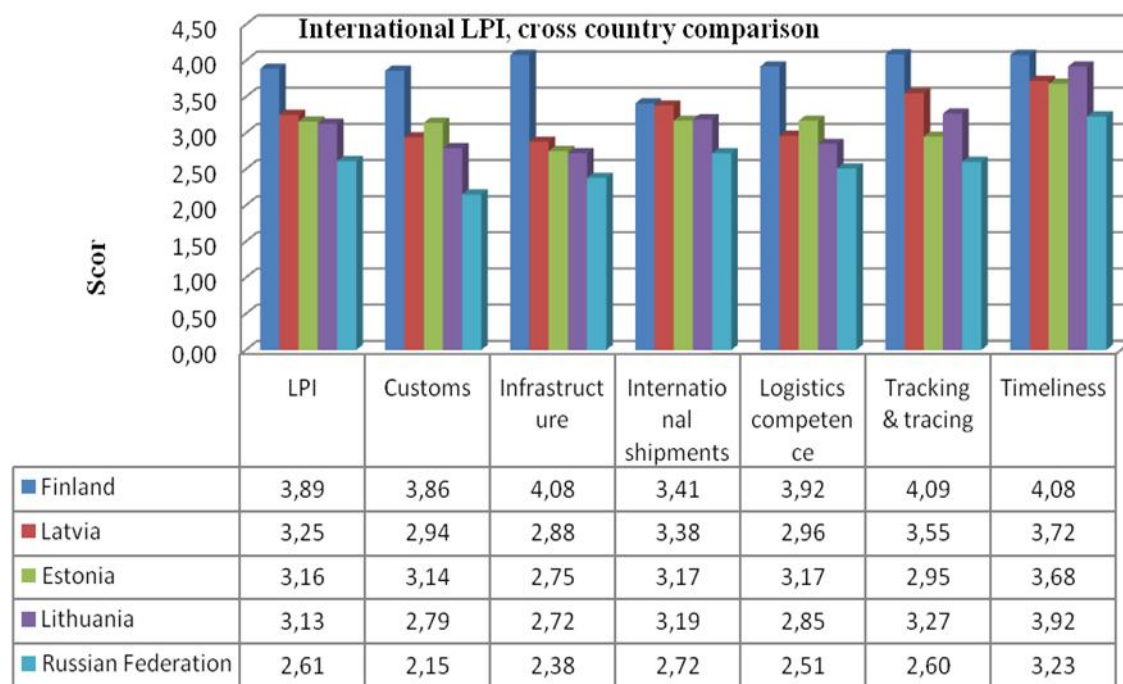
International LPI, cross country comparison

	LPI	Customs	Infrastructure	International shipments	Logistics competence	Tracking & tracing	Timeliness
Finland	3,89	3,86	4,08	3,41	3,92	4,09	4,08
Latvia	3,25	2,94	2,88	3,38	2,96	3,55	3,72
Estonia	3,16	3,14	2,75	3,17	3,17	2,95	3,68
Lithuania	3,13	2,79	2,72	3,19	2,85	3,27	3,92
Russian Federation	2,61	2,15	2,38	2,72	2,51	2,60	3,23

Fig.7. International LPI, Cross country comparison, 2010

- The competitive advantages of Estonia's logistic location and the transport and logistics sector:

- Estonia is the geographical midpoint of Northern Europe and therefore the best place to set up distribution centres and to generate added value;

- The historic Silk Road reaches Estonia - a most efficient trade route from China to North West Russia and Northern Europe;

- Estonians have a long term experience in trading with Russia that would ensure the goods dispatched reaching the correct destination safely and in a timely manner;

- Upon forwarding the goods through Estonia, all the applicable European Union safety standards and requirements are enforced.

Maritime transport and harbors - Estonia's competitive advantages

- The largest port of Baltic Sea is located in Estonia, taking into account both goods and passenger traffic;

- The deepest Baltic Sea harbours are in Estonia, able to receive also large ocean going vessels;

- Estonian harbours are ice free and easily navigable all year round;

- The water level in Estonia remains constant, there are no tides;

- Europe's East most harbour is in Estonia, located only 25 km from the border between European Union and Russia;

- Estonian waters are easily navigable;

- Vessels have easy and safe access to Estonian harbours;

- Europe's most efficient terminals are situated at the Estonian harbours, so the reloading of goods is performed faster than in other European harbours;

- Estonian ports apply the European Union safety rules and regulations;

- Estonian harbours are unique in Europe in the sense that there is still plenty of land available for the construction of new terminals;

- Estonian harbours have the most modern infrastructure and technology in Europe;

- In Estonia, free economic zones are located directly at the harbours.

Rail transport - Estonia's competitive advantages

- Estonian Railways is the most efficient rail operator in Europe;

- Estonia and Russia are strategic partners in rail transport, connected by railroad tracks of the same width 1520 mm;

- Estonians have an established long term cooperation with Russian rail transport organisations that would guarantee the goods dispatched reaching the correct destination safely and in a timely manner;

- The region's only regular container train is operated between Estonia and Moscow;

- Estonian Railways is willing to negotiate long term favourable price agreements;

- Estonian Railways employs electronic exchange of data that would allow for pre-arrival customs processing;

- Estonia and China are both members of the same international railway organisations:

    o International Union of Railways (UIC)

    o Organisation for Cooperation Railway Lines (OSJD)

    o Coordinating Council on Transsiberian Transportation

Air transport - Estonia's competitive advantages

- Tallinn Airport is a European Union airport closest to Beijing;

- The shortest flight time between China and European Union is the flight between Beijing to Tallinn with the flight time of 7.5 hours;

- Tallinn Airport is situated in the city centre;

- Tallinn Airport is the most modern and up to date in Europe, acknowledged by the Concrete Building of the Year 2009 award;

- Tallinn Airport offers major discounts for the flight operators that are interested in establishing an air route between China and European Union through Tallinn Airport.

Road transport - Estonia's competitive advantages

- Driving a car from Estonia to Moscow, St. Petersburg, Minsk, Helsinki, Kotka, Stockholm, Riga or Vilnius is fast and safe;

- Estonian road transport companies have a long term experience in organising shipments of different scale and type that would ensure the goods dispatched reaching the correct destination safely and in a timely manner;

- Estonian roads are toll/tax free;

- Estonia has a very good road capacity of the most modern infrastructure; driving from Estonia to Russia, a driver can opt between 10 border inspection posts;

- Estonia employs electronic pre-arrival customs processing for cargo/goods for the purposes of facilitating the crossing of the border between European Union and Russia.

3. ESTABLISHMENT OF A LOGISTICS COMPETENCE CENTER AS A POLICY INSTRUMENT

3.1. The Strategy and Drive for Regional Economic Development

In a global economic environment where one may witness constantly shifting nature of business patterns, competence center theories and strategies could be the source for an effective economic development strategy. Economic development policies that target individual firms or industries are arguably no longer the most viable option for many regions. The outcome of the logistics competence centres certainly does have their place in studying the competitive potential of regions in general and cross-border regions in particular. A starting point could be to elaborate what makes the difference between national regions and cross-border regions. Evidently it is the existence of a national border but what many scholars do not fully comprehend is that border should be interpreted in its widest possible definition - not only as an obstacle for the free flow of goods, services and labor force but also as linguistic, cultural and social divide between regions.

These obstacles significantly modify the strategies needed to enable and stimulate the development of business networks in general and cluster in particular. While in the context of cross-border regions the identification of potential clusters could be relatively easier handled using the established methods it is their nurturing and development that could be much different due to the border divide in its wider definition.

One principal shortcoming inherent in focusing on LCC development is that the likelihood of success could greatly vary for many regions in general and cross-border regions in particular. A prerequisite to developing LCC is the identification of regional competitive advantage based on

one or many several factors such as labor force characteristics, unique regional attributes, availability and quality of public and private infrastructure, and proximity to input and product markets. Industrialization efforts next must identify the targeted industry/firms and provide the services and infrastructure necessary to ensure that these businesses remain successful. Thus, the designing of an industry cluster program requires an extensive understanding of the region and its economic processes (Barkley and Henry, 2001).

New trends in economics and management are guiding public administrations and the business world towards new cooperation fields and systems: logistics is one of these fields and a LCC can be an innovative system of cooperation and coordination between public and private bodies.

For a long time, regional public administrations have faced freight transport problems from three main points of view:

- transport infrastructure;

- regulations;

- environment.

Though these three perspectives must be part of public administrations' vision, the present transport and logistics situation witnesses some basic problems that public administrations are still facing:

- insufficient infrastructure for goods mobility;

- road congestion;

- unbalance between road and railway, inland waterways, sea freight transport;

- pollution and space consumption.

New economic scenarios impose new ways of approaching transports and logistics and in particular the development of regionally focused policies in cooperation with private operators, in order to improve the competitiveness and sustainable development of the regions within an international dimension.

Logistics systems represent the projection of enterprises' business relations with customers, suppliers and partners on the regional territories. They are complex and they continuously change. In order to develop logistics and its networks at regional, national and international level, regional public authorities have to match a "government" & top-down approach with a "governance" & bottom-up one.

This bottom-up approach is based on:

- a change of perspective, oriented at understanding operators' needs on the demand and the supply sides of transports and logistics; in this sense a strong focus on companies' supply chain management strategies and actions is needed, as they strongly affect regional transport and logistics systems;

- the support to the cooperation among private companies and operators in order to optimize transport and logistics behaviours and management, to foster a system approach to sustain logistics and economic competitiveness and to reduce transport impacts within regions;

- the strategic planning of the regional transport and logistics systems by networking and

coordinating all the involved bodies within each system (and among systems) and in particular public authorities and private companies and operators.

Private and public spheres always have some relationship frictions and cooperation obstacles. A LCC can be the concrete solution to ease public-private joint activities in transport and logistics. In fact a LCC can represent the core body which focuses on regional logistics, as the LCC positions on a regional level between public authorities and private operators.

In this position, a LCC can play the role of:

- integrator at regional level between different kind of bodies and related needs and expectations;

- facilitator for the development of joint private projects, thus optimizing the strategies of single companies;

- supporter for the creation of packages of public policies for improving regions' transport and logistics systems, by defining industrial, transport, spatial planning, training and innovation policies oriented at supporting regions' competitiveness within an international perspective;

- gateway to international cooperation initiatives involving public and private bodies.

A LCC at regional level brings together the core transport and logistics actors which can easily cooperate into a forum dedicated to solve regional key issues on transport and logistics both in a regional and transnational perspective. These guidelines should support Authorities which have the aim to set up a LCC.

3.2. Definition of LCC

A Logistics Competence centre:

- is a network-oriented promoter of the economic development for logistics in the region. It works together with other institutions for economic development;

- initiates, promotes, coordinates and runs a partner-network of the logistics key players of its region (manufacturing companies, transport & logistics companies and nodes, consultants, associations/clusters, universities and research & training institutes, political and economic institutions in charge of transport and logistics);

- is a strategic body and provides a common "forum" where stakeholders with heterogeneous missions and roles can meet and define shared strategies and common policies;

- is a public or a semi-public body and holds a public mission;

- has an interdisciplinary role within the regional context and brings together different competences in a cross-sectored perspective to initiate and manage specific projects in logistics;

- faces and tries to solve the logistics problems which raise at regional level and which a shared at international level.

Figure 8 shows the main interested parties in developing Logistics Competence Centre.
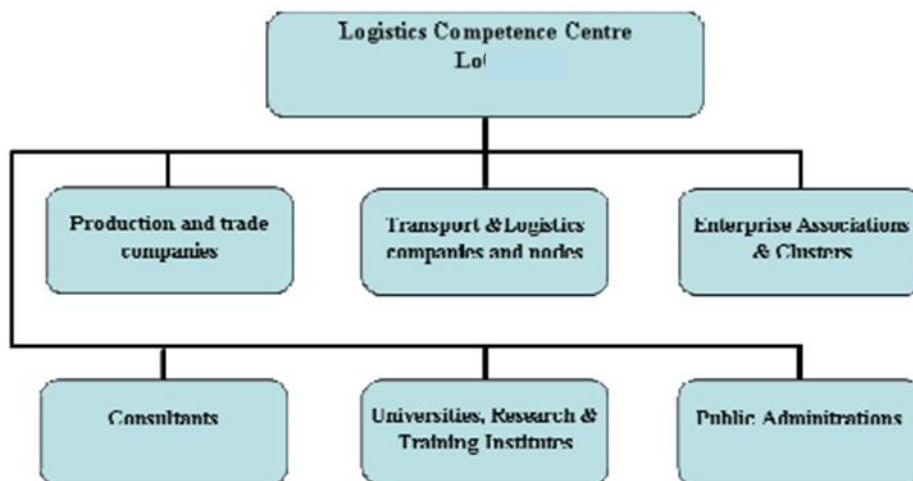
Fig.8. Interested parties in LCC development

3.3. The role of Valga LCC

Valga is located at a railway hub serving transit from Latvia, Russia and Estonia. After the Koidula customs checkpoint is completed it will lie on a direct route between Russia and Latvian ports. It is hoped that the center will set an example how to give goods flowing through southern Estonia value added, and the long term goal is to establish a logistics park in Valga. According to the national plan 'Estonia 2010', one of the major international transport routes to be developed is the Valga-Tartu-Jõhvi-Narva route. On the national and regional levels, this road is seen as a connecting and balancing addition, in terms of regional development interests, to the three major Estonian transport routes - Tallinn-Pärnu, Tallinn-Tartu and Tallinn-Narva. Via Hanseatica is the official title for the cross-European so-called Cretian tunnel no. 1A, which belongs in the cross-European transport network. Via Hanseatica is situated on the route Lübeck - Gdansk - Königsberg - Riga - Valga - Tartu - Narva - St.Petersburg. The development of common transport infrastructure and traffic is foreseen on this route.

VLCC would be a part of the Valga County Vocational Educational Centre. Following main organizations are on board of the project: Valga County Vocational Educational Centre , Tallinn University of Applied Sciences, Union of Estonian Automobile Enterprises, the city of Valga, ELEA, local companies etc.

The goals of the Valga LCC are:

- to develop the regional economy and in particular the transport and logistics fields;

- to perform this development by bringing together politics / public administrations and logistics key players;

- to support the industry and create workplaces by the enhanced mobility of goods;

- to develop logistics to reduce road congestion, support goods transport on railways, inland waterways and by sea, in order to rebalance and improve environmental conditions by reducing lorry traffics and space consumption;

- to initiate and promote research and development of innovative solutions and technologies in the transport and logistics sector.

Acting as a service provider a VLCC tackles infrastructural, organisational, managerial, technological, training problems of logistics in its region, by offering:

1. Official contact for the predominant tasks regarding logistics in the region:

    - analyzing problems, developing solutions considering the interests of all parties involved, coordinating solution projects;

    - monitoring, in a position of technical independent body, logistics projects development.

2. Improvement of the region's transportation and logistics infrastructure and organization:

    - linking private and public actors, promoting the concept and methodologies of PPP (Public-Private Partnership) and supporting the definition of related legislation.

    - supporting policy making in mobility, transport and logistics, by consulting to public administrations in their policies definition, implementation and monitoring, also thanks to ad-hoc empirical researches and permanent statistics elaboration - Logistics Observatory.

    - supporting regional growth and the definition of public policies which are consistent with the enterprises' needs.

    - supporting the development of logistics nodes in the region, favouring the cooperation among logistics nodes instead of cannibalism, improving the supply of freight transport services on rail and water, promoting existing regional transport and logistics infrastructures and services and the technological, process and organisational innovation in transport and logistics.

    - monitoring, observing logistics solutions and activities on regional level (e.g. monitoring the regional logistics state of the art and collecting/defining enterprises' requirements), creating databases on transport and logistics, diffusing best practices, innovations and logistic patterns.

    - creating synergies among initiatives and projects that usually run independent.

    - monitoring and creating financial opportunities for logistics investments and projects, also through EU funds.

3. Cooperation with network partners:

    - consortium projects, employment in the field of logistics (qualification and placing), special events and forums for transfer of know-how, brief consultancy considering individual questions of the network partners, business matching

activities.

- spreading a logistics culture through periodic information activities and support to logistics training (curricula & standards definition and testing).

- fostering the UE cooperation of the network partners in initiating new projects by using its EU contact network.

4. Public relations work:

- newsletters, publications, websites, workshops, seminars and conferences, road shows on the implemented activities.

The following scheme shows the thematic areas of a VLCC that can raise the competitiveness of the region.

1. Logistics consultations, service providing. Internationalization processes and the growing international integration of the regional and national economic systems brought to more complex logistics networks and have impacts on the supply chain management activities in production systems, which are asked to re-engineer their logistics activities on the base of new market imperatives. Reduced lead times and time to market impact on production companies' logistics behaviours, both in terms of logistics and of intra-logistics. Also the "nature" of products change in a new logistics perspective, in terms of design, volumes, weights, packaging, returns.

This scenario implies a:

- the re-designing the logistics networks in production systems and a relevant re-positioning of the logistics supply to support the industrial world's competitiveness.

- a deep transformation within the companies and along the whole value chain, in terms of needed competences, managerial techniques, operational tools and partnership building along the supply chain.

This thematic area of a VLCC monitors these changes, supports and promotes public actions to foster logistics services for production systems and initiates specific projects in cooperation with companies to foster a pro-active approach to the new logistics imperatives.

2. Transport and spatial planning. The thematic area focuses on spatial and transport & infrastructures planning as founding elements which determine the positioning and competitiveness of the regional logistics systems within the international arena. The location choice and the accessibility of logistics nodes and of industrial/commercial areas contribute both to the industrial systems' competitiveness and to mobility sustainability and transport environmental impacts reduction (accessibility to intermodal nodes in a modal shift perspective). The thematic area supports public administrations in their planning choices which determine the sustainability and the logistics attractiveness of the regional system. It also promotes the cooperation among the public bodies in charge of planning at different territorial levels within each regional context to make their choices synergic and consistent.

3. Logistics training. Logistics Training is the "5 th infrastructure" as sea, air, road and rail infrastructures need adequate logistics professionals for their proper development, operations and functioning. A VLCC plays a critical role to indentify training needs in logistics in the business world and bring them into the public policies in training and into the regional training supply. A VLCC can propose needed logistics curricula and standards, define logistics qualifications and cooperate

with training bodies in the test of new logistics classes at different levels (vocational training, master, high schools) also by means of e-learning initiatives. Also to use interesting training equipment, for example a package laboratory, which is a unique in Estonia.

4. EU policies. A VLCC should be a window on UE policy trends and scenarios. This thematic area is transversal as it concerns different logistics topics and issues on which the EU policy making has impacts. A VLCC can regularly monitor the most recent UE policy developments and be a contact point towards the EU. That allows keeping regional authorities informed on a pro-active approach on future EU policy developments and helping a better planning of regional policies.

5. Logistics statistics. A VLCC should select, collect, harmonise and elaborate logistics data and information from different regional, national and EU sources in cooperation with Research Institutes and Universities. That allows public administrations to take informed decisions and helps the business world to define its strategies and business actions. A VLCC can be qualified as a Logistics Observatory which permanently releases logistics statistics and carries out ad hoc empirical researches for specific business and policy purposes.

6. ICT for supply chain management. ICT play a critical role in the supply chain integration. This is a wide transversal thematic area which can find different projects and applications promoted by VLCCs to support the logistics industry competitiveness (in terms of improved quality of services), public-private documental/information exchange, RFID use, GPS systems, using simulation programs to better manage the supply chains, the ICT integration of nodes within transnational transport chains.

7. Co-modality and nodes/services development. A VLCC should be a promoter of the regional logistics infrastructures and services by providing territorial marketing services. Moreover it should help transport, logistics operators and intermodal nodes in projecting and testing technical solutions for intermodal transport and favour business matching initiatives which can strengthen intermodal services and nodes. It should help intermodal nodes and operators in improving their market positioning. With reference to public administrations it should help them in identifying schemes and in proposing acts to foster intermodal transport services development and the integration of the regional intermodal nodes at regional and international level.

8. Sustainability. The VLCC should deal with different researches in the fields of sustainability, green logistics, reverse logistics; how to reduce the negative impact of the logistics operations/ processes on the environment; how to use the recourses more efficiency.

9. Cooperation development. VLCC should deal in bringing together the logistics key players on the regional level but also of developing co-operations on a transnational and international level, given the present and future international dimension of logistics and the fact that EU regions share joint future challenges. For this purpose a group of Logistics Competence Centres set up within the EU founded Project ENLoCC (Interreg IIIC West, ERDF funded), the Open European Network of Logistics Competence Centres (Open ENLoCC).

5.CONCLUSION

Economic growth is strongly correlated with the development of the transport sector. Data at EU level show that GDP growth and growth in transport demand have always developed in parallel although with slightly different rates. This is not surprising: on the one hand, transport demand is a derived demand because it is linked to production and consumption activities, on the other hand,

transport demand needs to be met in order to prevent that an insufficient provision of infrastructures and transport services acts as a constraint to economic growth. The paper shows that the transport and logistics sector started rapidly growing in 2010 and the growth is continuous. The transport and logistics sector directly contributes to 12,7% of Estonia's GDP and if there also include the indirect impacts the contribution could be almost 20%.

Despite the fallout of the economic crisis, Estonia remains the best performers within Eastern Europe, ranking 33rd respectively. As in previous years, the countries' competitive strengths are based on a number of common features. They rely on excellent education and highly efficient and well-developed markets for goods, labour, and financial services, as well as a strong commitment to advancing technological readiness, particularly in the case of Estonia. In addition, Estonia's lead reflects solid institutions and improving macroeconomic stability, which is particularly commendable given that the region has been strongly affected by the economic crisis. The establishments of LCC is proven to be a very effective tool in raising certain regions or sectors competitiveness, with the introduction of LCC networks they could form a powerful network creating numerous opportunities.

The plan to establish a LCC in Valga is geographically and strategically well chosen. The development of transport and logistics sector in many regions is market driven. Up to the present day the advantages of Valga have not been exploited to their full extent. The opening of the Koidula customs checkpoint will lie on a direct route between Russia and Latvian ports and opens an opportunity to establish a logistics competence centre. Valga lies at a railway hub that has great potential to expand. The EU White Parer on Transport stresses heavily on the importance of railway transport in moving goods within the next decades. To fulfill these expectations a LCC in Valga is a step towards achieving these goals.

The main income sources of a VLCC may be:

- Public funds for business development;

- Fees of the partners (graded by the size of the partner);

- Public relations work incomes from the partner network;

- Initiating, coordinating, performing projects, activities, workshops, etc. (paid by the project partners / participants / customers / public promotion funds);

- Education and training in logistics;

- Logistics consultancy.

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A CAUSAL RELATIONSHIP BETWEEN THE EXPORT OF GOODS,

FDI AND ECONOMIC GROWTH IN ESTONIA

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Abstract

The intension of this paper is to investigate the relationship between export of goods, foreign direct investments and economic growth in Estonia in 1993-2010. The paper has tested export-led growth versus growth-led export hypotheses as well as FDI-led growth versus growth-led FDI. For this purpose Granger causality analysis has been performed. Provided that the time series used in analysis are non-stationary, vector error correction model has been estimated. The obtained results reveal that Granger causality runs from GDP to export of goods and from export of goods to GDP, which support bi-directional causal relationship between considered variable. The results also reveal that Granger causality runs from FDI to GDP growth, which support FDI-led growth hypothesis for Estonia.

Key words: *Estonia, export of goods, growth, foreign direct investments, Granger causality*

1. INTRODUCTION

During the last 20 years foreign direct investments into the Estonian economy have grown rapidly. It has been supported by open trade policy and set of economic policy reforms, which have impact to the economic performance. Estonia has entered the EU and the main trade partners also are the EU countries. However, these rapid changes have had serious effect on economic growth: during considered period Estonia has been known as a country with a high rate of economic growth. Besides structural changes essential development of economic legislation and environmental protection toward the EU standards has been done.

The relationship between export and growth, based on the endogenous growth theory, has been tested in a number of papers for the different countries. Share of export in GDP is considered to be one of the main determinants of economic growth.

Theoretically we can highlight two main approaches to causality of economic growth and foreign trade: export- led growth (ELG) and growth-led export (GLE) hypothesis (Reppas and Christopoulos, 2005).

Export-led growth means that the development of export is one of the most important determinants of economic growth. Export growth leads to the deeper specialization of exporting firms and branches, which in turn results in higher return of labor and capital. Resources are transferred from the lower productivity sectors to the higher productivity sectors. Increase in productivity results in growth of output. Export may lead to FDI growth into exporting branches, that again increases output (Awokuse, 2006).

Export-led growth is a feature of developing countries, whereas in developed countries growth-led export effect is more relevant. The later means that real GDP growth strengthens scale effect and decreases production costs (Subatomic, 2002). It allows raising competitiveness of domestic goods and leads to the growth of export. The increasing volume of investment reinforce structural changes and rise productivity leading to supply driven process of growth-led export (Fainštein, Lumiste, Matina, 2010).

As we can see, FDI is the factor that influences the export and GDP growth in both hypotheses. Assuming that trade does cause economic growth, a question should arise if there are some other factors, which affect this relationship. The best interpretations of the empirical relationship between openness and economic growth should contribute not only to the understanding of the role of FDI to economic growth but also should facilitate the interpretation of relationship between export and FDI (Dritsaki, Dritsaki and Adamopoulos, 2004).

Most papers assess positive influence of FDI on economic growth in long-run period through capital accumulation and spillover effects, especially in open economy. The relationship between FDI and export is becoming the third side of triangular relation (GDP growth, export and FDI). As in other cases, we will try to describe the direction "FDI causes export" or "export causes FDI".

Export increases FDI, paving the way for the investments by reducing the investors' transaction costs through the knowledge of host country's market structure (Hsiao, Hsiao, 2006). Also foreign direct investment may increase manufacturing of goods export directly and decrease transport expenses.

Foreign direct investments promote economic growth in different ways. Generally, FDI impact the productivity and serve as a catalyst for economic development through productivity enhancement, employment creation (poverty alleviation) and trade growth. FDI inflow brings new capital investment, adding to a country's capital stock; it promotes both forward and backward linkages within the domestic economy, thereby stimulating future economic growth. The essential contribution of FDI may also come through technology transfer that stimulate export growth, improves total factor productivity and helps a country to integrate into global economic networks (Hsiao, Hsiao, 2006). Furthermore, foreign direct investments are often more productive than local investments.

This paper is organized as follows. The second part of the paper is empirical literature review. The third part describes specifications and data of Estonian economy. The fourth section describes the basic theoretical model to explain the role of exports in economic growth (or vice versa), the fifth section shows empirical results. The sixth section concludes the paper with the summary.

2. LITERATURE REVIEW

There is a large volume of published studies describing the relationship between FDI, trade and economic growth. The available papers on FDI, trade and economic growth can be divided into the three groups: studies that analyse the relationship between FDI, export and economic growth, studies that analyse the relationship between FDI and economic growth and studies that analyse the relationship between FDI and trade. In this paper we will consider basically the first category.

Several studies have revealed that it is very important for policy to understand the long and short-term impact of FDI on economy growth.

It is also important to highlight that the interrelation between GDP, exports and FDI is complex and each variable has a plausible theoretical foundation to affect the other variables. Without knowing the direction and pattern of mechanisms among these variables can hamper effective policy to promote economic growth (Klirajan, Miankhel, Thangavelu, 2009). Therefore it is important to investigate the relationship between these variables to formulate correctly economic policies in respective countries.

A large body of literature has found that FDI-growth nexus is clearly identified by the neoclassical growth models. According to this approach, technological progress and labour growth are exogenous, inward foreign direct investment increases the investment rate, leading to a transitional increase in per capita income growth but has no long-run growth effect if it does not develop technology. (Klirajan, Miankhel, Thangavelu, 2009). FDI has only a 'short-run' growth effect as countries move towards a new steady state. The impact of FDI on growth is the same like domestic investment (Herzer, Klarsen and Nowak-Lehmann, 2008).

In contrast, since 1980s the new growth theory considers endogenous technological progress and FDI has been considered to have permanent growth effect in the host country through technology transfer and spillover. Most of the studies (for example Hsiao and others) find positive effects of FDI on transitional and long-run economic growth through capital accumulation and technical or knowledge transfers, especially under open trade regime.

Firstly, there are some reasons why FDI influence positively on economic growth:

- Learning process thought FDI can play a considerable role in the growth of a host country.

- There is a contagion effect of managerial practices and advanced technology introduced by foreign firms on the host country's technology.

- Capital accumulation gives the productivity increase possibilities, production growth and product promotion in new markets (Hsiao and Hsiao, 2006).

The relationships between FDI and economic growth might be negative too. Main reason why FDI is negative influence on growth asserts that FDI creates the crowding out effect on domestic capital. If pressure of foreign investments is strong, influence on GDP growth might be insignificant (Klirajan, Miankhel, Thangavelu, 2009).

Secondly, there are some unidirectional and bi-directional arguments in case of FDI and GDP. For example, multinational corporations are attracted towards growing and productive economies. Different studies have shown that FDI trend to serve the growing economies, because of higher return from the capital.

Other studies provide conceptual and theoretical relations between FDI and home country specific, host country specific and firm specific facts in the emergence and growth of multinational corporations. For developing countries is also important growth of investment to corporate entrepreneurship responding to the challenges and opportunities presented by globalization, favourable home government policy and the deepening reforms (Tolentino, 2010).

As it was mentioned earlier, positive effect of FDI on long-run economic growth connected with open trade regime too. There are two main types of GDP and export causalities: export-led growth and growth-led export. Export growth increases factor productivity due to gains obtained from increasing returns to scale, by catering to the larger foreign market. Due to the increased exports, efficiency is

enhanced because exporters are able to compete in foreign markets which results in technological advances and grooming of local entrepreneurs (Klirajan, Miankhel, Thangavelu, 2009).

Other theoretical arguments of ELG hypothesis are exports enhance efficiency through competition and diffusion of technical knowledge in production, which are potentially important sources of growth (Alici and Ucal, 2003).

Growth-led export hypothesis assumes that in a growing economy, a process of technological change and learning takes place which is not related to any specific government export promotion measures. Economic growth can be the result of human capital accumulation, cumulative productive process, transfer of technology via direct investment or physical capital accumulation. Follow to the output growth, exporters have to look outward to sell their products (Klirajan, Miankhel, Thangavelu, 2009).

Usually, export and economic growth causality is unidirectional, but some empirical studies have been found single cases of bi-directional GDP and export causality. Bi-directional connection occurs less often and is possible in countries with average level of economic development (GDP per capita), good level of human resources and liberal politics encouraging export. For the countries with high or low level of economic development bi-directional connection was not revealed (Ullah, Farooq and Javid, 2009).

Finally, we discuss about FDI and export causality. As well as in FDI and GDP, and export and GDP case, the empirical evidence on the causal relationships between FDI and trade can show unidirectional causality or bi-directional causality (Jayachandran and Seilan, 2010). However, sometimes there is no causality between FDI and trade. Usually there is no causality between FDI and trade, if a share volume of investments is very small or investors prefer non-exporting branches.

Hsiao (2006) lists two main export-led FDI reasons: exports increase FDI by paving the way for FDI by gathering information of the host country that helps to reduce investors' transaction costs, and growth of export (especially in transition countries) needs a capital, but host country capital possibilities are limited.

FDI-led export arguments suggest that gaining knowledge about foreign countries economies, political and social conditions, the home country firms establish subsidiaries in foreign markets and then it is lead to export growth (Klirajan, Miankhel and Thangavelu, 2009). Often foreign companies made FDI in exporting branches, because of high export goods demand and higher expected profit.

Recent evidence shows that FDI and export can complement or substitute each other. It is a special feature of FDI and export causality:

- FDI may reduce exports by serving foreign markets through establishment of production facilities there (Hsiao and Hsiao, 2006).

- Export may decrease FDI, because trade is easier and less risky than FDI, especially for first service the foreign markets.

So, GDP-FDI-export nexus is complicated and depends on many foreign and domestic markets conditions.

3. CASE OF ESTONIA

The purpose of this paper is to find causal relationship between export of goods, foreign direct investment and economic growth in Estonia.

In particular, the paper is concerned about the following questions:

1. Is there a long-run relationship between real export of goods, FDI and GDP growth and what are the parameters or coefficients of these relations?

2. What is the direction of causality? Does export of goods lead to long-run growth or vice versa? Do FDI lead to long-run growth or vice versa?

To answer these questions this paper considers dynamics of the chosen variables for the period from 1993 to 2010 and describes the basic directions of development of Estonian economy.

The Estonian economy is characterized by a high level of openness. An important factor in Estonian economic openness is the competitive advantage of its geographical location and remarkably liberal trade regime. The geographical location of Estonia enables it to have very close trade relations with Western European, Scandinavian and CIS countries, offering transit services for commodity flows from west to east and in the opposite direction.

Estonian foreign trade policy in the 90-s and 2000-s was based on liberal principles. The ratification of bilateral free trade agreements formed a legislative basis for the development of trade with both EU members and at that time potential members. Since 1995 free trade area has been created between Estonia and the European Union where all trade barriers to industrial products were abolished. Since 1999 Estonia is a member of the WTO and since 2004 of the EU.
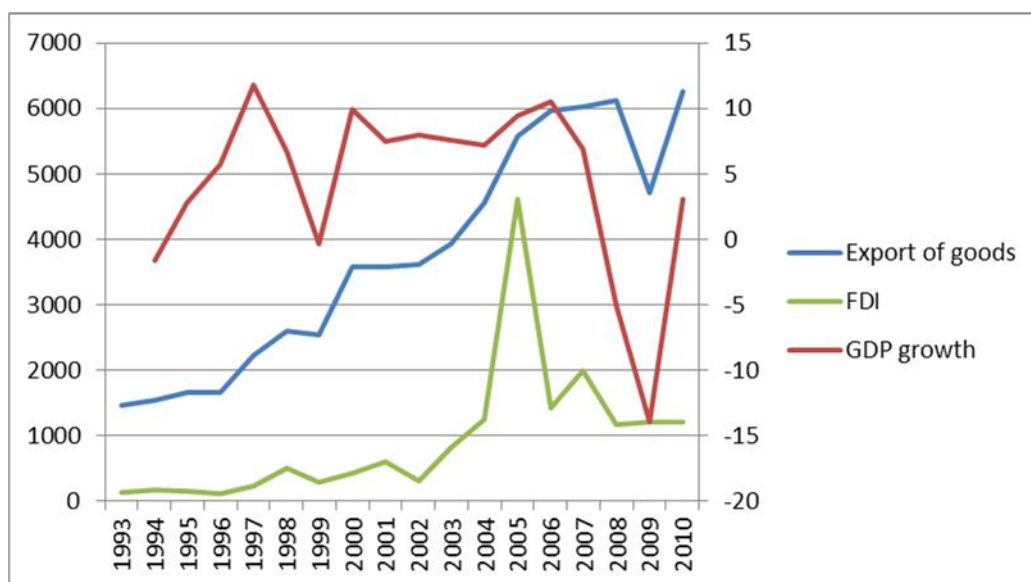
Diagram 1 Estonian real GDP growth in 1994-2010 (the right scale), Estonian real export of goods in 1993-2010 and FDI to Estonia in 1993-2010 (the left scale, millions euro)

3.1 Economic Growth

As it can be observed in Diagram 1, Estonian GDP has grown constantly since 1994 to 1998 and since 2000 to the beginning of 2008. The reason of small recession in 1999 was Russian default and export re-orientation from Russia to EU.

Big economic recession was observed from the middle of 2008 to the beginning 2010 and has been caused by the world's financial and economic crisis. Domestic demand of Estonian goods and services decreased rapidly and demand of exporting goods decreased too.

According to Bank of Estonia and Statistics Estonia, contribution of main components to economic growth has being changed during the considered period. Private consumption expenditure contribution to economic growth was grown up in 1995-1996 (6.6 and 6.8 percentage points) and 2001-2007 (from 4.8 to 7.5 percentage points). There were years of economic growth, when consumers' income quickly grew up and expectations were optimistic. The dynamics of domestic demand contribution to economic growth was the similar.

Export of goods contribution to economic growth was lager in 1997 (13.4 percentage points), 1999 (18.0 percentage points), 2004- 2005 (7.4 and 10.9 percentage points) and 2010 (13.6 percentage points). After economic recessions in 1998-1999 and 2008-2009 efficiency and factors productivity have increased and it has reflected in growth of export of goods. Export of goods contribution to economic growth was bigger than other components contribution in these years.

3.2 Export

According to Statistics Estonia, from 2004 to 2010 the main export partners of Estonia were: Finland – share of Estonian export changed between 14,9%-26,4%; Sweden – between 12,2% and 18,7%; Latvia – 6,4%-11,5%; Russia – 5,6%-10,4%; Germany – 4,7%-8,3%; Lithuania – 4,3%-5,9% and Norway – 2,7%-3,4% and Denmark – 2,5%-3,5%. Main foreign investors are also Finland and Sweden.

As we can see in Diagram 1, real GDP growth and export of goods have similar dynamics only in the end of the period in 2009-2010, but in the beginning of the period export of goods has constant growth. In 2010 export growth has considerably exceeded GDP growth. Basic export partners (Sweden and Finland) began to leave crisis, and it has caused fast growth of export.

During the whole period share export of goods in GDP has being grown constantly (see Appendix 2). According to Economic Survey of Europe, new member states have been competing successfully for foreign direct investment and showed their ability to cope with pressure of competition in whole EU market already in the first year of membership. Estonia was one of the new states with faster economic growth.

3.3 Foreign Direct investment

During this period FDI was one of the most powerful financing sources of Estonian economy. As it can be observed in Diagram 1, a membership in EU rapidly increased foreign direct investments into Estonia in 2004 (see also Appendix 1). It shows big influence of the expected memberships in EU and the carried out legislative reforms on foreign direct investment. Also, one of the explanations might be tax reform, which allows to release from tax reinvestment profit.

Like a GDP growth and export of goods FDI decreased in 2008-2009, but not so rapidly. Estonian economy is still interesting for foreign investors and decreased production costs promote competitiveness of Estonian goods.

In 2005 Swedbank became the owner of Hansapank and provided investment increased share of FDI in GDP to 51%.

4. THEORETICAL FRAMEWORK

In this paper the method of vector autoregressive model (VAR) is adopted to estimate the casual relationship between exports, foreign direct investment and economic growth.

EXP=f (GDP growth, FDI)   (1),

where EXP is the real export of goods, GDP growth – real GDP growth and FDI - foreign direct investments (Dritsaki, Dritsaki and Adamopoulos, 2004).

To investigate the relationship between considered variables the standard Granger causality analysis based on vector auto regression (VAR) methodology can be used. According to this approach we explain the development of each variable by it lagged value and by lagged value of all other endogenous variables of the model (Klirajan, Miankhel, Thangavelu, 2009).

Even in the graphical representation of time series (Diagram 1) it is obvious that time series have linear trend and probably are not stationary, which means that their distribution is time dependent (mean and variance change over time). If the variables are not stationary in level I(0) Granger causality analysis based on standard VAR cannot be applied because the stability conditions will not be met, relation will be spurious and obtained result wrong. In this case cointegration analysis is required. So, the first step of the analysis is to test whether the considered time series are stationary. The most commonly used test of the unit root for time-series is the augmented Dickey–Fuller (ADF) test which proposed by Dickey and Fulller (1981). The null hypothesis implies the existing of unit root.

According to Granger representation theorem the non-stationary time series can have stationary linear combination I(0). In case this linear combination exists the time series are cointegrated which can be interpreted as a precondition for the existence of a long run or equilibrium economic relationship between two or more variables having unit roots. Two or more random variables are said to be cointegrated if each of the series are themselves non – stationary.

So, the second step is to test the model for cointegration. The null hypothesis of cointegration test is no cointegration. The number of cointegrating vectors is determined using trace statistic and maximum eigenvalue statistic. Essential precondition to this testing is to choose the optimum lag length for the model which is possible on the base AIC (Akaike Information Criteria).

In presence of cointegration we have to estimate the model in Vector Error Correction form (VECM) and imply Granger causality analysis to this model. In the Vector Error Correction Model coefficients of long run relation (β coefficients) are separated from short run adjustment coefficients.

The Granger (1981) shows that X causes Y if in modeling of current value of Y as a lagged values of Y adding lagged values of X can improve the results. We can say in this case that Y is Granger-caused by X. In the last step of analysis Granger causality test for Estonia is performed.

5. ECONOMETRIC RESULTS

For estimation of the model annual data for Estonian real GDP growth, real export of goods, and foreign direct investment to Estonia in 1993-2010 have been used. Only based on annual data we can find long-run relationships between considered variables. Altogether there are 51 observations. All data was downloaded from Estonian Statistical office electronic database and Bank of Estonia electronic database.

Most of papers investigated relations between GDP and other variables have used time period from 22 to 40 years. Unfortunately, the Estonian data is available only since 1993 and real GDP growth is more acceptable for this research. Real exports consist of export of goods and export of services. Export of services depends of short-term fluctuations, therefore only export of goods is chosen.

The results of Augmented Dickey-Fuller test are presented in the Table 2. As can be seen real export of goods and real GDP growth are non-stationary in levels but all variables are stationary in the first differences I(1). Also optimal lag length determined on the base of AIC criteria's and amounts to 3.

Table 2 Augmented Dickey-Fuller test results

	Levels (Prob.)	1 differences (Prob.)
Real export of goods	0.1386	0.0066
FDI	0.0941	0.0028
Real GDP growth	0.1884	0.0957

Note: calculations were made with statistics software EViews 5.1. Equation with individual trend and intercept was included in test. Akaike criteria's of automatic lag selection was used.

Results of cointegration test are presented in Tables 3 and 4. Both statistics are below 5% critical value, thus we can reject hypothesis of no cointegration. As it can be observed Trace and Max-eigenvalue tests indicate 2 cointegrating equations at the 0.05 level.

Table 3 Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.963550	75.10932	35.01090	0.0000
At most 1 *	0.795069	25.43201	18.39771	0.0044
At most 2	0.104512	1.655804	3.841466	0.1982

Note: Trace test indicates 2 indicates 2 cointegrating equations at the 0.05 level

Table 4 Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.963550	49.67731	24.25202	0.0000
At most 1 *	0.795069	23.77621	17.14769	0.0047
At most 2	0.104512	1.655804	3.841466	0.1982

Note: calculations were made with statistics software EViews 5.1. Max-eigenvalue test indicates 2 cointegrating equations at the 0.05 level. Lags interval (in first differences) is 1 to 2. Trend assumption is quadratic deterministic trend. * denotes rejection of the hypothesis at the 0.05 level.

In presence of cointegration it has been estimated the model in Vector Error Correction form (VECM) and has been implied Granger causality analysis to this model. In the Vector Error Correction Model coefficients of long run relation ($β$ coefficients) are separated from short run adjustment coefficients. In the table 5 (see also Appendix 3) $β$ coefficients of cointegrating vectors in estimated VECM are submitted. All of that have expected sign and are statistically significant. The coefficients estimate in long-run relationships, which interrelated as long-run elasticities. As we can see export of goods and foreign direct investment are elastic to economic growth.

Table 5 $β$ coefficients of cointegrating vectors

Cointegrating Eq:	CointEq1	CointEq2
LEXP(-1)	1.000000	0.000000
LFDI(-1)	0.000000	1.000000
LGDP(-1)	-4.048543	-1.876965
@TREND(93)	-0.119101	-0.205270
C	-6.801489	-4.300063

Note: calculations were made with statistics software EViews 5.1. VECM with lag interval (in first differences) 1 to 2 and with 2 cointegration equations was used. Deterministic trend specification with quadratic trend in data and linear trend in VAR was used.

Table 6 represents the results of Granger causality analysis. The null hypothesis is the absence of Granger causality. As can be seen we can reject that real GDP growth is not Granger causal for export of goods and we can reject it in opposite case.

Table 6 Granger Causality Tests

Dependent variable: D(LEXP)			
Excluded	Chi-sq	df	Prob.
D(LFDI)	1.073186	2	0.5847
D(LGDP)	12.78251	2	0.0017
Dependent variable: D(LFDI)			
Excluded	Chi-sq	df	Prob.
D(LEXP)	1.419085	2	0.4919
D(LGDP)	2.116036	2	0.3471
Dependent variable: D(LGDP)			
Excluded	Chi-sq	df	Prob.
D(LEXP)	45.76608	2	0.0000
D(LFDI)	9.843293	2	0.0073

Note: calculations were made with statistics software EViews 5.1.

So, we found Granger causality from GDP growth to export of goods and from export of goods to GDP growth. Also we cannot reject that FDI is not Granger causal for GDP growth but we can reject it in opposite case. So the results of Granger causality test support bi-directional causality between export of goods and GDP growth and unidirectional FDI-led growth for Estonia in considered period.

CONCLUSIONS

The purpose of this paper is to investigate relationship between the export of goods, foreign direct investments and economic growth in Estonia in 1993-2010. The paper has tested export-led growth versus growth-led export as well as FDI-led growth versus growth-led FDI. For this purpose Granger causality analysis has been performed. Because the time series used in analysis are non-stationary,

vector error correction model has been estimated. The econometric results reviled bi-directional causality between real export of goods and real economic growth, and also showed that Granger causality runs from FDI to GDP growth, which support FDI-led growth hypothesis for Estonia.

The Estonian economy is a small open economy. As it was mentioned previously, Estonia's trade policy in 90-s and 2000-s was based on liberal principles. Share export of goods in GDP has grown constantly and export of goods contribution to economic growth reached 13-18 percentage points. Estonian firms have successfully used possibilities of big EU market, especially markets of the nearest neighbors – Finland and Sweden. It has given the chance to increase strengthens scale effect. Estonia is more integrated in EU economy than other Baltic States, because of close economic relations with Scandinavian corporations like Ericsson and others. EU memberships and economic crises have increased return of labor and capital and their productivity. The following facts support econometrical findings and allow confirming that bi-directional causality between real export of goods and real economic growth is the feature of Estonian economy.

During this period FDI was one of the most powerful financing sources of Estonian economy, especially from 2003. In the first years of the considered period share of FDI in GDI was insignificant 3-4%, but in the end of the period share of FDI in GDI has constantly exceeded 10%. Capital accumulation increased productivity leaded to production growth and product promotion in new markets. The following facts support FDI-led growth hypothesis for Estonia.

Relationships between export of goods and foreign direct investments have not been found in this paper. Unfortunately, the time period which could be used is only 17 years and FDI faster growth has been observed only in the second part of the period. Previous studies showed that finding relationships between export of goods and FDI needs longer time period.

Appendix 1 Share FDI in Estonian GDP in 1993-2010.

Year	Share FDI in GDP
1993	0,031213
1994	0,041536
1995	0,033158
1996	0,024602
1997	0,044832
1998	0,091812
1999	0,050739
2000	0,06893
2001	0,090989
2002	0,042917
2003	0,106932
2004	0,151646
2005	0,512513
2006	0,143544
2007	0,186675
2008	0,116508
2009	0,138688
2010	0,134344

Appendix 2 Share export of goods in Estonian GDP in 1993-2010.

	Share export of goods in GDP
1993	0,332
1994	0,357
1995	0,375
1996	0,352
1997	0,425
1998	0,462
1999	0,455
2000	0,582
2001	0,540
2002	0,506
2003	0,513
2004	0,554
2005	0,618
2006	0,5987
2007	0,566
2008	0,6042
2009	0,5401
2010	0,6952

Appendix 3 Long-run cointegrating relations between real export of goods, real GDP and FDI.
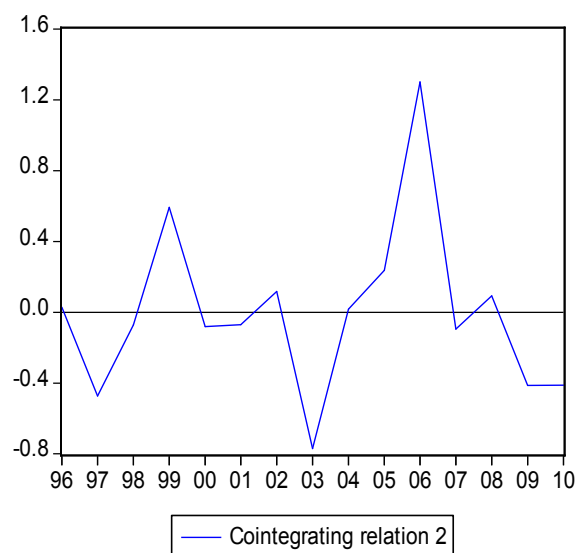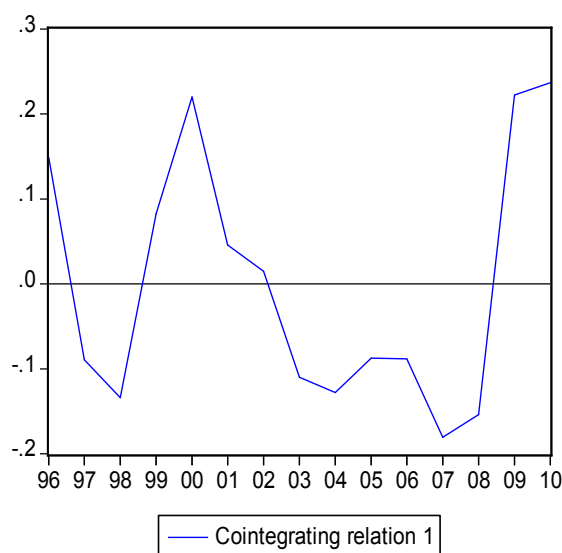
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SENSATION OF DANGEROUS GOODS IN BUSINESS ACTIVITY

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Abstract

Dangerous goods are sensed differently depending on the type of danger they present and field of activity where they are observed. As handling and transportation of dangerous goods have become individual business activities, there are several parties within these operations, which realize danger of certain goods differently. This article presents the positions of two main participants – carrier vs. trader, and tries to compare these views to each other and draw a parallel between feeling that a private person has in daily life. Is there any difference in sensation dangerous goods at all or how big is this gap? Relying on the study that was carried out among Estonian carriers and traders in spring 2011, finally will appear, how good awareness is concerning dangerous goods in practice. The complete examination of sensation of dangerous goods and their threats in reality is a vital stage, how to identify existing risks correctly. Moreover, how to determine correct means to manage these risks caused by dangerous goods in activity of transportation, handling and trading.

Key words: *sensation of dangerous goods, dangerous goods as business objects, carrier and trader, identifying risks.*

1. INTRODUCTION

Present article focuses on the analysis on the study of dangerous goods transportation in Estonia. The study was designed to find out, what are the most restrictive cornerstones of transporting dangerous goods both for carriers and freight forwarders on the domestic transport market. Moreover the key factor was to evaluate the awareness of these parties within the dangerous goods supply chain regarding main chemical characteristics and the reaction of the impact on actions in the transportation sector. In addition to previously mentioned goals, in the view of carriers and freight forwarders, on the other hand it was vital to find *bottlenecks* associated with the transportation of dangerous goods and the factors limiting the use of transport services operated in the Estonian market in the eyes of the producers of dangerous goods. The main output for the results of the study, was the possibility to **envisage** the transport of dangerous goods by improving its safety mostly and managing risks on hazardous chemicals.

The study took place in the period from September 2010 to March 2011 in form of two sub-studies – one aimed at activities of carriers and freight forwarders and the other directed to manufacturing and trading companies, whose business activities are related to dangerous goods. The first sub-study - *"The Competence Study of Estonian Carriers and Freight Forwarders in Scope of Dangerous Goods Transportation"* - covered transport and forwarding companies of Estonia. The second sub-study – *"The Dangerous Goods Transportation Know-How Study of Estonian Manufacturers and Traders"* – covered manufacturing and trading companies of Estonia. Since there are many companies that physically transport (carriers), forward the transportation (freight forwarders) or need for the

movement (manufacturers and traders) of dangerous goods, the study approach used, was the Internet-based questionnaire survey.

Present paper is divided into two main parts like the study itself. Following chapters will consider separately firstly positions of freight forwarders and cargo shippers and secondly standpoints of manufacturing and trading companies.

2. THE COMPETENCE STUDY OF ESTONIAN CARRIRS AND FREIGHT FORWARDERS IN SCOPE OF DANGEROUS GOODS TRANSPORTATION

2.1. Starting points for the study

"The Competence Study of Estonian Carriers and Freight Forwarders in Scope of Dangerous Goods Transportation" represented the first part of the main study - *"The Study of Transport of Dangerous Goods in Estonia."* Starting points for current **party survey** was to gain review for the following questions:

1. What is the current level of security / safety of dangerous goods transport in Estonia, Europe?

2. What are the most common problems (obstacles affecting the smooth functioning of the process), which arise when transporting and planning the movement of hazardous chemicals?

3. How real is the awareness of the Estonian carriers and freight forwarders regarding main characteristics of transported dangerous goods and the probability of chemical features to reveal themselves from the viewpoint of internal activities of a company and the position of transport mode in general?

4. How deep is the specialization among carriers and freight forwarders in the transportation market in the field of dangerous goods?

5. What is the relationship between physical-chemical properties of dangerous goods and the net cost of transportation and the resulting transportation price at last? To develop proposals for fair transportation price determination;

6. Which information channels are used by carriers and freight forwarders in order to increase the awareness of dangerous goods transportation?

7. How do carriers and transport service intermediaries sense the economic advantage in the form of competence of transportation dangerous goods?

8. What are main complaints from carriers and transport service intermediaries to other parties within the supply chain of dangerous goods logistics in order to make process of transportation more efficient? (Manufacturing companies – senders and consignees, public institutions and other authorities competent regarding handling hazardous materials);

9. To develop economically justified actions to mitigate risks of dangerous goods transport.

2.2. Fundamental principles of questionnaire and forming the selection

The questionnaire *"The Competence Study of Estonian Carriers and Freight Forwarders in Scope of Dangerous Goods Transportation"* was divided into three main sections:

18. The background data of carrier or freight forwarder;

19. Informational needs of carriers and freight forwarders in the process of transport of dangerous goods;

20. The competence of carriers and freight forwarders as participants in dangerous goods transportation.

The survey covered companies dealing with both road, air, rail and sea transport. Due to the fact that all known carrier and freight forwarding companies in today's market situation have somehow been related to the transportation of dangerous goods - all of these companies turned out to be in the selection. To ensure the greatest possible involvement of companies related to the transportation of dangerous goods, these carrier and freight forwarding companies were also taken into the selection, which are operating in the field of dangerous goods transport was defined separately.

All together questionnaires were sent to 150-companies (carriers and freight forwarders), of whom 34 replied in the entire volume of the questionnaire. That transformed share of respondents was 22.6%. Current weight was sufficient to draw conclusions, but was insufficient to give an accurate picture of all companies related to committing and managing transportation process of dangerous goods. Companies dealing exceptionally with rail transport were not among the respondents, although there was one company, that observed its activities addressing to all modes of transport,. Therefore no accurate conclusions could be drawn according to modes of transport individually; this point could be based on the previously known facts only.

2.3. Analysis of results

2.3.1. Comments on results of the first section of the questionnaire

Form the fist section regarding background data of companies' that answered to the questionnaire, it revealed, that the majority responded, practiced freight forwarding (60%), rather than carrying cargoes, including dangerous goods (35%), as it can be seen from Figure 1.
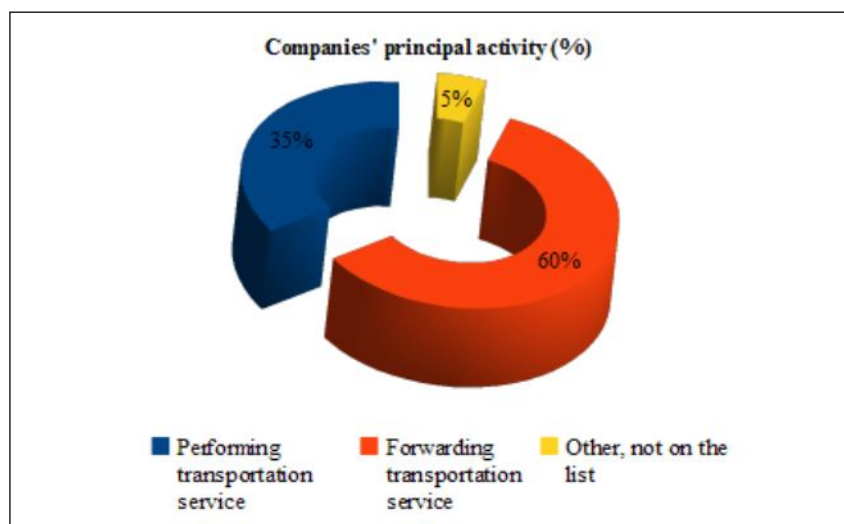
Figure 1. Companies' principal activity (questionnaire 1)
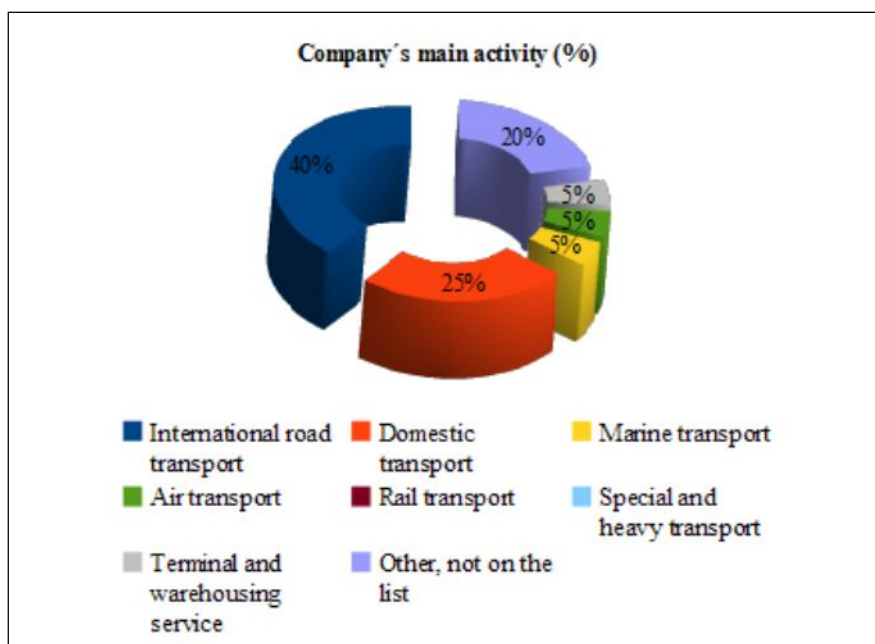
Figure 2. Companies' main activities

As seen in Figure 2 regarding main activities of companies' involved into the study, operations with domestic (25%) and international (40%) road transportation dominated. In addition, among respondents there were companies engaged to transport by sea or air, companies that handled freight at terminal or warehouse. Number of companies was also involved in all modes of transport.

2.3.2. Comments on results of the second section of the questionnaire

The second section, which concentrated on informational needs of carriers and freight forwarders as participants of dangerous goods supply chain revealed, that in most companies the proportion of dangerous goods is relatively small out of annual freight turnover – only up to 10%. This and other shares are illustrated in Figure 3. Another important outcome was that dangerous goods in the view of international transport were imported (69%), rather than exported (31%).
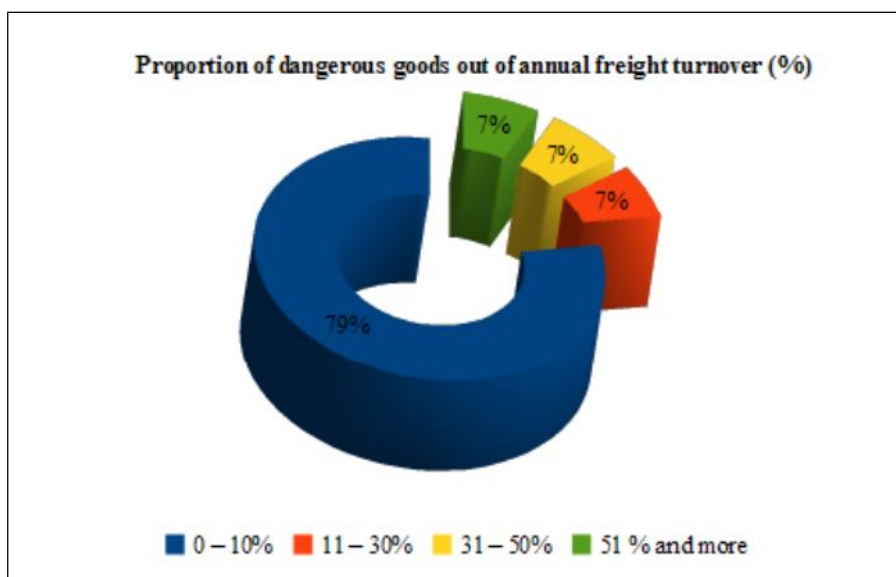
Figure 3. Proportion of dangerous goods out of annual freight turnover

When asked, whether companies need additional professional information in their daily activities in order to be informed on time with changes in the sphere of dangerous goods transportation, no one admits, that the knowledge is fully sufficient (0%). Additional professional information is required from time to time as needed by 87% of the respondents and the remaining 13% need that kind of information always, as the process of dangerous goods transport is managed or physically carried out.

Due to the fact that the dominant response to the previous question referred to the informational need, the type of information was investigated more specifically among respondents that they need in their everyday activities. What kind of information was adequate and what kind was lacking? Figure 4 describes hereby, that information may be considered sufficient regarding dangerous good quantity (62%) and the transport route and its nature (62%) aspects. It is also reasonable, since these aspects mainly are vital in the price determination for the transportation. Less information is known about types of packaging, as well as the information regarding packaging groups, in which goods are packed during the transport process. Only 8% of respondents are aware of what real danger (main chemical characteristic) lies beneath the UN-number of the dangerous good and the same number (8%) know how hazardous chemicals react to other goods within the same transport unit during common transportation process.

Although there is a number of informational aspects that carriers and freight forwarders were not aware of in the process of transportation – this was related mainly to chemical characteristics of a good and possible reactions with other goods (Bersani, C. *et al*., 2008). Therefore in the next question regarding possible reasons, why main chemical-characteristics may reveal during transportation process, the most frequent cause hid behind the human factor. As seen in Figure 5, biggest mistakes happen occasionally during mishandling the dangerous good when loading (15%). Incorrect storage conditions indicate also human mistakes, whilst technical aspects were much better followed and did not affect the reveal of danger-characteristic from point of view of carriers and freight forwarders of

Estonia asked to evaluate reasons which affected the activity of company due to reveal of chemical characteristics.
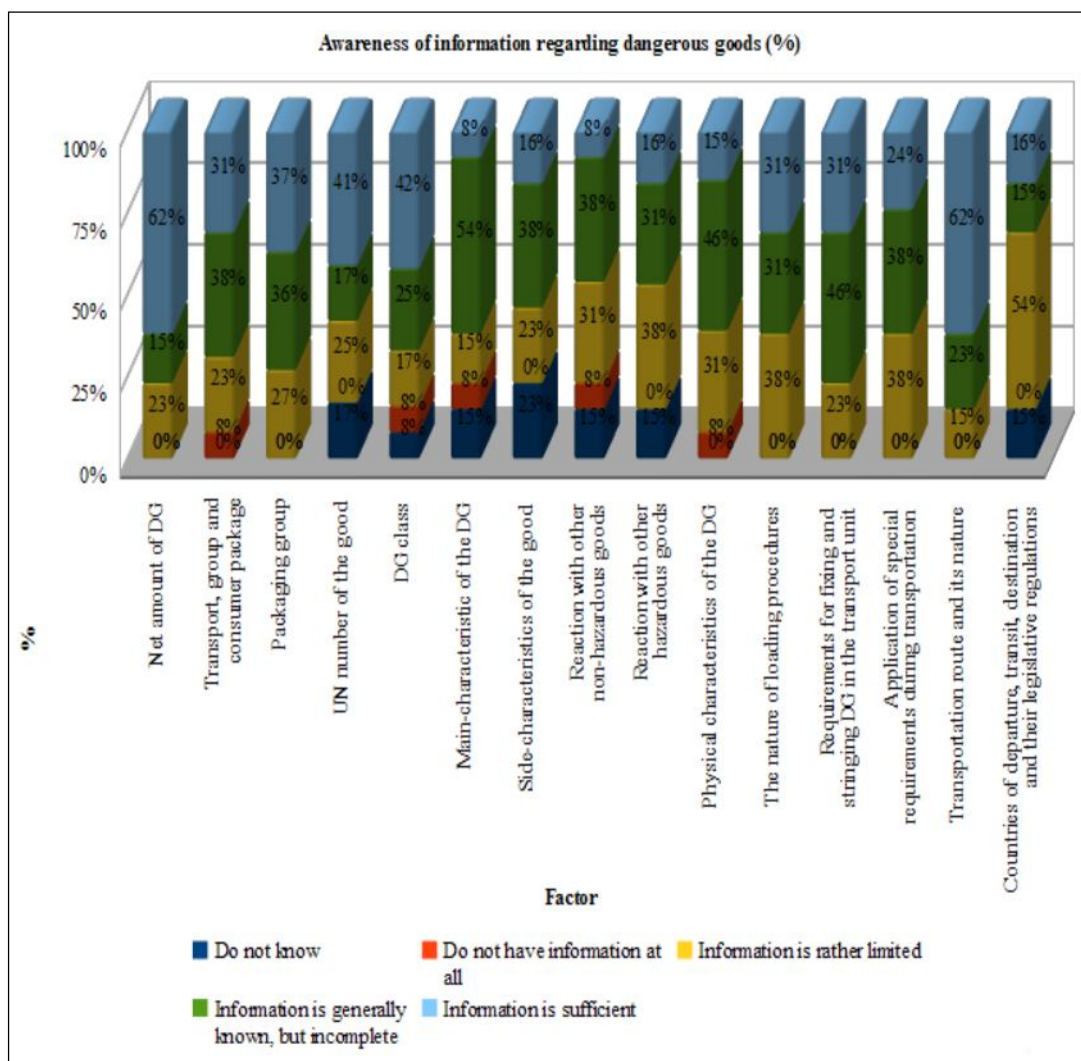
Figure 4. Awareness of information regarding dangerous goods

2.3.3. Comments on results of the third section of the questionnaire

The third section of *"The Competence Study of Estonian Carriers and Freight Forwarders in Scope of Dangerous Goods Transportation"* covered the analysis of practical competence of dangerous goods transportation as well as its panning among carriers and freight forwarders.
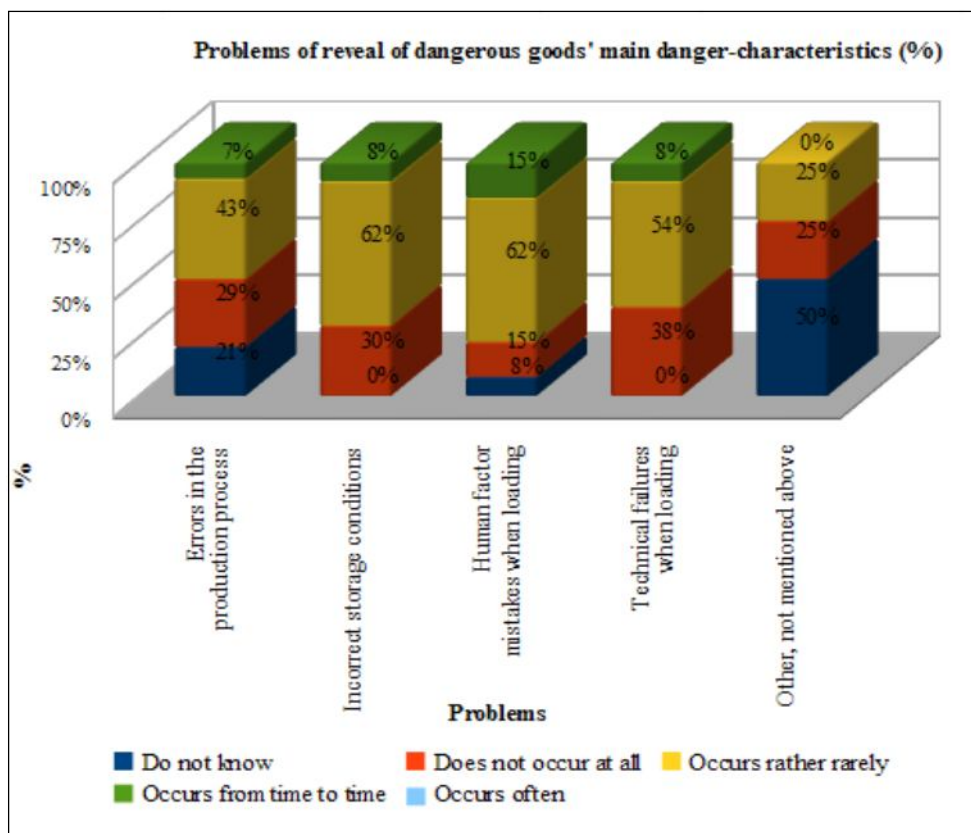
Figure 5. Problems of reveal of dangerous goods' main chemical-characteristic
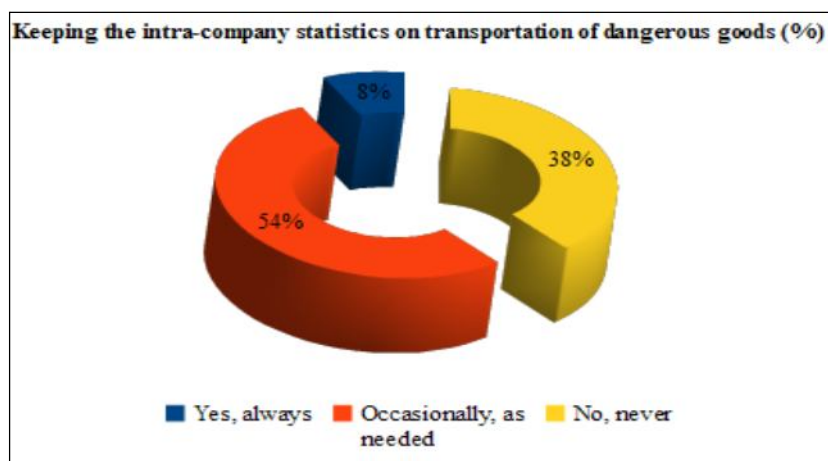
Figure 6. Keeping the intra-company statistics on transportation of dangerous goods

It appeared, that despite the fact that transportation of hazardous materials is considered as a process
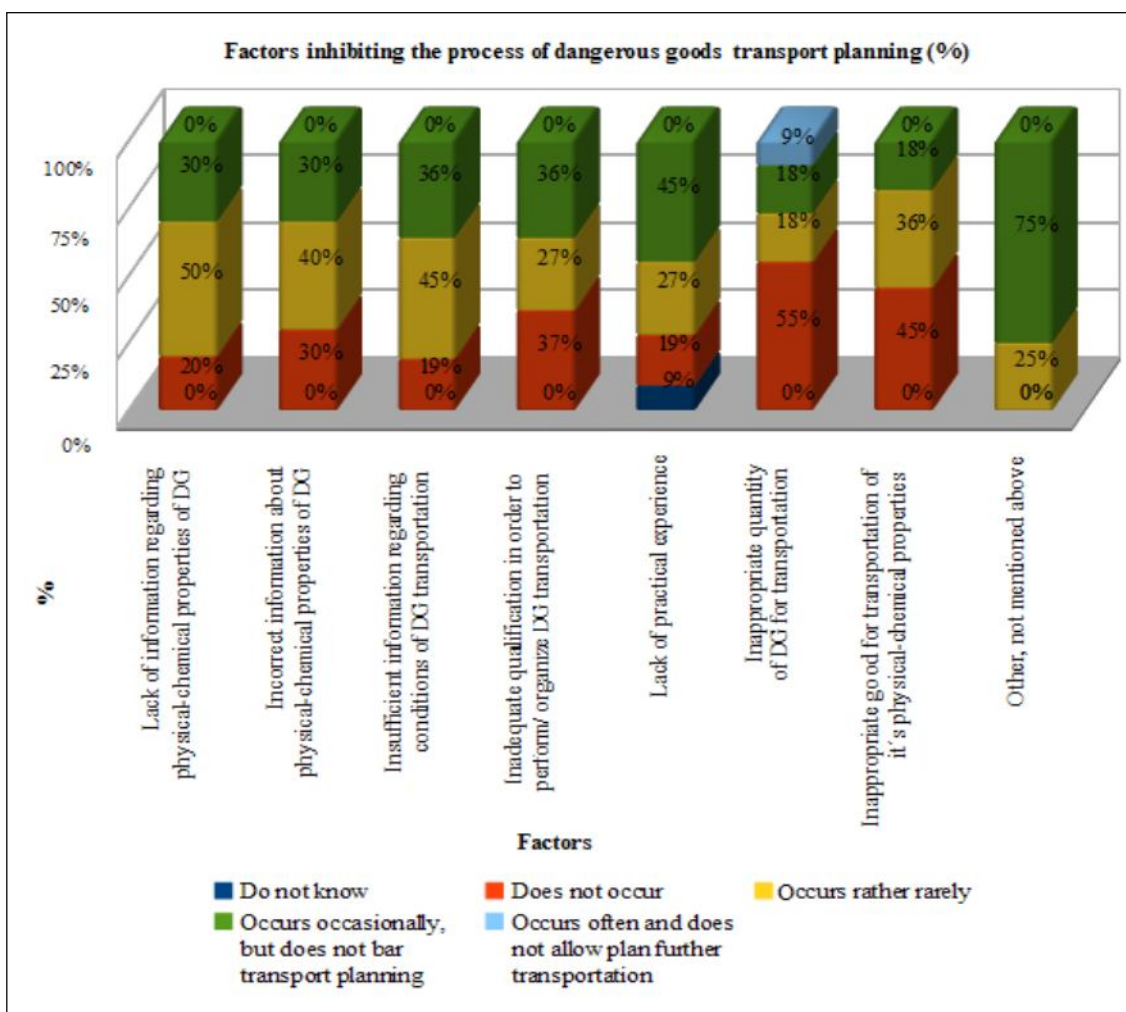
Figure 7. Factors inhibiting the process of dangerous goods transport planning

with special requirements that needs extra equipment, attention, time spent, *et cetera* – constructive records regarding materials being moved, were kept only in 8% of companies questioned. 54% of respondents did that kind of statistics occasionally as needed and the rest 38% had never done that(Figure 6).

Concentrating on problems that arise difficulties when planning and committing transportation of dangerous goods, lot of causes may play dramatical role so, that it may affect the whole process from its planning stage (Bartaliene, N., 2008). Therefore in following question as much as possible actual reasons / inhibiting factors were generated out of the practice in order to receive an adequate proportion of answers. According to Figure 7, the most related problem was the lack of practical experience in order to plan the transportation of hazardous substances. Occasionally (45%) there

appeared problems with insufficient information regarding conditions of dangerous goods transportation as well as inadequate qualification of staff (27%). The absence of proper and full information regarding physical-chemical characteristics of the good was also mentioned many times (40 – 50%) but the existence of none of these factors would immediately cancel planning procedure. The only critical factor hereby was the information regarding inappropriate quantity of dangerous goods (9%). This particular factor is extremely important when dangerous goods are transported in limited quantities (LQ) and ADR requirements are not fully applied.

As opposed to inhibiting factors in the stage of planning procedure, aspects in the process of physical transportation from the point view of carrier, is different (Fingas Mervin, F., 2002). Figure 8 describes factors that inhibit the process of dangerous goods transportation. There are group of aspects, which do not occur during the transportation – these problems are usually solved in the previous phase, when transportation was in the planning stage. These factors are "Other, not mentioned above" in the Figure 8. On the other hand strongly represented additional time spent (10%) and additional costs (10%) within the transport chain occur often in practice and at that point further transportation of hazardous materials can not be carried out.

During the course of the survey, was revealed that the likelihood of accidents that occurred in the process of transportation dangerous goods was rather rare or even non-existent. Next generalizations are related to Figure 9. Still, the main reason, which occasionally occurred regarding dangerous goods, was their leaking during the movement due to insufficient package (70%). This particular factor points at existing technical deficiency at manufacturer's plant where the product has been packed (Batarliene, N., 2004). Problems caused due to bad securing and lashing of dangerous load within the transport unit and resulting spillage (60%) , caused by the human factor.

In practice, when planning and performing transportation of dangerous goods different risk factors have to be taken into account - mostly risks of additional costs (EC 2006). Analyzing Figure 10, it is seen that costs are often related to personnel training (30%) by all modes of transportation due to its undertaking nature regulated by different international regulations on transporting dangerous goods, *id est* ADR, RID, IATA, IMDG. Second major cost category is consisting of unexpected costs (20%). These are especially important when transporting dangerous goods into third countries, where unexpected costs often occur.

Finally from the view of of Estonian carriers and freight forwarders it was important to determine how the price for the transportation is formed. Main criteria were similar to price formation of harmless good transportation - departure and destination points, legislative systems of countries passed through the transportation, quantity of dangerous good and its class of hazard (Bersani, C. *et al.*, 2008). Proportions of these criteria to occur often when forming price for transportation, were more than 70%, whilst the importance of primary and secondary chemical-characteristics with their ability to react with other goods were completely irrelevant aspects according to summarizing in Figure 11.

In addition to questionnaire itself many freight forwarders used the possibility to speak openly how to improve the collaboration within the supply chain of dangerous goods and reduce risks effectively at the same time (NATO, 2007). What is primary - the quality of information regarding dangerous good that is exchanged among parties within the logistical processes. This information has to be complete and correct. Full overview of chemical characteristics and handling procedures have to be passed to all parties related, documents of transportation have to be filled in correctly (UNECE, ADR 2009). It is easy to be mistaken in sphere of dangerous goods for all parties, as the Dangerous Goods Regulations are hard to understand on daily basis. Moreover, it is almost impossible to obtain an accurate picture how to commit 100% correct transportation.
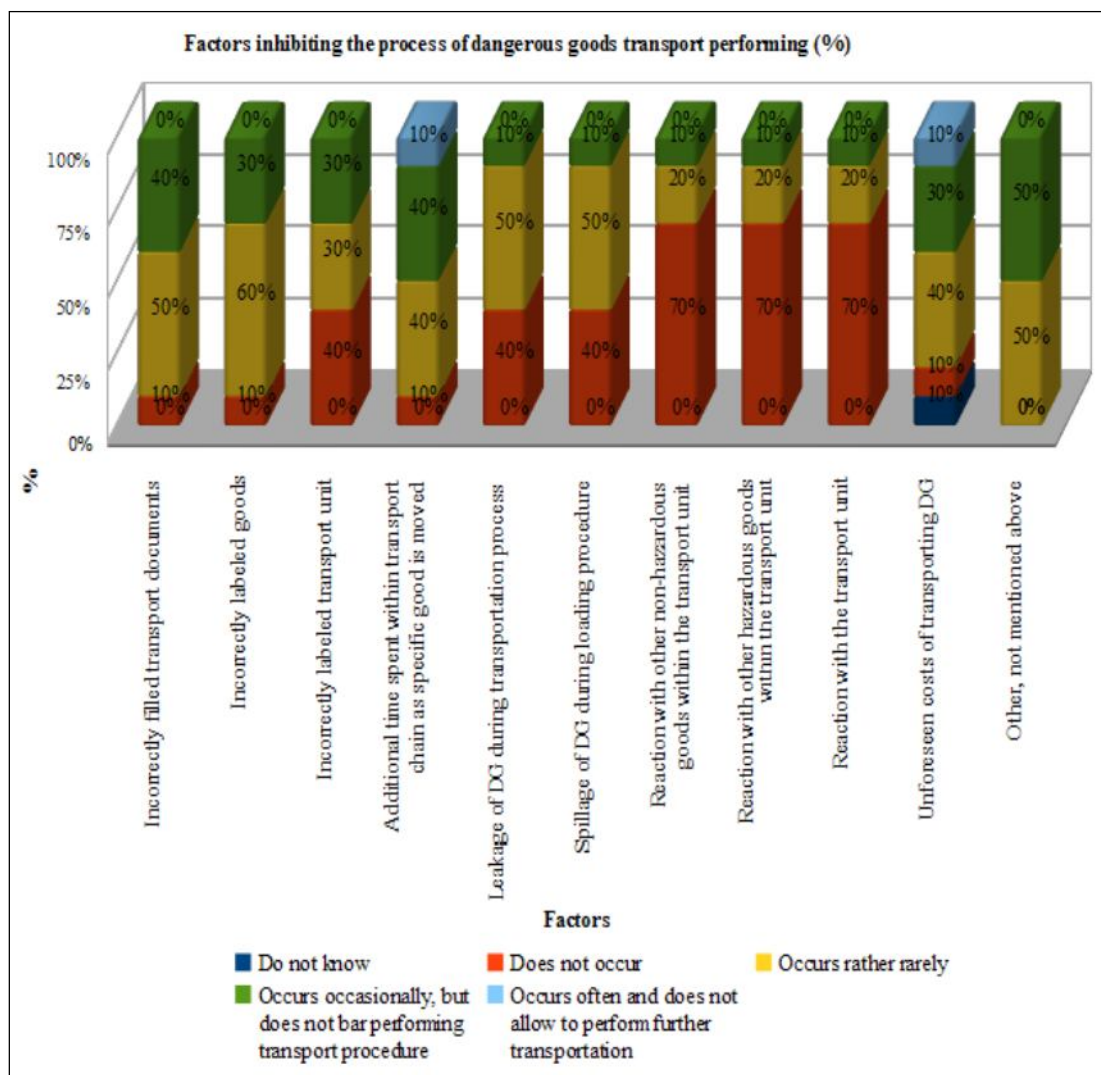
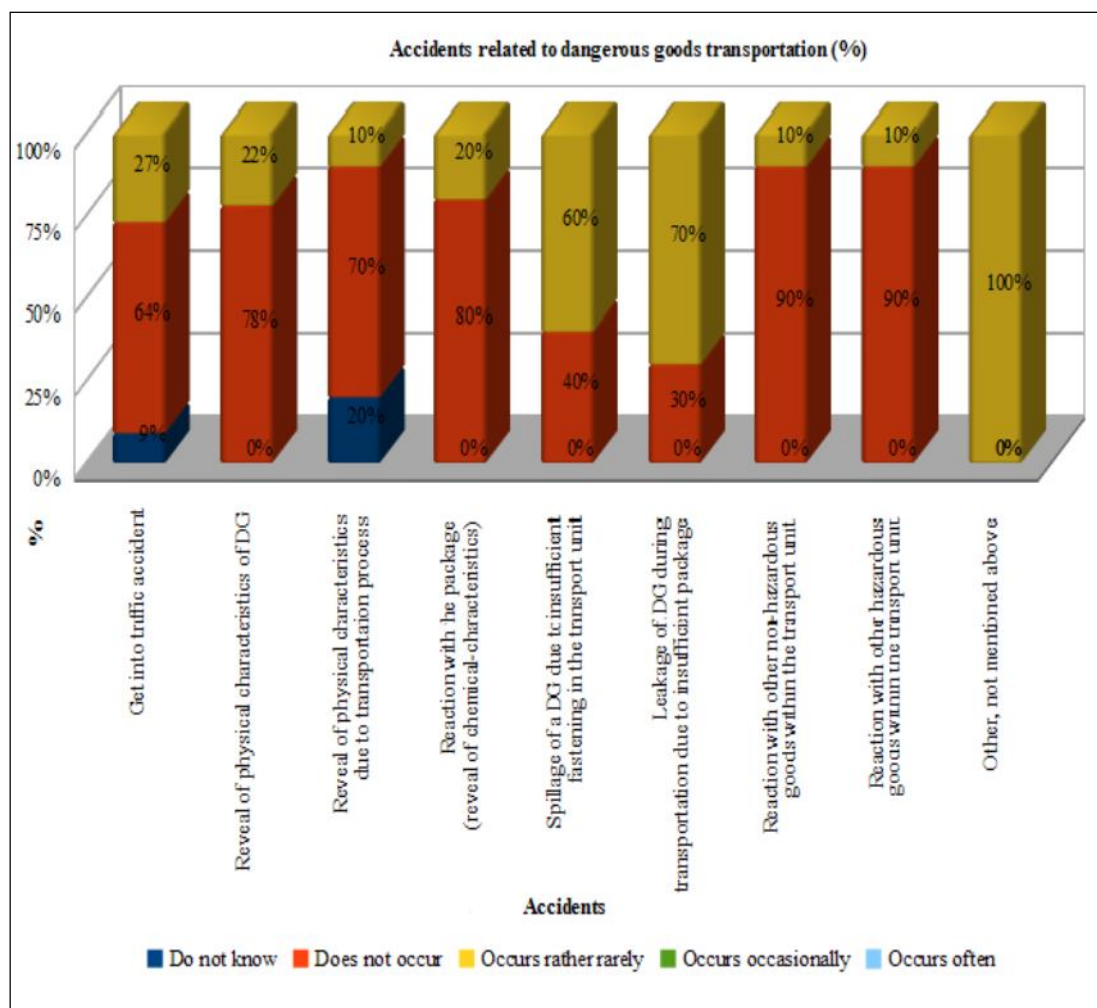**Figure 8.** Factors inhibiting the process of dangerous goods transport performing

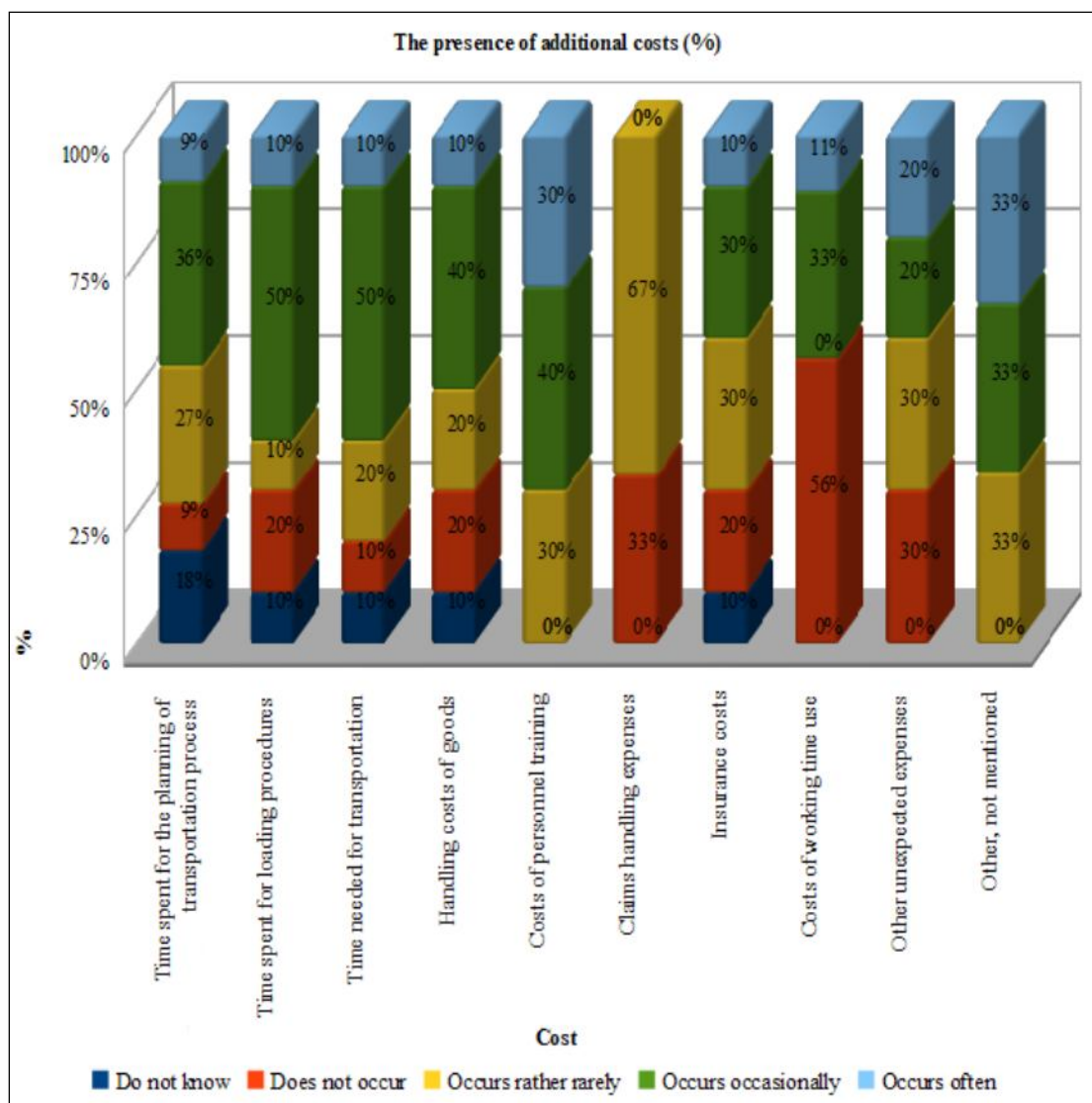**Figure 9.** Accidents related to dangerous goods transportation

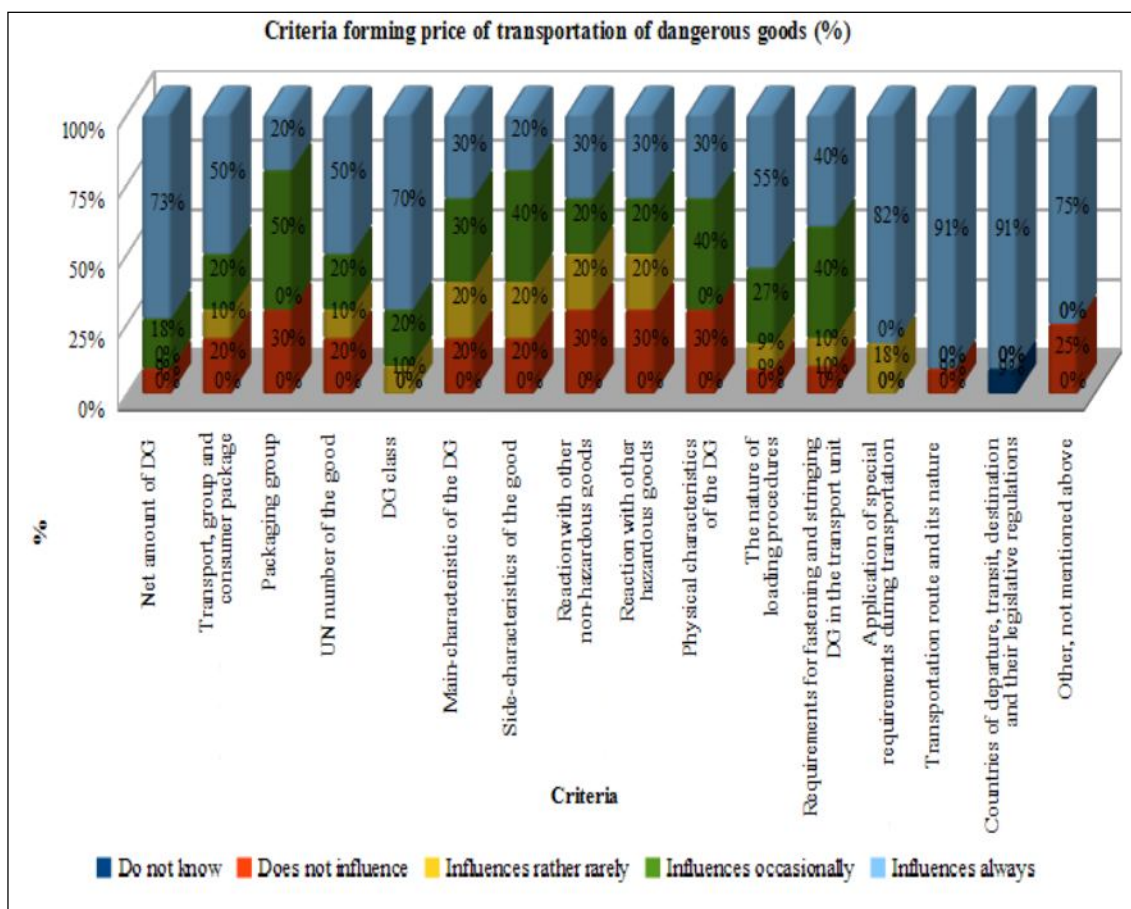**Figure 10.** The presence of additional costs

Figure 11. Criteria forming price of transportation of dangerous goods

3. THE DANGEROUS GOODS TRANSPORTATION KNOW-HOW STUDY OF ESTONIAN MANUFACTURERS AND TRADERS

3.1. Starting points for the study

"The Dangerous Goods Transportation Know-How Study of Estonian Manufacturers and Traders" represented the second part of „*The Study of Transport of Dangerous Goods in Estonia".* Starting points for present party survey was to gain review for the following questions:

- What are the principles that determine the manufacturers' choice of logistics partner to transport dangerous goods?

- What problems associated with the transport of dangerous goods are sensed in everyday work of production and trade enterprises?

- What kind of information related to dangerous goods logistics transport was needed the most in processes of logistics and supply chain management from position of manufacturer and trader?'

3.2. Fundamental principles of questionnaire and forming the selection

The questionnaire *"The Dangerous Goods Transportation Know-How Study of Estonian Manufacturers and Traders"* was divided into two main sections:

3.   The background data of manufacturing and trading companies;

4.   Activities and informational need of manufacturing and trading companies as parties within dangerous goods transportation chain.

The survey covered both traders of fuel, as well as manufacturers engaged to cosmetics, construction, household chemicals, explosives, gases, *et cetera*. Big variety of business areas were involved, in order to get the most accurate picture of existing bottlenecks of the transport related, also define restrictive circumstances of the transport service used by manufacturers of dangerous goods. In total 75 companies were chosen to whom questionnaire was sent, finally 27 of whom replied in the entire volume. Proportion of respondents was therefore 36%. Within each company the study was addressed to a person, who was aware (might have been aware) of these practices provided by other transportation and freight forwarding companies. Therefore, the study covered corporate general and secondary managers as well as professional specialists.

3.3. Analysis of results

3.3.1. Comments on results of the first section of the questionnaire

The first section of the questionnaire covered the background data of respondents, Figure 12 shows, that the total proportion of manufacturers of dangerous goods was 67%, reminder 33% of companies dealt with trading, *id est* the resale of hazardous materials.
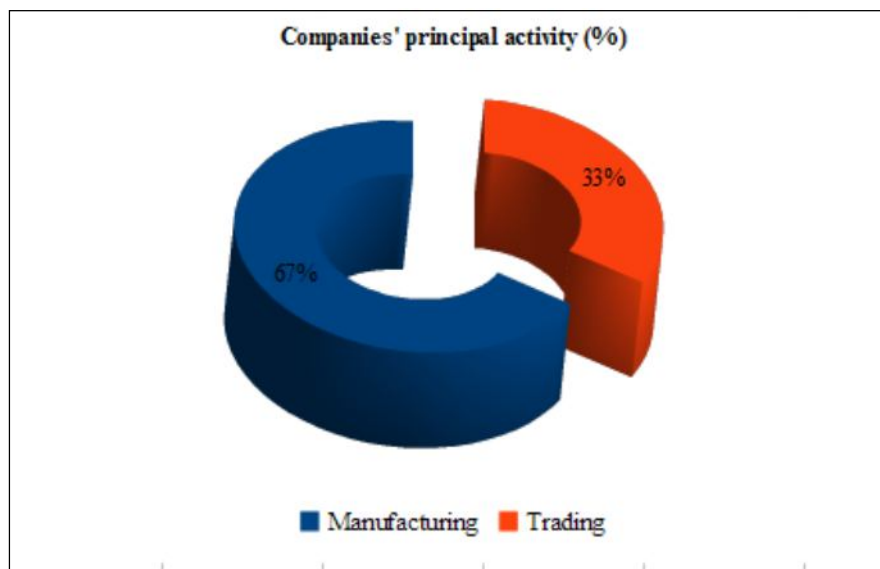
Figure 12. Companies' principal activity (questionnaire 2)

Other informational questions regarding background of companies consisted of annual turnover, the total umber of employees and the respondent's positions at the company. The questionnaire was filled both by general and senior managers as well as lower-level specialist respondent for organizing transportation. Study showed, that among manufacturers and traders there are two groups regarding what quantities of dangerous goods need for further moving. 50% of respondents need to transport only 0-10% of their total production / sale; other 50% need to transport over 51% of their production/ sale. These proportions are illustrated in Figure 13.
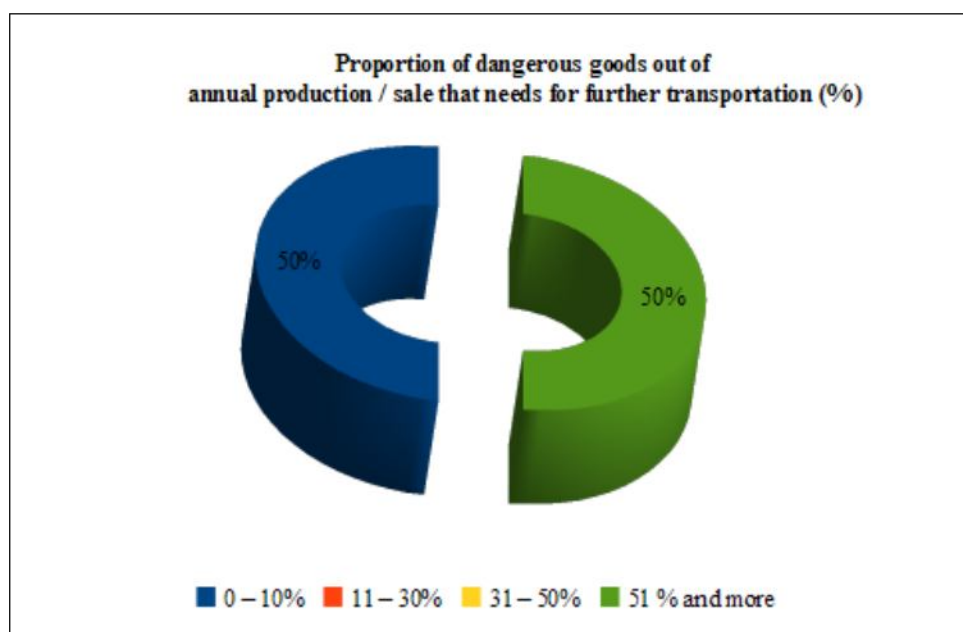
Figure 13. Proportion of dangerous goods out of annual production / sale that needs for further transportation

Having revealed that the surveyed companies used transport and freight forwarding services both for importing and exporting dangerous goods as semi-manufactured articles and end products, was important to find out how many of manufacturers and traders used these services on a daily basis in proportions. According to results of questionnaire in Figure 14, 70% of manufacturers and traders of Estonia use regularly services of carriers and freight forwarders.

3.3.2. Comments on results of the second section of the questionnaire

The second section of *"The Dangerous Goods Transportation Know-How Study of Estonian Manufacturers and Traders"* concentrated on defining quality of existing information and specifying additional informational needs for parties related. Figure 15 illustrates hereby partition as a consequence of the fact how easy is to find service provider to transport dangerous goods. Dominant, *"rather yes"* with 70% ahead strongly other versions.
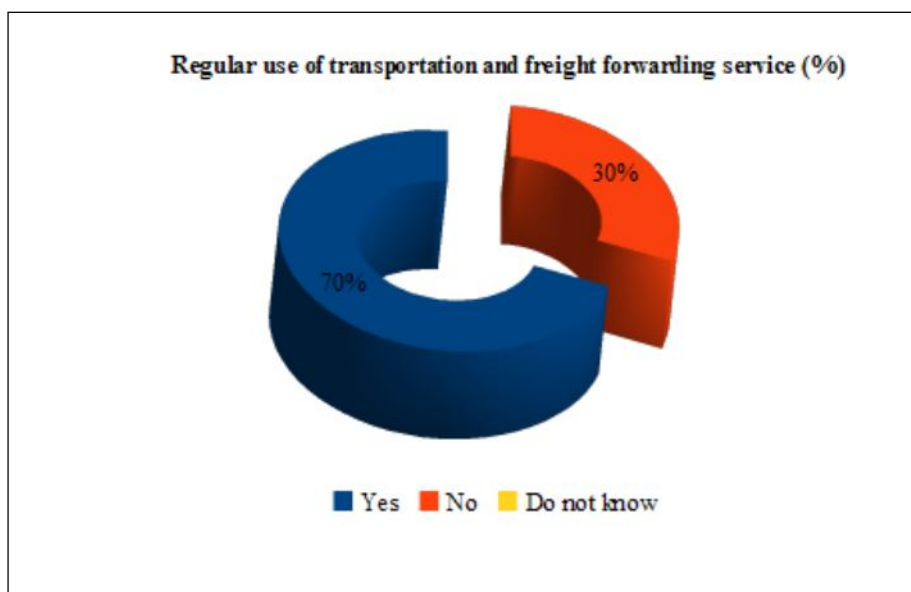
Figure 14. Regular use of transportation and freight forwarding service
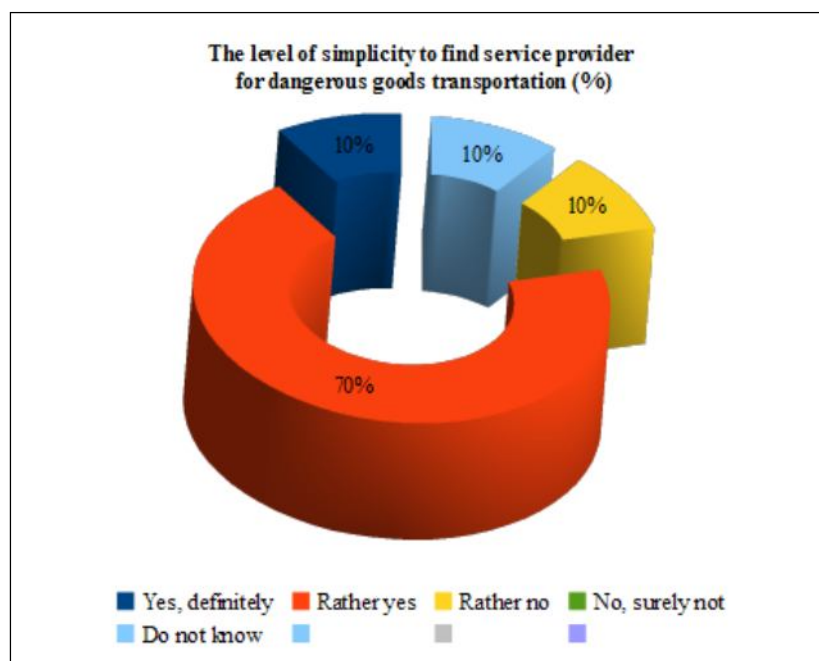

Figure 15: The level of simplicity to find service provider for dangerous goods transportation
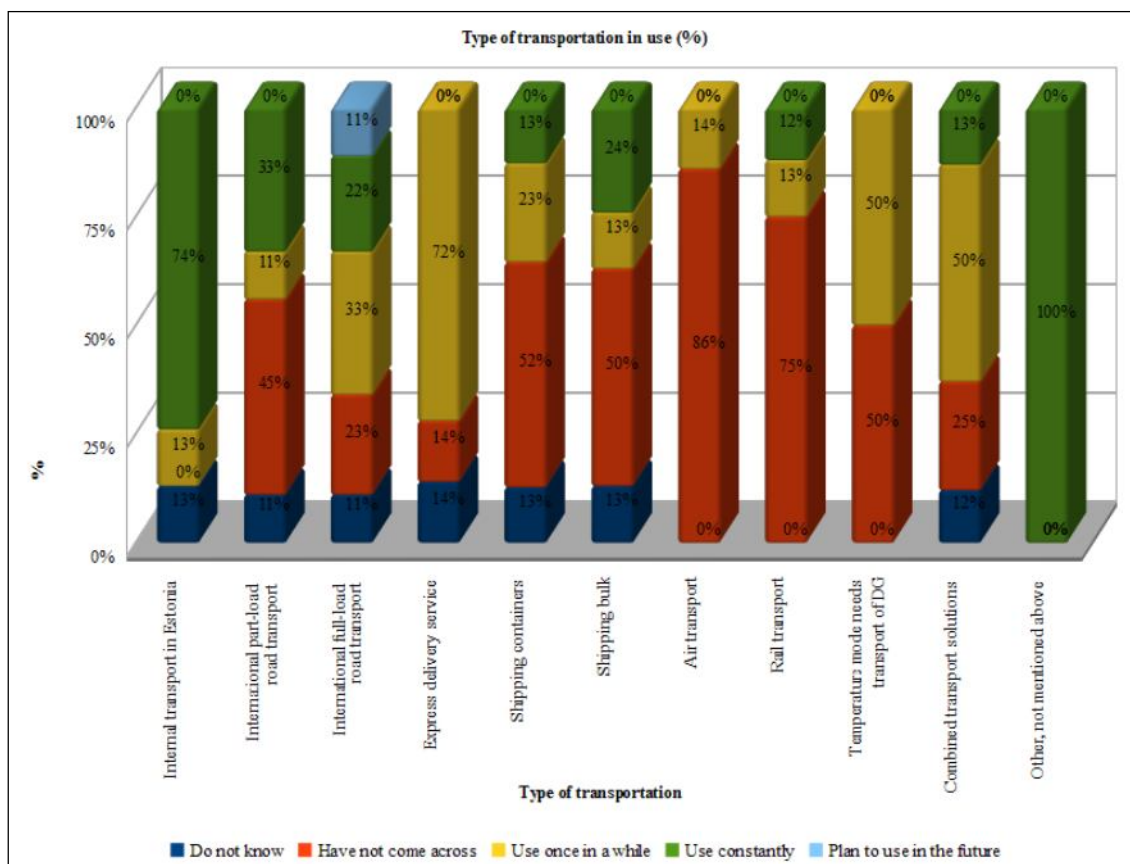
Figure 16. Transportation systems in use

In order to get an overview on what kind of dangerous goods solutions manufacturing and trading companies are using mostly, respondents had to evaluate specific mode of transportation by its involvement into company's logistical process regarding dangerous goods handling. This is illustrated in Figure 16. Consistently used in its largest volume was domestic transport in Estonia (75%). Dangerous goods transportation in part loads next to other non harmful goods within the same transportation unit is a complicated process, therefore 45% of recipients had not come across to use this solution. Reasonable argumentation for this is that it can be complicated to find carrier who would transport hazardous material as a part-load. It was also noteworthy that 11% of companies intend to use full-load road transport service in the near future, probably because of recovery of economic activity and growth of orders in numbers. Marine, air and rail transport were not majority of manufacturing and trading companies to use, however as little amount is transported by sea in containers.

From practical view there is always a difference between, what kind of factors in the whole process and all parties within supply chain of dangerous goods, are evaluated as more important and especially valuable (Fingas Mervin, F., 2002). According to results of present survey, illustrated in Figure 17,

most valuable aspect was carrier's know-how in combination of its own technical equipment to perform safe transport of dangerous goods. Moreover none of recipients mentioned these criteria as not important at all.
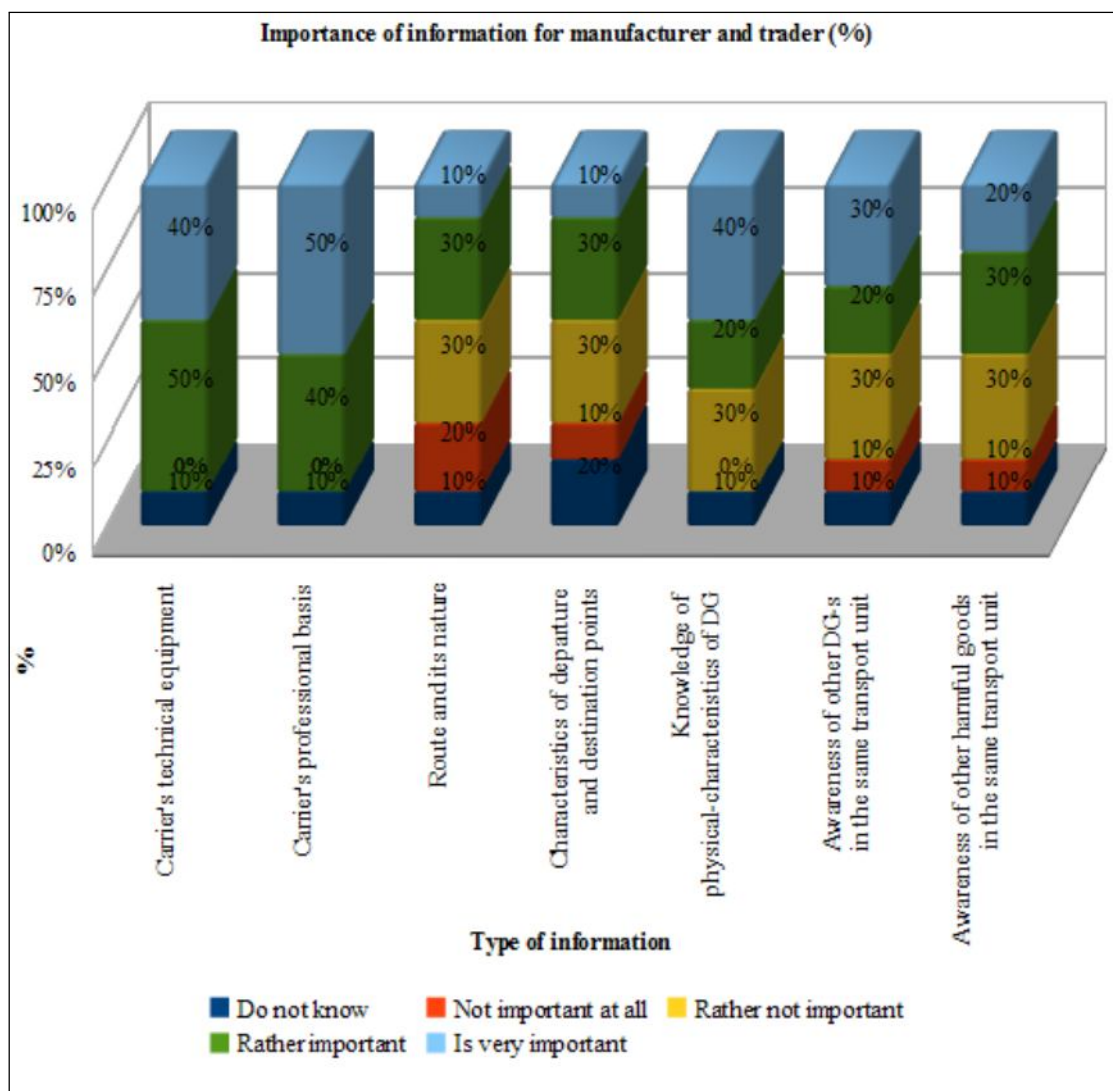

Figure 17. Importance of information for manufacturer and trader

Fact is that accidents with harmful chemicals still happen and as a result dangerous goods endanger society, mankind, properties and the environment (UNECE, ADR 2009). Often chemical-characteristics are believed to be the greatest danger. But relying on the results of the survey, the key-factor, why main-characteristic of dangerous good reveals is due to human factor. Both technical and human errors happen especially easily during loading procedures, which could have started already

from technical failure during production process on incorrect storage of a good at the terminal (Bartaliene, N., 2008). Apparently, in Figure 18, causes human activity have bigger likelihood to happen – human factor mistakes during production process as well as mistakes during loading procedures collected both 10 % of total, *id est* occur occasionally.
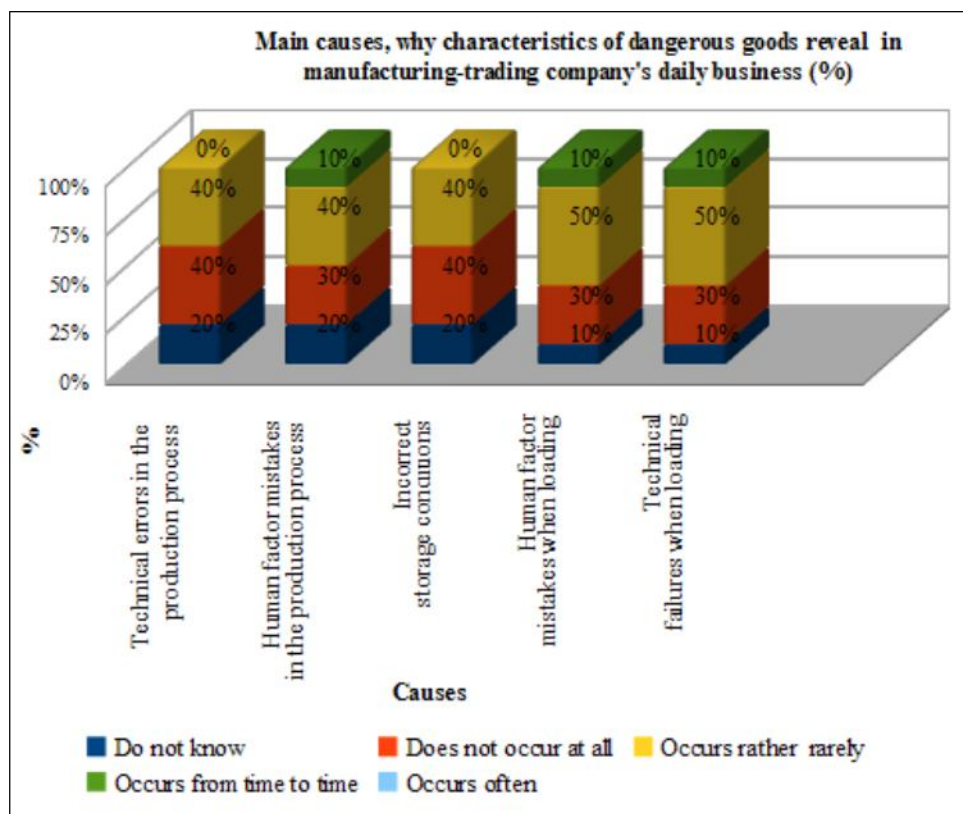

Figure 18. Main causes, why characteristics of dangerous goods reveal in

manufacturing-trading company's daily business

The choice regarding cooperation partner is difficult and always includes risks, no matter what sphere of activity it would be. All responds of the survey regarding this particular question indicated, that the most important criteria when selecting transportation process provider, was professional experience of a carrier. The same factor was also vital when aspects affecting price for transport were analyzed, which can be seen in Figure 19 below. Manufacturers and traders highlighted in addition to professionalism and technical capability also flexibility and ability to respond quickly to changes as well as commit transport in a short transit time. One idea that was given from manufacturers and traders in addition to list in questionnaire was the necessity to form the Internet database of carriers of dangerous goods, both with professional (practical) and knowledge base. The reason of this would firstly prevent the possibility to transport dangerous good by non-professional carrier and therefore reduce the risk of accident with leakage and spillage of hazardous chemical into environment due to its

careless handling (Fingas Mervin, F., 2002).

As transportation of dangerous goods means automatically higher risks, due to specificity of a cargo, it would be therefore obvious to manage some of these risks with cooperation regulated by long-term contracts (NATO 2007). In practice on the example of Estonia the proportion is even – 50% of manufacturers and traders related via their activity to dangerous goods used binding contracts with carriers and freight-forwarders. In other cases of cooperation such formal agreements were missing.
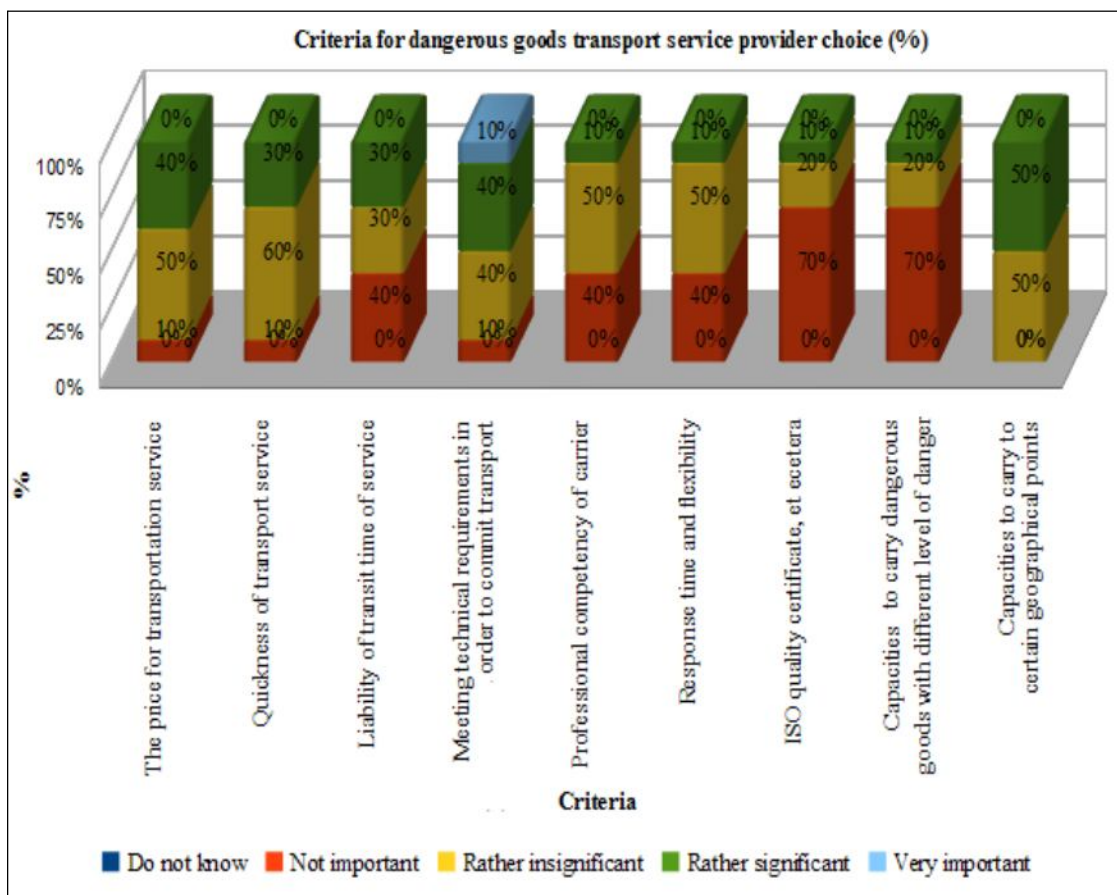
Figure 19. Criteria for dangerous goods transport service provider choice

Producers and traders had to give their opinion on what kind of information carrier or freight forwarder needed the most, seen in Figure 20. Such specific information like physical and chemical characteristics of dangerous goods is needed often, also special marks and labels are asked from producer / trader in order to tag transportation unit correctly. As a rule carriers and freight forwarders need a lot of information and it can be each time a little bit different. None of transportation process on dangerous goods is similar to previous - conditions and regulations change too quickly, therefore manufacturer of a dangerous good has to be ready to give all kind of information related (Bersani, C. *et al.*, 2008). In addition to list in Figure 20, Estonian manufacturers and traders pointed out that in

Estonia many carriers ask for TREM Card (Transport Emergency Card) and freight forwarders for MSDS (Safety Data Sheet of Chemical).
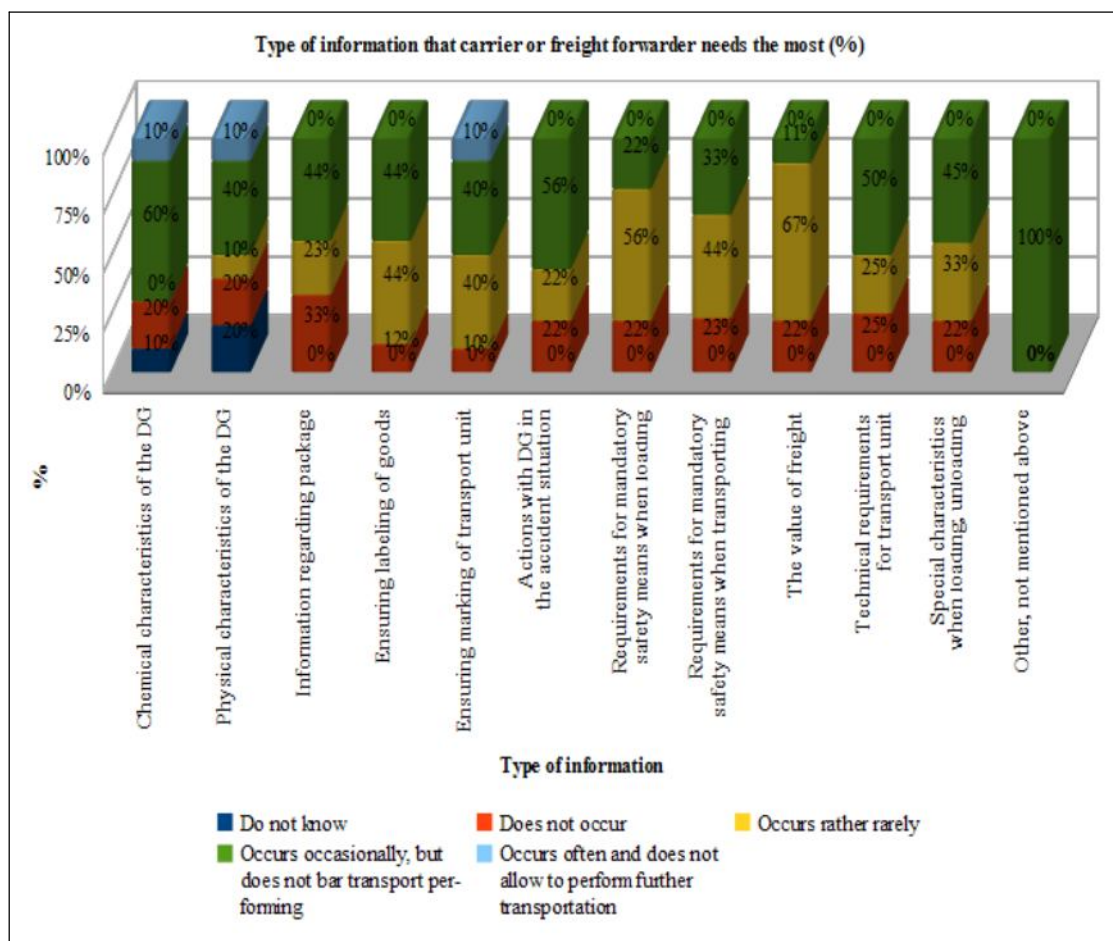

Figure 20. Type of information that carrier or freight forwarder asks / needs the most

Finally manufacturers and traders had to evaluate problems that they have had with carriers and freight forwarders. Named issues were not often and usually had no serious damages as a leakage of the good, poor fixing or stringing goods in the transportation unit as well as wrong placement of load in the trailer (EC 2006). Issues mentioned above are easily transmitted on to transport of non-hazardous goods, where exactly same problems occur. Due to the fact that respondents did not mentioned any major problem with serious consequence and existing issues have more traditional nature, it can be said that there is no criticism towards transport service providers. The only direction for carriers and freight forwarders in the eyes of dangerous goods producers is to qualify its personnel consistently – 11% for occasional occurrence of staff with poor qualification (Figure 21).
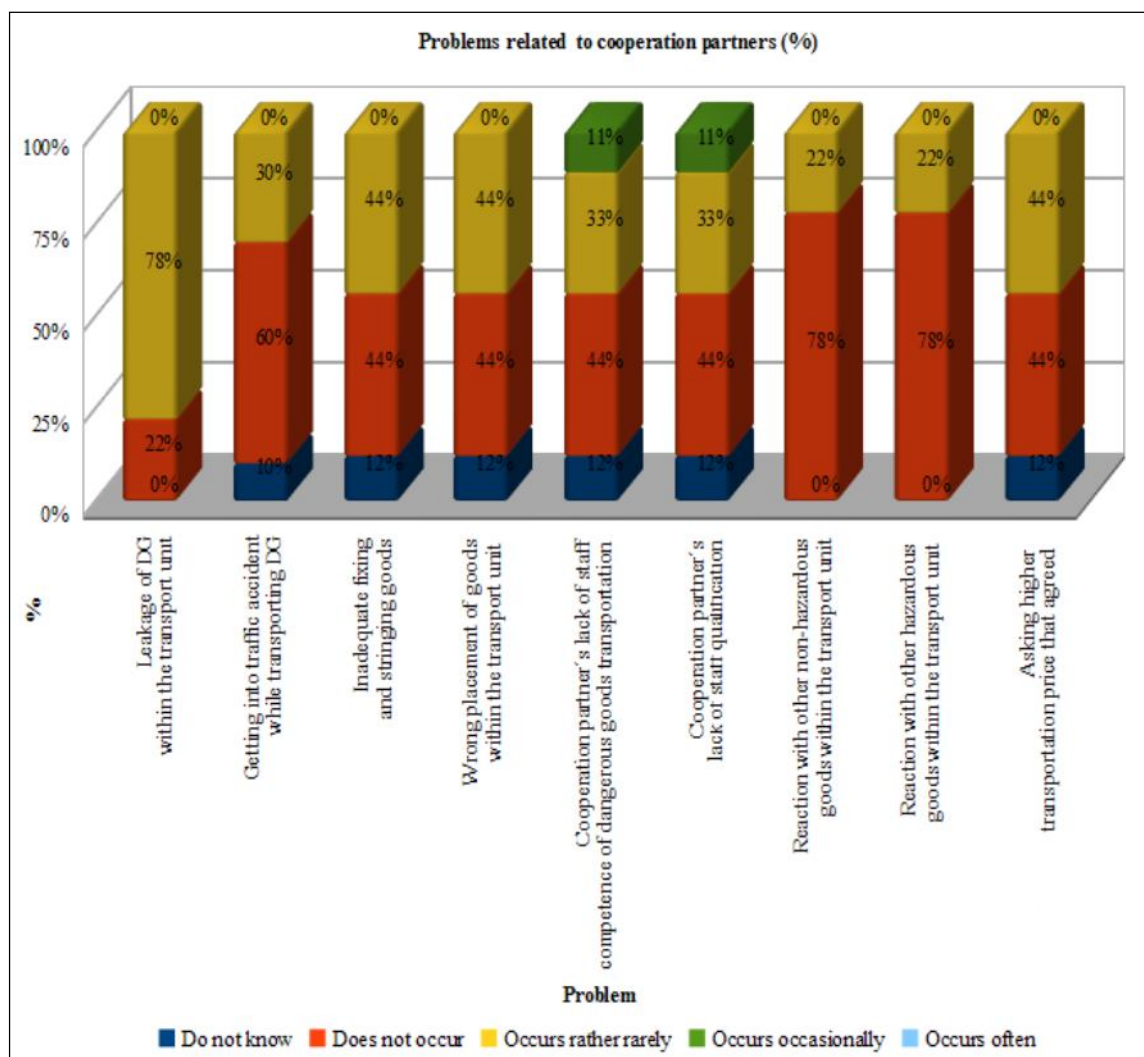
Figure 21. Problems related to cooperation partners

4. CONCLUSION

Firstly, the most important conclusions of the sub-study *The Competence Study of Estonian Freight Forwarders and Carriers in the Scope of Dangerous Goods Transportation"*are following:

- The study was designed to involve all the available modes of transport and it was also achieved: road, air, rail and sea transport, all of them were included into the study;

- Despite the conservative percentage of respondents (22,6%) it will allow to make generalizations and conclusions;

- The survey revealed that in the Estonian transport sector, the share of dangerous goods was relatively low, by most companies *id est* up to 10% of annual freight turnover;

- As the proportion of the transport of dangerous goods in the market was quite small, the lack of professional knowledge of personnel is represented:

- Most of companies acknowledged that they need additional information when arranging the transportation of dangerous goods;

- Dangerous Goods Regulations are written too difficult, when not doing dangerous goods shipments every day, this is was virtually impossible to get accurate picture of how transport is in the "correct" form;

- There is a lack of information regarding chemical characteristics of dangerous good, as well as information regarding packages of the good;

- There was no difference in transportation price - was transported dangerous good or just harmless product;

- Most common accident during transportation of dangerous goods was spillage or leakage of the product.

Secondly, the most important conclusions of the sub-study *The Dangerous Goods Transportation Know-How Study of Estonian Manufacturers and Traders'''*are following:

1. The study was designed to involve all possible manufacturers and traders of dangerous goods;

2. Despite the small percentage of respondents (36%) it will allow to make generalizations and conclusions;

3. The most consistently used mode of transportation for dangerous goods is a domestic transport in Estonia

4. The most important aspect when choosing transportation service provider practical experience, existing technical equipments and qualification appropriateness were stressed;

5. The need for international database in the Internet with the information of all carriers and freight forwarders dealing with dangerous goods;

6. Carrier and freight forwarder ask much about chemical-physical properties of goods.

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LONG-TERM DEVELOPMENT STRATEGY FOR ENTREPRENEURSHIP IN RUSSIA: THE CONCEPT OF FOUR "I"

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Abstract

In 2008 the president of Russia has formulated the programme announcing its priorities – institutions, investment, infrastructure, innovations. Stimulation of investment activity, development of innovation infrastructure, creation of the innovation foundation "Skolkovo" and the modern system of institutions in the innovation field are the main tasks of the government of Russia in future years .

Key words: *innovation infrastructure, innovation fund, the Skolkovo Foundation, innovation activity, financial support, Fund for assistance, innovative enterprises, innovation clusters, innovation entrepreneurship*

In February 2008 D.A. Medvedev formulated a program at the economic forum in Krasnoyarsk, announcing its priorities "four "I" (institutions, investment, infrastructure, innovations) in his pre-election speech.

The tasks of the state in the innovation field are an increase of the human potential in science, education, technology and innovations, rise in the "innovativeness" of the state, support of innovative orientation of science and education, stimulation of the innovation activity of the existing enterprises, assistance to the formation of new innovative companies, increase in demand for innovative products.

For the first time the president of the Russian federation said in his annual message to the Federal Assembly on 12 November 2009: "...it is necessary proposals development to be finished for the creation of the high-powered research and development center in Russia that would focus on support to all the priority directions, exactly all the ones. It is about the forming of the modern technology center, if you like, in imitation of the Silicon Valley and other similar foreign centers" (Medvedev, 2009).

On December 31, 2009, Dmitry Medvedev issued a decree № 889-RP to form "The working group to develop the project for creation of the geographically separated complex for elaboration of development and research, and commercialization of the results".

It was decided to build the ultra-modern scientific and technological complex for development and commercialization of new technologies in Skolkovo situated near Moscow. According to the words of the state's head it was caused first of all by the fact that "it is a place where is quite a good groundwork for doing it quickly". We would remind you that some years ago the Moscow school of Management "Skolkovo" was built in Skolkovo. According to the project initiators' intention (14 the largest investors, Russian and Foreign companies and individual persons), its task was to teach unique leader and entrepreneurial skills, as well as the opportunity to take part in joint implementation of international consulting projects for its students.

Some priority directions are expected, in the field of which the "Skolkovo" Foundation will work. This is power efficiency and energy saving, including the questions of development of innovative energy technologies; space technologies, first of all in the field of telecommunications and navigation systems (including the formation of the appropriate ground-based infrastructure); medical technologies: equipment, medicinal agents; strategic computer technologies and software; nuclear technologies.

Moreover, the matter is about "not only the scientific and technical park, the special economic zone, but about the center of intelligent gravitation for the best intellects and talents not only from Russia but also outside the country" (Sitnikov, 2011). That is how Viktor Vexelberg (the president of the Skolkovo Foundation) has emphasized the research component of Skolkovo during the World Economic Forum in Davos, which was held in January 2011.

The government of Russian Federation was entrusted with the working out the special legal, administrative, tax and customs conditions of operation of the Skolkovo Foundation. It means the existence of tax and other benefits, as well as the lack of the administrative barriers to the companies' activities to maximize the operational involvement of scientists and specialists who work in the sphere of advanced technologies.

For example, the preferential terms will be acting during ten years from the registration's date of the enterprise as a participant of the Fund until the time when the size of the annual revenue amounts to one billion roubles. And then when the accumulated earnings amounts to 300 million roubles. The rate of mandatory insurance contributions is 14 %, income tax rate and enterprise's property tax rate, as well as land tax rate – 0% (Commission for Modernization and Technological Development of Russia's economy, 2010).

In addition to the tax benefits the innovation organization registered as a participant of the Fund receives an access to the laboratories which were made within Skolkovo, the opportunity to involve the largest scientists and research groups from the leading universities around the world in their projects and interact with the potential private investors with an allowance for the projects co-financing.

The organization interested in searching for innovative decisions to increase the power efficiency of production, form the unique competencies in the sphere of power efficient equipment production, receives the opportunity to place the orders for research development and testing in the laboratories of Skolkovo involving the largest international scientists and research groups, place its own research and development center within Skolkovo receiving the status of the participant of Skolkovo and the accompanying benefits, as well as the access to all the innovation proposals and the possibility to obtain the Fund's co-financing to create the start-ups for the purposes of research and development.

In December 2010, the authorities of Skolkovo introduced the first participants of the innovation center. 16 projects were announced at the forum «Forward, Russia!». There are OOO "Innograd Pushchino" engaged in biotechnologies of detection and neutralization of dangerous infectious agents, the international center of quantum optics and quantum technologies, the scientific and technical centre of thin-film technologies under the Ioffe Physical Technical Institute, the program complex of intelligent IP-video surveillance (OOO "Satellit innovation"), the automated translation systems (the ABBYY corporation) among them.

The participants of Skolkovo will be engaged also in devising the original drugs to treat the infections of viral etiology and the virus diseases diagnostic methods (the Ural pharmaceutical cluster), three-dimensional rendering using the cloud computing (OOO "Klaudmak"), predictive modeling and

multidisciplinary optimizing (OOO "DATADVANS"), projects of the superconducting industry (OOO "Russian superconductor" Corporation"), researching and improving the heat-insulating composite coatings based on the microspheres (OOO "The team of energetic entrepreneurs") and working out the energy-efficient innovation processes for the complex processing of technogenic waste based on the new metallurgical technologies (OOO "The new metallurgical technology").

It should be noted that next three years 36,2 billion roubles will be invested in the projects realized within the Skolkovo innovation center. In particular, 10,6 billion roubles will be invested in 2011, 11,8 billion roubles – in 2012 and 13,8 billion roubles – in 2013 (Naumov, 2011).

In December 2010 the Skolkovo Foundation signed agreements with Lukoil, a Fund for assistance to small business in science and technologies, two Russian cities – Tyumen and Kazan during the All-Russian innovation forum "Forward, Russia!". The Russian state corporation Rosatom also signed a memorandum of understanding with the Skolkovo Foundation.

In November 2010, the Skolkovo Foundation agreed to cooperate with a number of foreign companies. The agreement was signed with the Microsoft Corporation which plans to develop five areas in Skolkovo: to allocate the development center of Microsoft in Skolkovo, to carry out the scientific research in cooperation with Russian universities and scientific institutions, to expand the programs for assistance to Russian innovative start-ups, to set up the Center of multiple access to IT technologies, to take part in the establishment of Skolkovo Technological University.

The Skolkovo Foundation signed a memorandum of understanding also with the telecommunication center Nokia Siemens Networks. According to the agreement reached, next year Nokia will open a research-and-development center in Skolkovo which becomes a part of the Company's global innovation network. The main areas of research planned in the telecommunications field in Skolkovo are the cloud computing, the interaction of M2M (machine to machine), the development of the smartphone applications, as well as the converged telecommunications and web 2.0 applications. The Center's projects include the development of interaction between Nokia Siemens Networks and the leading Russian universities, such as: Lobachevsky State University of Nizhni Novgorod, Tomsk State University of Control Systems and Radioelectronics, Voronezh State University, St. Petersburg State University of Aerospace Instrumentation, the company is actively cooperating with in the field of research.

The features to involve the foreigners in labour activity are established by the Federal law of Russian Federation of September 28, 2010 № 244-FL "On the Skolkovo innovation centre" to implement the project. In particular, the employer does not need to receive authorization to hire and utilize the foreign workers; entry invitations to implement the labour activity in Russian Federation and working permits for foreign citizens are issued without taking into account quotas on issue, established by the Russian government.

The cooperation agreement was signed between the Federal Migration Service (FMS) and the Foundation for Development of the Center of Research and Commercializing of New Technologies (the Skolkovo Foundation) to increase the implementation of measures aimed at the simplification and even the complete abolition of the existing quota mechanism, migration registration and various types of the working permits for highly skilled foreign specialists. The main purpose of the agreement is the interaction between the Skolkovo Foundation and the Federal Migration Service of Russia during the execution of entry papers and working permits for foreign citizens who will work in the Fund. For simplification of all the procedures it is planned to establish a subdivision of FMS of Russia in

Skolkovo. Besides, knowledge of Russian will not be required of foreign specialists. The translators will be attached to them, because first of all the scientific knowledge is expected from them.

To develop the existing institutional and financial support mechanisms and create the new ones, it is important to strengthen the state support for creation and assistance to existing innovative companies.

In order to stimulate the innovation activity of existing enterprises the following areas were suggested (Ministry of Economic Development of the Russian Federation, 2010):

- To stimulate the large companies of state sector to form and realize programs aimed at development and adoption of new technologies, products and services, that meet the world standards, and a significant improvement of the basic indicators of production efficiency taking into account the state priorities of scientific and technological development;

- To give grants to small, medium, large business by competition in priority areas of their innovation activity, which should provide the risks sharing while enterprises moving to more intensive implementation of technological and organizational innovations, and create the additional incentives to realize more innovative long-term projects and increase the interaction between companies and scientific and educational organizations.

The most important institutions providing enterprises' innovation activity with grant support must be the Russian Foundation for Technological Development (RFTD) and the Fund for Assistance to small business in science and technology.

Besides, within the framework of RFTD's activity the followings will be provided:

- Grant-based financing of the research and development programs for medium and large sized enterprises, including the strategic research programs in technological platforms;

- Interest-free long-term (3-5 years) lending under the project documentation, series manufacture creation and sales start;

- Support of the projects of sectoral business associations aimed at giving support to the organizational innovations related to the improvement of control mechanisms of innovations and technological management in enterprises, the development of quality management system, the development of technological management, the support of high-technology export, and others.

The Fund for Assistance will provide in addition to research and development, also co-financing of the small enterprises' expenses on patenting procedure, the establishment of an industrial model, the certification, the export security, and the purchase of appropriate equipment.

- Intensification of the innovation activity of the specialized banks and financial institutions of development;

- Improvement of the tools for tax stimulation of the enterprises' innovation activity;

- Improvement of the support system for export of high-technology, new products (services).

In addition to the stimulation of the innovation activity of the existing companies it is very important to support the creation of new high-technology enterprises and their development in the early stages.

One of the priority directions for assistance to the start and development of new high-technology business will be (Ministry of Economic Development of the Russian Federation, 2010):

- Expansion of financial support in the early stages of the innovation activity – "pre-seed" and "seed", including the program for assistance to small and medium-sized business, the activity of the Fund for Assistance, as well as the activities of the Seed Investment Fund, founded at the federal and regional levels;

- Extension of the mechanisms to support the activities of private investors for small innovative enterprises – "business-angels";

- Intensification of the innovative orientation of the programs for assistance to small and medium entrepreneurship;

- Forming favorable conditions to set up small innovative enterprises by the state scientific and educational institutions in accordance with the Federal Law of August 2, 2009 № 217-FL;

- Development of support system for invention, creation and activity of student innovation companies.

Ensuring the preferential access to the government-owned objects of intellectual property for innovators will be of great importance for development of active processes of technology commercialization, cost reduction on establishment of new innovation companies. This measure can increase significantly the number of innovators.

It is appropriate to say here about the so-called "mechanism of technological transfer", which supposes a transmission of technological developments of research institutes to entrepreneurial structures. It is known that the majority of important discoveries are obtained in the state research institutes, and the additional sources of finance are required for their implementation, and as a rule it is several times more than has already been invested in development. Hence, it is advisable to use the large companies in researches of the research institutes with their industrial complex, as well as the sale of licenses and patents (Novikova, 2009).

The important measure to improve the institutional conditions for development of the innovation activities of enterprises is the system upgrading, aimed at development of a simplified procedure for withdrawal of new products to the market which based on the voluntary conformity declaration and reduces the risks to mismatch to the obsolete standards and other regulatory documents for developers.

Besides, in order to improve the state purchasing system of technically complicated products, as well as the purchases for needs of the natural monopoly subjects of federal significance and the large companies with the dominant participation of the state, the development of proposals for improvement of the standard legal base is provided for to establish the modern requirements to functional, technical and quality characteristics of the purchased products.

The support of activities of the specialized institutions (industrial parks, business incubators, technology transfer centers and multiple-access centers, and so on) aimed at enhancing product and process innovations in industry will assist with increasing of efficiency and development of the innovation infrastructure. The infrastructure of innovations is a major component of the total innovation support system.

It should be noted that the modern system of development institutions in the field of innovations has already been created, including the institutions of pre-seed and seed financing, the venture funds with the government participation (through the Russian Venture Company), Bank for Development and Foreign Economic Affairs (Vnesheconombank), the State Corporation of Nanotechnologies "Rosnanotech", which supports the projects in the field of nanotechnologies. The additional

investment resources may be obtained using them, which are critically important especially in the early stage of development of the innovation business, as well as through the scaling system of the existing programs and by introducing the new programs of the Fund for Assistance to small business in science and technology, and additional financing of subjects of the Russian Federation within the framework of government support measures for small and medium-sized business.

It is supposed that the federal budget, the budgets of the regions of the Russian Federation, municipalities and development institutions, including the Russian Venture Company (RVC) and the State Corporation of Nanotechnologies "Rosnanotech" should be viewed as the sources of financing for the state support to create the above-mentioned objects of the innovation infrastructure.

It is known that the federal and regional authorities cooperate closely with the entrepreneurial structures which function on their territory. Thus the special economic zones are established, the preferential conditions of which are based mainly on granting tax benefits and other preferences at the expense of the budget's revenues of the regions of the Russian Federation.

These zones enable the administrative units responsible for business development to form the sectoral clusters, and organize the cooperation between large, medium and small enterprises (Bykhalova, Bogomolova, 2009).

In order to provide the additional support for the special economic zones and improve their adjustment it is supposed to simplify the functioning of free customs zone; increase the availability of credits for projects, including a subsidy for interest rate, a provision of government guarantees for residents' loans, an attraction of financial support for the appropriate projects by development institutions, as well as a provision of the accelerated development for the objects of the innovation infrastructure in technical-innovative zones, including the business incubators, the technology transfer centers, and the centers of engineering and consulting services.

The support for establishment and development of the innovation clusters is also started by competition. During joint actions of business and government, it is possible to form a group of enterprises or interrelated sectors which promote a significant rise in competitiveness of each other – this is called a cluster. When you create a cluster the existing productions begin to give each other direct support (Kichigina, 2010).

Thus, the implementation of cluster policy promotes the growth of business competitiveness by realizing the effective interaction potential between cluster participants (educational and research institutions, enterprises, financial structures and authorities, etc.) which is related to their geographical close location, including the expansion of access to innovations, technology, "know-how", specialized services and highly skilled personnel, as well as by cost reducing, which ensures the formation of prerequisites for implementation of joint cooperation projects and productive competition.

Small high-end enterprises ensure the stability and reliability of activity, intensify the existing competitive advantages and acquire the new ones by entering into the innovation clusters.

The main areas for promotion of cluster development which are implemented by the state and local authorities will be (Ministry of Economic Development of the Russian Federation, 2010):

First, the assistance to the institutional development of clusters, which supposes, inter alia, the initiation and support for establishment of a specialized organization of cluster development (centers of cluster development), as well as the activities for strategic planning of cluster development, effective information cooperation between participants of the cluster and stimulation of cooperation between them.

Secondly, the development of project support mechanisms aimed at increasing the enterprises' competitiveness and assisting the efficiency of their cooperation, including:

- Stimulation of innovations and development of technology commercialization mechanisms, support of the cooperation between the research groups and enterprises;

- Improvement of management quality at the cluster enterprises, competitiveness and product quality of suppliers;

- Promotion of product marketing (goods, services), produced by the enterprises – participants of the cluster and direct investment attraction.

Thirdly, the creation of favorable conditions for cluster development, including the improvement of efficiency for vocational education, the assistance to cooperation between enterprises and educational organizations, the goal-oriented investing in development of the innovation infrastructure objects, the accordance of tax benefits in conformity with the current legislation, the administrative barriers reduction.

The implementation of the existing favorable preconditions for development of the regional innovation clusters, including the ones which are based on the technology-innovative special economic zones, science cities, closed administrative-territorial formations, areas of industrial parks, enables to activate the use of the existing scientific and technical potential.

In order to activate the innovation development of the regions of the Russian Federation the grants would be given them by competition for development of the regional innovation clusters.

So, the formation of high-end clusters in our country depends essentially on the efficiency of the government's policy on assistance to innovation entrepreneurship. It should foresee the whole set of direct and indirect arrangements (Nesterenko, 2008), such as: the legislative security; the extension of grants, favorable credits and non-repayable loans; the tax reduction; the protection of intellectual property; the insurance of activity and decrease of risks; the creation of the effective innovation infrastructure.

Thus, the right understanding of the entrepreneurship's nature and role requires the government regulation to stimulate the innovative reproduction and competition, which increase the level and stability of development of the national economy stimulating the growth of national wealth and the ability to ensure the welfare of the population (Kovalyova, 2010).

The organization of government regulation for formation and development of entrepreneurship supposes to create the effective long-term strategy concept of the scientific support for entrepreneurship and build the innovation policy on this basis (Kovalyova, 2010).

It is necessary to continue forming conditions which are favorable for innovation activity. It requires firstly to remove the barriers which restrain the expansion of innovation activity of enterprises; secondly, to strengthen the companies' incentives to the constant innovation activity, the use and development of new technologies to ensure the business competitiveness and thirdly, to create favorable conditions for establishment of new high-tech companies and development of new products (services) markets (Ministry of Economic Development of the Russian Federation, 2010).

It should be noted that social responsibility of business relates to the formation of favorable entrepreneurial environment. Wide spread of informal economic relations and weak observance of legal norms impede the normal formation of the social responsibility of business (Kusakina, Paltsev, 2009). In other words "for successful development of entrepreneurship it is necessary to form the

human need for independent economic activity" (Shakhovskaya, Ketko, 2009), they would be responsible for.

It is also important to develop the system of technical control, which provides for modernization of the outdated rules and standards, that are barriers to the expansion of innovation activities of enterprises; opportunities for manufacturers to put products on the market under their own responsibility by using the declaration procedure instead of the certification process; simplifying and speeding up the certification procedures, including the ones that meet the international quality standards; forming "the technological channels" – the toughening of requirements for efficient use of the natural resources by enterprises, the identification of appropriate encouragements and sanctions system, the harmonization of Russian standards with the international ones firstly in those areas where the prospects for expansion of the export of innovative production exist.

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NEW DIMENSIONS OF POVERTY AND RECENT DEVELOPMENT
OF THEIR MEASUREMENT – EXAMPLE OF SELECTED CEE COUNTRIES

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Abstract

These times economic situation attracts the attention towards the economics of poverty and its measurement. This paper deals with the development of measuring the poverty using traditional and recently introduced indicators. The aim is to show the necessity to focus on the multidimensional aspects of poverty and development on the example of selected CEE countries.

Key words: *development, absolute poverty, relative poverty, deprivation, Human Development Index, Human Poverty Index, Multidimensional Poverty Index, CEE*

1. INTRODUCTION

Poverty is defined by the World Bank as "pronounced deprivation in well-being" (World Development Report, 2000). There exist several vastly used concepts of poverty whose depend on different understanding of the meaning of "well-being". The poverty can be than evaluated from subjective or objective point of view, it can be understood as absolute (unchanging in time and for countries) or relative (opposite). The most common is to see the poverty in monetary terms – as the comparison of an individual's income or consumption with defined threshold (poverty line). Poverty can be also measured in qualitative terms for example as education poverty, food poverty, or in composite indicators such as HDI.

The problem of capturing poverty and its relevant description has become increasingly difficult, and presents a great challenge for today's foremost economists. The debate about unification of different concepts into one comprehensible, simple and applicable indicator takes and will take many years. The importance of multidimensional aspects of poverty has grown especially with planned admission of the new EU countries (2004 and 2007). The debate has been strongly accelerated in the past two years due to financial and economic crisis. The main result of this debate is the integration of multidimensional aspect in the form of regularly monitored indicators, especially material deprivation indicator (since 2009, for EU countries) and Multidimensional Poverty Index (since 2010, for the majority of world countries).

This article aims to capture the evolution of the economic theory of poverty in the last twenty years on the example of putting theory into practice in significant modifications of main indexes. This work also seeks to outline the future development trends in this field. The aim of this paper is to show the necessity of concentration onto the multidimensional aspects of poverty and development especially in the European countries. As a sample, the CEE countries have been used.

2. ABSOLUTE CONCEPT

Absolute poverty line is "fixed in terms of the standard of living it commands over the domain of poverty comparaisons" (HAUGTON, KHANDKER, 2009). World Bank's $1 a day poverty line was established for the 1990 World Development Report and than recalibrated at $1,25 a day, using new data on purchasing power parities. For CEE countries, the World Bank proposed an absolute poverty line of $2,15 and a vulnerable to poverty line of $4,30 a day (RAVALLION, CHEN, SANGRUALA, 2008). But even those higher thresholds resulted in very low poverty rates – all of the 27 countries (except Romania) reached one digit poverty rate at $4,30 poverty line[9] (BRADSHAW, MAYHEW, 2011).

3. RELATIVE CONCEPT

Relative poverty can be understood in quantitative terms – used by the European Union or in qualitative terms – used the United Nations.

3.1 European Union

Since 1975, the EU Council of Minister decided the poverty in the EU as relative to a particular country at a particular time (BRADSHAW, MAYHEW, 2011). The biggest progress in measuring poverty was made at the Laeken European Council in December 2001, where the set of 14 common statistical indicators of social exclusion and poverty was agreed (Eurostat – Metadata, 2010). Those indicators are an essential element in the Open Method of Coordination to monitor the progress of Member States in the fight against poverty and social exclusion and they are also continuously updated and completed.

The most important and the most presented indicators are (European Commission, 2003):

- the at-risk-of-poverty rate,
- the median at-risk-of-poverty gap,
- the persistent at-risk-of-poverty rate,
- the at-risk-of-poverty rate anchored at a point in time

The indicator of at-risk-of-poverty rate is calculated with a threshold set at 60 % of the national household equivalised median income. An individual is considered income poor (or at risk of poverty) if the equivalised income of his/her household is below this threshold (Eurostat: Income poverty, 2010).

3.2 United Nations

The most known and used indexes compiled by the United Nations Development Programme are the Human Development Index and the Human Poverty Index.

3.2.1 Human Development Index

With the fall of the Iron Curtain and the convergence of Eastern and Western world in 1990, the UNDP launched the project to monitor the global economic and social development and also to target

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[9] World Bank poverty threshold were applied to EU SILC 2008

correctly the global development programs. The Human Development Report introduced the Human Development Index (HDI) to simplify and clearly present the progress of countries social and economic development (UNDP, official internet pages). The HDI unified the ways of measuring human development (so far changing with an institution or author), replacing the number of partial indicators, and has become a globally recognized standard.

The HDI is the main indicator of maturity and development of the world countries in three basic dimensions – long and healthy life, education and adequate standard of living. The HDI is a composite index of three sub-indices – Life Expectancy Index, Education Index and GDP Index. Input data are: life expectancy; literacy of adult population (over 15 years of age); combined entry into primary, secondary and higher education and GDP per capita in purchasing power parity (in USD). These indicators are recorded and measured in a total of 182 countries, where the HDI is also completed. (Source of the whole paragraph: Human Development Reports, official internet pages)

The HDI has been for years the only highly aggregated indicator including poverty. Various economists in the nineties emphasized the need for the index focusing on poverty not only for a society as a whole, but for the most vulnerable citizens groups, too. Amartya Sen, for example, states that „The possibility of reflecting in a usable and uncomplicated index the bearing of „human development" on the „deprivational prespective" (...) has not been, so far, pursued. To undertake that task would require the development of an index of „human poverty", which would focus exclusively on the specially deprived and impoverished." (ANAND, SEN, 1997, p. 1). This critique has been further projected to other changes in the Human Development Report.

3.2.2 Human Poverty Index

The year 1997 became an important milestone for the economics of poverty and its measurement. In preparing the Human Development Report for 1997 a team, led by Amartya Sen, was assembled to compile a new index focusing only on the world poverty issues (HDR, official internet pages). The new index was named the Human Poverty Index (HPI) and it represents a major step towards identifying the various forms of deprivation and social exclusion in the society.

The HPI is also a composite index having two variants – one (HPI-1) for developing countries and another (HPI-2) for selected highly developed OECD countries, to better reflect the socio-economic disparities and different dimensions of poverty in these countries. The HPI-1 shows same three dimensions as the HDI, but the HPI-2 captures the extra fourth dimension, which is a social exclusion. The indicator of a long and healthy life is a probability at birth of not surviving to age 40 at the HPI-1 (for HPI-2 it is age of 60). The indicator of education is represented by adult illiteracy rate (or the lack of adult literacy rate of the HPI-2) and finally, an adequate standard of living indicator combines the percentage of people without sustainable access to an improved water source and the percentage of malnourished children younger than 5 years (HPI-2 measures only the percentage of population living below the income poverty line, i.e. less than 50 % of median disposable income in a society). The dimension of social exclusion in the HPI-2 index is represented by long-term unemployment.

But the HPI can't be easily applied for a deeper analysis because of the time series data limitation – for the majority of CEE countries, data are available only for the last two consecutive years. Moreover, the HPI is not measured in all the CEE countries and the input data present the monitoring problems for the national statistical offices.

The UNDP researchers concluded that the HPI had limited utility because of its aggregated average deprivation levels for each dimension and thus could not be linked to any specific group of people

(UNDP, official internet pages). Several high profile initiatives have also started trying to solve this challenge.

4. MULTIDIMENSIONALITY OF POVERTY

The broad expert discussion about the mentioned indicators' pitfalls and the necessity of capturing new dimensions, especially material deprivation, resulted in new indicators – Material deprivation indicators and Multidimensional Poverty Index. Material deprivation can be defined as "the inability to possess the goods and services and/or engage in activities that are ordinary in the society or that are socially perceived as 'necessities'." (Eurostat: Income and living conditions in Europe, 2010)

4.1 Material deprivation indicators

The list of mentioned 'Laeken' indicators updated for health in 2008 and for material deprivation and housing in 2009 (Eurostat – Metadata, 2010). These indicators significantly improve the multi-dimensional coverage of the EU portfolio of indicators for social inclusion (Eurostat: Income and living conditions in Europe, 2010). The centre of our interest is the deprivational dimension, which is new in the field of measuring poverty. The reason for creation of this indicator is that purely income-based indicators of poverty and inequality are not sufficient to satisfactorily reflect the diversity of living conditions in the EU, especially since the 2004 and 2007 enlargements (Eurostat: Income poverty, 2010).

The Material deprivation indicator is on the following 9 items: The EU deprivation indicators are calculated on the basis of EU-SILC data and they are based on the enforced lack of items from a list of 9 following items (Eurostat: Income poverty, 2010):

- to face unexpected expenses
- one week annual holiday away from home;
- to pay for arrears (mortgage or rent, utility bills or hire purchase instalments);
- a meal with meat, chicken or fish every second day;
- to keep home adequately warm;
- to have a washing machine;
- to have a colour TV;
- to have a telephone;
- to have a personal car.

The deprivation rate is defined as "the proportion of people living in households who lack at least 3 of these 9 items because they cannot afford them" (Eurostat, 2010). The intensity of deprivation measures "he mean number of items (from 0 to 9) lacked by people" (Eurostat, 2010).

4.2 Multidimensional Poverty Index

Forty-six researchers in 13 countries in both developed and developing world worked for more than two years on development of the new multidimensional poverty indicator. The Oxford Poverty & Human Development Initiative (OPHI) and the UNDP Human Development Report, have announced launching the new indicator of poverty in July 2010 (OPHI, press release 14th June 2010). The

Multidimensional Poverty Index (MPI) was featured in the 20th Anniversary edition of the UNDP Human Development Report in October 2010.

The measure is innovative in 5 essential points (ALKIRE, SANTOS, 2010). It can at the same time:

- Identify the poorest people

- Show all the deprivations that impact someone's life at the same time

- Show which deprivations are the most common in different regions and among different groups

- Reflect the results of policy interventions quickly and enable comparison across time

- Integrate many different aspects of poverty into a single measure, reflecting interconnections among deprivations

The MPI has the mathematical structure of one of the Alkire and Foster poverty multidimensional measures (ALKIRE, FOSTER, 2009). It is composed of 10 indicators corresponding to three critical dimensions of poverty at the individual level (person or household): Education, Health and Standard of Living (the same dimensions as with the HDI). The measure assesses not only the intensity of poverty (the sum of weighted deprivations that each household faces at the same time), but also the nature or composition in each mentioned area which is essential for effective human development programs and policies.

The MPI was for the first time set for 104 developing countries, thus covering about 78 % of the world population. At the same time, the indicators correspond to the Millennium Development Goals (ALKIRE, SANTOS, 2010).

5. COMPARISON

The necessity of concentration onto the multidimensional aspects of poverty and development can be shown by the comparison of the results of common used indicators and the mentioned (multidimensional) indicators.

5.1 At-risk-of-poverty rate and material deprivation indicators

In any country, some people are income poor but not materially deprived, and vice versa. The result can be surprising and useful, especially when the resulting picture of derivation is significantly different from that with the at-risk-of-poverty indicator.

Taking Hungary as an example of the country which has high levels of material deprivation but low income poverty rates. In this case, Material Deprivation rate can give a warning signal to the government and international institutions. When analysing in depth and focusing to the lacking items (using also the indicator of Severely materially deprived persons and the Depth of material deprivation), the end poverty strategy can be better targeted (especially the material help) and the results can be better monitored while at-risk-of-poverty indicator may not show any changes.

Estonia can serve as an opposite example. It is the country where the percentage of population with an enforced lack of at least three out of nine material deprivation items is much lower than the percentage of people with income below the risk-of-poverty threshold. Looking at the indicator of Severely materially deprived persons, Estonia is among the best three countries in the region. This disparity in results in income poverty and material deprivation can signify the existence of another important item

(not included in the 'economic strain and durables' dimension), characteristic for this country having strong correlation with the income poverty. The result can lead to better focus on the poverty problem and to the faster solution of this issue.

Table 1. Population at-risk-of-poverty or exclusion, Material deprivation rate, Severely materially deprived persons and Depth of material deprivation in CEE countries

Country	Population at-risk-of-poverty or exclusion (%)	Material Deprivation rate (%)	Severely materially deprived persons (%)	Depth of material deprivation
Albania	-	-	-	-
Bosnia and Herzegovina	-	-	-	-
Bulgaria	46,2	55,5	41,9	4,6
Croatia	-	-	-	-
Czech Republic	14	15,6	6,1	3,6
Estonia	23,4	17,1	6,2	3,6
Hungary	29,9	40,9	20,8	3,8
Latvia	37,4	39,7	21,9	4
Lithuania	29,5	27	15,1	3,9
The former Yugoslav Republic of Macedonia	-	-	-	-
Montenegro	-	-	-	-
Poland	27,8	29,5	15	3,8
Romania	43,1	49,3	32,2	4,3
Serbia	-	-	-	-
Slovakia	19,6	24,5	11,1	3,7
Slovenia	17,1	16,2	6,1	3,5

Source: Eurostat (recent data: 2009)

Legend:

<u>*Population at-risk-of-poverty or exclusion:*</u> *the indicator is defined as the share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers). The best result: 0*

<u>*Material Deprivation rate:*</u> *the indicator is defined as the percentage of population with an enforced lack of at least three out of nine material deprivation items in the 'economic strain and durables' dimension. The best result: 0*

Severely materially deprived persons: the indicator is defined as the percentage of population with an enforced lack of at least four out of nine material deprivation items mentioned in the text above. The best result: 0

Depth of material deprivation: the indicator is defined as the unweighted mean of the number of items lacked by the materially-deprived population (at least three out of the nine items retained for the definition of the 'Material deprivation rate' indicator). The best result: 0

Weaknesses of the Material Deprivation rate can be concluded as: the selection of items, their structure and their aggregation. Current academic debate addresses especially to additional items (BRADSHAW, MAYHEW, 2011).

5.2 HDI and MPI

As explained in the previous chapter, the MPI can reveal internal differences and disparities in poverty that are not clear from the HDI nor the HPI. In the term of poverty reduction, there exist significant differences in the MPI, despite the difference in the HDI or the HPI is not obvious (even though the comparison encounters a problem of availability of data).

Table 2. Multidimensional Poverty Index in CEE countries where data are avilable and accompanied by Human Development Indicators

Country	Multidimensional Poverty			Human Development	
	MPI Value	Proportion of poor	Average intensity of deprivations	HDI Value	Category
Albania	0,004	0,010	0,381	0,719	High
Bosnia and Herzegovina	0,003	0,008	0,372	0,710	High
Bulgaria	-	-	-	0,743	High
Croatia	0,007	0,016	0,416	0,767	High
Czech Republic	0,000	0,000	0,467	0,841	Very High
Estonia	0,026	0,072	0,365	0,812	Very High
Hungary	0,003	0,008	0,389	0,805	Very High
Latvia*	0,001	0,003	0,467	0,769	High
Lithuania	-	-	-	0,783	High
The former Yugoslav Republic of Macedonia	0,008	0,019	0,409	0,701	High
Montenegro	0,006	0,015	0,416	0,769	High

Poland	-	-	-	0,795	Very High
Romania	-	-	-	0,767	High
Serbia**	0,003	0,008	0,400	0,735	High
Slovakia†	0,000	0,000	0,000	0,818	Very High
Slovenia†	0,000	0,000	0,000	0,828	Very High

Source: Alkire & Santos (2010) calculations and UNDP (2010) Human Development Report

Legend:

MPI: the best result is equal to 0, the worst is equal to 1.

HDI: the best result is equal to 1 the worst is equal to 0.

* The poverty estimates for these countries should be interpreted as lower bound estimates, meaning that multidimensional poverty is at least as great as their MPI values indicates.

** Although there was information on mortality for this country, the indicator had to be excluded from the estimates due to a very high percentage of missing values.

† The poverty estimates for these countries should be interpreted as upper bound estimates, meaning that multidimensional poverty is less than or equal to their MPI values.

Let's take again the case of Estonia, which is evaluated as a country with the very high human development (together with the Czech Republic, Slovenia, Slovakia, Hungary, and Poland). The poverty situation in Estonia, is, according to the MPI, on the last (thr worst) place in the CEE region (where data are available). Estonia has the largest proportion of poor (0,072) among following countries but the average intensity of deprivation (0,365) is one of the lowest the the CEE region. This fact can help us to understand that in Estonia, the majority of people at-risk-of-poverty has its income around the poverty line and living standards not too scattered around the given minimum.

The most flattering example of surprising and important information obtained form the MPI is the case of the Czech Republic. Having the lowest Material Deprivation rate and the proportion of the population at-risk-of-poverty or exclusion, the Czech Republic is the leader in the CEE region. This is also confirmed by the highest HDI value. Looking at the best MPI result (with Slovakia and Slovenia), there is still nothing surprising. By the decomposition of the MPI, a lot of questions appear. The Czech Republic has one of the lowest proportions of poor (again with Slovakia and Slovenia) but the highest average intensity of deprivations in the CEE region (0,467). So there are not many poor inhabitants, but the poor citizens are severely deprived, while in Slovakia or Slovenia, the average intensity of deprivation is still equal zero.

6. CONCLUSION

Poverty in the world becomes relative and takes many forms in different countries. The first attempt of the regular statistical capture of poverty and creation of rankings of countries dates to the sixties. It has been associated with the well-known economist Arthur Okun. The Misery Index, on which Okun

based the ranking of countries, was simply the sum of unemployment and inflation. The problem of capturing poverty and its relevant description has become increasingly difficult, and presents a great challenge for today's foremost economists.

In the second half of the year 2008, the economic crisis stroke the whole world. The development of different social strata starts to be even more distinctive at the international level. The effectiveness of the economic policies faces to re-assessment by all CEE countries. Academic and practical attention to the poverty issue was intensified and brought a lot of new ideas especially regarding the multidimensional aspects. The last year was established by the European Commission as the European Year for Combating Poverty and Social Exclusion which refers to the importance of this issue.

This paper tries to capture the changes in poverty understanding from absolute over relative to multidimensional concepts having analysed different indicators commonly used by the World Bank, the European Union and the United Nations. The comparison of the results on the example of the CEE countries has shown the importance of informations obtained form the multidimensional indices for the economic policy – especially regarding the targeting and monitoring of social policies.

But the existing indicators are still not able to cover all important aspects of poverty and human development. An example is a missing factors of freedom (both economic and political), quality of institutions or life satisfaction. Same of these dimensions are captured by The Heritage Foundation or The Fraser Institute Index of Economic Freedom, World Economic Forum Global Competitiveness Index, Legatum Prosperity Index and others. So, can any single index ever be a sufficient statistic for poverty assessments? The World Bank expert Martin Ravaillon in his recent paper argues that all indices are „unidimensionals" and that the „goal for future poverty monitoring efforts should be to develop a credible set of multiple indices, spanning the dimensions of poverty most relevant to a specific setting, rather than a single multidimensional index" (Ravaillon, 2011). It is so indisputable that the multidimensional indices will play very important role in current and especially in future economic theory and practical economic policy.

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INDIRECT ASSESSMENT OF ORGANIZATIONAL CONDITIONS
FOR PROJECTS IMPLEMENTATION

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Abstracts

Organizational conditions of production a product or project realization are the important factor of efficiency. Usually organizational conditions are defined as a condition in an economic unit. During the projects realization in cooperation there are problems of mismatch in the managing the project. Te task of this article is estimation of organizational conditions of perceiving the project which is as though imposed on the settled relations (in a territorial economic complex). "The trend with an error", which is based on a reduction to stationary casual processes is supposed to make such estimation is the basis of model. For an estimation of organization of all economic system it is necessary to use a set of indicators and numbers of their values for the certain period. Then for the structural characteristic it is possible to use a serial scale, for example, rates of movement of indicators. Further it is possible to offer model of forecasting of organizational properties on a certain interval of time without a binding to chronology. It is possible to estimate ability of economic system to self-organizing on parameter of time by means of the comparative characteristic of possibility of the coordination on abstract time intervals. Such indirect estimation of level of coordination is called as the period of the coordinated management.

Key words: *organizational conditions, indirect estimation, "trend with error", stationary random processes*

The possibility of assessing the level of institutional conditions in the economic system is of practical interest. This option can be called an organizational resource and used in the implementation of joint projects by several economic units. Basing on this assessment decisions on the advisability of either self-financing or financing at the expense of subcontractors can be taken, as well as empowerment, responsibility and self-governance of authorities in charge of the project. The concept of organizational resource is the essential characteristic of organized economic system.

Management tasks on the project are to integrate the subcontractors. In this case one management function is implemented - coordination of interactions.

To assess the organizational resource it is supposed to use the period of time during which economic units cohere their efforts and establish links under irreducible level of their economic interest. This time period is called coherent control period (CCP).

Assessment of organizational resources is needed in case [1,2]:

1) the project either does not provide investment or provides it in a small amount, the program should be designed so that its implementation by all co-perpetrators was possible without restructuring their logistics bases and the use of capital investments specifically designated for the implementation of

project activities. Thereby the adaptive properties of the project increase that ensures its implementation.

2) in course of the project implementation, business units recourses to restructure their interactions become obvious, that is the organizational mobility recourse and the institutional capacity in the economic system can be determined. Assuming that the interaction between the co-executors of the project are only possible if they are agreed, we can say that consistent management plays an important role in the project implementation and the final success depends on the level of coherent management.

1.   There is a lag of economic management, which is manifested in the existence of period-effect (or lag delay) after the adoption of the most ambitious decisions. During this period the results of the decisions don't become apparent at their full scale. Therefore there is a period of search for a way of establishing links. This period closes the cycle of interests coordinating and the interests balance establishes.

2.   Information structure, serving the reconciliation process has some certain disadvantages. They are: inaccurate message addressing, ill-timed delivery and formation of messages which are not adequate the events.

3.   The divergence in administrative and economic structures in the economic system, leading to difficulty in identifying and resolving multicast problem situations is time consuming even with perfect information structure.

You can set a task to assess organizational modalities that perceive the project, which are superimposed against the entrenched attitudes (in territorial economic complex). Such an assessment would be done on the basis of model representations.

The model designed for indirect assessment of coherent management must meet the following requirements [3]:

1) Organizational conditions for the target program realization are mainly manifested in the possibilities of agreed solutions implementation.

2) The sign of a coherent management is the structure stability of imperilment relationships in the interaction of business units. It is believed that each economic indicator covers a set of relationships between business units. Then the interpretation of the economic indicators dynamics in terms of relationships is held as the change in intensity, duration and the relationships renewal.

Units of the regulatory infrastructure contribute to the organization of choice for joint solutions by the program participants. Grouping of tasks for regulatory infrastructure is presented in Table 1.

Finding agreed solutions and establishing of coordinated management conditions for the entire system of interactions is reflected in the dynamics of the economic unit management index, so this index can be viewed as an instrument (indicator) of approval decisions of managers in the process of the activities exchange, and the dynamics of the system index can be viewed as a result of the established conditions of coherent management.

For this index more or less stable dependence of the current value on the previous values is typical. The duration of interactions on base of this dependence is not uniquely defined. It represents a range of time intervals, each of which corresponds to the interactions of certain types: recurring and constantly maintained over time; irregular, often changing and corresponding to short time intervals. Ultimately, the changing of economic indicators is a subject to different interactions of the implementation period bonds/relationships.

Thus, the harmonized conditions imply the existence of links between the economic units that satisfy a certain level of economic interests of these units. Under the influence of this dynamics of the constraints motion (activity exchange), there is a monotonous change of indicators reflecting the combination of constant interactions.

Subject to review in order to assess the economic system mode consistency are the structural links of indicators that control the inter-element interaction. Interpretation of the changing parameters is as follows:

- the dynamics monotony of indicator change proves the coordinated functioning of the system, because there is no need to revise the set of new links, checking them at the profitability and choosing the most profitable;

- Waving the indicators dynamics suggests the contradictions presence in the interests of business units, which at some point gain an explosive character, marking the beginning of restructuring bonds.

Interpretation presented allows a retrospective analysis of a dynamic set of indicators to consider how the overall strategic development of interactions, reflected in the dynamics, as well as tactical changes in the direction of the indicators associated with significant changes in environmental and internal conditions of the system development.

Statistical estimation is based on time series analysis: smoothing, identifying trends and other characteristics. In order to analyze the model of "trend with error" is used. This model is based on the reduction to stationary random processes. However some modification of the method is required which allows to identify the index dynamics trend for all periods under review. Trend is a conventional term that could be considered at a certain time interval, which is a factor in the trend. Trend is the notion of uniform; the change of each index includes the set of trends. The index motion is a synthesis of trends.

We can also formulate the inverse problem - trends identification according to the indicator changes. In other words - to put into mutual correspondence the processes organization degree in the economic system and the spectral characteristics of the parameters motion. The percentage of bonds of each type determines the extent caused by the indicator motion . This approach meets the goal - to put into mutual correspondence the organizational conditions level and the parameters motion period.

The dynamic range of one index processing in order to study its various trends in the time parameter can be done by "sliding" averages.

Then we can formulate the following idea of the consistency criterion: the solution at some certain interval of the total spectrum of time intervals is agreed (is balanced in the system of interests), if the business units are not going to find new solutions with the implementation period, comparable to the duration of the interval. Indeed, if the search for new bonds is not observed, then there is no mismatch at this interval. I.e. the mismatch is represented as a variation of the structure of connections, expressed as a change of index motion direction during the period.

To assess the structural characteristics of the dynamics of the whole economic system a set of indicators should be used. Then, for structural characteristics an ordinal scale can be used, for example, the rate of indicators motion.

Table 1- Regulatory infrastructure tasks grouping

Organizational decisions type	1	2	3
Tasks for regulatory infrastructure	1. Ensuring of growth in number of controlled connections in the system, i.e. ensuring changes in number of perceived informational influence on the economic unit.	2. Structuring the freedom of choice for individual economic units.	3. Freedom of choice-making organizing in the process of information exchange; identifying the diversity of information interactions associated with joint actions.
Task solving	Organization of the search methods of information transfer in the of joint activities implementation.	Organization of binding the new methods of data transformation to functioning ones by introducing the rules for converting the old information into the principally new (for example, information of the territorial and branch type into the designed one).	Organizing new kind of information to produce new useful results.
Tasks for infrastructural units	Syntactic organization of language is determined i.e. rules, techniques and formation methods of previously unknown links. This function is performed by the leadership of the project. Link is fixed in the legal aspect (the contract) in case it is effective.	Localization of finding solutions within the available and permissible actions of the project participants. Stimulation of finding agreed solutions that reduce conflicts.	Search for the interests contradictions of the economic units.
Result	Individual units solutions coherence.	Search of mode for coherent solutions in the entire economic system.	Finding contradictions that at some point gain an explosive character, which marks the beginning of the bonds/relationships restructuring.

Then we can propose a model for predicting the potential opportunities of economic system to perceive and resolve a problem situation; in other words to predict organizational properties at a certain point of time without reference to chronology. It is possible to evaluate the ability of the economic system to self-organizing in the parameter of time through the comparative characteristics of the possibilities of harmonizing the abstract time intervals. Calculation of the CCP is presented in Table 2.

Table 2- Scheme for calculating the index of the CCP

№	Calculation subject	Calculation method
1	Information about the dynamics of the economic system.	List of indicators of economic system. Rate parameters calculation.
2	Characteristics dynamics trends identifying in the system of time intervals.	Smoothing time series of rate parameters. Ranking of indicators on rates of performance after smoothing.
3	Economic system mode stability analysis in the development process.	Stability index calculation of the characteristics dynamics in the system of time intervals as a ratio of inversions amount when comparing the rank ordering the current year characteristics and previous year to the maximum possible amount of inversions.
4	Activity mode distribution analysis of the economic system at all time intervals.	Distributed profile activity mode of development building.
5	CCP definition.	Distribution mode determination.

Thus, an indirect assessment of the consistency level in the economic system is embodied in an agreed period of control (CCP) - the number of time slots for which the highest alignment in the whole investigated period is achieved.

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FACTORS HINDERING THE DEVELOPMENT OF ENTERPRENEURSHIP IN POLAND

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Abstract

This article aims to present the most important factors hindering the development of innovative SMEs in Poland. This paper attempts to answer the question what the main sources of obstacles to the development of Polish entrepreneurship are and what innovation might be implemented. Sources of limitations are to be found in the country's economic situation, and the barriers are being developed in companies themselves. The results of the research on the whole SME sector and on small and medium enterprises from the Lower Silesia show that the most important barriers hindering the development of innovation are first of all the consequence of ineffective national economic policy and inadequate professional preparation of enterprises themselves, together with limited financial resources of these enterprises.

Key words: *small and medium enterprises, entrepreneuer, entrepreneurship, innovation, external and internal barriers hindering the process of innovation.*

1. INTRODUCTION

One of the most important factors initiating changes at the level of competition in worldwide economy is the development of innovation. It has brought into many changes, worth mentioning among others are: the increase of productivity, the decrease of working time, the decrease of employment, the increase of unemployment, steady and ever more rapid shortening of product cycle and technology. The increase of significance of innovation forces enterprises to intensify their activity in B+R zone, to use innovative solutions and introduce novelty to catch up with growing competition. Scientists and business practitioners as well agree about the importance of innovation being one of the main speeding forces in development of global economy (Igartua, Garrigos, Herveas-Oliver 2010). The innovation of enterprises is a special research subject being realized in small and medium enterprises.

The aim of this paper is to present the most important factors hindering the innovation of SMEs in Poland. The article will attempt to answer the question about the main sources of barriers limiting the innovation of enterprises, and whether these limitations are connected with national economic and social situation or are internal barriers.

2. THE NOTION OF ENTERPRENEUR, ENTERPRENEURSHIP AND INNOVATION

The notion of innovation is most often related to the notion of enterpreneur as the pioneer and carrier of new solutions, the founder of a small or medium enterprise, to and the notion of entrepreneurship.

In the literature related to the issue we can come across lots of definitions of the entrepreneur. However, their common characteristic is the assumption that the entrepreneur in his activity discovers

novelty in the way of acting and by introducing new products and services as well. J. A. Schumpeter – the father of current enterpreneurship – described the entrepreneur as the innovator, a creative owner of the enterprises who introduces new innovations actuating in this way the whole economy. Schumpeter highlighted the creativity of the enterpreneur's activity ever connected with innovative ideas or activity in new areas (Schumpeter 1960). In addition, the leader of science about current management – P. Drucker – defined the entrepreneur as a person who seeks changes, who reacts and uses it as an opportunity (Drucker 1962). The entrepreneur is then a person who destabilizes market balance and fulfills the function of the innovator (Sadler-Smith E., Hampson Y., Chaston I., Badger B.2003). According to the theory, entrepreneurs are special people who face new challenges, seek and seize opportunities in economic activity. Modern and simply definition is that entrepreneur has an entrepreneurial spirit (Akpomi M. E. 2008).

The article assumes that the entrepreneur is a private person who takes up and leads registered economic activity, whose main aim is profit and who takes the risk related to this activity.

The notion of entrepreneurship can be also considered in different contexts. According to H.H. Stevenson, the notion of entrepreneurship is related to seizing opportunities regardless of resources possessed. In contrast, P. Mc Gowan defines entrepreneurship as the activity ever connected with creative thinking and organizational and planning abilities (Stevenson 1990). In most cases the entrepreneurship is the foundation of a small or medium enterprise, managing the company and bearing the whole responsibility for its future. It may be assumed that the entrepreneur should be entrepreneurial which means innovative and capable of taking risk.

Innovation is considered the vital element of entrepreneurship. However, also this notion is defined variously. The common denominator constitute such elements as innovation in relation to the target group, specific company's culture, its efficiency, market share and financial results (Low, Chapman, Sloan 2007) .

3. CHARACTERISTICS OF SMALL AND MEDIUM-SIZED FIRMS

Recognizing strengths and weaknesses of the company is essential from the point of view of building competitive advantage over enterprises. On one hand, possession of proper resources determines competitiveness, on the other hand, competitive advantage should base on the usage of special resources and capabilities of the company.

Thanks to their strong points, small and medium enterprises show the ability of quick reaction and adapting to changing market needs, especially changes in tastes, fashion and technology. It may be assumed that they characterize by the capability of adapting in a short time. A small number of management subjects resulting from a small number of workers and concentration of power in a hand of one or two people makes working in a small company determined by close contacts between the workers and the chairman. When characterizing a small company we can talk about the domination of personal connections and the ability to react quickly to internal problems (Jennings P., Graham B. 1997). The proximity of the market and related to it knowledge of customers' needs make favorable conditions to seek and introduce innovative solutions, which has big influence on the speed of information flow in SMEs.

The weakness of SMEs is the lack of specialized staff. Management devotes a lot of time on current affairs, and that is why they seldom plan strategically the future if the company (Shrader C.B., Mulford C.L., Blackburn V.L. 1989). Small enterprises are characterized by the lack of clear

obligations and a low degree of delegation of tasks. Insufficiencies in management are connected with the strategy of the whole company's development and functional strategies as well, especially market, financial and innovative strategies. The lack of special units supervising these areas has an impact on the SMEs' potential in (K.S. Stewart 2002).

If we assess the level of innovation from the point of view if intensity of the introduction of one or more products, and not the frequency of modifying the current ones, we can classify this level as a weakness of small companies. The low technical and technological competition of small companies seems to be one of the most dangerous drawbacks of these subjects. Enterprises' activity on a small scale makes the unit costs rise and causes the significant share of personal costs in general costs.

Small enterprises act mainly in the local or regional market, which in practice means the high dependence of these subjects' condition on the situation in these markets. Especially strong relations connect small companies acting in smaller towns and in the rural areas. Fluctuations of demand in local or regional market may turn out to be a barrier hindering not only the company's development, but they also determine the survival in the long perspective. Cooperative connections allow for lowering limits resulting from the small size of the company: they allow for boosting the continuity of the sale, ensuring a steady income and lowering impediments (Gray C. 2002).

The key to survive and succeed in a small or medium company is innovative and creative attitude of the entrepreneur. His characteristics, such as being reserved and conformism impede innovation, and pioneering approach, imagination, the ability to predict, intuition and concentration on the future determine taking up innovative activities (Meredith, G.G., Nelson, R.E., Neck, P.A. 1982).

4. INNOAVTION OF POLISH SME SECTOR

Innovation is a key factor for gaining and maintaining competitive advantage. Carried out periodically measuring innovation in the EU countries has shown that innovation in Poland significantly different from other countries because it is low. Low values of sub-index SII (Summary Innovation Index) cause that Poland was among the Catching-up countries that are less innovative when compared to other European countries. Innovation leaders are treated on Leadres Innovation (Denmark, Finland, Germany, Sweden), another group of Followers Innovation focused countries such as Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, the Netherlands, Slovenia and the UK. Poland alongside Czech Republic, Greece, Hungary, Italy, Malta, Portugal, Slovakia and Spain belong to the group Moderate Innovators (Union Innovation Scoreboard 2010).

The dynamic development of enterpreneurship, which has been noted down from the beginning of the 1990s', resulted in arousal of SME sector in Poland. In 2007 enterprises of SME sector were decisively dominating: small and medium companies accounted for 99% of all the enterprises. Because of their number, GDP share and creation of new workplaces, these companies have had a considerable influence on the state of domestic economy.

However, while the number of small and medium enterprises is very big, their quality is rather poor. Interesting and cyclically repeated studies of the innovation of SME sector in Poland are conducted by Polish Agency for Enterprise Development. The synthetic results of the studies showing the innovation of small business are presented below (ed. by Żołnierski 2008).

SME sector is varied because of many reasons, among other because of its innovation. This innovation is connected with entrepreneurship and the entrepreneur. It 'means the way in which the entrepreneur creates new resources which will be able to create values and wealth, and (…) the basis for

entrepreneurial activity is innovation' (Drucker 2002). Initiatives in the area of innovation concern new products, techniques, technology, organization and management.

Small and medium companies realize innovative activity in different ways; still their characteristic is domination of process innovations which aims at improvement of new products manufacture. In about 50% of cases these are new products, not only from the perspective of the company's offer, but also from the perspective of the market. When assessing the effectiveness of innovation, the most often these are changes related to the improvement of the quality of products (44% in small and 38.6% in medium companies). The effectiveness of innovation can be also observed in growing assortment (38% in small and 36.8% in medium companies) and in entering new markets (27.6% in small and 28.35% in medium companies). When assessing innovative activity taken up by small and medium Polish companies related to products in correlation with the company's strategy, it can be assumed that these enterprises may realize the strategy if expansion and diversification, lowering the influence of negative changes going on around thanks to the extensions of the scale of activity.

Innovations related to products especially influence the growth of productive capabilities (33.1% in small and 29.6% in medium companies). Furthermore, they bring numerous benefits for the company, such as: boosting flexibility, lowering the labour costs, lowering the negative effect on environment, fulfillment of regulations, norms and standards. When realizing process innovations of SMEs, they most often buy devices serving to automate production processes.

As to the innovation related to organization, companies introduce knowledge management systems and changes in the organization of work and relationships with other companies. Polish SMEs the most often reinforce their competitive positions and introduce or improve the current knowledge management system, thanks to which they can use their knowledge potential and workers' abilities better.

Innovative activity of enterprises requires the need of the protection of this innovation, i.e. keeping rights to the invention, copyrights, usage and industrial pattern. In comparison to bigger units, these types of SME sector's activities are undoubtedly rarer: every third company and only 6% of small and 9% of medium have attempted to obtain the protection of their inventions. Among the available forms of protecting intellectual properties, the registration of the trademark is the most popular with SMEs.

When analyzing the origins of the innovation, small and medium companies introduced first of all innovations related to the product and the process, worked out by enterprises and cooperative groups of companies.

The traditional sources of information in the innovative process can be divided into internal (workers' knowledge and the knowledge gathered in the company's documentations) and external ones. External sources relate to contacts with customers, suppliers, rivals and participation in trade fairs, exhibitions and conferences as well. Polish SME sector mostly uses internal sources (40% of small and 45% of medium companies). However, because of the limited staff and organizational potential, companies are 'forced' to use external sources of information about innovations. Contacts with customers are of special importance for small and medium enterprises.

In comparison to big companies, SME sector much rarer introduces innovative solutions. Simultaneously, innovative process stays in the tight relationship with the size of the company: the smaller the subject, the smaller the activity in this area.

5.   BARRIERS FOR INNOVATION IN SMALL AND MEDIUM POLISH ENTERPRISES

Innovative activity of small and medium enterprises is limited by barriers of various character. These factors can be divided into: economic (the lack of own resources and difficulty in the access to external sources funding innovative activity, too high costs of the introduction of innovation), related to knowledge in its broad meaning (the lack of well-qualified staff, the lack of information about new solutions, problems with finding suitable partners possessing highly-specialized knowledge), connected with the market (far-fetched monopolization of the market, unsure demand), the lack of need to take up innovative activity, the lack of demand for innovations.

According to the origins of factors limiting the innovation in SMEs, the barriers for innovation can be divided into external and internal. Due to the range and speed of the barriers limiting innovation, only the most important aspects of the limitations of innovation in SME sector in Poland are going to be presented. Reflections on the barriers to innovation were reviewed on the basis of the interview focused on selected 50 enterprises of Lower Silesia. Face-to-face interviews were that primary means of information collection. The sample included firms in the small and medium categories that were involved in innovation. In an ongoing study, purposeful sampling was adopted research. A common feature of the companies surveyed was their location in Lower Silesia, directing the company by the trader, acting as manager, the selection of successful firms in innovative activities. Presented below are some of the results. The study served identification barriers hindering the development of innovative initiatives.

5.1. External barriers

Barriers resulting from macroeconomic conditions of innovative activity of Polish SME sector are connected with the government's policy towards the SME sector, they belong to market, legal, financial, informational, social and organizational factors.

The government's policy realized in SME sector hinders longitudinal, costly and highly risky planning of innovative activity. The growing significance of SME sector is not reflected in creating conditions essential for stable development which would take specific needs of small and medium enterprises into account. The high level of administrational and financial requirements from the part of enterprises, the high tax, the lack of clear and coherent tax law and frequent changes of norms related to writing off the tax and tax leave, incoherent and unstable norms regulating economic activity; excess of regulations and bureaucratic style of national institutions, the lack of adapting of Polish laws to UE standards make the entrepreneurs concentrate mostly on the current company's activity.

Barriers imposed by the market are connected with the worsening conjuncture of Polish economy, first of all with the decreased pace of GDP growth and the increase of unemployment. The growth of the competition considerably hinders taking up longitudinal initiatives by small and medium companies, too. Among other limitations, worth mentioning are: deteriorating financial conditions of people which cause the decrease in demand, whose fluctuations are especially acutely felt by small and medium enterprises, difficulty in finding large and strong companies which SMEs can cooperate with.

Legal barriers are related to dangers in legal spheres. They mostly involve mass of legal articles and difficulty connected with their interpretations together with high costs of the legal protection. This situation requires frequent appeals to counselors' and specialists' help and significantly rises the costs of the current activity.

Financial barriers, as assessed by Polish entrepreneurs, account for one of the vital impediments reducing the development and innovations of small and medium companies. The access to external

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sources of financing is especially limited due to the high interests of credits and loans and numerous requirements to be fulfilled. Micro- and small enterprises have the hindered access to credits, as banks follow the rule according to which the smaller company, the higher cost of the credit. Regional and local funds help to achieve an external capital only to a little extent. Other barriers are: long due time of payments, inconclusive payments and legal and financial problems related to execution of debts.

An informational barrier which means an ineffective system of accessing the information results from the limited resources for informing entrepreneurs. Hindered access to the current economic information, essential in daily companies' functions, makes enterpreneurs' focus on gaining basic information vital for companies' existence. Specifics of SMEs which possess limited financial and human resources, effectively hinder gathering and working on information, especially related to B+R zone and innovations. The information connected with this issue is dispersed and forces companies to search independently and to bear the financial and organizational costs which it all involves.

A social barrier accounts for a significant limitation to innovations, as it is related to the educational level and national Polish characteristics. The traits of the Polish society, such as low inclination to take risk, being reluctant to plan, the lack of faith in the possibility of being successful, impede the way to be innovative to a large extent. Other factors that reduce SMEs' innovations are as follows: short history of learning entrepreneurship by the youth and socio-religious context in Poland which condemns wealth and desire to become wealthy and instead sympathizes with the poor.

A weak representation of enterpreneurs' interests and an ineffective system of the support also create a barrier to the development of innovations. Polish organizations representing and associating entrepreneurs are dispersed, and entrepreneurs are not obliged to federate. Institutions in Poland which are supposed to support entrepreneurship in most cases offer basic informational, training and counseling services; the offer of specialized counseling in B+R and innovations is poor. The main default of business organizations, entrepreneurship incubators, economic development agencies and other institutions supporting small business is the lack of the proper capital and low effectiveness. However, the biggest barriers are created by entrepreneurs themselves who do not involve in the activity of organizations representing and supporting SMEs and do not cooperate with each other. Because of the poor organization, Polish entrepreneurs do not create political force and they have no influence of forming the conditions for the environment friendly for stable growth and innovations of small business.

5.2. Internal barriers

Mostly carried out an extensive study of the small business sector include primarily the number and structure of these companies, and external barriers to their development and innovation, government declarations in the area of law, finance and administration. Much less is known about their internal growth potential associated with the knowledge of entrepreneurs, access to information and approach to innovation.

Internal barriers influencing the SMEs' economic condition, innovations and competitiveness are as follows: knowledgeable and entrepreneurial management, the size of financial resources that a company possesses and human resources effective management. Among the barriers impeding innovations of small and medium entrepreneurs some were depicted as the most significant. Insufficient qualifications and abilities of entrepreneurs account for the most considerable limitation of innovations in small and medium enterprises in the Polish market. The enterpreneur's profile – his insufficient level of knowledge about management and the lack of practical abilities of running the enterprise cause his inability to build longitudinal company's competences based on innovations.

The SMEs' founding capital and the lack of financial reserves are the cause of financial trouble that entrepreneurs face. The lack of knowledge and experience leads to the situation when the company's survival becomes a priority, and longitudinal investments in highly-risky innovative ideas are not carried out.

The lack of planning and development of SMEs results from ever faster changes in the surrounding in which small and medium companies act. Polish entrepreneurs rarely plan their activity believing that it would not bring the expected results. That is why they do not involve in the activity which requires long-term planning, such as innovations.

The employment of low-qualified workers and the lack of interest in continuous education are for the average small and medium company very difficult, as it requires considerable financial involvement. Thus, in SMEs we can observe the lack of well-educated lawyers whose experience and knowledge would make introduction of innovations possible.

The lack of appreciation for innovations is due to the fact that entrepreneurs have to choose between reinforcing the company's competitive potential and caring about the safety of its wealth. Polish businessmen prefer to invest in the real estate since this activity carries much lower risk and it boosts the owner's material status. Enterpreneurs' attitude to innovations supports the thesis about the lack of carefully thought strategy of development including the essential element of innovations.

The lack of approach to the information as the strategic resource results from the fact that entrepreneurs do not treat the information as the factor essential for gaining success in the market and they are not aware of the importance of the information in the contemporary world. The lack of cooperation between specialists and counselors with SMEs is due to the high prices of specialized services. This situation rarely makes entrepreneurs be innovative as without the external support working out and introducing innovative solutions is very difficult.

6. IMPLICATIONS AND FUTURE REASEARCH

In developed countries, thanks to the flexibility, innovation and openness, SMEs are considered as an important element of the economy. Especially in a rapidly changing environment, where in the world market dominated by global competition, small and medium-sized enterprises play an important role of the media of economic growth and technological progress. Polish SMEs do not play so important role in our economy as companies belonging to this sector in the countries of Western Europe or the USA. Although in the era of economic and social transformations taking place in our country, SMEs have contributed to economic growth and reduce unemployment, but now their dynamism was halted. If these companies want to grow it should take new initiatives aimed at better use of their potential suited to the requirements of contemporary market. It is increasingly difficult task due to the increasing speed of change and lack of experience of Polish enterprises due to the short history of our free market economy. Despite the fact that the basis for entrepreneurship is ever growing innovation, in the long perspective it poses danger to Polish small companies whose level of innovations is very low.

The lack of the usage of innovation in Polish enterprises' activity influences manufacturing processes being too old-fashioned, working efficiency being too low, the quality of products being too poor and effectiveness of activity being inadequate. When not possessing assets in the area of innovation, small and medium companies take up the activity in branches in which innovation is not the main factor of competitiveness, and the sole type of activity characterizes with high working force and low

productivity. Obviously, this type of business is lowly profitable and it does not make the SME a market leader able to face international competition.

The cause of this situation may be low investments in research and development, high costs of the introduction of innovations, difficulty in gaining the up-to-date scientific information and the lack of interest in new scientific inventions. Other barriers impeding innovations of SME sector are among others: high risk related to these types of investments, domination of macroenterprises, poorly-qualified staff and low educational level and the lack of experience from the part of management. The lack of cooperation with scientific and research units which can not start cooperation with SMEs is a considerable impediment. The passive attitude from the part of entrepreneurs is another barrier as they do not treat 'novelty' as the most important source of success in current companies. In the Polish market there is the lack of enterprises set up by scientists who want to commercialize their inventions in this way. The lack of innovations from the part of domestic entrepreneurs causes the fact that new solutions are rarely used, the most often they are acquired abroad rather than in Polish research units.

In the longer perspective the lack of active forms supporting and initiating innovations in SME sector may result in moving companies to the role of economic subjects whose only asset is cheap and poorly-qualified labour force. On the basis of the analysis presenting the barriers impeding innovations in Polish SMEs it can be concluded that the dangers which may limit and hinder innovations in the future are mainly caused by immature market economy system and short cultural history of entrepreneurial society.

Internal limitations of innovations in SMEs are a direct consequence of undermining the significance of knowledge and education in every enterprise's activity. Mistakes made by Polish entrepreneurs are related to the lack of willingness and ability of steady improvement of the company's competitive potential, whose one of parts is innovation. Enterprises carry out strategies which are not thoroughly thought and are spontaneous, taken up in order to survive, and long-term benefits are of little importance. Stabilization of Polish economy together with creation of environment favorable for taking up risky and long-term activities should minimalize barriers for innovations in SMEs. Bigger interest in conditions of small and medium enterprises from the part of politicians together with strong and influential representation of enterpreneurs' interests ought to make building long-term competitive advantage possible based on innovation. Also the growth of awareness of Polish entrepreneurs in relation to the importance of technical development, formation of new markets and functioning of global competitors would definitely help in overcoming limits hindering innovations in companies. An important force enabling the growth of innovations in SMEs might be the feeling of strong emotional connection between the entrepreneur and his enterprise, and what goes with it, confidence about the necessity of existence and development of the company. This interest in the company's future should make entrepreneurs assign the profits for innovations and convince the workers that maintaining the company's strong position is of their own interest.

The state and other institutions supporting small business have a big influence on taking up entrepreneurial initiatives. This activity should not focus only on financial, social and counseling help. Organizations supporting entrepreneurship ought to promote a model of enterpreneur as a person basing not only on the own initiative but also making success thanks to the knowledge, experience and abilities acquired, professional further education in running a company or taking up well-calculated risk.

Very useful for SMEs' development is directing the activity towards innovations and getting to know new technologies. Innovation is the basis of entrepreneurial activity, which naturally stands a chance for SME sector. This activity is to be conducted by ever better educated entrepreneurs and the

government being aware of the necessity of initiation of research and development in the scientific units – SME sector line. Their success is determined by effective cooperation of the whole SME sector, supported by organizations representing entrepreneurs and helping small and medium companies. When creating the support for innovation in SME sector, financial and counseling help in B+R zone is of great importance: innovative activities together with introducing and development of cooperation net. In the times of growing globalization and blurring borders, the improvement of innovation in Polish enterprises is vital, especially when the liberalization of foreign trade change is growing and international competition is becoming more and more fierce.

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OVERCOMING THE UNDERDEVELOPMENT OF (SECTORAL) BRANCH'S STRUCTURE OF NATIONAL ECONOMY (RUSSIA'S EXAMPLE)

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Abstract

Progressive changes in the sectoral structure of the economy can be achieved by: rejection of the evolutionary path of its development and transition to a radical transformation in accordance with the parameters of the world's leading countries' economies; a clear definition of national specializations

according to the criteria of country's advantages; integrated approach to the development of main, supporting and related industries; achieving the required level of production diversification; maximizing the level of added value; providing innovative orientation of the economy; downsizing the inefficient activities and mobilization of freed resources for development in priority directions.

Key words: *sectoral structure of the economy, criteria and parameters for the structural modernization of the economy, a new quality of economic growth, state policy of structural modernization*

1. INTRODUCTION

One of the most important factors designating the effectiveness of national economy, its developmental potency, and population welfare gain ability is progressiveness of sectoral structure, intrinsically reflecting the degree of substantiation and equation in priority choice and line of activity. Macro-economical instability, low level of added value production, high degree of technological and investment dependency from more developed countries, and incompetence in forming of the sustained development mechanism are distinguished for the countries with retarded sectoral structure of economy, to which Russia also should be assigned. Nevertheless, this problem was obviously undercharged on the part of the state administration bodies, whereas the steps undertaken in this field do not carry systematic, and conceptual nature. Overcoming of the existing problems, from our point of view, requires elaboration of an integral methodological approach to segregation of fields of national specialization, and sectoral priorities and to formation of mechanisms, providing the implementation of selected assignments in structural modernization of the economy.

2. INFLUENCE OF STRUCTURAL IMBALANCES IN THE ECONOMY AND ITS ABILITY TO DEVELOP

One may assure in reasonableness of the judgment in question in terms of Russian economy, the most significant feature of which is predominance of both propellant-energetic, and raw material resources export, and low process stage products in industrial structure. As shown by readings in table, the share of fuel and energy complex and metallurgy industry is steadily on the increase in structure of material production, and share of machine manufacturing and industry sector, working for the domestic market, – decreases. In the case of share by modern advanced industries – microelectronics, informatics, bio-

and nanotechnologies – so they still occupy insignificant position (9.8%, against 47.3% in mature economies). In the case of economy of the U.S.A. and economies of other developed countries in their socioeconomic behavior, high (exceeding 80%) industrial sector share of processing manufacturing industry and leadership among the latest ultimate investment industry sectors – machine manufacturing (more than 40%) and chemistry (about 13%) are differential characteristics of its sectoral structure. Predominance of the process treat industry sectors in economic structure is explained by the following factors: considerable specific and qualitative diversification of products (ample opportunities in differentiation of product); multiversion and flexibility of manufacturing methods; comparatively major mobility of capital assets; big number in degrees of freedom for choosing of activity categories and spatial location of ventures; higher share of added value through the cost elements and, correspondingly, larger productiveness of the contributed capital. As for special attention paid to machine manufacturing and chemistry, so scientific and technological progress in the whole of economy

Structure of industrial production , % (5 p. 184–185; 3 p. 53)

Sectors of industry	Russia					USA
	2004	2005	2006	2007	2008	
The whole production sector, including:	100	100	100	100	100	100
electric-power industry						7,5
propellant industry	8,5	8,4	8,6	8,9	9,3	5,3
out of it						
oil-producing industry	6,7	7,9	8,1	8,3	8,4	3,1
gas-oil industry						1,5
coal industry	3,8	4,9	5,0	5,2	5,4	0,7
ferrous and nonferrous-metals industry	,6	,8	2,0	2,2	2,5	3,7
chemical and petrochemical industry	,3	,2	,1	0,9	0,5	13,5
machinery and metal working						40,0
wood and wood-working industry	6,9	7,3	7,8	8,0	8,2	not available
construction materials	,6	,3	,4	,5	,6	20,1
light industry						7,9
food processing	0,5	0,3	0,2	9,6	8,1	1,0
other industry sectors						87,2
Total of processing industries, including	,7	,5	,7	,6	,7	
industry sectors designating					3	2

scientific and technological progress (machine building and chemistry)	,9	,9	,0	,1	,3 2	
manufacture of high-technology, and science-intensive products	,7	,8	,9	,9	,1 1	53.5
	5,8	5,6	5,7	5,8	6,0 0	
	,7	,0	,6	,3	,3 7	47,3
	4,7	3,7	3,3	3,1	2,3	
	0,1	9,6	9,8	9,1	8,7 2	
	2,9	,8	,7	,8	,8 9	

industry sectors depend on development of these branches. In particular they are qualified to equip the economy with progressive means of production and modern effective materials, on which in many instances depend the growth prospects of the national competitive power. As this takes place the latest science-driven types of machine manufacturing and chemical industry come forward topside: production of laser-based and electronics and computer technologies, automation equipment, equipment for atomic energy industry, output of microbiologic specimens and predeterminated-properties materials. More than half of total output, produced by processing industries, is accounted for the share of these progressive industry sectors in the USA. In Germany, France, Great Britain, Italy – from 35 to 40% (3). In Russian economy specific weight of the process treat industry sectors and branches, designating scientific and technological progress, not only remains behind the developed countries, but even has a tendency to regression. Dependence of the economic health of the country on the business environment through the world market prices for energy products, raw materials, and products of low process stage makes it enormously vulnerable in the context of sustenance of the inland macroeconomical steadiness, which has been confirmed with the latest world economic depression. Thus, on figure one may trace a distinct interrelationship between production volume gross of the domestic product and revenues of the consolidated budget of the country depending on the petroleum price. The mechanism of its spinning away was in many instances traditional, and it rather completely defined the "painful" points of the Russian economy. The relapse of free market price for oil and other resources of the Russian exports predetermined the initial impact of the economic depression. The downswing of revenues obtainable by the economy becomes a consequence. Further – employment and household income decline. Untoward conditions in the world markets as well result in worsening of the investment environment, showing up in dilution of earnings and investment activeness of the largest exporters. Decreasing of production orders scope from the Russian exporters and natural monopolies negatively affected industrial activeness of a plenty complementary branches of economy, first of all, of the investment ones. Cutting of the domestic demand more and more

reduces the business activity. The State appears a "hostage" of foreign economic business environment together with enterprises of the production sector in Russia. The situation in the Russian budget directly depends on

1 – GDP dynamics; 2 – petroleum price dynamics; 3 – revenues of the RF consolidated budget dynamics (in the form of trends)
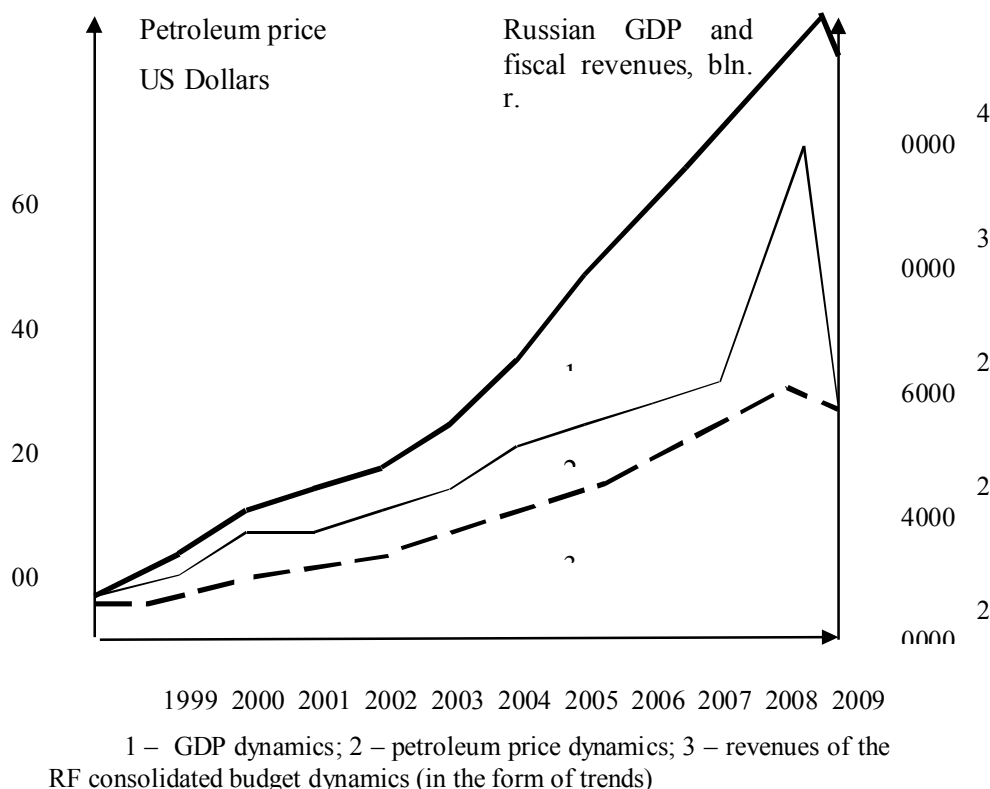
Interrelationship of the GDP and the revenues of the Russian consolidated budget dynamics to the petroleum prices dynamics (5 p. 30–31, 485)

dynamics of exports, since the most part of its revenue is formed at the expense of export duties and taxes per extracting corporations. Posteriority of the government revenue and expenditure policy after fluctuation of the export business environment is due. Besides in conditions of worsening of the latter the fiscal system just intensifies the negative fluctuation of the economic dynamics. Diminishing of the budget returns stipulates the recession of the government expenditures and investing level, which causes a multiplicative effect in relapse of the gross domestic product. Moreover the administrative efforts of countering that effect turn into extreme expenditures. The exports market fluctuations have influence not only in fiscal field, but also in the status of the monetary system. The tightness of the relation of the Russian gold and foreign exchange reserves amount to the world market price for crude mineral oil composes 0.783. The monetary stock and the economy credit facility extent also demonstrate the dependence on the foreign trading dynamics. The correlation of external imbalance to the specific weight of internal credit facility in GDP is 0.530 (7 p. 9). At the same time, inevitable under the crisis conditions slump of the national currency exchange results in enterprises, having considerable currency indebtedness, liquidity

crisis. The essential factors of fluctuations in momentary field appear in the form of place-to-place capital flows and world rates of interest, under the influence of which intensification of production output fluctuations happens. As the statistics shows, the share of ventures in production sector, experiencing limitation of the output for the lack of financial resources, is directly aligned with deflux or influx of capital in Russia. The higher is the net balance of financial account, the less are financial restrictions for development of an industrial production, and the more stable is dynamics of an investments flow and output in production sector. According to the described scenario also some events progressed under conditions of the recent world economic depression. The first symptoms of recessionary relapse of the economy was recorded in the second part of 2008, when the expansion rate of Russian economy of 6 to 7% per year, persisting through the latter years, decreased latterly in 2008 down to 2.1 %. Following the decline of production, conditions of population employment and its income began going down. According to official figures, at the beginning of December 2008, number of unemployed population in Russia was 5 million persons (6.6% of economically active population) and enlarged during November per 400 thous. persons. During the first months of 2009, up to 50% of the Russian ventures were set about the reduction of staff. Together with the negative impact on macro-economical steadiness, high relevance of primary exports, and continuous growth of its scope, invite the danger of "denudation" of the raw materials base for own industry. The state exports around the half of produced oil, about 30 % of gas, 80 % of mineral fertilizers and more than 50 %
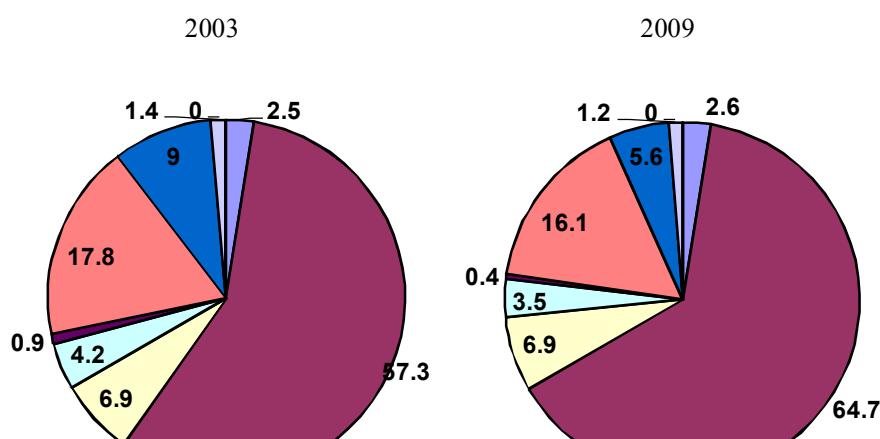
where 57,3 and 64,7 – mineral commodities;; 6,9 – products of chemical industry; 4,2 and 3,5 – forest products and pulp and paper industry products; 0,9 and 0,4 – textiles, textile products, and footwear;; 17,8 and 16,1 – metals, precious stones and jewelry goods; 9,0 and 5,6 – machines, equipment and transportation vehicles; 1,4 and 1,2 – other goods;; 2,5 and 2,6 – food products and agricultural raw materials.

Structure of Russian exports in 2009, %) (5 p. 396).

of industrial wood. Things are becoming serious due to insufficient promptness of the resource base reproduction. Failure to satisfy own production requirement in the items of process treat branch sets own trace also
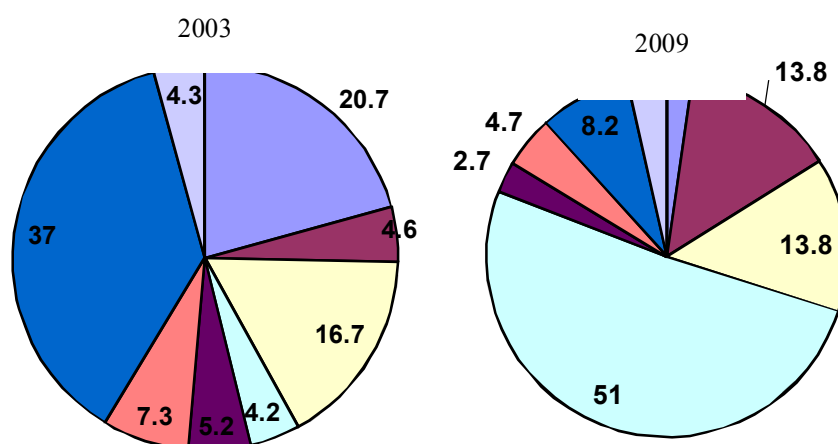
where 37,0 and 51,0 – machines, equipment and transportation vehicles;; 4,2 and 2,7 – forest products and pulp and paper industry products; 5,2 and 4,7 – textiles, textile products, and footwear; 7,3 and 8,2 – metals, precious stones and jewelry goods; 4,3 and 3,5 – other goods; 4,6 and 2,3 – mineral commodities; 20,7 and 13,8 – food products and agricultural raw materials; 16,7 and 13,0 – products of chemical industry

Structure of Russian imports in 2009, % (5 p. 396)..

on the structure of imports, wherein sophisticated techniques, equipments, foodstuffs and other finished products of mass consumption prevail. The most important negative consequence of the ultimate structural misalignments is low level added value, generated by the Russian economy, which can imply the level of household income and business organizations revenues. Actually, the added value in its structure includes compensation of employees, gross profit, gross mixed income, other taxes and production subsidies. The data on dynamics of added value and components of its elements are quoted in the table. If to correlate specific weights of

Dynamics of gross value added in Russian economy, bln. r. (5 p. 168)

Readings	2003	2005	2007	2009
Gross output	23298	37091	57756	69038
Gross value added	11654	18533	28495	34161
Specific weight of added value in % to gross output	50	58	49	49
Compensation of employees in % to gross value added	6231	9474	15527	20229

	5 3	4 4	5 4	5 9
Net taxes on production and in % to gross value added	2 110 1 8	4 244 2 2	6 334 2 2	6 431 1 9
Gross profit of economy and gross mixed income in % to gross value added	4 902 4 2	7 906 4 3	1 1397 4 1	1 2404 3 6

individual elements of the added value in extracting and processing sectors, then in processing sector the specific weight of occupational earnings to salaried employee is higher, than in extracting sector, but income and taxes are correspondingly less. Thus and so, the economy of Russia in the context of production of added value consists of two quite different parts: customary industry (mainly the internal-oriented sector) and extractive industries (mainly the export-oriented sector). In processing sector the principal factors of the added value expansion are enhancement of qualitative-quantitative characteristics of labor and increase of salaried employees' incomes in the form of occupational earnings. In extracting sector – export prices for products of extractive industries. In the last occurrence the added value is not thus much the result of labor productivity gain, but the consequence of fluctuations in business environment of world market prices and condition of the world economy in general. But even within the period of comparatively high prices for raw materials and energy products, propellant-primary orientation of the Russian economy results in significant loss of income consequent on adverse trading conditions. Actually, pursuant to the theory of general equilibrium in international trade, one may analyze the effectiveness of the latter and its impact on the economic growth and distribution of the earnings between countries, on the basis of a sales conditions coefficient. This coefficient characterizes the ultimate correlation of the export and import prices for the certain commodity, the country in general, and the group of countries. In the course of growth of the relative aggregate price for export commodities the relative quantitative volume of exports in comparison with quantitative volume of imports will be on the increase. The inverse dependence: in the course of growth of the relative price for imports the relative demand for imported goods will decrease. The relative price arising at the intersection of curves on the relative import demand and the relative offer of goods for export at the point with their relative quantity will be the one representing the sales conditions. Thus and so, the sales conditions reverberate a correlation between the reciprocal demand and the reciprocal offer for exports and imports of each country, and are the most important benchmark for the foreign economic strategy and policy. The rising coefficient of the sales conditions suggests that the increase of the aggregate price for the country's exports in comparison with the aggregate price for imports allowed its acquiring of more imported goods per capita unit of exported goods. Moreover, since the larger volume of imports becomes possible instead of the previous amount of exports, the well-being of the nation grows up. The regressive sales conditions index, on the contrary, suggests that in the course of growth of the aggregate price for the country's imports in comparison with the aggregate price for exports per every unit of exported goods, it becomes possible to acquire the less and less of imported goods. And so, since the less volume of imports becomes

possible instead of the previous amount of exports, the well-being of the nation decreases. Last years this coefficient dropped down. This means that each unit of the Russian exports became being exchanged in less of imported goods, i.e. the sphere of foreign economic activity in question under the expressed increase of absolute measures not only stopped encouraging the growth of national welfare, but even led to redistribution of the large part of the revenues obtained in the country in favor of other countries. The specified circumstance essentially influences also a solution of the problem for growth and upgrading of material and technical base of production sector in the country, since in the conditions of underdevelopment of principal investment branches (machine manufacturing, and chemistry) the assets, resourced for these objectives, will be fatally rearranged in favor of countries supplying some modern equipment and technology. Simultaneously the menace of technological backwardness arises, whereas the growth of economy effectiveness and population prosperity becomes depending on a desire of other countries to facilitate this. One another thing as structural problem of Russian economy – low level of industry sectors diversification. As an example, in developed countries the number of subindustries and production units in machine manufacturing achieves 150–200, whereas in Russia this exponent does not exceed 10–15 (6). Therefore one may draw a conclusion not only about persisting standing behind of the sectoral structure in Russian economy from leading countries of the world, but also about its extreme volatility under the influence of market fluctuations. One cannot maintain that in Russia there were no efforts taken for diversification of the sectoral structure of economy and exports. The level of products diversification in the Russian production sector is steadily growing. However, in the area of export diversification the situation is much worse. This process commenced comparatively recently and, in spite of the fact that Russia entered the number of countries leading in the enlargement of their shares in various commodity markets, with respect to absolute level of product line and exports diversification it still repeatedly falls behind not only from countries with developed free market economies, but also from majority of countries with economies in transition. This standing behind takes place even in comparison with the countries having predominantly primary export specialization.

3. CRITERIA FOR OPTIMIZATION OF SECTORAL PROPORTIONS

Attacking the assignment modernization of sectoral structure of the economy, we proceed from the assumption that it is available to use the economic structures of developed countries, characterized with predominance of perspective industry sectors and production units in the context of requirements for the scientific and technological progress and higher-level of the added value, in capacity of benchmarks for formation of common macro- and meso-proportions. Together with the establishment of effective macro- and meso-proportions modernization of the Russian economy structure assumes the optimization in composition of economic activity types or its microstructure. This task is solvable at multiple levels – at the level the State, business unit, chain of the final cost formation for consumer (business process), team or even individual executor. In the fractal geometry such a replication at many levels is known as similarity to oneself. As the analysis shows, the various types of economic activity also have fractal structure and dimensionality, since they have a structure similar to a network structure of mutual relationship, no matter which scale is used for their dimensional scaling. The selection of types of economic activity, providing the formation of an effective economic structure, corresponds to some complicated theoretical and practical task. And solution of this task, according to our opinion, cannot be reduced just to division of economic activity, proposed by R. Mathews (2 p. 65 – 69), into economically efficient (providing high added value) and economically inadvisable (generating negative or insufficiently high added value) types with subsequent waiving those types of activity, which are in the range of economically inadvisable. Such a choice unnecessarily will lead to

positive result, since exactly in the areas of activities, generating the highest level of added value, particularly the most intensive competitive struggle is observed, which result is predetermined with competitive potency of the national economy. This means that only those countries may allow themselves some relatively free choice, the ones possessing highly developed economies and global competitive power with respect to wide range of economic activity types. Other countries, lacking such a high competitive power, should carefully deliberate their actual or available in the future potencies in supporting of competitive power for preselected types of activity. As for alternatives of the Russian economy, for example, then by experts' estimate, only 6% of products manufactured by the processing production sector in Russia may compete in foreign markets (9). In case of application of the analyzed selection criterion dynamic aspect also is not taken into account – an alternative to transfer previously inexpedient types of activity into category of economically efficient ones, for example, at the expense of an industry sector restructuring and transition to a production output at higher-level of a process stage. Consequently, in the general case, in the course of making choice among economically attractive types of activity one must base on the application of more than one system of objective test. First of all, one shouldn't ignore the provisions of classic and neoclassic theories, being fundamental for international division of labor. These theories impartially point to a necessity of taking into account of comparative advantages of countries, determined with natural-climatic conditions, existence of basic and developed factors of production, achieved level of development, and etc. in the course of choice for national specialization. It should be noted that the given factor is, perhaps, exclusive, rather completely in use in the course of structure formation of the Russian economy. Yet in the process auxiliary facilities are slightly taken into consideration, which globalization opens (for example, availability of country advantages and markets all over the world), as evidenced by rather low level of the Russian economy trans-nationalization. Meanwhile the trans-nationalization is one of the dominant processes in modernity, providing scaling-up and efficiency of production, extension of geographic frames for cooperation ties, perfection of the mechanisms of capital assets and development resources accumulation, unification of the economic territory in the form of contingency for "game directives" and uniformity in consumer preferences via dominating of the world brands and standards. Active participation of domestic business in the process of trans-nationalization would allow advancing competitive power of the Russian economy essentially, forming additional sources of development assets, and directly participating in production and distribution of the world revenue. The Russian economy possesses all of the needed prerequisites for active enabling into the process of trans-nationalization: significant resource, personnel and scientific and technical potential; experience of management in conditions of multi-cultural surroundings and large, geographically-distributed, complexes; high level of adaptability formed in response to permanently emerging recessionary events. However, subsequent integration of the Russian economy into the present process, unshaped organizational-legal and economic mechanisms of development and promotion of the Russian TNC negatively affect scale and promptness of trans-nationalization of the Russian business. At the level of corporations – this is an absence or insufficiently good quality of the foreign investing strategies, controlling mechanisms for international network and promotion of business in the world economy, at the level the State – insufficient effectiveness of governmental support for the foreign expansion by the Russian corporations, as well as some problems in creation of the country positive image. Taking into consideration the rising instability of market situation, the degree of product line and exports diversification comes forward among the most important criteria for formation of the effective structure of the Russian economy and for securing of the conditions for sustainable development. As you know, in its own way of content diversification is a degree of internal variability of economic affairs and is provided in three dominant modes: by means of extension of number of economic activity lines (intro- and inter-industrial mode), output goods

(product mode) and markets, in which these products are represented (regional mode). Its thematic objective is – stabilization of economic development and reduction of market risks at the expense of inconsistent, in time and space, market fluctuations. It is not difficult to notice that diversification (dispersion) resides in a complicated dialectic connection with the national specialization (concentration upon special activities), whereby the establishment and sustenance of the balance in the inventory of these criteria are needed. Pareto optimum for three variables may be employed for solution of this problem – degree of diversification, revenues, and cost effectiveness. According to computation by professionals, rate of the diversification coefficient, providing some relative stability of production in conditions of modern market, should constitute from 130 to 150 (6). Please keep in mind that the leaders of the product line and exports diversification process in the USA and China have the diversification index even more, and it constitutes correspondingly 530 and 391 (6). In Russia this index in production does not exceed 40, and in exports – is less than one, which makes the Russian economy enormously vulnerable in relation of changes in market trends. The achievement of the efficient diversification level is able not only to reduce market risks and to become the long-term support of the economic growth for the country, but also to assure the explosive foreign trade expansion of Russian corporations, implementation of the ambitious global technological leadership by them, though initially at rather tight segments of the world market. The adequate consideration should be devoted also to the role of various types of economic activity in solving of the problem of economic security of the country. The case in hand is production of essential commodities and industry sectors, creating the basic conditions for functioning and development of the national economy. Certainly, the machine manufacturing, which is responsible for structural adjustment and technical upgrading of the whole national economy, should be assigned to the latter number. The present industry sector in the largest degree is liable for yet another important criterion of the economic activity types' choice – maximization of the multiplier effect, when together with the main enterprise activities the conditions for development of conjugate spheres and industry sectors are formed. The economic system of any level, up to the level of metasystem, constitutes the constellation of companion types of activity, which borders migrate according to their growth, depression or restructuring. In this context the provision of the development equilibrium and harmonization in principal and conjugate industry sectors serves as the most important factor of effectiveness and competitive power of the economic system. The Russian economy to the full extent perceived itself the disamenities of backlash degradation in scientific-industrial and household complexes as a result of transformational crisis. Assignably, M. Porter (4 p. 185), together with factorial conditions, demand conditions and conditions, determining the process of business offices establishment and management among the determinants of international competitiveness by the national economy, forming the so-called "national diamond" includes the competitiveness existence and level of conjugate (related and supporting) industry sectors. Actually, the added value is created not only individually by the separate business organizations (units), but also interdependently – by the entrepreneurial associations consisting of more than one member. This interdependence may be simplified, if consider the companion types of activity as manufacturing total production, having its independent value for consumer, and the one, which in a reciprocal manner produces added value of other types of production. The latter circumstance forms the basis of the economic affairs synergy, when the interdependence value is specified with the difference between the cost amount sum of individually taken assets and total cost of assets as the part of the arranged network. As the world experience shows, for the purpose of potential benefits catching, arising from harmonization and equilibrium between companion types of economic affairs, it is expedient to perform the latter within the limits of various types of the network structure. Such network structures may be formed both in the base of entrepreneurial associations, making chains of creation of final value for consumer or product life

cycle stage (services), and at the level of national economies, associated within the framework of the international division of labor or collaborative implementation of the economic interest in control over the intended region of economic territory. Since for any type of the economic activity, first of all, its result is important, then *the added value level* generated by them acts as the most important selection criterion of the higher priority type of the economic activity. Indeed, the added value index not only mirrors the final financial result of the economic activity (profit, reimbursement against capital assets, occupational earnings), but also in a mediated manner serves as the most important characteristic of the life level and quality, economic security of the country, and environmental concern. The determining influence of the added value index over the business organizations revenues, population's level and quality of life requires justified definition of strategic challenges in the present field.. As noted above, the Russian economy in its current state is not able to guarantee the achievement of the indices of the population's standard life activity specified by the United Nations commission. According to one of the indices, occupational earnings less than 3 doll. per hour do not guarantee even simple reproduction of labor-power and fatally result in degradation of labor potential in society. In Russia this exponent is 1.7 doll. Another indicator – the wage share in GDP should be from 50 to 75% (EC, USA and Japan maintain this standard), in Russia it is feasible just around 30% (1). Therefore, even a yield of a level of standard reproduction of labor-power supposes, at least, duplication of the added value rate, generated by the Russian economy. The solution of this intricate problem requires intensive governmental support of development for middling- and high-technology industry sectors and production, which, as you know, give the highest level of added value. However, performing a choice in favor of denoted types of economic activity, it should be keep in mind that exactly this high level of added value provokes extremely intensive competitive struggle in corresponding fields of market space. In this context, within the short-term period, in own choice one should bear against those types of the economic activity, wherein the Russian economy accumulated the largest competitive potential. It must be borne in mind, also the fact that provision of competitiveness in suppressive number of high-technology types of activity is directly aligned with the leadership achievement in technological development, i.e., among the choice criterion for perspective types of economic activity their innovation feature comes forward. This circumstance requires interrelated consideration of noted above criteria and quality of conformance from the preselected types of activity to the thematic assignment on innovation development of the country and formation of innovation-conducting structures. However, establishment of innovation structures by itself isn't a guarantee of high innovation activeness that is dramatically demonstrated by the Russian experience. Indeed, in spite of establishment in the country of the governmental innovation fund, innovation-technological centers, industrial parks, venture innovation funds, and etc., manufacture of products by the domestic enterprises on the basis of crucially new technological developments, on evidence of the official statistics, is a little more than 70 bln. rub., and its share in stocks of industrial products is – correspondingly 0.6%. Even in high processable sectors this share does not exceed 2.4%, which is essentially less, than in majority of European countries. For example, the share of crucially new products in average through the segments of industry is in Finland – 17%, in Sweden – 15, and in Germany, Франции, Великобритании – 10–11%. If to consider less knowledge-intensive industries of domestic production, then their investment in output of crucially new products is minimal: ventures in middling-processable sectors of higher-level – 1.2%, low level – 0.4, low-processable industry sectors – 0.5% (3). The low effectiveness of innovation activity weakens the competitive positions of the Russian manufacturers in external markets. The suppressive part of their exports falls on the products, naive from technological changes, and the share of innovation articles, works and services is still 7.7%. As the analysis shows, the ventures in Russian production sector prefer some other type of innovation activity like purchasing of already embodied technologies – machinery and equipment

(68% of enterprises). In this connection motive is fully justified in ultimate macroeconomical situation like ambition of the enterprises to renew material and technical base, to advance technological standard and level of production competitiveness at the earliest possible date, to furnish faster return on investments contributed in innovation assets. However, as early as the near-term prospect policy, preventing the long-range investments into not yet embodied domestic elaborations in the form of patents and various results of R&D works, may cause the failure of innovation potential accumulated in the country and so blast foundation of not only current, but also future competitiveness of the Russian economy. For the practical solution of the problem in modernization of the sectoral structure in Russian economy, the formulated criteria must be supplemented by the effective mechanisms of their implementation. In this connection the problem of mobilization to the desired service life comes forward topside, among them on the account of structurally-depressive production curtailing. Resources, areas, labor power are released then in the course of their liquidation or partial curtailing, which then may be redistributed into higher priority industry sectors.

4. DIRECTIONS FOR MODERNIZATION OF SECTORAL PROPORTIONS

The actualization of the process in modernization of the sectoral structure in Russian economy should be preceded by the preliminary period, which time duration depends on economic potential accumulated in the country, current state economy and depth of structural crisis. Industry sectors and production, subject to curtailing, as well as consistence of events and timetable of their prosecution must be specified during this period. The first step in elaboration of the program for structural transformation is ranking of the economy's sectoral structure into branch groups: key branches of industry, which are bearing the structure of national economics, determining its independence; upcoming sectors, determining the base of economic growth; structurally-depressive branches, sub-industries, enterprises and production units, including environmentally hazardous, resource- and labor-consuming, based on earlier technologies, and deadlock lines of business, having no future development. As we seem, considerable scope of structural adjustment of the economy in Russia and its current state embarrasses the solution of this problem in comparatively short time. It will be necessary to accomplish several governmental step-by-step programs possessing succession at the time. It is expedient to adopt special legal acts in support of implementation of these programs (for example, in the USA in due course Special emergency law on structurally-depressive industry sectors and Transitional law on structural adjustment of economy branches were adopted). There are two ways to solve existing problems of transition the Russia's economic structure to a new level of development – evolutionary, that involves gradual accumulation of parametric changes on the way to achieve a new quality system, and the path of radical transformation, which provides for the fundamental qualitative changes in components, proportions, communications of the system with a view to its transfer to a new state, a new, not previously available level of functioning and development. Of course, the path of radical transformation is associated with high risks, because making radical changes is commonly accompanied by a loss of stability of the system. And here a lot depends on the ability of the subject of management to address emerging strains and contradictions. However, the path of evolutionary change is not without significant risks. After all, underdevelopment, as a rule, is a consequence of the imperfections of the system, and hence the introduction of parametric changes can not solve the problem in principle. As a result, falling behind will accumulate, leading to more and more significant destructive processes. In this connection radical transformation seems preferable. It means that the process of post-crisis restoration of Russian economy should take into account the criteria providing the transition of its structure on a new level. It should be mentioned that the change of mezo-proportions in favour of woodworking branches doesn't

mean the reduction of volume production in extractive branches that create the conditions for mobilization of means necessary for the realization of state policy of modernization. Considerable increase in the volumes of activities in manufacturing branches is considered, particularly in those spheres of economic activity that are able to provide considerable increase in Russian economy profitableness as well as its transition to the innovation way of development. Specifically taking into account the Russian economics potential and its scientific experience the following priority kinds of production can be pointed out: in information and communication technologies *(applied software; intellectual systems for support of complicated complexes and complex automation of enterprise; systems for unified telecommunication net, including the Internet, TV, radio; multimedia systems of different applications, virtual reality systems; systems for afield identification of people and objects with high accuracy level; referral database and services based on geopositioning technologies; unified electronic identification documents; systems for distance education and medical service; in nanotechnologies *(catalysts based on artificial zeolits and other mezustructures; high-performance nanocatalysts of selective effect; nanotubes based catalysts for photo degradation of waists and for water analysis; high-performance biocompatible materials for medicine; nanocomposites; intellectual materials with changing and set up properties; nanodiodes and nanolasers; microcapillary chips; biosensors layers on microelectrodes; in creation of new materials (ceramic and composite materials with critical behavior and prescribed functional properties; protective materials for metallurgy and space-based technologies; multifunctional optic electronic and magnetic materials; new liquid-crystalline materials for creation of "electronic paper type" displays; new types of electronic materials for nonferrous-metals industry, and others; for biological systems (new medications using membranes proteins and receptors as their targets; means for medical diagnostics of cancer, system, infectious diseases; technologies of complex DNA-diagnostics of congenital diseases; testing of food products quality with biochips, which allow to minimize negative post effects on human health and environment after emergency situations of technogenic and natural disasters). In Russian experts' opinion, in a long-term prospect (up to 2025), creation of complicated intellectual systems of control (means of evaluation of risks and planning of measures for emergency situations overcoming in transport, communication and energy supply infrastructures; computer-based monitoring and forecasting of the most dangerous climatic events and geologic natural disasters and others), as well as bioinformation technologies, hardwear base and architecture of nanoelectronic devices will become extremely urgent. Along with identification of the most significant trends of technological development, experts specify spheres where new technologies may be used with maximum efficiency. Thus, for nanomaterials processing industry (strengthening coating in machine-building; polymeric materials with higher mechanical strength and chemical stability) may become the most advanced sphere, including production of new types of machines (crystal materials for infrared technology, spintronic and phototronic devices and others); transport *(crystal and nanostructured metal materials with improved structural and functional properties for aviation, space, vessels and automobiles construction); power engineering material that can be used in alternative energy sources, including solar batteries; portable fuel elements, hydrogen accumulators, electrochemical energy sources, thermoelectric sources of current, supercondensers); production and processing of natural resources *(catalysis with laid on nanoparts of non-ferrous metals in oil processing industry and others). Among tendencies, specified by the experts as key tendencies in a long-term period, it is necessary to mention radical enhancement of efficiency за traditional sources of energy (pure coal-fired electric power-plant; efficient technologies of hydrocarbon production of coal, gas vapor power generating units with efficiency factor over 60%), development of new technological solutions for nuclear power engineering (fast reactors with combustibles breeding, ring closure for uranium, plutonium, minor actinoids), utilization of unconventional energy sources (high-efficiency technologies of biomass gasification with obtaining of power gas, gasification of solid sanitary waste with further utilization

of generator gas in power units), energy-efficient technologies (design and construction of buildings energy consumption reduced in 2,5 – 3 times, electro energy accumulation systems up to 10 GJ and others). The above list of advanced tendencies of technological development comply to the world tendencies, has excellent market value and to some extent reflects technological stepping stones accumulated in the country. Realisation of innovation criterion of any branch of industrial structure demands new original solutions. Innovational activity also presupposes joint efforts in different spheres of activities. It means that branch or regional way of economy organization should be replaced by its structuring on the basis of innovation – installing clusters. The carrying-gut of a structural adjustment program requires also shifts in the investing emphasis (share of expenses for modernization and reconstruction in developed countries is 70–90% from total volume of capital investments), as well as sectoral structure of investments, performing through the interindustrial and international mobility of capital (3). The latter provides redistribution of investment flows between branches and inside of corporate giants in favor of advanced industry sectors (production units) and waiving from investing into structurally-depressive types of activity. This process is carried out through the diversification or stock channel, for example, in the form of fresh issue of equity shares. The international mobility of capital in terms of structural transformation maintains the solution of such problems, as creation of transnational corporations, international strategic alliances, other global entrepreneurial networks or growing-in the composition of already functional associations for the purpose of joint use of existing potential and competence; level recession of nonequivalent exchange of the country in the world markets of knowledge-intensive products, technologies, and intellectual services.

5. STATE POLICY OF STRUCTURAL MODERNIZATION

Programs of structural adjustment are to be supported with appropriate state regulatory mechanisms, specific attention, in our opinion, should be paid to the following aspects: creation and underpin of demand for upcoming sector products, practicing of government orders, price subsidies and selective customs regulations are to be employed; managing of capital depreciation process for increasing of investment possibilities of enterprises using their own capital; currency exchange control enhancing for accumulation of foreign currency in the country that can be used for structural modernization; enhancing of governmental control of profit distribution of enterprises that are fully or partially owned by the state and to convert it to investments inside the country according to the selected national priorities; concessional taxation of income used for modernization, reconstruction and innovation development of production; concessional taxation of priority sectors enterprises using selective easing of interest rates and creation of preferential conditions for raising credits for investments that are to be used for new products production start and advanced technology implementation; support of innovation business through governmental insurance of investments risks in high-technology sectors; indication of limits for credit resources allocated for priority sectors financing, violation of which might result in drop in of their refunding. Solution of the problem of modernization and technical upgrading of Russian economy, due to its extreme underdevelopment, could be ensured only with investments that are significant in amount and of long pay-off period. However, enterprises of raw material business are more advantageous for investors as they have their own significant investment potential, while most of processing industry enterprises have no own capital for development and external investments in the conditions of current economic policy make the field of low-profit and high-risk allocation of capital. This results in currently existing structure of investments, where in processing industry 14,5% of total amount of investments goes to the fixed capital. The similar situation exists for foreign investments, which make about one half of internal amount of investments (8). The structure has not changed in condition of the recession, when the major state support was directed to financial sector, fuel and energy complex. Selection criteria for processing industry

enterprises were not so much prospects of their development, but social factors that related to employment of people. That means that in the nearest future, extremely low level of investments in sectors not related to the export of material and energy resources, will signal and result to a slump in material and technical base of these sectors due to disposal of equipment reached the service life end and further reduction of competitive ability due to lack of possibilities for renovation in production. That will result in production volume reduction in processing sector and necessity to replace the increasing deficit of these products by import that will lead to the load on foreign balance of the country. Drop in production can not but will cause unemployment and reduction of incomes of population. There are several other disquiet aspects. Unlike the experience of economically developed countries, where government support is targeted and spotted, in Russia it is preferred that such support is made by "a huge front", without connection of such events to the priorities of structural modernization of the economy. At the same time, in our opinion, post-recession restoration of economy should be implemented with the consideration of new requirements, new goals of development, scientific and technical achievements. It is reasonable to study experience of structural modernization of economy in France, where in post-recession period within the frame of the "goullisme" program, the state very efficiently redistributed funds of traditionally highly remunerative production sectors to new, but the most prospective ones. In conditions of current crisis state authorities of the USA, China and some European countries create domestic demand for advanced businesses products and grant tax concession. In Russia the different way has been preferred: "In contradistinction from the Western countries, namely from America, we do not use the sector principle, the support is provided not to the sectors of economy, but to enterprises", V. Mironov, senior economist of the Research Centers of Development, has explained. "In conditions of great technological changes, which accelerate during crisis, sectors of economy are not the proper object for governmental support of any kind". It is much more correct to focus on enterprises, to range them as "strong", which showed rise of production efficiency in pre-crisis period, "medium-successful" and "go-behind". Developing further his idea, Mr Mironov mentioned that government support would be provided not only to strong and medium-strong players, the outsiders are to be helped to disappear from the market to give place for viable enterprises and not to create negative added value. In our understanding, such approach to selection of objects for government support leaves a little hope, that the problem of structural modernization of economy will be solved, first of all, and that is absolutely obvious, that in the list of "strong" enterprises there will be a lot of processing industries entities. Finally, the conclusion made regarding the abilities of enterprises to produce added value is not clear, being "weak" due to their technical delay, in reality machine-building plants after technical re-equipment, will be able to produce larger added value compared to the "strongest" metallurgy industry enterprises. However, as the experience of developed countries show, formation in the country of full-valued national innovation system (NIS) should become the major trend of the state policy; this system must insure natural inbuilt of innovation process to progressive advance of economy and society. In despite of national differences of models of NIS, leadership of government is the uniting feature for all of them, state power ensure three major priorities: development of science, development of education system, development of knowledge-intensive production. Whereby, government should play an active role in identification of priorities in scientific and technical development, in support of fundamental researches, motivation of business activity in innovation sphere, protection of intellectual property, reforming of education system. As for stages of applied Research and Advanced Development (RAD) and commercialization of pioneer works, the priority in this sphere is to be given to private companies. Innovation system efficient functioning is possible only when its components, namely, governmental policy, legal base, education and industrial production, market and infrastructure are aimed for creation of favorable environment for working and development of the major sub-system, sub-system of knowledge generation and distribution. Strategic reference points of NIS functioning and development are set up by priorities of scientific and technical development, that allows not only to overcome atomism of limited

resources for development, but to connect them with the appropriate priorities in real production. Accordingly, significance of feasible identification of priorities of technological development will be more sound. Taking this into consideration, in 1993 the National Council for Science and Technologies with the federal agency status was founded in the USA by the Executive Order of the President. The major objective of this agency is to identify and lay down in a very clear format, national goals and priorities for state investments in the development of science and technology. Similar governmental authorities have been found in European countries: Technology Assessment Board in Germany, Science and Technologies Select Parliamentary Committee in France, National Scientific-research Board in Island, Committee for Scientific Policy in Finland. European Parliament has adopted the Resolution on creation of European Parliament Committee for Examination and Selection of Priorities in Science and Technologies. The majority of countries issue "white books" to reflect priorities of their national innovation policies. On this basis, for more balanced approach in identification of technological development priorities in Russia, which has limited resources for innovation development, it necessary to establish a state agency functioning on a continuing basis, in contrast to groups of experts that are gathered from time to time. Such agency should study this question using constant monitoring of forecasting of situation if science, technologies and geo-economy.

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RENEWABLE ENERGY SOURCES IN THE FUNCTION OF ACHIEVING COMPETITIVE ADVANTAGES AND SUSTAINABLE DEVELOPMENT OF THE REPUBLIC OF CROATIA AS A TOURIST DESTINATION: ANALYSIS OF EUROPEAN EXPERIENCES[10]

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Abstract

Preservation of natural resources represents one of the key development factors of a competitive tourist offer. Modern tourist devotes greater importance to tourist destinations which base their development on sustainability factors. Renewable energy sources in the Republic of Croatia have still not been represented, in spite of their great potential. The Republic of Croatia, as an accessing country to the European Union, is facing a great task - to increase the share of using renewable energy sources until 2020. As an accessing country, the Republic of Croatia has to adapt to the European Commission's laws and regulations, and transfer and implement them in its legislation, among other, in the field of sustainable development, increase in the use of renewable energy sources, preservation of environment, and tourism development. Using renewable energy sources in tourism will enable achieving competitive advantages and positioning the Republic of Croatia as an ecological tourist destination on the European and international market.

Key words: *renewable energy sources, sustainable development, Croatian tourist offer, EU*

1. INTRODUCTION

Lately, great emphasis has been placed on upholding sustainable development principles with the goal to preserve natural resources and protect the environment in order to ensure successful and undisturbed development of a competitive tourist destination and tourist offer. Ecologically acceptable renewable energy sources play a great role in this process. They also demand greater investments; however, their long-term use justifies the invested resources. They represent the key guideline of future sustainable development and are one of the basic elements for successful diversification of the Croatian tourist offer in relation to the competing countries, considering the fact that modern tourists have developed ecological awareness and show increased tendency of staying in ecological tourist destinations. The use of renewable energy sources will result in a significant decrease in the use of fossil fuels, the sources of which have been disappearing, and emission of greenhouse gases will be

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reduced. The greenhouse effect leads to significant climate changes, which pose a direct threat to the tourist offer of the Republic of Croatia as a tourist destination.

2. BASIC FEATURES AND THE ROLE OF RENEWABLE ENERGY SOURCES

Renewable energy sources have been known from ancient times. The use of some renewable energy sources (for example, wind energy by using windmills and water energy by using mills) was not as frequent, but in the past few decades, renewable energy sources have rightly taken their place in the world economy. Their role in the world energy production has been on the rise daily.

Renewable energy sources are classified into: water energy, wind energy, solar energy, bio-mass and geo-thermal energy.

Water energy (http://energetika-net.com/skola/oie/energija-vodenih-tokova) originates from several sources. Solar energy causes water movement in nature, which provides the energy of water flows (rivers and creeks), and waves, which was once used for providing mechanical work in the water-mills and it is presently used for obtaining electric power in various hydro-electric power plants. The term energy of water flows or hydro-energy includes all the possibilities for obtaining energy from the water flow in nature: from inland waterways (rivers, creeks, channels, etc.), from tides (high and low tide), and from the sea waves.

Wind energy (http://energetika-net.com/skola/oie/energija-vjetra) is based on wind as a horizontal component of air masses circulation which originated from the differences in temperatures, i.e. spatial distribution of pressure. Wind is a consequence of solar radiation, and local factors have a great impact on its characteristics. Obtaining electric power is enabled by the functioning of wind farms and the wind.

Solar energy (http://energetika-net.com/skola/oie/sunceva-energija) is a renewable and unlimited energy source from which, directly or indirectly, originates the largest share of other energy sources on Earth. Solar energy in the strict sense of the word implies the quantity of energy transmitted through solar radiation, and is expressed in joules (J). In its original form, solar energy is most frequently used for transformation into thermal energy for the preparation systems of hot water consumption and heating (in the European countries mostly as an additional energy source), and in solar power plants, while photovoltaic systems are used for the transformation into electric power. Solar energy may be used in its original form, i.e. actively (direct transformation into thermal or electric power) and passively (by adequate construction of buildings – glass surfaces, adequate room layout, etc.)

Bio-mass (http://energetika-net.com/skola/oie/energija-biomase) is a fuel obtained from plants or parts of plants such as wood, straw, cereal stems, shells, etc. Bio-mass is a renewable energy source, and it is generally classified into wood-, non-wood- and animal waste, and this may imply: wood bio-mass (fast-growing trees), non-wood cultivated bio-mass (fast-growing algae and weeds), leftovers and waste from agriculture, and animal waste and leftovers. Its application in the energy production has been stimulated while upholding the principles of sustainable development. Wood mass is used most frequently, derived as a by-product or waste, and leftovers which can no longer be used. It is used as fuel in the production plants for electric and thermal power, or is processed into gaseous and liquid fuels for application in vehicles and households.

Geo-thermal energy (http://energetika-net.com/skola/oie/energija-okolisa/geotermalna-energija) in the strict sense of the word implies only a part of the energy from the depths of the Earth which reaches

the surface of the Earth in the form of hot or warm geo-thermal medium (water or steam), and can be used in its original from (for bathing, healing, etc.), or for transformation into other forms (electric power, heat in the heating systems, etc.)

The above-described renewable energy sources have had a positive effect in their application in tourism and the hotel industry, despite the fact that initial investments for their application require significant financial investments. The invested resources will, over a certain time period, pay off through energy savings, protection of the environment, increase in the interest of ecologically aware tourists who are inclined to stay in ecological destinations, and improvement of the market position of the respective tourist destination on the tourist market.

The following effects of certain forms of renewable energy sources have been recorded (Granić, G. et al., 2005):

- wind: increase in windmill construction leads to the growth in power units and decrease in investment costs.

- bio-mass: applicable in electric power production, heating, and traffic, with achievements in the technological progress.

- sun: increase in the in-built collectors with the average annual growth of 13%, and in solar cells of 27%. The dominant construction technology of solar cells consists of use of silicon, with constant growth of new ideas, as for instance, the utilisation of amorphous rather than crystal silicon, cells in copper-indium-gallium-selenium (CIGS), dye-sensitized solar cells, and flexible solar cells.

- geo-thermal energy: growth in capacity of 44% for the previous period, in electric power production of 48%, in thermal capacities of 76%, in space heating production of 70%.

- small hydro-power plants: constant growth in production with minimal changes in technological development.

About 19% of the total world energy is obtained from renewable energy sources, but most of this energy is obtained from the traditional renewable sources. Although new renewable energy sources produce only 2,7% of the total world energy, they represent a significant potential for future development of renewable energy sources (http://www.ecofutura.ba/index.php/bs/component/content/article/43-energija/106-podjela-obnovljivih-izvora-energije.html). The above-stated facts speak in favour of development of renewable energy sources use, whose application will reduce the emission of greenhouse gases, and stimulate the use of domestic energy sources, which will result in the reduction of import of raw materials and energy sources, and development of domestic economy and tourism as its leading industrial branch.

3. RENEWABLE ENERGY SOURCES IN THE FUNCTION OF ACHIEVEMENT OF SUSTAINABLE DEVELOPMENT IN TOURISM

As a Mediterranean country, Croatia has over 1000 islands, a preserved coastline, cultural heritage and preserved ecological resources. Because of these characteristics, Croatia has great potential for development of selective forms of the tourist offer, while, on the other hand, sustainable tourism development is threatened by mass tourism, which is, along with increasing climate changes, one of the most significant obstacles for sustainable development. The tourist market is turbulent and records changes in tourists' attitudes and preferences daily. Over the years, tourists started devoting more

attention to sustainable development, preservation of the environment, health care, and staying in ecological tourist destinations. Renewable energy sources represent a great advantage and a challenge for development and improvement of business operations in modern tourism and the hotel industry.

Energy savings, which are achieved through the use of solar systems, amount to 30% for the heating support system, up to 90% for consumable hot water heating systems. The use of thermal energy from the solar system does not only contribute to positive energy balance of the Republic of Croatia, but also provides personal financial gain for every individual. Tourist facilities (small family hotels, apartments, villas, camps, facilities with pools...) which spend great amounts of electric power in the summer are one of the most favourable places for the use of solar energy to prepare hot water consumption, because the needs for hot water and availability of solar energy match perfectly. 75% of yearly sunshine is between the months of May and October. A small solar system, consisting of 2 to 4 m^2 of the collector surface and a water tank of about 200 to 300 litres, is sufficient for a weekend cottage. However, it is also profitable to install a larger system, of, for example, 10 to 12 m^2 of the collector surface with the tank of 750 to 1000 litres. Such system could accumulate enough energy during the winter to be adequate for connecting to the central heating system, which reduces the heating bill. By installing the solar system, it is possible to achieve significant savings in the use of primary energy sources, and become more competitive on the market because of reduced input costs for energy sources. Greater electric power consumers for water heating and heating in general will achieve financial savings on the level of the value of the investment made into the solar system in a short period of time (5 to 7 years). The average investment value for heating of hot water consumption in a family house is about 30,000 kunas, while in exclusive tourist villas, the total coverage of efficient under-floor heating, ceiling cooling, hot water preparation and pool heating with solar support represents an investment value of about 300,000 kunas (Krasnić, 2011). The above-stated facts clearly prove success of application of renewable energy sources in tourism and the hotel industry. Their use will result in the preservation of natural resources and reduction of business costs.

4. AN OVERVIEW OF CROATIAN LEGISLATION IN THE RENEWABLE ENERGY SOURCES FIELD

In the framework of the accession process of the Republic of Croatia to the EU, the total concept of energy sector reform is synchronised with the EU requirements through legal and institutional framework, taking into consideration specific national solutions. With the goal to provide a detailed overview of Croatian legislation in this field, numerous screening meetings have been held in Brussels in relation to the Chapter 15 "Energetics" and great efforts have been made, especially by the Ministry of Economy, Labour and Entrepreneurship, as a government administration body competent for the field of renewable energy sources, in order to synchronise the legal and institutional framework of the Republic of Croatia with the acquis communitarian of the EU. In the process of reforming the Croatian energy sector, development and utilisation of renewable energy sources are ensured by the following laws and directives (http://www.hro-cigre.hr/hrv/downloads/sr2/Predragovic%20Luka_diskusija%20za%20SR%2013_01_2011-Treci%20paket%20EZ%20i%20Zakon%20o%20OIE.pdf):

- Energy Law (Official Gazette No. 68/01, 177/04, 76/07, 152/08)
- Law on Electricity Market (OG No. 177/04, 76/07, 152/08)
- Law on Regulation of Energy Activities (OG 177/04 and 76/07)
- EU Directive: 2001/77/EC (in force until the end of 2011)

- EU Directive: 2009/28/EC (in force from 2012)

The Energy Law and Law on Electricity Market generate five competent by-laws (rules and regulations) which regulate the use, rights and obligations, stimulative measures, and organisation and institutions relating to implementation of renewable energy sources in the field of energetics, construction, urban planning, concession, water resources and ores, environmental protection, protection of nature, trade and other aspects of project development from the renewable energy sources fields (http://www.menea.hr/hr/component/attachments/download/18.html). These are the next by-laws (http://www.eihp.hr/hrvatski/zakoni_propisi.htm; http://oie.mingorp.hr/default.aspx?id=51):

- Regulation on fees for the promotion of electric power from renewable energy sources and cogeneration (Official Gazette No. 33/07, 133/07, 155/08, 155/09, 8/11) -

  adopted by the Croatian government, based on the Energy Law, this Regulation regulates the manner of use, amount, calculation, collection, distribution and payment of the compensation for stimulating electric power production from the plants using renewable energy sources and from cogeneration plants.

- Regulation on minimum share of electric power produced from renewable energy sources and cogeneration, the production of which is stimulated (OG 33/07, 8/11) -

  adopted by the Croatian government, based on the Law on Electricity Market, this Regulation regulates the minimum share of electric power produced from plants which use renewable energy sources and from cogeneration plants.

- Tariff system for electric power production from renewable energy sources and cogeneration (OG 33/07) -

  adopted by the Croatian government, based on the Energy Law, this Tariff System regulates the right of eligible electric power producers to a stimulative price paid by the market operator for the delivered electric power produced from the plants which use renewable energy sources and from cogeneration plants. This law prescribes tariff items, and tariff rates for electric power producers from the plants which use renewable energy sources and from cogeneration plants.

- Regulation on the use of renewable energy sources and cogeneration (OG 67/07) -

  adopted by the Ministry of Economy, Labour and Entrepreneurship, based on the Energy Law, this Regulation establishes the RES and cogeneration plants used for energy production, and prescribes the terms and possibilities, and other significant issues for the use of renewable energy sources and cogeneration plants. The same Regulation also prescribes the form, content and manner of keeping the Registry of Projects and Plants for using renewable energy sources and cogeneration, and eligible producers.

- Regulation on granting the status of eligible electric power producer (OG 67/07) -

  adopted by the Ministry of Economy, Labour and Entrepreneurship, based on the Law on Electricity Market, the Regulation prescribes the terms for granting the status of eligible electric power manufacturer, which may be acquired by the project manager or a producer who produces both electric and thermal power at the same time in a production facility, and who uses waste or renewable energy sources for electric power production in an economically adequate manner, synchronised with environmental protection requirements.

Directive 2001/77/EC has been transferred into Croatian national legislation entitled „Promoting electric power produced from renewable energy sources in the internal electric power market", adopted on September 27, 2011. In accordance with this Directive, Action Plan for Renewable Energy Sources until 2020 has been prepared, and the Republic of Croatia was obliged to compose it in the framework of negotiations in the Chapter 15 "Energetics".

In relation to Croatian goals until 2020, and the new Directive 2009/28/EC, adopted by the European Parliament and Council on the promotion of using the energy from removable energy sources, it is important to point out that it will be implemented in Croatian legislation through future amendments of legislation and implementing regulations for renewable energy sources. The new Directive 2009/28/EC "Promotion of the Use of Energy from Renewable Energy Sources" dated April 23, 2009 cancels or amends the existing Directives (2001/77/EC, 2003/30/EC i 2003/54/EC), which had an impact on the existing legal solutions (http://europa.eu/legislation_summaries/energy/renewable_energy/index_en.htm). Some provisions of the Directive 2009/28/EC have already been implemented into the Action Plan for Renewable Energy Sources until 2020, which shall determine long-term perspective until 2020, with the estimate for 2030, as well as the plan of activities for the development of renewable energy sources infrastructure in the Republic of Croatia for the EU goals concerning climate changes and renewable energy sources for 2020. The goals of the new Directive 2009/28/EC are: increase in energy efficiency; stimulation of local and regional development; improved development of energy market from renewable energy sources; reduction of the emission of greenhouse gases and independence of energy import; decentralised energy production; legal clarity of the provisions of the Directives and the Energy Law; use of waste materials and other biological materials on farms for the production of bio-gas; use and stimulation of other forms and purposes of renewable energy sources, not only electricity; training for architects, planners and installers and their certification for renewable energy sources and building; simplification of regulations on building and environmental protection; simplification and easier availability of renewable energy sources to the internal energy market, and connection to public networks, etc.

5. FUNDS AND FINANCIAL SUPPORT FOR THE INTRODUCTION OF RENEWABLE ENERGY SOURCES

In accordance with the Energy Development Strategy of the Republic of Croatia, adopted in 2009, the Croatian energy system has been fully incorporated into the EU energy system and the energy system of South-Eastern Europe. An open system enables energy market development and an increase in competitiveness, attracting domestic and foreign investments in energy market activities, synchronisation of future strategic energy projects development and economic co-operation with the neighbouring countries. Croatian government will lead an active policy since energetics provides special opportunities to the stakeholders that clearly define their position and interests, and implement them consistently and without delay. In order to increase the supply safety and positive external effects of investments in energetics on economic growth and development, investments in facilities on the territory of the Republic of Croatia shall become a priority (Energy Development Strategy of the Republic of Croatia).

Republic of Croatia imports over 50% of primary energy. Although import of oil and petroleum derivatives is expected, a reason for concern is the figure concerning the import of electric power which exceeds 35% of today's electric power consumption. However, a significant share of electric power may be saved by using solar systems for support to heating in general and heating of hot water consumption. Solar water heating system consists of a solar collector which is placed on the roof, and

other corresponding places in the facility. Installation of such a system is possible in virtually all facilities and does not require extensive construction works (Krasnić, 2011).

The best possibilities for using renewable energy sources, taking into consideration competitiveness and a possible contribution to national energy balance in the field of thermal energy are bio-mass heating plants and thermal solar collectors, and in the electric power field, wind farms and bio-mass cogenerations. Other renewable energy sources technologies are, for example, geo-thermal plants for the production of thermal energy, small hydro-electric power plant and photovoltaic systems for the production of electric power, while possibilities for using liquid bio-fuels in traffic are somewhat smaller.

The original goal of the Republic of Croatia was to realise 5,8% of the total energy consumption from renewable energy sources by 2010, while in the total consumption of motor fuels, 5,75% would be manufactured from bio-fuels. Furthermore, until 2020, the share of renewable energy sources should have amounted 20,3%, and the share of bio-fuels in the total consumption of motor fuels 10% (http://www.gradimo.hr/Obnovljivi-izvori-energije-u-Hrvatskoj/hr-HR/8947.aspx).

The set goals have not been achieved, and the Croatian government has prescribed the new minimum share of electric power from renewable energy sources and cogeneration for 2020. The Regulation prescribes that the minimum share of electric power from renewable energy sources and cogeneration, the production of which is stimulated, shall amount 17,6% by December 31, 2020, out of which 13,6% from renewable energy sources and 4% from cogeneration plants (http://www.mojaenergija.hr/Aktualno/Vijesti/Hrvatska-i-regija/Minimalni-udio-obnovljivih-izvora-energije-u-Hrvatskoj-2020.-godine).

5.1. Financing of renewable energy projects

Market potential for renewable energy sources projects in Croatia is great and constantly on the rise, which is especially contributed by continuously rising prices of energy, import of energy, supply safety, accession to the EU, fulfilment of international obligations (EU directives, the Kyoto Protocol), increasing awareness of the necessity of sustainable development on all levels (environment, climate changes), as well as domestic industry, possible new workplaces, possibilities of more significant growth of the BDP, macroeconomic policy, etc.

In order to realise the planned values, it is necessary to ensure additional financing level and financing sources, to define legislative, administrative and institutional framework, and define organisation and market environment. The possible sources of financing in Croatia are numerous. Budgetary expenditure for renewable energy sources may be allocated for financing (national, local, regional), dedicated funds (Environmental Protection and Energy Efficiency Fund), state grants to the manufacturers of equipment for using renewable energy sources; for example, Tariff System for Electric Power Production from Renewable Energy Sources and Cogeneration, (OG 33/2007). Except for domestic sources, also available are deed of donation and other international assistance programmes (GEF's deed of donation for financing the preparation of renewable energy sources projects and GEF's deed of donation for development of energy efficiency projects, as well as UNDP energy efficiency projects.

Croatian Bank for Reconstruction and Development has developed special credit lines – Loan programme for financing the projects of environmental protection, energy efficiency and renewable energy sources; Zagrebačka Banka and Privredna Banka Zagreb offer their „green" loans for increasing energy efficiency of facilities. Also important are the EU programmes – IPA, FP7, IEE, and

other forms of financing through energy services (ESCO), third party financing, public-private partnership, etc.

5.2. The role, financing sources and criteria of granting funds of Fund for environment protection and energy efficiency

This fund, based on the Law on Environmental Protection and Energy Efficiency Fund was constituted on the basis of the Environmental Protection Act and the Energy Law, and it is the first and only extra-budgetary fund earmarked for the financing of projects, programmes and measures of environment protection, management of special waste categories, energy efficiency and renewable energy sources. Funds are collected through dedicated revenues from fees by the pollutants (CO_2, SO_2 and NO_2 emissions), compensation for waste disposal in the environment (non-dangerous and dangerous waste, industrial waste, special categories of waste - packaging waste, waste tires, electrical and electronic waste, used oil, vehicles, batteries, accumulators), and special environmental fees for motor vehicles. Fund resources are allocated to the users on the basis of a public tender announced by the Fund, and are granted to local (regional) self-government units, companies, craftsmen, and other legal and natural persons. Fund resources are granted in the form of loans, interest rate subsidies, financial aids and donations. It is important to note that companies and other private-legal persons qualify only for loans and loan interest rate subsidy approved by commercial banks (the so-called „green loans").

Criteria for allocation of fund resources are classified into general and special criteria. General criteria determine the manner of financing of the user, so that local self-government units are co-financed in the areas of special state concern to 80%, hilly and mountainous and island area up to 60%, and in other areas up to 40%. Other legal and natural persons are financed to the amount of 40% of the planned investment (interest rate subsidies of up to 1,0 million kunas at most, and loans up to 1,7 million kunas). Special criteria are preparation level of the project, degree of favourable impact on the environment and energy efficiency, the quality of the offered technical solution, level of endangerment of the environment, financial capacity of the user of investment funds, and refund if it is stipulated in the contract (http://www.fzoeu.hr/hrv/index.asp?s=ofondu&p=iskaznica).

The research fields of the Fund are the following – Energy Efficiency; Renewable Energy Sources; Industry; Service Sector and Public Sector – public lighting, fuel substitution, using waste heating; Energy Audits and Demonstration Activities; Cogeneration Facilities; Centralised Heating Systems, Buildings/Sustainable Construction – low-energy and passive facilities, installation of the new and/or substitution of the existing materials, components and devices; application of renewable energy sources; Cleaner Transport - organisational and technical measures, using of alternative fuels, procurement of EURO 5 vehicles; Solar Energy – thermal solar collectors, photovoltaic systems; Wind Energy – project development and construction; Bio-Mass Energy – co-generation, heating, bio-gas, solid bio-fuels (charcoal, briquettes, pellets) and liquid bio-fuels (bio-diesel, bio-ethanol); Energy from Small Waterways – project development and construction; Geo-Thermal Energy – project development and construction; Other Renewable Sources – energy of gas from dumpsites or sewage treatment plants (see table 1) (http://www.fzoeu.hr/hrv/pdf/PRAVILNIK_sredstva_fzoeu_.pdf).

For renewable energy sources projects 50,631,802 kunas was granted, while only 23,297,034 kunas was paid, which indicates insufficient dissemination of information in the local community on the possibilities of funds as assistance in the financing of renewable energy sources introduction.

HRK (Croatian kunas)	Granted	Paid
Improvement of Energy Efficiency (78)	58.995.802	33.149.754
Using of Renewable Energy Sources (39)	50.631.802	23.297.034
Sustainable Building (9)	7.300.976	5.024.665
Cleaner Transport (3)	355.865	129.005
Energy Audits and Demonstration Activities (118)	3.665.710	3.100.201
Education, Research and Development Studies (50)	4.777.072	2.696.169
Other Projects and Programmes (5)	21.750.000	8.117.015
Total RES and EU projects (303)	**147.477.227**	**75.513.843**

Table 1: Investments of the Renewable Energy Sources Projects Fund and the EU (2004- 30/09/2008)

Source: http://www.sumari.hr/biomasa/urhsisak2008/4-1SculacDomac.pdf

6. AN OVERVIEW OF EXPERIENCES OF RENEWABLE ENERGY SOURCES INTRODUCTION IN TOURISM OF THE SELECTED EU MEMBER STATES

European Union has developed its energy policy by adopting „Green Papers and Strategic Energy Reviews" in order to improve the agenda on sustainability, competitiveness and safety of energy supply. Establishment of the internal energy market, energy savings, insurance of successful and undisturbed energy supply are only some of the factors for achieving competitiveness. The share of renewable energy sources in 2008 amounted 10% of the total consumption of energy sources in the EU Member States. In 2009, 62% of newly installed electricity capacity in the EU originated from renewable sources, mainly wind and sun (http://europa.eu/rapid/pressReleasesAction.do?reference= SPEECH/11/441). The above-mentioned facts indicate successful application of renewable energy sources in the European Union Member States, and the fact that Croatia is facing a demanding task: full synchronisation with the standards and energy policy set by the European Union in relation to renewable energy sources introduction. Below are the examples of successfully implemented renewable energy sources projects in tourist destinations of the EU Member States. The stated examples are the islands of Sicily, Sardinia, Cyprus, Corsica and Crete (http://www.tourisminnovation .eu/index.php/downloads/cat_view/50-produced-documents).

Sicily is an autonomous Italian region and the largest Mediterranean island (surface of 25,799 km^2 inhabited by 5,1 million people), located in Southern Italy. The economy of the island of Sicily is mostly based on agriculture, fishery, industry and tourism. During the 1970's, the island was affected by migrations of a great part of the population to the United States of America and Europe, which caused lack of labour force and investments of local entrepreneurs. Sicily still suffers significant unemployment rate of 20%, and lack of specialised experts. From the energy point of view, 70% of electric power originates from fossil fuels and 30% from renewable energy sources (mostly from hydro-electric power plant). However, the potential of renewable energy sources is still great, thanks to geographical characteristics and the Etna volcano which is the largest volcano in Europe. A great part of the island is on the UNESCO's list of natural heritage. In terms of renewable energy sources, Sicily is an area with a significant innovative project – production of renewable energy from the force of waves. The electric power system produced by waves has been tested in the Messina Strait, where

water density (by which also electric power production) is up to 800 times higher than the force of wind. Unlike wind, wave energy can in most cases be predicted, which is a significant advantage for the development of this form of renewable energy source. Results have been very encouraging so far, and the system has proved to be much more profitable than using wind energy. Implementation of this project has, among other things, stimulated significant tourist development, also because it is a pilot-project and attracts great attention of scientists who regularly visit the island, thus contributing to renewable energy sources development.

Sardinia is an island of 24,090 km^2 inhabited by 1,655,677 people, which acquired the status of an Italian „autonomous region" in 1948. Sardinia has very significant geological characteristics because it originates from a part of the oldest rocks in Europe, while the climate is typically Mediterranean with mild temperatures. In 1994, the Magdalena Archipelago with its 180 km^2 of the coastline was classified as a seaside eco-park. As for island economy, the primary sector holds 33% of the total economy, the secondary sector 19%, and the tertiary sector 48%. The tertiary sector is mostly comprised of tourist services, and employs 60% of the local population. Tourism realises 7% of the national product which has caused, among other things, construction of a series of hotel chains, especially in the southern part of the island. About 10 million tourists visit Sardinia every year, and the most significant tourist months (recording arrivals of 80% of the tourists) are July and August. Although it has various economic activities, Sardinia records high unemployment rates (about 12%), mostly in the youth population (about 22%), which leads to emigration of the youth, especially from the inner part of the island. As for energy, the most significant energy source is oil. In order to avoid using this fossil fuel, a project was designed to use renewable energy sources so as to take into consideration specific energy needs and energy resources of each island area separately. Development of renewable energy sources in Sardinia was stimulated by the European Union through development of thermal pumps in order to fulfil the energy needs of the local community. For example, energy obtained through burning of the bio-mass is used for the heating of schools, offices and local homes, companies, farms, and camps, and bio-fuel for transport. It is interesting that small wind farms attracted significant interest of local investors, since investment costs and visual pollution of the environment are nominal. Development of this project has significantly stimulated the synergy between thermo-electric power plants and hydro-electric power plants because water serves for maintaining the maximum efficiency of thermo-electric power plants.

Cyprus is an island in the vicinity of Turkey, Syria and Lebanon inhabited by 820,000 people, covering the surface of 9,251 km^2. Development of island economy and growth of the living standard has been aggravated because of the geo-political problems which unfolded throughout the history of this island. The most significant negative impact on the life of local inhabitant's occurred in 1974, when Turkish armed forces had invaded the island, which resulted in the occupation of a strategically important part of the island. When the Republic of Cyprus joined the European Union, in May of 2004, it used significant benefits obtained through the EU cohesion funds which are oriented to increasing the use of renewable energy sources. Its geo-morphological elements, climate, local natural sources and way of life have influenced the fact that renewable energy sources have been developed differently in certain regions, which has resulted in different and unsynchronised energy strategies. In the areas marked by delicate ecosystems and historical monuments, only slight interventions in space are possible in order to avoid visual saturation of the space. In the areas with luxurious tourist attractions, application of renewable energy sources has been conducted through solar energy used for vehicles on golf courses, while in more distant areas, bio-mass was adapted to be used in households.

Corsica is a French island with the surface of 8,680 km^2 inhabited by 279,000 people. The island has a long tradition and history. The altitude of the island is 2706 metres, and the coastline extends to 1000

km. The island has numerous renewable energy sources and many protected natural parks. The island is often at risk of fire, which is especially caused by climate changes. Corsica has several airports and great diversity of the production sectors; thus, the primary sector makes 5,3%, the secondary sector 15,3%, and the tertiary sector 79,4% of island economy. Local entrepreneurial activity is very powerful, often based on family manufactures. Energy needs on Corsica are great and there are attempts to fulfil them by applying renewable energy sources projects. Some of these projects greatly contribute to achievement of sustainable tourism development. For example, in 1998, a German company started building the second wind energy park (the Calenzana Park) on the island, and its building was not finished until 2003. Today, there are 10 wind farms on the island with the total installed capacity of 6MW, which is especially significant during tourist season when there is significant expansion of energy consumption. Total investment amounted more than 5 million euros, and was not subsidised by the French government. Realisation of the project was aggravated by geo-morphological characteristics of the island (transport of material to the construction site of the wind farms), but also by the lack of understanding of the local community because of bad experiences with the first wind farms installed on the island, as well as outdated French legislation. Presently, wind-farms serve, except for fulfilling local needs for power, as a confirmation for a successfully managed project. European students visit the faculty of the University of Corte while they attend summer school (http://www.univ-corse.fr/presentation-organisation-administrative-service-de-la-communication-et-de -l%27evenementiel-service-evenements-campus-d%27ete_920.html).

Crete is the second largest island of the Mediterranean Sea with the surface of 8,335 km² inhabited by 650,000 people. It is a mountainous island, full of olive groves and vineyards, with high grounds of up to 2,452 m. Economy of the island is marked by the tertiary sector, which employs 80% of the island population. Mass tourism is a significant threat to the development of the island, which is indicated by the increase in the number of tourist arrivals between 1986 and 1991, an increase of 53%, while growth in the remaining part of Greece amounted to 25%.For example, 13,3% of the total number of visitors to Greece stayed on Crete in 2006 (http://portal.kathimerini.gr/4dcgi/_w_articles_kathextra_9_27/06/2007_195397). There are various selective forms of the tourist offer developed on the island (leisure time, religious, cultural, medical events, ecological tourism, etc.), which has also contributed to significant development of local traffic infrastructure (two international airports) and the accompanying facilities. Development of infrastructure has enabled improved connection of the island with the rest of Greece. Numerous scientists come to the island who, together with the local community, contributes to greater promotion of the use of renewable energy sources. There is a hotel on the island with one of the largest solar systems in Europe; its capacity is 275 beds. The surface of the solar collector amounts 2,358 m^2, which fulfils as much as 70% of hot water needs in the hotel (Waldmann, 2004). Except for this system, since 1999, a few more hotels started using the benefits of renewable energy sources, primarily by solar collectors which enable coverage of almost 10% of the hotel needs, which implies the daily load of 450-500kWH (Soursos, 2002). Greece has significant insolation of almost 3000 sun hours per year, and great possibilities of solar energy production, which is estimated to 1900 kWh/m^2 per year (Dascalaki & Balaras, 2004). The building sector realises significant energy consumption in Greece, which causes 40% of greenhouse gases. The very application of solar energy will ensure improvement of the standard of living of the local population and increase in the total quality of the tourist offer. On Crete, there are developed theme parks projects based on the application of renewable energy sources. The beginning of the use of renewable energy sources in theme parks is linked to Windmills Lassithy, built during the 1930s, with the goal to supply the neighbouring settlements with energy. This marked the very beginning of using the renewable energy sources. The wind mills triggered numerous negative reactions of the local population. Today,

however, they represent local tradition because the wind used to drive the mills in the past, and the wind mills, in fact, represent continuation of the tradition of Greek islands, and the local government has decided to use the windmills to provoke memories of the old mills and turn them into a great tourist attraction. This example clearly shows the synergy between the tourist offer and great possibilities provided by the use of renewable energy sources through the creation of theme parks.

The above examples indicate success of tourist destinations development through the use of renewable energy sources, the use of which has contributed to the increase in competitive advantages on the world tourist market, with continuous upholding of sustainable development principles.

7. PERSPECTIVES OF DEVELOPMENT OF RENEWABLE ENERGY SOURCES USE IN THE REPUBLIC OF CROATIA

Almost the entire energy demand in the world until 2050 could be settled from renewable sources such as wind, solar and geo-thermal energy with the purpose of obtaining electricity, for transport and heating. The assumption of obtaining 95% of the energy from renewable sources in the future originates from the study designed by the American fund WWF International and the Dutch consulting firm Ecofys. The share of oil, gas and coal, and nuclear energy in the global energy mix in the next four decades will be reduced to only 5%. It is stated in the study that estimations show that energy saving measures might reduce the total consumption by 15% in relation to 2005, even if the population, industrial production, conveyance costs and passenger traffic grow. This would demand 4,8 billion dollars of investments until 2035 in the modernisation of buildings, electric power network and expansion of wind farms and capacities for obtaining solar energy, and profitability of this initiative should be visible until 2040 (http://www.poduzetnistvo.org/news/do-2050-iz-obnovljivih-izvora-95-struje). Introduction and use of renewable energy sources represents a security against changes in the prices of oil and gas and climate changes, and this will be achieved by application of available technologies; and the technologies which will soon appear on the market. At the same time, the International Energy Agency (IEA), global umbrella energy organisation, estimates that it takes 33 billion dollars of investments in energy infrastructure until 2035 for the countries to fulfil international obligations in connection to reduction of greenhouse gases.

Improvement of energy efficiency and reduction of the emission of greenhouse gases are the goals also set by Croatia on the threshold of accessing the European Union. Namely, the EU wants to reduce the emission of greenhouse gases until 2020 by 20% in relation to 1990. Accordingly, Croatia plans to achieve the goal of energy policy by 2020 formulated as „three times 20%", i.e. to use the measures of energy efficiency to reduce emissions of greenhouse gases by 20%, reduce energy consumption by 20%, and to increase the share of renewable energy sources by 20%. Thus, Croatia will need to invest up to 10 billion euros until 2030. However, the question is posed how much of these resources, as well as great incentives for renewable energy sources production will remain in Croatia, and how much will end up abroad, so that foreign companies and scientists, instead of Croatian companies and scientists, will benefit the most from using Croatian national resources and incentives, which is an opinion of numerous experts. Great investments in renewable energy sources (of the total power of 1600 megawatts) are also predicted in the Energy Development Strategy of the Republic of Croatia in order to ensure its own additional energy sources and thus facilitate the fulfilment of consumption growth and reduce increasing dependence on import, as well as fulfilling of the obligation to reduce the emission of greenhouse gases from the Kyoto Protocol and the EU membership. However, the problem is that foreign, and often also domestic investors, mostly use foreign technologies and products because of the relatively modest offer of domestic technologies and products, and this is why

foreign companies profit from the largest share of these 90 million kunas of incentives. The example of Končar shows that Croatian industry is also interested to have its share in this great amount. Končar invests 80 million kunas in building of wind farms in the hinterland of Split in order to acquire the necessary references for placing its own technology on the domestic and foreign market. It should be pointed out that over 75% of wind farms is a domestic product. The interest for investing in renewable energy sources in Croatia is great, which is also confirmed by over 700 requests which the Ministry of Economy, Labour and Entrepreneurship has obtained from foreign and domestic investors. Until now, 512 requests have been processed, and investors are in the process of acquiring licences, or in the process of building already, and 25 of them are already functioning. Renewable energy sources also provide numerous economic benefits, such as initiation of development and innovations, production, employment, reduction of import, increase in export and others. For examples, only the building of 100,000 solar collectors would open about 2000 workplaces, and the same amount of thermal cranes using geo-thermal energy would ensure 1200 workplaces (http://www.poduzetnistvo.org/news/koliko-ce-od-10-milijardi-eura-ulaganja-ostati-hrvatskoj).

HEP also joined the sector of renewable energy sources. „HEP – Renewable Energy Sources" is one of the companies in the HEP Group which deals with developing renewable energy sources projects. These are primarily projects of wind farms, encompassing a defined series of possible projects. It is also involved in the development of projects of several bio-power plants, and one of the most important is the project of a power plant running on bio-mass in Velika Gorica as one of the 30 priority government projects.

European Commission's reports indicate that acceleration and modernisation of electric power network is necessary for all EU Member States, i.e. improved interconnectivity of electric power systems, as well as introduction of the so-called smart networks, management modernisation, securing of secondary back-up of the electric power system, as well as more efficient stimulation of renewable energy sources. It is recommended that the renewable energy sources projects be developed in co-operation with the local community so that it could also benefit from the project. It is necessary to train the employees in the public sector in order to accelerate, i.e. remove administrative obstacles which slow down the realisation of projects. The above-mentioned goals, i.e. action plans in general may also be transferred to the Croatian market in order to achieve the set goal (http://www.poduzetnistvo.org/news/do-2050-iz-obnovljivih-izvora-95-struje).

Below is a SWOT matrix which points to the importance of using renewable energy sources in tourism (see table 2).

STRENGTHS	WEAKNESSES
Preservation of the environment, biodiversity and distinctive features. Creation of an eco-destination brand. Improvement of the local population's living conditions. Ensuring pre-requisites for improved business environment. Differentiating the offer on the tourist market. Long-term profitability of the project.	Costly expenditures for building of the basic infrastructure. Profitability after longer period of use. Credit lines in the initial stage.
OPPORTUNITIES	THREATS

Financing of removable energy sources projects through EU cohesion funds. Stimulation of investments in renewable energy sources development through tax policy - exemption from duties. Strengthening of awareness of citizens and companies on the necessity to introduce renewable energy sources. Creation of special teams for renewable energy sources within companies - a legal obligation.	Lack of understanding of local and business community for renewable energy sources systems. Insufficient training of the staff. Low financial support. Insufficient use of the EU cohesion funds.

Table 2: S.W.O.T. Analysis of Using Renewable Energy Sources in Tourism Development

Source: authors' interpretation

The S.W.O.T. matrix shows that there are numerous advantages of introducing renewable energy sources. Introduction of renewable energy sources in business operations of the hotel industry, but also the everyday life of the local community, enables active participation of all interested participants in sustainable development of a destination. The tourist destination will preserve its distinctive features: climate, landscape, clean sea, and provide the visitors with a new and more fulfilled offer of green tourism which may also be defined as return to nature, which has lately been especially significant, taking into consideration general accelerated pace, alienation and stressful everyday life of tourists. It is an obligation of the bodies of national, regional and local government to ensure legislative framework for implementation of sustainable development measures and to stimulate by this legislation (through active political activities - tax policy) the use of renewable energy sources as the only one allowed in a tourist destination. Except for legislation (on paper), participation of the interested parties in the implementation and design of the renewable energy sources projects is also necessary, which will be financed from the EU funds and the Environmental Protection Fund of the Republic of Croatia. Also, it is necessary to stimulate banks, primarily to introduce „green" loans into their credit lines, and ensure co-financing of realisation expenses of the loan, in order for them to become more available for the local community.

Providing education to all participants in the decision-making process on the necessity to introduce renewable energy sources will accomplish greater engagement of local entrepreneurs, but also of natural persons in the promotion and introduction of these types of energies. In order to adopt a successful strategy of tourism development of each destination, including the Republic of Croatia, it is necessary to initiate the entire series of interdisciplinary activities through inclusion of experts from various fields – economists, engineers, geographers, landscape experts, constructors and others in designing sustainable and innovative renewable energy sources projects.

8. CONCLUSION

Renewable energy sources represent a very important developmental factor in an economy. In its energy policy, the European Union places great emphasis on the use of renewable energy sources (energy of water, sun, wind, bio-mass and geo-thermal energy). As a future Member State of the European Union, Croatia is facing a demanding task: full synchronisation with the standards and energy policy of the European Union. Croatian legislation in the field of renewable energy sources is designed on the basis of guidelines of European legislation, umbrella energy laws of the Republic of

Croatia, as well as by-laws in the field of renewable energy sources and co-generation. What is more, the entire concept of the energy sector reform has been synchronised with the EU requirements, within the limits of specific national solution, and there are continuous efforts to synchronise Croatian legal and institutional framework with acquis communitarian of the EU. Croatia is a country rich in natural resources, and as such has excellent pre-requisites for increasing the use of renewable energy sources, primarily in tourism and the hotel industry, which are one of the most important factors of development of the Croatian economy. Benefits of their use will be reflected in preservation of natural resources, reduction of emission of greenhouse gases, reduction of business costs as a result of a decrease in the import of energy and raw materials, and, consequently, development of Croatia as an ecologically desirable tourist destination.

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DIMENSIONS OF THE GENDER INEQUALITY INDEX

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Abstract

Worldwide, there are many inequalities between men and women. This paper examines the effort to standardize measurement of gender inequality by way of creating an innovative new gender inequality index (GII). The author's aim is to use the new GII for further analysis to show how to construct a valid and reliable gender index. The need to use multi-dimensional aspects in the construction of the index is strongly emphasized as a necessity to eliminate the severe data limitations. The object of interest is also to identify the strengths and weaknesses of the examined index. This paper uses GII as an indicator that shows largest and smallest losses in achievement in Central and Eastern Europe (CEE) countries. The analysis constructs a new composite index by extension of current index of another pertinent dimension and find out how the ranking of investigated countries will changed.

Key words: *CEE countries, gender inequality, GII, GDI, GEM, GPG, multidimensional approach*

1. INTRODUCTION

Efforts to implement the principle of equal opportunities for men and women have become largely a public issue. An increasing demand for equal treatment for men and women appears especially in the last two decades. Requirement of equality is mentioned by the European Union and other international institutions. The importance of the principle of equal opportunities is quite normal in the minds of people and the idea of the implementation of equal rights for men and women in all levels of society and economy has been gradually adopted.

The basic aim is to use such measures and policy instruments, which contribute to greater equality and equal chances in access to opportunities for both sexes. To do this, it is necessary find out a full picture of the gender inequality across countries. A necessary assumption for fulfilling the concept of gender equality is to find such a right approach, which in the bright light reveals the true level of inequality.

The United Nations under its Development Programme (UNDP) has introduced an innovative new gender inequality index (GII) in 2010. This index is one of the three experimental indices[11] described in The Human Development Report.[12] The main objective is to bring innovations in measuring inequality and poverty, based on belief that gender inequality is still strong barrier to human development. The GII is unique in including set of variables measuring disadvantages for women that have been neglected until now.

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[11] The Inequality-adjusted Human Development Index (IHDI), The Multidimensional Poverty Index (MPI) and The Gender Inequality Index (GII)

[12] Human Development Reports, official internet page

After the World War II. governments effort to systematically organize the fundamental principles of human rights and freedoms within a coherent framework. The first attempt was the adoption of the Universal Declaration of Human Rights (UDHR) on 10. December 1948, that represented the acceptance of common standards for all nations to protect human dignity. Not only governments, but also international agencies, especially the International Labour Organization (ILO), formed by agreements tried to encourage states to increase motivation in the fight against discrimination. Series of ratified ILO conventions[13] remind the need to eliminate discrimination and ensure equal access to all professions and other associated conditions, without distinction of any kind. The adoption of these contracts means to pursue gender equality policy through national legislation, legally established methods respecting equality between men and women or a combination of various instruments.

The number of documents dealing with the principle of gender equality has increased during the last quarter century. An important document in detail focusing on the area of equality between men and women and pointing out that respect for women's equality is violated, was agreed as The Convention on the elimination of all forms of discrimination against women (CEDAW).[14] The Convention's attention is drawn to the context of discrimination in economic development and try to make sure that when we promote international economic order that respects the principles of equality and not create obstacles to women's participation in political, economic, social and cultural life, we come to the full development of the welfare society.

Although the initial attempts to create conventions focusing on gender equality date back to the forties the first global gender indices were created in the nineties. The Gender-related development index (GDI) and the Gender empowerment measure (GEM)[15] were launched in 1995 with the belief that collecting and analyzing data show the gender disparities and demonstrate the importance of significant negative effects on sustainable development.

The aim of this paper is to use the new GII for further analysis to show how to construct a valid and reliable gender index. The need to use multi-dimensional aspects in the construction of the index is strongly emphasized as a necessity to eliminate the severe data limitations. The object of interest is also to identify the strengths and weaknesses of the examined index. This article uses GII as an indicator that shows largest and smallest losses in achievement in Central and Eastern Europe countries. Selected countries with a relatively high level of HDI[16] are still struggling with persistent inequality between men and women, which is partly based on their national policies. The result of this study is to construct a new composite index by extension of current index (GII) of another pertinent dimension and find out how the ranking of investigated countries will change.

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[13] e.g.: Equal Remuneration Convention(1951), Discrimination (Employment and Occupation) Convention (1958), Maternity Protection Convention (2000); Gender equality in the world of work, International Labour Organization, official internet page

[14] CEDAW (1969), United Nations, official internet page

[15] Human Development Reports, official internet page

[16] Human Development Index

2. JOURNEY TO THE NEW INDEX

As I mentioned, there have been two indices[17] to measure gender equality since 1995. The first one, gender-related development index (GDI), shows inequality using three indicators: life expectancy, educational attainment and adjusted real income. The methodology used imposes a penalty for inequality. It means that the greater the gender disparity the lower level of GDI. The calculation of the first indicator uses minimum and maximum values for female (27.5; 87.5 years) and male (22.5; 82.5 years) life expectancy at birth. An educational attainment is divided into two observed variables. The GDI gives two-thirds weight to adult literacy and one-third to combined primary, secondary and tertiary enrolment. The last step in calculation of GDI refers to estimated income which is the most complicated part, because of the lack of data on disparities between men and women in earned income and even on wages in some areas. At the end an adjustable parameter called ε is used, which represents penalty for inequality.

The relationship between the HDI and GDI is very close; they have the same base measurements focused on expansion of capabilities. Basically, GDI is the HDI adjusted. Using comparable data from the participating countries is built ranking according to gender inequality. It is hardly surprising that gender inequality exists in every country, but significant progress has been achieved since 1970[18].

The second index, gender empowerment measure (GEM), is based on gender balance in decision-making. Promoting equal access for women to resources such as employment opportunities, political and economic participation indicates the existence of inequalities between male and female in a different dimension than reflects GDI. Measurement focuses on looking at the three basic indicators - female and male shares of parliamentary seats, female and male shares of positions as legislators, managers and of professional and technical positions, female and male estimated earned income.[19] The difference between the perceptions of a common indicator - estimated earned income- is that while the GDI pursues an individual's ability to earn income, GEM captures what the level of economic independence of women is.

These two measures are certainly not the only indices that are used to detect gender inequality.[20] But their wide range of countries and easy availability meant that they became a suitable source of data for the public debate on disproportion between men and women in many areas of human behaviour. This public debate helped to increase the general awareness that gender equality in its entirety can be a key to improving livelihoods and social, economic and political situation of many countries.

Both the GDI and the GEM as constructed does not provide a sufficient measure of women's status. Weaknesses of these indices appear in several key points. Gender inequality and its adverse effects on social progress cannot be truly captured by specifically incorporated variables. The criticism concerns

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[17] Source of the whole paragraph: Human Development Reports, official internet pages

[18] Positive trend in GDI values and in other variables investigating women conditions (level of literacy, participation in the economy, representation in parliament, etc.) was examined in several studies; See: Forsythe; Korzeniewicz; Majid; Weathers and Durrant (2003); Gray; Kittilson and Sandholtz (2006); Apodaca (1998)

[19] Human Development Reports, official internet pages

[20] For example: a, The Gender parity index (GPI) used by The United Nations Educational, Scientific and Cultural Organization (UNESCO) to measure females' and males' level of access to education at primary, secondary and tertiary school. (UNESCO, official internet pages); b, The Gender Equity Index 2009 (GEI) computed by Social Watch, classifies countries and ranks them according to indicators in three dimensions, education, economic participation and empowerment. (Social Watch, official internet pages)

the choice of variables that are separate indicators rather than to be able to show evidence of gender inequality as a whole. Therefore, we should be careful in the evaluation of the relationship between gender equality and economic development. The main weakness can be identified as the construction of indices themselves.

In the case of GEM, access to administrative and management positions has ambition to reflect decision making power of men and women in society. Female share in high labour market positions, in parliaments, management does not demonstrate the actual amount of power that is entrusted to women in their positions. High representation of women in national parliaments should not be blindly pursued goal. First, real political and economic power of women can hardly someone measure, but it might help to look at female share in lower level of public authorities, municipalities, unions and other organisations and companies in private sector. (Dijkstra, 2001) Second, proportion of women in national governments in certain countries may be very small just because it is the result of their tradition and customs. Then this is not a gross injustice that can be righted by granting women a specific quota of representatives in parliament. Increase female representation in parliament in less developed countries should be in accordance with their principles formed by traditions instead of violent and rapid changes.

The choice of indicators is at least questionable (Moser, 2007). Some of them, for example estimated earned income, does not tell us anything about intra-household resource distribution, which may reinforce income differences. Another overlooked fact is women's unpaid work which should be included somehow. Other limitations of measurements have been recognized as well (Stanton, 2007). Still, we should bear in mind, that the creation of such indices has had a positive impact. As an experimental work, both of them have caused a raising interest and attention among academics and policy makers on this issue.

3. NEW CONCEPT OF MEASURING GENDER INEQUALITY

Due to the mentioned shortcomings in the measurement these two indices (GDI, GEM) occurred attempt to develop a new improved index. The alternative measure was named Gender inequality index (GII) and it represents a major step towards monitoring gender inequality and reflecting various dimensions of disadvantages for women.

3.1. Computing the GII

The index shows the loss in human development results from inequality between men and women. The GII captures women's disadvantage in three dimensions - reproductive health, empowerment and the labour market. It ranges from 0, which indicates no inequality, to 1, which indicates absolute inequality in all measured dimensions. More the gender equality, more GII is close to 0.[21] The index is innovative in efforts to be a universal measure of women's status. What is new is the use of multidimensional approach which is more meaningful to compare the status of women cross-nationally with respect to particular aspects in included countries. At the same time, we suggest that the choice of one indicator or another can make an important difference for the ranking of countries and hence the overall empirical results.

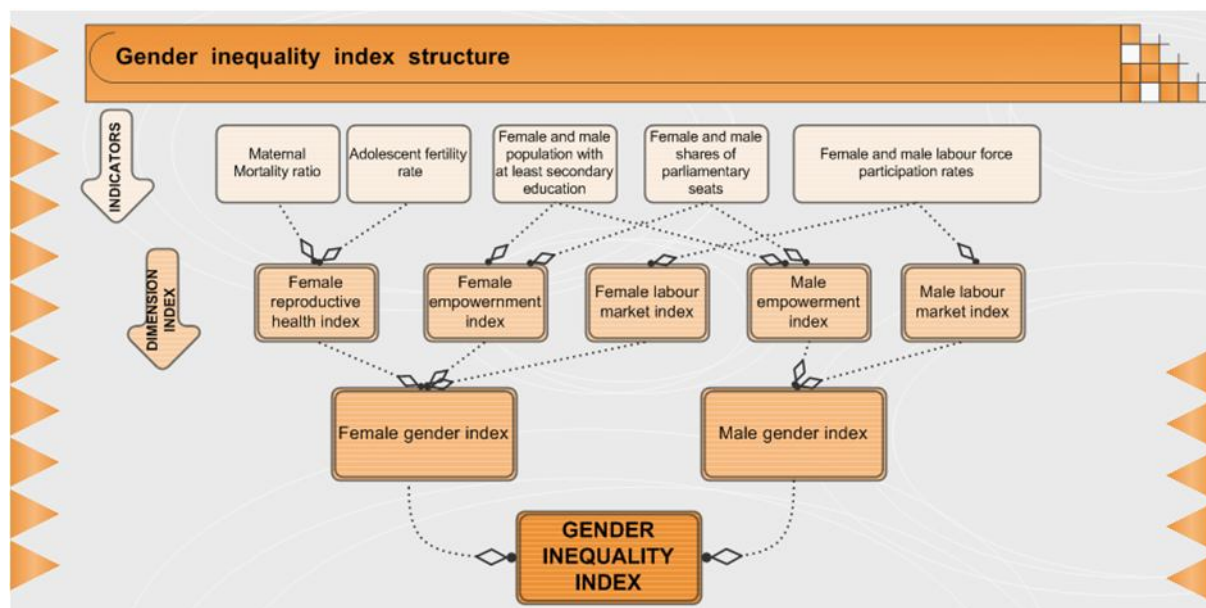[21] Human Development Reports, official internet pages

Fig. 1. Gender inequality index structure

Source: author's interpretation based on information from Human Development Reports, official internet pages

Reproductive health as a one of components of the GII measures maternal mortality ratio and adolescent fertility rates. First one can reliably detect health care that women receive during childbirth. Many women lose their lives due to inadequate antenatal care and prevention involves regular medical visit by pregnant women. The adolescent fertility rate measures number of births to women aged 15 - 19. High level of both indicators occurs especially in developing countries as implies recent work Reynolds; Wong and Tucker (2006). Poor access by couples to information about family planning and such services to prevent early motherhood cause that babies born to teenagers who are facing greater risk of complications during pregnancy. Adolescent mothers and their children usually live under conditions of poverty, family instability and life uncertainty. Moreover motherhood also limits women to obtain higher education. Limited opportunities for better education have a negative effect on women's employability in the future.

Like the previous index GEM, GII highlights women's representation in parliament. The proportion of seats held by women in national parliaments can be described as an indicator of agency. Low levels of female participation in the national parliaments of most countries results from inadequate women's educational achievements and political parties and electoral systems, which enhance the ability of men to access to political leadership. A much stronger barrier of women's opportunities to participate in politics is existence of gender stereotypes and cultural norms in countries where men play a dominate role in the political arena for long time.[22] The perception of male and female candidates has slowly changed in Scandinavian countries[23] where they have experience with an almost gender-equal

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[22] See Paxton and Kunovich (2003) for further details.
[23] For an overview of the representation of women in politics see Norris and Inglehart (2001)

parliament. This approach is based on the belief that women's participation at some level of politics will positively affect political activity of other women and girls.

Parliamentary representation of women is closely associated with their educational attainment and vice versa. Next GII component reflects differences between men and women in such areas as educational attainment. The increase in educational attainment resulted in increased opportunities for women in labour market, in improved the long-term socioeconomic well-being of women and in possibility to participate in public life. Educated women are expected to achieve greater satisfaction of applying a full spectrum of their rights and of their professional success and career.

Labour force participation as last described indicators of GII, measures female involvement in paid work.[24] Focussing on recent trends, it is clear that labour force participation rates of women have globally remained steady in the two decades (1990 – 2010)[25]. However, sub-regional trends in the case of women show great variation. It is generally accepted idea that increase in female labour force participation goes along with the improvement socio-economic status of women and enhancement their economic or financial independence.

3.2. Evaluation of GGI concept

In looking for an appropriate approach to construct proper new composite index GII was created. In fact GII is not perfect, but so far the great attempt and challenge to capture true gender inequality. There exists still need to find a source of information that indicates differences in the distribution of achievements between women and men in the countries around the world in order to enhance awareness and public debate about inequalities. The relationship between gender equality and development has been supported in several studies[26], which show positive effects of greater female participation on the economy. Attention to the same opportunities for men and women comes from the conviction that the advancement of women has a significant impact on the growth of nations.

The gender inequality is multifaceted and therefore only a composite index can capture all aspects of it. That is why the multidimensional approach is right way to avoid shortcomings and misinterpretations cause by indices consisting of a few indicators. The GII has ambitions to provide a comprehensive view of gender-related issues faced by each country. The index is innovative in one essential point: it includes five indicators and three dimensions (as shown in Fig. 1). It is useful to measure multidimensional concept which takes into account these aspects of gender inequality. More dimensions capture gender inequality in a much broader perspective and explain issue in its entirety.

Although the aim is to define important aspects of gender equality and inequality there are still significant conditions which lie outside general interest. Most neglected aspects are information related to labour force participation. First, GII does not look at wage differences. Differences in wages between men and women are of great importance because it affects a large number of people. In general, women's wages are lower than men's wages everywhere, but the gender pay gap is not uniform cross-nationally. (Polachek; Xiang, 2009) The gender wage gap varies considerably across countries not only in Europe. Although part of gender pay gap can be explained by the differences in education, age, skills, experience, but some persistent differences cannot be explained by objective

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[24] The labour force is economically active population who is either employed or unemployed (but actively seeking work and currently available for work) – labour force classification from ILO, official internet pages

[25] Mrkić (2010)

[26] See European Commission (2010a) and Mason and King (2001)

reasons. Part of the wage gap remains unexplained and potentially related to discrimination[27] and Glass Ceiling phenomenon[28].

Second, we should include a measure of the degree of occupational segregation by gender in the labour market. This is significantly important in light of the fact that the male occupations tend to be higher paying, with greater promotional opportunities and better conditions of employment. Anker's (1998) analysis affords us the opportunity to understand occupational segregation by sex in the world. In the first place job segregation refers to different characteristic such a personal quality, educational attainment and skills. Occupations for women are strongly consistent with gender roles and stereotypes at the same time. Traditional gender stereotypes are determined by cultural assumptions that women are well-suited to particular occupations.

Gender roles affect men and women in other ways. Specifically, gender stereotypes influence how men and women spend their free time and it has decisive influence on the division of household labour and childcare as well. Housekeeping and infant care presents an obstacle to the participation in the labour market and to the gain a material satisfaction for women. Housework, care of children and care of elderly relatives describe women's unpaid work which is indispensable financial support to the entire economy. Several explorations[29] show that the value of these home-produced goods and services contributes to economic well-being.

Focus on the proportion of time devoted to unpaid work awakes interest in measurement and valuation of non-market work and probable connection to the distribution of family income among married couples. The women's share of family income is closely related to access to material resources. The ownership of economic assets by women and men is another important issue not included in GII. With greater ownership and control over economic assets women are less likely to experience poverty (in case of a divorce or the death of the partner) and are better able to withstand financial crises and care for their children. Women who own property or have access to ownership of land, housing and other assets are better positioned to improve their status and gain equal opportunities and become economically independent which provide them significant benefits. That is why we consider material possessions to be a crucial implication.

Following relevant issue to women's well-being, violence against women, presents manifestation of the denial of women's equality and dignity. Gender-based violence is still widespread and associated with low socio-economic status of women. Women face up to different types of domestic violence with miscellaneous consequences for them and for those who witness it, especially children. Data provided by World Health Organization (WHO) give evidence of a proportion of women who had experienced physical or sexual violence by intimate partners that ranges from 15% to 71%.[30]

The last mentioned dimension is a matter of law, particularly how the law can advance women's rights. One of the possible options on how to prevent discrimination against women is to implement the requirement of equal treatment in legislation. First of all, equality of rights between women and men must be enshrined as an essential principle. Legal shortcomings and barriers that hinder protection of human rights should be identified and eliminated mainly at national level. Although it is

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[27] See Levine (2004: pp. 5-9) for further details about the unexplained portion of the gender pay gap

[28] The Glass Ceiling describes an invisible barriers that affect women in their rising to the decision making positions in an organization and that result in less frequent promotion of women.

[29] See Antonopolous and Hirway (2010); Baker (2007) and Coleman (1998)

[30] See Jansen; Watts; Ellsberg; Heise and García-Moreno (2005)

only an administrative weapon, it has big impact on human behaviour in society and allows create the awareness of Right and Wrong. Almost everyone can distinguish Right from Wrong but experiences have shown that it is necessary to confirm these rights in the constitution.

The latest developments of anti-discrimination legislation and policy in individual countries are very different. There still exists insufficient current legal protection against discrimination in the world. However, several countries have implemented the requirement of equal treatment of women and men into their national and regional legal systems recently. The principle of equal treatment between women and men, which is essential to respect such fundamental rights, has become hallmark of the European Union's gender equality policy[31]. EU emphasizes the importance of full implementation of greater promotion of gender equality in new legislation and encourages Member States to strengthen their efforts to extend present legal framework.

The above analysis points to necessity of including other dimensions such as wage differences, occupational segregation, unpaid work, access to and control over material resources, violence against women, anti-discrimination laws, that govern the way people can expect to be treated with regards to their sex. Further we should add female share in lower level of public authorities, municipalities, unions and other organisations and companies in private sector in order to determine true picture of political and economic power of women. The aim was to define important aspects of gender equality and inequality that may be captured by multidimensional index. These possible extensions of GII get us closer to index which provides an adequate and relevant comparative measure of women's status.

It is pointed out that in real life we are confronted by many difficulties, from lack of empirical information to the subjective perception of inequality. Mentioned dimensions and aspects of gender inequality are difficult to discover due to data constraint. Most data are not available for large number of countries. The ability to identify women's status is limited by an absence of sex-disaggregated data and by the way in which the data are collected. Data limitations appear especially in developing countries where it has been assumed that data-collection processes are inadequate and trustworthy (Bradley; Khor, 1993). This means that unobserved factors lead to an incomplete or partial understanding of the inequality. To overcome these barriers it is necessary to strengthen national statistical systems and implement reliable statistical methods. Access to data is vital to gender-equality analysis and hence there exists urgent need for collection of required figures for measuring women's status.

4. THE GII FOR CEE COUNTRIES

The GII is built for 138 countries and ranges from 0.17 to 0.85. In this paper, we concentrate on the overview of the differences and disparities in gender inequality among CEE countries and the problems related. The data are analysed for 1 year (2008), because only 1 year of data are available for this GII measure. Here, the time series data are more limited. GII values are not available for all of the CEE countries so the analysis takes into account 7 CEE countries, namely Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia.

The difficulties of the GII approach have already been discussed in the previous chapter. The aim of our analysis is twofold: firstly to determine what the contemporary rankings of selected countries according to the GII is, and secondly extend current index of another variable and find out how the

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[31] See European Commission (2010b)

ranking has changed. As shown subhead 3.2., several aspects can provide wide implication of how equal or unequal opportunities for men and women are within a society. But by this time these aspects were not taken into consideration. For this reason, we believe that additional pertinent variable can provide a more compact picture of gender inequality.

4.1. Old ranking and calculation method

Let's calculate each country's GII value according to formula presented in Human Development Report's technical notes[32]. To identify GII we must accomplish following steps. First, create aggregation across certain dimensions for women (G_F) and men (G_M) separately, using geometric mean,

$$G_F = \sqrt[3]{\left(\frac{1}{MMR} \cdot \frac{1}{AFR}\right)^{\frac{1}{2}} \cdot \left(\frac{PR_F}{100} \cdot \frac{SE_F}{100}\right)^{\frac{1}{2}} \cdot \frac{LFPR_F}{100}} \tag{1}$$

$$G_M = \sqrt[3]{1 \cdot \left(\frac{PR_M}{100} \cdot \frac{SE_M}{100}\right)^{\frac{1}{2}} \cdot \frac{LFPR_M}{100}} \tag{2}$$

where MMR=Maternal mortality ratio, AFR=Adolescent fertility rate stand for the dimension of health; PR=Share of parliamentary seats constitutes the dimension of empowerment; SE=Attainment at secondary and higher education, LFPR=Labour force participation rate presents the dimension of labour market.

Second, combine resulting female and male indices by using harmonic mean.

$$HARM(G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1} \tag{3}$$

Third, calculate the geometric mean of the arithmetic means for each dimension, Health, Empowerment and Labour market,

$$G_{\bar{F},\bar{M}} = \sqrt[3]{\overline{Health} \cdot \overline{Empowerment} \cdot \overline{Labour\ market}} \tag{4}$$

where $\overline{Health} = \left(\sqrt{(1/MMR) \cdot (1/AFR)} + 1\right)/2$,

$\overline{Empowerment} = \left(\sqrt{PR_F/100 \cdot SE_F/100} + \sqrt{PR_M/100 \cdot SE_M/100}\right)/2$ and

$\overline{Labour\ market} = (LPFR_F/100 + LPFR_M/100)/2$.

In the last step follows division of $HARM(G_F, G_M)$ and $G_{\bar{F},\bar{M}}$. As a result, we obtain formula (5) that is used to determine the degree of gender inequality.

$$GII = 1 - \frac{HARM(G_F, G_M)}{G_{\bar{F},\bar{M}}} \tag{5}$$

When formula (5) has been introduced, we can clearly calculate value of GII for CEE countries and make list of countries by GII value. From this ranking, and other relevant information, we get view of gender-related disparities faced by each country. Table 1 presents calculated values of GII for

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[32] Source of the whole paragraph and following formulas (1) – (5): Human Development Reports, official internet pages.

investigated countries with ranking according to GII and unequal distribution of human development (HDI). The results indicate relatively high values of GII that vary between 0.293 and 0.487. It points out that CEE countries belong to the upper ranked countries and there are no large disparities among them. Slovenia tops the lists, followed by Czech Republic and Poland. Romania and Bulgaria are on the other side of scale due to relatively high degree of maternal mortality ratio and adolescent fertility rate.

Table 1. GII value in CEE countries

CEE countries	GII Rank (from all 138 countries)	HDI rank (from all 182 countries)	GII - value	GII Rank
Slovenia	17	29	0.293	1
Czech Republic	26	28	0.312	2
Poland	27	41	0.325	3
Slovakia	31	31	0.352	4
Hungary	34	36	0.382	5
Bulgaria	36	58	0.399	6
Romania	49	50	0.487	7

Source: author's calculation based on data from Human Development Reports, official internet pages

As emerged from above formulas, GII can reveal differences and disparities in gender inequality among countries and clearly accomplish comparison of losses due to gender disparity. The GII aims primarily at comparison rather than at direct derivation of specific conclusions.

4.2. New calculation method

It is essential to develop an overall index in order to capture significance of gender inequality. Given that women are usually in a disadvantage position in the labour market, an additional pertinent variable, illustrating unequal remuneration for work of equal value, extends the set of parameters in current GII. To analyse statistics about gender disparities in work place, we need effective measure for detection of significant women's disadvantage - wage discrimination. Gender pay gap (GPG)[33] provides a useful indicator for examining differences in wages between men and women.

The GPG is used as an international comparison technique. According to European commission[34], the GPG represents a relative difference (in percentage) in the average gross hourly earnings of both genders. An increase in the GPG indicates higher wage differences between men and women within

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[33]The Statistical Office of the European Communities (Eurostat) provides direct access to statistical data in order to improve international information services and enable comparison and harmonization between countries and regions.

[34] European commission: Employment, social affairs and inclusion, official internet pages

the economy as a whole. This statistical indicator of gender inequality ranges between 4.9 and 30.9 in EU's member states.[35] Italy is a member state with the lowest GPG, where the data suggests that women earn 96.1 % of men's wage. Women in Estonia, on the contrary, suffer from worst GPG. The average value of GPG in the EU is 17.5 %. Inequality in earnings between men and women remains relatively high in EU and it can be seen that there exist considerable differences among each region.

There have been a number of studies that explain reasons for existence and size of the GPG. Olson and Walby (2004) use statistical methods to clarify why we have a GPG. Their research identifies reasons and different factors that are associated with gender earnings disparities. One of the most salient reasons of the GPG is the degree of segregation by sex across the hundreds of occupations. Wage structure across occupations is a factor showing in which kinds of jobs women are less concentrated and vice versa, because women and men tend to go into different kinds of jobs. Another source of the gender pay gap is connected with effort to combine family responsibilities with paid employment. Connolly and Gregory (2007) suggest that women's employment is concentrated in part-time work which is associated with poor conditions in the labour market. The pay penalty related to part-time work arises from differences in lifetime working patterns.

There are many factors that affect size of the GPG such educational attainment, qualifications and special skills, experience, amount of time spent at work, etc. These factors yield reasonable explanations of gender differences in measured characteristics. However, the GPG cannot be fully explained by rational factors. This fact has been attributed to labour market discrimination[36].

The GPG has been chosen in our analysis because it is widely used and has a large database that includes many countries. It is one of many indicators of gender inequality but it only concerns salaried persons. That is why it cannot be used as a separate instrument to measure women's well-being. The GPG is regarded as common economic indicator providing crucial information on the wage differences between men and women. However, the GPG does not provide an assessment of the causes and context of gender earnings disparity as a situation where women earn less than men.

To illustrate complex and elusive issues we add an additional pertinent variable: the GPG. A necessary step is to add the new variable to each formula. The greater the GPG, the greater the value of the GII. The form of the variable is therefore follows: $1/GPG_F$. We work on an assumption that an increase in the GPG will lead to an increase in GII*. This assumption will be proven correct in subhead 4.4.

$$G_F^* = \sqrt[3]{\left(\frac{1}{MMR} \cdot \frac{1}{AFR}\right)^{\frac{1}{2}} \cdot \left(\frac{PR_F}{100} \cdot \frac{SE_F}{100}\right)^{\frac{1}{2}} \cdot \left(\frac{LFPR_F}{100} \cdot \frac{1}{GPG_F}\right)^{\frac{1}{2}}} \tag{6}$$

To do a geometric mean of labour force participation rate of men and the GPG we add 1 to equation. This simple modification of the formula (2) shows that in examined countries exists only positive GPG. This fact means that on average men earn more gross hourly than women, which can be demonstrated from the available data from Eurostat[37].

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[35] The unadjusted gender pay gap, 2008, see Eurostat: Gender pay statistics , official internet page

[36] See Blau and Kahn (2000) for further details.

[37] See Eurostat: Gender pay statistics, official internet page

$$G_M^* = \sqrt[3]{1 \cdot \left(\frac{PR_M}{100} \cdot \frac{SE_M}{100}\right)^{\frac{1}{2}} \cdot \left(\frac{LFPR_M}{100} \cdot 1\right)^{\frac{1}{2}}} \qquad (7)$$

Aggregating equations (6) and (7) and using harmonic mean yields one of the fundamental parts of GII.

$$HARM(G_F^*, G_M^*)^* = \left[\frac{(G_F^*)^{-1} + (G_M^*)^{-1}}{2}\right]^{-1} \qquad (8)$$

The dimensional expansion is introduced in equation (9). This is the crucial part of our effort. In order to get our goal, we make a geometric mean of labour force participation rate of women and the GPG and the same for men as well. As a consequence of our extension, it turns out that we construct wide scope index, noticing now wage disparities between men and women.

$$\overline{Labour\ market}^* = \frac{\left(\left(\frac{LFPR_F}{100} \cdot \frac{1}{GPG}\right)^{\frac{1}{2}} + \left(\frac{LFPR_M}{100} \cdot 1\right)^{\frac{1}{2}}\right)}{2} \qquad (9)$$

Note that in creating equation (10) we follow the same process as author of current GII.

$$G_{\bar{F},\bar{M}}^* = \sqrt[3]{\overline{Health} \cdot \overline{Empowerment} \cdot \overline{Labour\ market}^*} \qquad (10)$$

As a result we obtain the Gender inequality Index* (GII*), an alternative to measure gender inequalities through new strategy based on the consideration of the additional indicator. The newly introduced index seems to be a much more expressive index compared to the current one.

$$GII^* = 1 - \frac{HARM(G_F, G_M)}{G_{\bar{F},\bar{M}}} \qquad (11)$$

4.3. New ranking of CEE countries

Now we can calculate value of GII* for CEE countries and make list of countries by GII* value. Moreover we will find out how the ranking of investigated countries will change. The results for GII* are presented in the 6th column in Table 2.

Table 2 displays the GPG in CEE countries that varies from less than 9 % to 26.2 %. We observe that the average male wage is still higher than the average female wage in all countries, besides, the Czech Republic and Slovakia is far below average. The GPG has a clear negative impact on value of GII* and hence on gender equality. This impact is seen from increase of GII between two consecutive countries and increase of GII* between two consecutive countries.

Now, we use an example to illustrate our approach. Let's see the case of first two countries in the table 2. The Czech Republic has higher GPG than Slovenia by 17.7 percentage points. So we can expect that percentage difference of old GII for the Czech Republic and Slovenia (106.48) should be smaller than for new GII for these two particular countries (121.33). Our assumption is fulfilled and so we verified that higher GPG brings higher increase of GII than small GPG. This assumption can't be applied for countries which are not sufficiently close by GII level, since the same level of new variable (GPG) has higher effect on low level GII than on high level GII. This is due to fundamental principle of index creation which is exponential as will be shown later.

Table 2. GII* value in CEE countries

GII*- rank	HDI rank	CEE country	GPG (%)	GII - value	GII* - value	Increase of GII between 2 consecutive countries (A)	Increase of GII* between 2 consecutive countries (B)	GPG difference	Differences in (A) and (B)
1	29	Slovenia	8.50	0.293	0.388	100	100	-	-
3	28	Czech Republic	26.20	0.312	0.471	106.48	121.33	17.70	14.85
2	41	Poland	9.80	0.325	0.424	104.17	90.14	-16.40	-14.03
5	31	Slovakia	20.90	0.352	0.492	108.31	116.03	11.10	7.72
6	36	Hungary	17.50	0.382	0.509	108.52	103.31	-3.40	-5.21
7	58	Bulgaria	13.60	0.399	0.509	104.45	100.17	-3.90	-4.28
8	50	Romania	9.00	0.487	0.567	122.06	111.32	-4.60	-10.73

Source: author's calculation based on data from Human Development Reports and Eurostat: Gender pay statistics, official internet pages

From previous, it is clear that any effort to improve the GPG will ensure a lower value of GII* and higher equality. One can conclude that a greater presence of women in the workforce, in public life and the introduction of measures to promote women's access to labour market including equal pay for equal work would be a valuable asset to all of society. It is well known that labour market institutions are responsible for a significant portion of wage gaps. However, issue of earnings disparities has wider connection related to personal characteristic, skills and abilities. Furthermore, social and cultural characteristics at the national level affect overall wage structure. Although the GPG is influenced by many exogenous determinants, it is still an excellent and appropriate instrument that gains meaningful information that should be part of the GII.

Our results provide, among other things, ranking by GII*. As we see, only one change has occurred in countries' ranking. Poland has outrun the Czech Republic. This change has appeared due to relatively high value of the GPG in the Czech Republic. As we know from previous explanations, countries are penalized for gender inequality in wages. For the purpose of our analysis, we look only at CEE countries which seem to be insufficient in the sense of data availability. In the quite small sample of countries for which data are available, large-scale comparisons cannot be made. Given the limited number of countries and observations available at the GPG and GII, an investigation of change among these countries may not be fully representative. However, we can correctly assume that in the case of large number of countries and required data, the GPG would have a major impact on the final ranking of countries.

4.4. Case of Bulgaria

Bulgaria, as one of the post-communist countries, is influenced by the socialist period in which the governments attempted to erase gender differences by guaranteed participation in full-time employment of both genders. In spite of official statement declared that men and women were paid

identically for equal work the reality at the labour market was far from gender equality.[38] The situation has changed after the European Union entry. Requirement of gender equality is strongly mentioned by the European Union and results in strategy toward gender equality that adopts wide range of policy measures.

This subhead underlines the importance of our approach by taking an example. Bulgaria as one of the CEE countries with average value of the GPG (among CEE countries) is suitable example. Table 3 shows demographic characteristics and other necessary data to calculate GII*. Using the formulas introduced in the subhead 4.2., this is easy to compute.

Table 3. Calculating the GII* for Bulgaria

GII			Maternal mortality ratio[a]	Adolescent fertility rate[b]	Seats in parliament (%)	Population with at least secondary education (% ages 25 and older)	Labour force participation rate (%)	GPG (%)	GII*
Rank	Value								Value
2008	2008		2008	2008	2008	2010	2008	2008	2008
36	**0.399**	**female**	11	42.2	21.7	69.1	63.4	13.6	**0.509**
		male	na	na	78.3	70.6	73.8	na	

Source: author's calculation based on data from Human Development Reports and Eurostat: Gender pay statistics, official internet pages

[a] The maternal mortality ratio is defined as deaths per 100,000 live births.

[b] The adolescent fertility rate is defined as the number of births per 1,000 women ages 15 - 19.

na is not applicable

One can conclude that value of GII* indicates noticeable negative drop in the gender equality, but we must remember that absolute value of our indices does not tell us anything about size of gender inequality. These indices are primarily used as an appropriate tool for comparing gender inequality among countries.

So far we have worked with the assumption that an increase in the GPG will lead to an increase in GII*. Now we can verify that this assumption is valid. We use sensitivity analysis to identify the parameter of GPG that are responsible for changes of GII*. The accuracy of measure should be checked through sensitivity analysis. To have an objective tool that can be used as a benchmark for

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[38] For further circumstances of situation of women in the labour market in Bulgaria during socialist period see Stoilova (2006)

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gender equity we assess the contribution and the importance of the factor (GPG) to determine GII* in our model. The aim is to help gauge the key feature of the composite indicator and improve transparency of multi-modelling approach.

Figure 2 shows the sensitivity analysis of the new parameter. Under a ceteris paribus (all else equal), we systematically vary the contribution of our parameter (GPG) to determine whether there is any evident indication that dependence in our data exists. An illustration of this dependence is shown in Figure 2. As we expected, we get an exponential shape of the curve. Our results provide support for the idea that decrease in the GPG reduce GII* and vice versa. Moreover, impact of change of the GPG is greater in countries with relatively low value of GII*. So as the value of GII* increases, there is a reduction in influence of changes in the GPG.
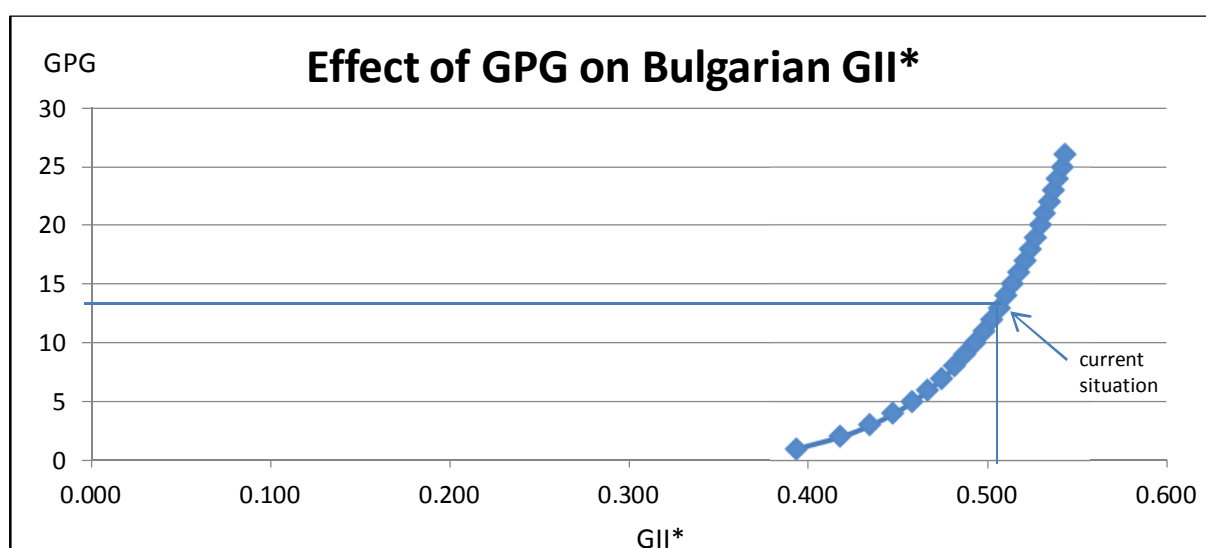
Fig. 2. Effect of GPG on Bulgarian GII*

Source: author's calculation based on data from Human Development Reports and Eurostat: Gender pay statistics, official internet pages

It should be emphasized that the construction of a composite index is not a straightforward process. It works with assumptions that have to be evaluated prudently in order to capture all possible effects among factors and to find out the relationship between the parameters inside the model.

5. CONCLUSION

In this paper, a new way to measure gender inequality was introduced. The effort to create a relevant tool to capture gender inequalities has become a significant challenge for everyone involved. It is generally recognized that concept of gender equality is a pervasive phenomenon and important issue in itself that results in finding such a right approach, which in the bright light reveals the true level of inequality. The main reason for measuring the size of the mentioned problem is a prerequisite for identifying the best solutions.

The paper showed how essential was initial attempts to create benchmarks and indicators to compare the achievements in women's equality around the world. At the beginning of the paper, two previous indices are presented. Both of them do not provide a sufficient measure of women's status, as is clear from the evaluation. That is why the alternative measure, named GII, was constructed. This attempt represents a major step towards monitoring gender inequality and reflecting various dimensions of disadvantages for women. The GII has ambitions to provide a comprehensive view of gender-related issues faced by each country, but this paper highlights its shortcomings and limitations.

The analysis points to necessity of including other dimensions such as wage differences, occupational segregation, unpaid work, access to and control over material resources, violence against women, anti-discrimination laws, that govern the way people can expect to be treated with regards to their sex. The extension of the GII provides a more compact picture of gender inequality. In this regard, we add the GPG in our model in order to detect significant women's disadvantage - wage discrimination – and to implement multidimensional approach.

As a result we obtain an alternative to measure gender inequalities - GII*. The GII* is a new tool to show a sobering picture of women's status. Simultaneously we also calculate value of GII* for investigated countries. The analysis focuses on the overview of the differences and disparities in gender inequality among CEE countries and provides anew ranking by GII*. There is also a certain data limitation that is critical for analyzing and interpreting the data within the database. Even with a small data sample, indicator that directly measure gender inequality is presented. It should be noted that GII* may be revised and improved in light of data availability.

Finally, we use a sensitivity analysis on the example of Bulgaria to identify the behaviour of the parameter GPG that is responsible for changes of GII*. Our results demonstrate that the GPG is an appropriate indicator which should be an essential part of a composite index of gender inequality.

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GENDER IMPLICATIONS OF ECONOMIC RECESSION ON THE LABOUR MARKET IN THE CZECH REPUBLIC AND SELECTED EU COUNTRIES

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Abstract

The paper deals with the impact of economic recession on the labour market, focusing on men and women. The main purpose is to identify the different impact of economic recession on the male and female workers and determine the cause of this difference The situation on the labour market, unemployment rate and income level, is examined by comparison of data for Czech Republic with data for selected EU countries. The article takes a close look at the gender impact of the crisis, thus demonstrating that a male workforce was affected by the adverse effects of economic downturn. Identified cause is the differential effect of the crisis on selected sectors of the economy, in which male employees dominate. Results of the analysis made findings of developments and current status of women in the labour market set in a European context.

Key words: *Gender pay gap, economic recession, unemployment rate, occupational segregation, labour market*

1. INTRODUCTION

The efforts to implement the principle of equal opportunities for men and women in all spheres of life have become a considerable public debate. Especially in the last two decades is an increasing demand for equal treatment for men and women. It is desirable to use such measures which can bring for both genders equal chance in access to opportunities. The importance of principle of equal opportunities has increased in the Czech Republic and other European countries after becoming member of EU. There is a situation, where the concept of implementation of equal rights for men and women in all levels of society and economy is gradually adopted.

One of the basic assumptions for achieving partial objectives in European social policy and employment including social solidarity and social cohesion is the application of the principle of the equal access of men and women in the labour market. These efforts may be impeded by such diverse and adverse conditions in economy and also by significant one-time negative economic shock that does not fit the expectations and can immediately generate a strong negative impact to our society. The aim of this paper is to determine the change of the selected labour market indicators by sex in the Czech Republic during worldwide recession period. At the same time, the object of interest is the detection of the initial negative impact of the overall global economic downturn caused by the global financial crisis on the investigated labour market indicators, namely the development of unemployment rate and gender wage gap. The paper provides time series evidence on various aspects of female labour force participation rates in Czech Republic.

2. IMPLEMENTATION OF THE PRINCIPLE OF EQUAL ACCESS TO LABOUR MARKET OPPORTUNITIES

The status of women in the labour market is generally observed to be relatively low with comparison to men. Therefore, ways how to prevent negative effects and other adverse symptoms of a different treatment of men and women in the labour market have been looked for in a response to the growing debate about gender inequality. The governments have sought to add greater meaning to this phenomenon and systematically organize into a coherent framework the fundamental principles of human rights and freedoms, as well as to implement the requirements of equal treatment and equal pay for work.[39]

Most of European countries declare that **the object of legal protection** is equal treatment of individuals in the labour market and equal pay for work of comparable worth. Any kind of government involvement in this issue supports women's role in society, their rights and also help women build better lives for themselves. Gender equality seems to have positive effects on economic development. Several studies[40] confirm that higher gender inequality has a positive effect on growth in any region of the world. Moreover the empirical results in some analyses indicate that gender inequalities have a statistically significant negative effect on growth and other economic objectives.

The role of gender equality and women's empowerment is also detected in reducing poverty and in a range of development outcomes. The positive benefits of measures that seek to prevent gender-based inequality take into account both the to respect the equality of women and removing barriers to women's participation in political, economic, social and cultural life which has a positive impact on the economic development of the country and the greater participation of women in the labour market which leads to increase in their economic activities.

3. EVALUATION PRE-CRISIS POSITION OF WOMEN IN THE LABOUR MARKET[41]

Implementation of the concept of equal treatment and equal pay for work in the legislation as well as other efforts of international and non-profit organizations extends the current legislation and ensures the practical implementation of this requirement. Investigated labour market indicators provide solid starting point to monitor development of the current role of women in the work force and professions with comparison with men.

3.1. Employment level

Based on indicators of economic activity and employment we may look for peculiar characteristics of the Czech labour market focus on explaining the differences between men and women with regard to developments in recent years. The number of persons in the labour force increased during the period 2000-2007 and increased moderately in men and women. The proportion of employed men in total

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[39] See Musilová (1999)

[40] See Baliamoune-Lutz and McGillivray (2009); Klasen (1999)

[41] The indicators of labour market are derived from several official sources. All data are comparable to other states. The exactly same methodology is used, related to definitions from ILO (International Labour Organisation), which uses details from the sample of LFS (The Labour Force Survey), Eurostat and OECD statistics.

employment remains relatively stable at 56 %, while proportion of employed women is 43 %[42]. Despite this difference in numbers, the participation of women in the labour market is still relatively high and has increasing trend.

The differences in employment rate between women and men are apparent at the first glance from the data provided by Eurostat[43]. Generally, it can be demonstrated that the difference in employment rates between men and women in Czech Republic ranges between 16 and 18 percentage points. In other EU Member States we observe increasing trend of women's employment. However, in the Czech Republic we see stagnation in women's employment instead of gradual growth. Nevertheless, the employment rate in the Czech Republic is slightly above average of what is normally occur in the EU-27. It can be emphasized that Belgium, Ireland and Luxembourg are similar to the Czech Republic in this area.

The unemployment rate as one of the main macroeconomic indicators of the development of the economy emerged in our region after 1990.[44] Its use is widespread due to its good interpretive ability. The unemployment rate of women exceeds in the last decade the unemployment rate of men and this gap is between 2 and 3 percentage points[45]. Trend of indicator, however, moves along with the overall unemployment rate, and so we do not observe any fluctuations in its development. The women's unemployment rate is appreciative in the international comparison and close to the average of OECD countries, where the unemployment rate for women in 2009 was 7.8 %, while it was 7.9 % in the Czech Republic.[46] This comparison shows that the Czech Republic achieves better results in this field than any developed Western economies, for example, the U.S., Belgium, Sweden and Ireland.

3.2. Male-female earnings differentials

Another key indicator for our examination is the earnings differentials between men and women. Comparison of wages, salaries, and their development in recent years, offers a detailed view of wage rate in the country. According to data on the evolution of average wages during the last decade[47] shows that women earn relatively stable 71-75 % of men's earnings. Even over the last few years, when the interest in the principles of equal pay has increased mainly due to enforcement of equal pay for equal work in the EU, we see almost no indication of a larger improvement.

A similar gender earnings ratio was found in a more appropriate indicator, which is the median value.[48] In this indicator women's earnings reaches 79-82 % of men's earnings, which presents lower differences than the average wage. However development of both indicators has a similar behaviour. Male earnings advantage of 18-29 % remains. Median expression is also used in the context of setting wage differentials through the gender pay gap (GPG). Wage differences for the purpose of international comparisons are pursued by the GPG. There are strong fluctuations of GPG among the EU countries. The lowest female-male earnings ratio occurs in Italy, where the GPG in 2008 was only

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[42] Czech Statistical Office, Labour market in Czech Republic 1993-2009, Employment and Unemployment in the Czech Republic as measured by the Labour Force Sample Survey
[43] Eurostat, Employment rates by sex, age groups and nationality
[44] See Krebs (2005)
[45] Czech Statistical Office, employment and Unemployment, official internet pages
[46] OECD, Labour force statistics, Harmonised unemployment rates and level
[47] Czech Statistical Office, Focus on Women and Men 2009, Labour and earnings, Average gross monthly earnings and medians of earnings
[48] Ibid.

4.9 %. On the other side is Estonia with the highest GPG 30.3 % in the same year. The Czech Republic (26.2%) is on the second worst position just behind Estonia.[49]

For the complexity of assessing earnings differentials is essential to include in the total view also the salaries in non-entrepreneurial sector in the Czech Republic. Shaping the salaries of employees in non-business sector is going through laws, which accurately and consistently define the clear rules for determining salary.[50] Therefore, we are talking about salaries and not about wages, as in entrepreneurial sector. Salary differences between men and women are in non-business sector lower than the differences in the business sphere. The median earnings of women in the years 2006-2009 in the business sector was 77 % - 80 % of men's earnings and in non-business sector was 82 %-86 %[51]. This explains the preference of women to be in the position of employees in non-business sector. Over the last two years, the proportion of women employed in non-business sector has risen to 65 %[52]. The main reason is greater job security, more leisure time due to a less overtimes and various benefits that non-business sector offers to women in terms of salary tied to the salary scale.

4. EFFECTS OF ECONOMIC RECESSION

The global economic crisis, whose manifestations in the form of an economic downturn began to materialize in 2008, led to adverse impacts on the labour market. Expert estimates augured a considerable range of impacts of economic recession and feared problems of rising unemployment and social exclusion. The EU recommended to launch a strategic partnership and provided guide lines and procedures in the field of employment.[53] Several analyses suggested that this recession would impact on women more than on men because women as an example of vulnerable groups in the labour market would be hit more by downturn. Women's working patterns make them more economically vulnerable than men and therefore face the greater waves of layoffs. Moreover recession has a broader set of social, economic consequences and other factors that make women less likely to be able to withstand the effects of the downturn.

To verification or falsification of these allegations, we focused on the analysis of labour market indicators and characteristics of the work force by sex from 2008, 2009 and 2010. We foreshadow that although it was expected that the economic recession would have on women's equality in the workplace worse impact, the statistical data did not confirm anything like that.

4.1. Changes in employment level

Total employment in 2008 still grew Y-o-Y by 1.64 %, while in 2009 was noticed drop by 1.36%. In 2009 we see a decrease in the indicator of total employment, expressed in absolute terms by 68.3 thousand, which was unevenly distributed between the sexes. Although the number of employed men

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[49] Eurostat, Gender pay gap in unadjusted form in %

[50] The creation of salaries in non-business sector is governed by § 122-137 of the Act No. 262/2006 Coll., Labour Code

[51] Average earnings international system, AEIS, Survey results, archive

[52] Ibid.

[53] Council Decision on guidelines for the employment policies of the Member States, 2008

dropped by 39.5 thousand, in case of women this decline was only 28.7 thousand.[54] In the first half of 2010 a similar decline in employment for men by 1.65 % and 1.55 % for women happened.[55]

Equally surprising was the development of female unemployment presented in Table 1, which defied the common argument that women in the labour market were more vulnerable to the impacts of economic crisis than men. The most significant breakthrough in the overall unemployment rate occurred between 4th quarter of 2008 and 1st quarter of 2009. The overall unemployment rate rose from 4.4 % to 5.8 % and its growth continued in the coming quarters, when the negative impacts of economic recession appeared and changed parameters of the labour market. Male unemployment rate increased from 4th quarter 2008 to 4th quarter 2009 almost doubled (from 3.4 % to 6.5 %), but female unemployment rate had lower growth recorded, nearly 1.5 times lower (from 5.7 % to 8.2 %). From these data it can be argued that men were more vulnerable to the impacts of economic crisis than women, and now they face worse consequences.

Table 1. Unemployment rate (%) in the Czech Republic in 2008-2010

	2008				2009				2010	
	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter
Total	4.7	4.2	4.3	4.4	5.8	6.3	7.3	7.2	8.0	7.1
Men	3.7	3.5	3.3	3.4	5.0	5.5	6.4	6.5	7.4	6.2
Women	6.0	5.2	5.6	5.7	6.8	7.4	8.5	8.2	8.8	8.3

Source: author's calculations based on data from Czech Statistical Office, Employment and Unemployment in the Czech Republic as measured by the Labour Force Sample Survey, Archives

A similar situation has been observed in the EU. The release of statistics for 2009 and the first two quarters of 2010 showed that the unemployment rate for women in the EU-27 was even from 2nd quarter of 2009 lower than the unemployment rate for men. The Gap between male and female unemployment rates was 0.1-0.4 percentage points. Such a situation is very unique and by exploring data from Eurostat[56] for the entire existence of the EU-27, we observed that this phenomenon has appeared for first time.

4.2. Changes in earnings differentials

The trend of earnings was steadily growing between 2006 and 2008. In each quarter, the value of hourly earnings increased in the range 1-7 %, except for small fluctuations in the 1st quarter of 2007. Especially interesting, however, is to interpret the values of 2009. Already in the 1st quarter of 2009, noticeable decrease in the hourly earnings of men by 2.94 CZK was found out, but only a slight reduction in women's wages (0.37 CZK). Even in subsequent quarters of 2009 did not reduce the

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[54] Czech Statistical Office, Labour market in Czech Republic 1993-2009, Employment and Unemployment in the Czech Republic as measured by the Labour Force Sample Survey
[55] Czech Statistical Office, Employment and Unemployment in the Czech Republic as measured by the Labour Force Sample Survey, Archives
[56] Eurostat, Employment rates by sex, age groups and nationality

wages of women on equal footing with men, but rather stagnated and even in the last quarter grew by 3 %.

Table 2 follows similar pattern as that depicted in the previous table. We see the development of the median hourly earnings in the business sector, which again confirms that, despite the negative impacts of economic crisis and downturn in the economy, it appears that the earnings of employees (especially of women) have surprisingly positive progress. A few months later, the level of earnings is almost back to pre-crisis levels. The situation in the non-sector salaries is the same.

Table 2. Development of median hourly earnings (CZK) in business sector

	2006				2007			
	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter
Men	106,92	108,17	110,88	115,25	113,64	116	118,25	123,92
Women	84,03	85	86,32	90,38	88,26	90,38	92	96,32
GPG (%)	*21,41*	*21,42*	*22,15*	*21,58*	*22,33*	*22,09*	*22,2*	*22,27*
	2008				2009			
	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter
Men	125	127.25	128.29	132.04	129.25	129.39	129.84	133.97
Women	97.61	98.63	99.94	102.79	102.38	102.69	102.52	105.76
GPG (%)	*21.91*	*22.49*	*22.1*	*22.15*	*20.79*	*20.64*	*21.04*	*21.06*
	2010							
	1st quarter	2nd quarter	3rd quarter	4th quarter				
Men	131.54	132.32	132.11	x				
Women	105.48	105.96	105.04	x				
GPG (%)	*19.82*	*19.92*	*20.49*					

Source: Average earnings international system, AEIS, Survey results, archive

x data are not available

The GPG, in which we see from 2009 systematic improvement, it is worth attention. Closest approach of earnings of both sexes occurred in the business sector in the 1st quarter of 2010 and in non-business sector in the 4th quarter of 2009. The GPG actually got to its lowest level in the business sector in the 1st quarter of 2010 (19.82 %) and in non-business sector, where the conditions for women are more sufficient, in the 4th quarter of 2009 (14.76 %).

5. SEARCH FOR THE CAUSE OF THE CONDITION

The segmentation of workers in the labour market by the proliferation of different types of employment shows a relatively strong segregation of male and female work force in the Czech

Republic. Occupational and industrial segregation of female and male workers in the Czech labour market results from different selection of study subjects among students in schools that determined their future departmental profiling and the subsequent career choices. The causes of segregation of male and female work force are not merely the result of choice of study field, but they are given by the historical context and development of the Czech labour market. Further reasons can be competitive impulses that determine which industry will be further developed, changes in skill requirements of employers and physical and psychological differences between males and females.

In the long term, it appears that preferred fields of study for women are different than the fields that are more suited to men, as it is apparent from Table 3. Women prefer the physically undemanding jobs, professions performed mainly in the interior with predominantly fixed working hours with no overtime requirements. Consistent with these requirements, the female work force predominates in the third sector of economy. Women are especially concentrated in administrative support, education, financial intermediation, health and social work. They are frequently employed in traditionally female professions, like school teacher, nurse or librarian. On the other hand men tend to work in construction, transportation, mining, etc. Men's work is, however, hard, physically demanding, working hours are usually flexible and work can have seasonal pattern.

For the purpose of monitoring the occupational segregation we use labour statistics and Industrial Classification of Economic Activities (CZ-NACE)[57] which can show us the structure of female and male occupations.[58]

Table 3. Employed (thousand) in National Economy by CZ-NACE in 2005-2009

	MEN					WOMEN				
	2005	**2006**	**2007**	**2008**	**2009**	**2005**	**2006**	**2007**	**2008**	**2009**
	2 705.5	**2 741.9**	**2 806.1**	**2 863.2**	**2 823.7**	**2 058.5**	**2 086.1**	**2 115.9**	**2 139.3**	**2 110.5**
Agriculture; hunting; forestry; fishing	**126.2**	**118.6**	**117.8**	**109.5**	**107.0**	55.4	55.7	51.2	49.3	46.8
Mining; quarrying	43.3	47.2	47.9	48.0	44.7	5.6	7.3	5.9	7.1	7.5
Manufacturing	**780.6**	**819.9**	**855.4**	**879.6**	**804.9**	468.5	490.7	492.9	498.9	437.8
Electricity, gas	49.3	47.0	44.8	47.3	46.8	12.7	12.3	11.4	12.8	11.0
Water supply	36.6	40.0	41.9	42.0	43.4	10.1	10.2	9.6	10.6	10.3
Construction	**433.1**	**417.3**	**425.6**	**438.7**	**456.0**	42.7	37.3	40.2	42.0	40.7
Wholesale and retail trade, repairs of goods	287.2	281.6	284.3	288.7	297.0	313.6	318.1	314.6	330.5	333.9

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[57] The CZ-NACE classification is maintained by the Czech Statistical Office
[58] See Trendová (2008)

Transport, storage, communications	**230.6**	**241.6**	**245.4**	**244.2**	**245.4**	83.2	78.9	77.8	83.3	85.3
Hotels, restaurants	84.3	84.6	79.3	80.7	81.8	97.5	102.5	102.2	96.2	104.2
Information and communication	60.6	66.9	72.0	82.5	94.6	45.9	42.4	43.1	35.3	34.6
Finance and insurance	38.3	34.6	38.4	45.0	44.5	59.0	58.5	64.3	70.9	65.9
Real estate, renting and business activities	15.9	15.7	18.6	19.6	19.8	15.0	15.3	17.0	20.6	20.8
Professional, scientific and technical activities	79.4	90.0	96.4	96.4	100.4	73.7	82.0	92.6	98.7	101.4
Administrative and support activities	60.0	65.3	67.6	67.0	63.2	44.3	47.8	52.2	61.0	54.5
Publ. administration, defence	173.2	165.2	160.1	166.9	167.7	150.1	150.8	156.6	150.1	153.5
Education	71.7	73.7	73.2	70.3	67.4	**226.8**	**216.0**	**219.0**	**213.6**	**228.2**
Health and social work	66.7	63.8	65.9	59.3	60.5	**255.0**	**259.6**	**265.6**	**262.0**	**265.8**
Arts, entertainment and recreation	38.7	39.4	43.0	40.1	42.0	35.3	39.2	38.4	42.3	41.3
Other activities	29.0	28.2	27.4	36.5	34.3	60.6	58.1	58.4	51.9	57.6

Source: Czech Statistical Office, Labour market in Czech Republic 1993-2009, Employed persons by CZ-NACE

The effects of the crisis on the labour market in EU brought changes in the type of employment created and a drop in wages. Given the fact that economic recession affected only certain sectors of the economy, such as, for example, construction and manufacturing industries, it is clear that people working in these sectors faced greater risk of layoffs and of unemployment. From the analysis "The government approved the analysis of the Czech economy and sectors within the competence of the MIT for 2009"[59] the differential impact of the recession is clearly discernible. Moreover certain sectors of the economy that were hit hard during recession were identified. Among these, we included the

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[59] Survey of the Czech Economy and MIT Sectors in 2009, MIT

manufacturing, automotive industry and other industries with production closely associated with export.

We know from previous examination that women tend to work in industries and occupations less immediately affected by recession. A significant decline in economic result of non-financial enterprises was recorded in agriculture, forestry and fisheries as well as mining and quarrying. We observed that men worked in such sectors of the economy, which was most affected by the economic downturn.

6. CONCLUSION

The aim of this paper is to identify and evaluate recent changes in the parameters of the labour market, particularly unemployment rate and earnings levels, all with regard to gender differentiation. Special attention is given to the years 2008, 2009 and 2010 as part of the relevant period for assessing the effects of economic recession. In general, recession has been associated with declines in employment and real wages. Development of monitored indicators suggested surprising conclusions. The assumption that women as a disadvantage group in the labour market will be more vulnerable than men, was not confirmed. The economic recession affected men much harder than women.

The economic had negative impact not only on the unemployment rate of men, but also a on the level of their earnings. The rate of male unemployment in the Czech Republic grew faster than the rate of female unemployment. This fact was supported by the similar evolution in the EU-27. Other observed values helped us to find out the changes in overall real wages. Investigated data suggested a relative strong decline in men's hourly wages in comparison to women's decline in wages. It was also observed a clear reduction in the value of the GPG expressing the difference in median earnings between men and women.

From the analysis of recently published statistical data related to the labour market, it is apparent that the economic recession had unexpected gender impact. Another area of interest was to identify factors that caused these differences. The effort to explain the nature of the observed results implies making the survey of the impact of economic recession on all sectors of the economy. By summarizing the main results of the analysis dealing with the economic development in the Czech Republic, industry sectors that were hit hard during recession were identified. The survey highlighted just the sectors with significant predominance of male workers. The observed impact of the recession and identification of the most affected sectors of the economy with the pointing out of the occupational segregation in the Czech labour market illustrated the greater negative impact on male workers.

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MANAGEMENT OF SPECIAL PROGRAMS OFFERED AT TOURIST DESTINATIONS

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Abstract

Management of special programs is a part of the internal environment of tourist destinations. The paper will explore those facilities which often make the basic motive for the arrival of tourists to some tourist destinations. Special programs can be a frequent and a further increase of customer satisfaction with the chosen tourist destination, and also an impulse for increasing tourist spending. Model of the research are travel programs of special offer facilities, based on destination programs. They are often not a part of the hotel or other accommodation facilities' offer, but the destination facilities in the tourist offer. The authors wish to define the tourism offer of special programs, their importance and characteristics, as well as the system of experiences of a tourist destination. Authors want to explore the influence of special tourism programs and facilities on the increase of tourist spending. Special emphasis will be put on importance of destination management and the external environment of hotels and other accommodation facilities. The bearers of the execution of plans of special tourist programs in the tourist destination which affect higher tourist spending will be explored and defined. Forms and types of special tourist programs offered in the tourist industry to increase the tourism offer and consumption will also be explored. Model of the research are recognized tourist destinations in Croatia and the world in which, in a particular mode, special tourist programs are shaped to enhance tourism experience and increase tourist spending.

Key words: *tourist destination, tourist spending, tourist offer, special tourist programs.*

1. INTRODUCTION

The system of tourist attractions and offer in a tourist destination is contained in the commonly known fact that tourists want to experience the distinctiveness of a destination through as many facilities as possible. Is it a well known fact that programs and staff are a basic resource of any tourist destination and they add to special tourist programs that determine the attractiveness of a tourist destination. The aim of work is to determine the importance of designing special tourist programs which enhance the experience of tourists and encourage increase of tourist spending.

The authors start from the known facts and the available references, models and experiences in Croatia and Mediterranean countries which serve as a model in the research of the goal of the paper. Systems of management in a tourist destination are measured through indicators of management performance. Value and effects of tourism offer of special travel programs can also be measured. The authors use their own research and various domestic and foreign sources, in particular those based on surveys of tourist spending in a tourist destination, which is linked to a range of special programs in a selected tourist destination. Conclusion will be made after research done using various methods: correlation methods, system of benchmarking, analysis and synthesis. Since special tourist programs are a part of tourist attractions and destination management, the paper will define the importance of special

facilities as a part of a tourist destination. Most common special tourist programs (which enhance the pleasure of tourists with staying in a selected tourist destination) increasing tourist spending will be defined. In the end, quantitative evidence will be presented to prove a direct connection between specific programs and their impact on the number of tourists.

2. TOURIST DESTINATION AND RESOURCES OF SPECIAL PROGRAMS

Tourist destination is determined by a number of elements and factors that determine its character and potential of its market valuation. Basic resources of tourist destinations are space and staff, and programs implemented in the area.

The areas include facilities and equipment which are arranged in a certain area at a destination where special tourist offer and specialized technical personnel carry out special programs to make tourists' stay enjoyable and meet the expected motives (Čavlek et al., 2011).

Factors of programming tourist programs in the tourist destination can be defined and determined as the three factors:

a) Space, with its characteristics and influence on the success of the program,
b) Staff, with all the features and qualities that make the program feasible and successful,
c) Program, content and structure of the proposed program has its own characteristics, sold and appropriately valued in the market

All three factors are interrelated; they affect and condition one another.

2.1. Space as a factor of special programs in a tourist destination

Space is one of the three factors that determine a specific program as part of tourism. As a factor of the animation program, it has to be divided into two main parts, the outer and inner space (exterior and interior).

Outer space (exterior) with their characteristics and importance in the creation of tourism offer is reflected through the following elements of outer space:

1. landscape, characteristics of the region and relief
2. climate, sunshine, snow, wind, rain – precipitation
3. flora - the diversity and excellence of plant resources, types and characteristics of plant life in a tourist industry, tourist potential, (types of plant life, plant life for observing and painting, flowers, decorative plants, parks, underwater plant life, etc.)
4. fauna, the diversity and excellence of wildlife on land, in water and under water, characteristics and importance of wildlife in the tourist industry, tourist potential, (types of animals, birds, fish and underwater life, insects, reptiles, etc.)

Inner space (interior) with its equipment and capabilities is an important part of tourism and a factor of a total creation of animation programs. Elements and features of the interior are:

1. Types of objects for special purposes (sports halls, conference halls, entertainment halls, concerts and gatherings, historic buildings and archaeological sites, etc.)
2. Sizes of objects and their characteristics, potential and importance

3. Location of the building, characteristics and importance of the location for the creation of animation programs, (location in relation to the program, availability, traffic characteristics, etc.)
4. Decoration of buildings, equipment that can potentially be used and is important for the creation of animation programs, (garages, patios, roofed over, view-point, elevators, etc.)
5. Equipment of the facility that specifies the animation program and determines the potential to perform the program (technology of sound and picture reproduction - simultaneous translation, possibility of duplication of material, etc...)

Space with all its features and facilities shapes an indispensable element of any tourism program (special program) and becomes its factor. Space as a constant, however, is variable and dependent on staff and program. It is often the first and the initial factor, but never the only one and never fixed.

2.2. Staff as a factor of special programs in a tourist destination

Staffs is often one of the basic elements of any human activity including tourism, but in creating the animation program staff make a special element of the potential success of a tourist program. When observing the importance of staff as a factor of special programs it is important to highlight the following important characteristics required in the implementation of special programs:

1. Structure of potential staff for the performance of potential tourist program
2. Potentials of staff in the environment; structure, number and potential skills which necessary for a potential program; cultural heritage and population characteristics of the surrounding area
3. Structure and quality of schools and institutions of higher education in the environment of special travel programs
4. Development of human resources services, supporting services and resources in potential human capabilities of a destination (town, city, region or county)
5. Services for staff support and possibilities of rapid adjustment to supply and demand of human resources
6. Age and qualification structure of the population in surrounding area as a potential for possible local demand and demand in periods of fall in tourism demand (potential of demand of the local population)
7. Characteristics of population, cultural, linguistic, social, religious heritage.

These settings point to the fact that every program in the tourist offer is a special program in a tourist destination. The significance of special tourism programs and facilities in a tourist industry for a particular holiday destination remains one of the basic questions to every destination management aimed at creating increased tourist spending.

3. THE DEFINITION OF SPECIAL TOURISM PROGRAMS AND FACILITIES IN THE TOURIST OFFER

Every tourist product is particularly heterogeneous, complex and demanding. Quality of tourist demand is imperative in the tourist industry, and it is often the target of tourist demand and tourism offer. Ongoing development of tourism supply system and changes in demand are the result of the totality of development of science and technology, and the totality of constant change development. A full range of needs and motives which lead the tourists to a specific trip or visit to a recreation facility or program is carried out with the aim to satisfy tourists. In this two-sided desire to experience

something new what would meet the expectations, tourists in fact, seek new experience. Experience is absolutely the foundation of travel or selection of an object or program, but obviously it is not enough. Fulfilment of the expected for the other side of tourism, which is the realization of tourist spending, is also necessary.

Fulfilment of the expected economic profit comes from tourist spending, which makes the main driving force of each organizer regardless of whether they are an entrepreneur or a manager. Two basic concepts are met on a tourist market: experience and profit. Starting from the general concept of tourism offer and the system of importance of tourist animation in an increase in tourist spending and satisfaction of tourists to more fully experience the tourist destination, imposes two main goals of tourist animation:

- **Satisfaction**, satisfaction of tourists to a complete and fully experience a tourist destination and all of its resources that are available and put at the disposal of tourists to experience their own motives and needs which have attracted the tourist to visit a destination, an object or event, i.e. the program offered.

- **Tourist spending**, increase of tourist spending is the second goal of any special tourist program and offer. Tourist spending is the goal of every economic activity including special tourist programs in tourism, which is measured by increasing the number of tourists and the amount of their consumption as a result of demand for some special tourist programs.

Starting from the characteristics of a tourist destination for adventure and travel destinations for tourists, as well as system of tourist demand, it is concluded that the targets of special tourist programs meet the needs and motivations of tourists and increase tourism spending. Special tourism programs are not an economic activity that has itself as a purpose nor are a separate part of tourism offer in which the objectives are only achieved by one side of the tourist offer and demand; but are a part of the total tourist spending. It is a joint activity of the organizer of the offers in a tourist destination and a potential tourist, but in which both parties meet their goals which connect them in the fastidious tourist market (Cerović, 2010).

Special tourist programs and facilities are basic elements in the tourist offer in which the wishes and needs of tourists, on the one hand, and the needs of carriers of tourist offer to increase tourists' spending, on the other side, are met. Special tourism programs are defined as: "a special travel program is a part of tourism offer which meets the needs and desires of tourists to experience the expected and desired travel program, through which the organizer increases tourist spending" (Cerović, 2010).

From the above definitions and as a result of experience, increased tourist spending arises thanks to the following special programs:

- Programs of presentation of ethnographic cultural heritage (Ethnographic museums, theme museums),
- programs of presentation of the cultural architectural heritage (protection and presentation of public and private buildings of architectural heritage, programs teaching the historical and cultural heritage),
- musical programs (festivals , classical music concerts and local folk music, musical evenings, folklore performances, music museums)
- programs in entertainment, (carnival, fisherman's nights, harvesting, olive, grapes, truffles, chestnuts picking, country life, participation in rural or arts and crafts activities),

- entertainment for children (children's games with props, dance for children, children's games, video games, cartoons),
- Entertainment and dancing (dancing, games with music, active dance, dance choreographies, artistic dance, folk dance)
- Fine arts programs (art exhibitions, events in the galleries-museums-lapidaries, galleries, various visual exhibitions, etc.)
- Graphic and visual programs (exhibitions of graphic and visual content, graphic workshops, virtual electronic presentations)

- Syncretism programs (scene programs for tourists, theatrical programs involving tourists, themed animation and drama programs, frozen characters on the squares in cities, etc.)

- Individual animation (organized participation in combined ad hoc programs, such as: Bar Lero in Dubrovnik in Mark-piano and saxophone available for guests to entertain themselves, etc.)

- Programs on archaeological sites, archaeological parks, scenic programs in historic buildings and sites,

- Religious programs (programs related to religious events and happenings associated with religious rites and religious social events, eg. *Majka Božja na Trsatu, Majka Božja u Mariji Bistrici* etc.)

- Organization of thematic schools and special learning programs: programs and schools of painting and fine art, sculpture programs, learning programs and learning about the music programs, hobby activities, radio amateurs, model building, flying model construction, angling, car modelling, etc.

These programs in the tourist industry are an important part of the experience (primary or special) of a tourist destination. There are several questions to be answered: who is the carrier of the activities, what the system of management for special programs' offer is like and who is the carrier of a potential tourist satisfaction as a prerequisite for the increase in tourist spending.

The next question is how to measure and demonstrate management system to determine the economic success of the offered special tourism programs.

4. MANAGEMENT EFFECTS ON INCREASING TOURIST SPENDING ON SPECIAL TRAVEL PROGRAMS

Tourist offer of special programs is aimed at increasing the experience of a tourist destination and increasing tourist spending. Destination management creates special tourist programs, but in order to enable management to track the effectiveness, two main goals are set, namely the satisfaction of tourists and level of tourist spending.

Management must set the MBO system, implemented in three phases: a) defining the objectives of special programs, b) analyzes the key results - defines the parameters for determining the effects of special programs, c) monitor the realization of special programs (Jadrešić, 2001).

Economic impact of special programs offered is an important factor for destination management system, but with the emphasis of monitoring the proper development of the two most important tourism resources of every tourist destinations, facilities and personnel. The following study aims to

determine how the investment in a special tourism program in a recognizable tourist destination can provide the economic effects.

Another question will be explored: can the funds invested in special programs (which encourage possible satisfaction and higher expected return of tourists) be justified? Economic impact of special programs in the tourist destination is an important indicator for the destination entrepreneurship. Model of the research refers to the estimate averages of investment in the tourist season 2010 in ten representative tourist destinations, in Croatia: Poreč, Rovinj, Opatija, Novalja, Rab, Šibenik Solaris, Makarska, Bol and Dubrovnik.

Model of the studies is related to specific programs which offer a variety of special programs in facilities for fun and adventure (beaches, museums, galleries, parking lots, religious buildings, renovation of historical heritage, the city walls, towers, fishermen festivities, outdoor concerts, festivals, etc.). In the named ten tourist destinations, the following special programs were measured:

      a. Programs in museums,
      b. Fishermen festivities and parties,
      c. Classical music concerts,
      d. Concerts of ethnic and folk music and dance,
      e. Visits to churches and historic buildings,
      f. Historical Ethnographic meetings (Rabska fiera, etc.),
      g. Common recreation activities - aqua aerobics, etc,
      h. Sports and recreational tournaments, tennis tournaments, sailing regattas, etc.

There are few more questions to be answered: are specific investments cost-effective, when should credit resources be taken and returned from future incomes of local government (Tourist Board budget), which amount of money is related to the number of overnight stays and the size of future income from sojourn tax.

The degree of statistical correlation between the occurrences is measured by methods that make the area of correlation analysis. Data for the illustrative example of analysis of simple linear regression models relating the number of employees in the DMC (companies that perform these special programs) in ten tourist destinations in 2010 and the number of special programs - tourists (the number of users in 000 tourists)

x = independent variable - number of values of the DMC performance

y = number of users - tourists – dependent variable

The arithmetic mean is calculated using the formula [Cerović, 2008]:

$$\underline{x} = \frac{x_1 + x_2 + \cdots + x_i + \ldots x_N}{N}$$

$$\overline{x} = \frac{877,70}{8} = 109,7125$$

$$\overline{y} = \frac{279,50}{8} = 34,9375$$

Score of parameter b using the least squares is presented by (Šošić, 2002):

$$b = \frac{\Sigma^n x_i y_i - n\overline{xy}}{\Sigma^n x_i^2 - n\overline{x}^2}$$

Calculation of regression coefficients is obtained by the substitution of appropriate values from the table 1 in the formula:

$$b = \frac{56.685,48 - 8 \cdot 109,7125 \cdot 34,9375}{182.694,37 - 8 \cdot 109,7125^2} = 0,301168$$

No.	Special program	Program value in 000 kn	Number of tourists (in 000)	Variables		
		x^i	y^i	x_i^2	y_i^2	$x^i y^i$
1	A	90.8	27.50	8.244.64	756.25	2.497.00
2	B	310.3	80.20	96.286.09	6.432.04	24.886.06
3	C	33.4	10.90	1.115.56	118.81	364.06
4	D	50.3	15.30	2.530.09	234.09	769.59
5	E	19.7	5.80	388.09	33.64	114.26
6	F	260.3	98.90	67.756.09	9.781.21	25.743.67
7	G	55.9	18.60	3.124.81	345.96	1.039.74
8	H	57.0	22.30	3.249.00	497.29	1.271.10
TOTAL		877.70	279.50	182.694.37	18.199.29	56.685.48

Table 1. Number of tourists visiting the special programs, estimates averages in ten destinations (Poreč, Rovinj, Opatija, Novalja, Rab, Biograd, Šibenik Solaris, Makarska, Bol, Dubrovnik) in 2010

Regression coefficient in this example may be interpreted with the connection of the value of special programs and the number of users – tourists who are using the special programs. If the number - indicator of the value of the increases for one (one thousand), the number of special program users - the tourists, increases on average for 0.30017, or 300 tourists (visitors).

Finally we come to conclusion that the number of tourists who will come again to a popular tourist destination, will be higher than last year's number if they were satisfied with the offered tourist program. It is implied that special programs and all travel programs that are offered to tourists in order to better experience the tourist destinations with all the features of its area and the offered programs definitely have economic justification. Increase of overall tourist satisfaction with the offered special programs enhances the positive experience of the tourist destinations and consequently enhances tourist spending.

Management of tourist destinations should invest in increasing the number and quality of specific programs by increasing the quality of the offered special programs. Tourists are looking for a better evaluation of the space and all the elements that are offered in a tourist area and the increase in quality

of personnel, which both make an important element of tourism. Special high-quality tourism programs are required for the pleasure of tourists and the increase of tourism consumption.

5. CONCLUSION

Tourist offer of special programs as a part of the tourism offer is defined as a set of services that meet the needs and wishes of tourists to experience the expected and desired tourist program, using which the organizer will increase tourist spending. Tourists choose a tourist destination and visit it again to practice their hobby, have an adventure, or experience the destination as an integral tourist product, as the fulfilment of their expectations. Possible special programs in the tourist destination can be a part of the tourism offer as a basis for encouraging tourist spending.

Special tourist programs are offered to tourists so they can experience the chosen tourist destination, or the expected special program which they have chosen to experience the reason of their arrival in the destination. All programs in a tourist destination, as well as special programs are constantly changing according to changes that are caused by permanent changes in travel demand. The present models of development and potential features of the tourism offer are based on special facilities that make a tourist destination attractive so a special experience can be gained but in the entire system of maintaining and enhancing the health and physical harmony of the human body and nature that surrounds it. Managers measure economy, as well as the effects of inherently uneconomic investments in the efficiency of special tourist programs and investing in special tourist programs to increase the number of tourists in the tourist destination and thus increase the total tourist spending. Financial success of tourist spending on special programs is important for the managers and entrepreneurs, but also the satisfaction of tourists with the special programs offered.

Indicators determine financial, i.e. economic effects, the supply of tourist programs since, through the benchmarking system with other special programs; they show the possibility of comparison with the competition in the surrounding area and past periods. The objective of management measurement is to determine the economic efficiency of the programs in progress, together with planned programs which would meet the needs and motivations of tourists and increase the economic effects of the possible programs that are planned, implemented and realized by the destination management. Special high-quality tourism programs should be offered to satisfy the tourists as an incentive to maximize consumption and tourist spending.

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GLOBAL COMPETITIVENESS, BUREAUCRACY
AND PUBLIC SECTOR TRANSPARENCY

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Abstract

In the last decades the global competitiveness became the most important target for all countries all over the world. The global economic crunch highlighted how economies are advancing at different speeds and there is still the risk of a "double dip" in a number of countries. According to 2010 World Economic Forum, the quality of institutions has a strong bearing on competitiveness and growth. It influences investment decisions and the organization of production and plays a key role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies. Public sector could contribute to the economic development promoting new strategies and encouraging investments in different areas. In this context, proper management of public finances is also critical to ensuring trust in the national business environment. Bureaucracy developed in the public institutions during the economic development and during the economic crunch, as well.

Key words: *global competitiveness, bureaucracy, public institutions, public sector*

1. INTRODUCTION

Global competitiveness became a priority for all the governments and states all over the world. Since 2005, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness Index (GCI), a highly comprehensive index for measuring national competitiveness, which captures the microeconomic and macroeconomic foundations of national competitiveness[60] . We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. According to the Global Competitiveness Report, the level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. Thus, more competitive economies tend to be able to produce higher levels of income for their citizens. This is why the productivity level also determines the rates of return obtained by investments (physical, human, and technological) in an economy. Because the rates of return are the fundamental drivers of the growth rates of the economy, a more competitive economy is one that is likely to grow faster in the medium to long run.

The slow recovery of the European Union economy after the economic crises demonstrates the value of institutions and the role of public sector transparency in economic development. Reducing

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[60] www.weforum.org – The Global Competitiveness Report 2010 – 2011, pp. 4

bureaucracy in public sector could be one of the most important factors for investment encouraging and economic growth. "While emerging economies have, for the most part, bounced back to healthy growth, advanced economies face continuing difficulties such as persisting unemployment, weak demand, and spiraling debt, while still struggling with reforms in the financial and labor markets, among other challenges."[61]

2. LITERATURE REVIEW:

The paper has based its conclusions on the researches of the most recent papers in this area:

World Economic Forum(2011), Global Competitiveness Report (2010-2011), that presented uncertainty in the global economy and a continuing shift in the balance of economic activity away from advanced economies and toward developing ones. Despite significant government stimulus spending aimed at dampening the recession, growth in advanced economies remains sluggish as they are mired in persistent unemployment and weak demand. The Global Competitiveness Report has, for more than 30 years, played a facilitating role in this process by providing detailed assessments of the productive potential of nations worldwide. The Report contributes to the understanding of the key factors determining economic growth, helps to explain why some countries are more successful than others in raising income levels and opportunities for their respective populations, and offers policymakers and business leaders an important tool in the formulation of improved economic policies and institutional reforms.

World Economic Forum(2011), "Global Risk 2011", presented an initiative of the risk responses network: The world is in no position to face major, new shocks. The financial crisis has reduced global economic resilience, while increasing geopolitical tension and heightened social concerns suggest that both governments and societies are less able than ever to cope with global challenges. "Two risks are especially significant given their high degrees of impact and interconnectedness. Economic disparity and global governance failures both influence the evolution of many other global risks and inhibit our capacity to respond effectively to them. In this way, the global risk context in 2011 is defined by a 21st century paradox: as the world grows together, it is also growing apart."[62] According to Global Risk 2011 report, globalization has generated sustained economic growth for a generation. It has shrunk and reshaped the world, making it far more interconnected and interdependent. But the benefits of globalization seem unevenly spread – a minority is seen to have harvested a disproportionate amount of the fruits. Although growth of the new champions is rebalancing economic power between countries, there is evidence that economic disparity within countries is growing.

E. Page and B. Jenkins (2005) in "Policy Bureaucracy" presented how policymaking is often assumed to involve activism, advocacy, and asserting preferences in the cut and thrust of politics. Yet it also brings with it the active participation of people whose main connection with the policy in question owes little to any normative, still less emotional, attachment to the issue. "Policy bureaucracies, parts of government organizations with specific responsibility for maintaining and developing policy, have to be mobilized before most significant policy initiatives are launched—although, as we will see, they may also be mobilized to make sense of policy initiatives after they have been announced by politicians. The key players in policy bureaucracies are not the top civil servants alone, the ones we

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61 www.weforum.org – The Global Competitiveness Report 2010 – 2011, pp. 4

62 World Economic Forum(2011), "Global Risk 2011", p. 6

know most about, such as permanent secretaries." Page and Jenkins said that in policy bureaucracies responsibility for maintaining and developing a specific area of policy rests to a large extent on middle-ranking officials, and our study concentrates on their role within policy bureaucracies.

3. ABOUT THE GLOBAL COMPETITIVENESS, BUREAUCRACY AND PUBLIC SECTOR TRANSPARENCY

According to the 2010 World Economic Forum(WEF) the concept of competitiveness thus involves static and dynamic components: although the productivity of a country clearly determines its ability to sustain a high level of income, it is also one of the central determinants of the returns to investment, which is one of the key factors explaining an economy's growth potential. "There are many determinants driving productivity and competitiveness. Understanding the factors behind this process has occupied the minds of economists for hundreds of years, ranging from Adam Smith's focus on specialization and the division of labor to neoclassical economists' emphasis on investment in physical capital and infrastructure, and more recently, to interest in other mechanisms such as education and training, technological progress, macroeconomic stability, good governance, firm sophistication, and market efficiency, among others."

All the components of the global competitiveness could be grouped into 12 pillars of economic competitiveness:

- First pillar: Institutions

- Second pillar: Infrastructure

- Third pillar: Macroeconomic environment

- Fourth pillar: Health and primary education

- Fifth pillar: Higher education and training

- Sixth pillar: Goods market efficiency

- Seventh pillar: Labor market efficiency

- Eighth pillar: Financial market development

- Ninth pillar: Technological readiness

- Tenth pillar: Market size

- Eleventh pillar: Business sophistication

- Twelfth pillar: Innovation

Between these 12 pillars of economic competitiveness is a strong link, most of them highlighted the role of the state into the economic development. Thus, the stability of the macroeconomic environment is important for business and, therefore, is important for the overall competitiveness of a country. "Although it is certainly true that macroeconomic stability alone cannot increase the productivity of a nation, it is also recognized that macroeconomic disarray harms the economy. The government cannot provide services efficiently if it has to make high-interest payments on its past debts. Running fiscal deficits limits the government's future ability to react to business cycles. Firms cannot operate

efficiently when inflation rates are out of hand. In sum, the economy cannot grow in a sustainable manner unless the macroeconomic environment is stable. This issue has captured the attention of the public most recently through discussions on exit strategies to wind down deficit spending, and in the context of the recent buildup of sovereign debt."[63]

According to the 2010 World Economic Forum(WEF) the role of institutions goes beyond the legal framework. Thus, government attitudes toward markets and freedoms and the efficiency of its operations are also very important: excessive bureaucracy and red tape, overregulation, corruption, dishonesty in dealing with public contracts, lack of transparency and trustworthiness, and the political dependence of the judicial system impose significant economic costs to businesses and slow the process of economic development. In addition, proper management of public finances is also critical to ensuring trust in the national business environment. Bureaucracy is described by many researchers. One of them Weber (1978: 223) identified bureaucracy as 'the most rational known means of exercising authority over human beings' and as such capable of the 'highest degree of efficiency'. This research presented the comparison between the technical superiority of bureaucracy, to that of the machine over non-mechanical modes of production. This is why we have a choice in organizing administration is between 'bureaucracy' and 'dilettantism'.

Townley thinks that understanding that bureaucratic organization is the embodiment of rationality, offering a 'machine' model of organizations, bureaucracy is transformed into a prescriptive model, identified with a particular form of organizational structure, and deemed to be more efficient than other forms of organization. "Such descriptions prompt a stream of research into the administrative functioning of bureaucracy and the consequences of a bureaucratic organization for the achievement of organizational goals. Organization theory focuses on bureaucracies rather than a bureaucratic rationality. Initial research questions bureaucracy as a monolithic representation of organization. It confronts but does not resolve the confusion as to whether bureaucracy should be treated as a structural type or as a variable, that is, whether something is or is not a bureaucracy or whether it is more or less bureaucratic.[64]" Townley observes how bureaucracy's superiority lies in its formality, and with this, its guarantee of calculability. And formality refers to calculability, just as the formal rationality of economic action is the extent of quantitative calculation or accounting that is technically possible and applied (with money being the 'most perfect' means of economic calculation, and therefore providing a rational basis of uniform numerical statements), so rational bureaucracy is formally rational because it provides the calculability of means and procedures.

Although the economic literature has focused mainly on public institutions, private institutions are also an important element in the process of creation of wealth. According to the Global Competitiveness Report, the recent global financial crisis, along with numerous corporate scandals, has highlighted the relevance of accounting and reporting standards and transparency for preventing fraud and mismanagement, ensuring good governance, and maintaining investor and consumer confidence. "An economy is well served by businesses that are run honestly, where managers abide by strong ethical practices in their dealings with the government, other firms, and the public at large. Private-sector transparency is indispensable to business, and can be brought about through the use of standards as well as auditing and accounting practices that ensure access to information in a timely manner.[65]"

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63 www.weforum.org – The Global Competitiveness Report 2010 – 2011, pp. 5

64 B. Townley – Reason's Neglect. Rationality and Organizing, Oxford University Press, New York, 2008

65 www.weforum.org – The Global Competitiveness Report 2010 – 2011, pp. 5

The 2010 World Economic Forum(WEF) observes how is the evolution of the most developed countries and the evolution of the poor ones. Thus, one trend worth noting is the slight decline on average among countries in the most advanced stage of development, the innovation-driven stage, while those countries in the first and second stages have seen a slight improvement in score. In other words, while the competitiveness of more industrialized economies is worsening, developing countries are improving, resulting in a small convergence in performance. The economic development all over the world shows the significant role of the public sector and the public institutions, the influences of the government strategies and policies over the economic sector. According to the results of the Global Competitiveness Report 2010-2011, the countries that constitute the top 10 remain the same as last year, with some changes in rank among them. Switzerland retains its 1st place position, characterized by an excellent capacity for innovation and a very sophisticated business culture, ranked 4th for its business sophistication and 2nd for its innovation capacity.

4. SOME EXAMPLES OF COMPETITIVENESS IN EUROPE

The European Commissioner Joaquín Almunia explores the differences in competitiveness performance across the EU27 members. Thus, the global economic crisis has hit a number of European countries particularly hard, leading to rising unemployment, plunging demand, and, in some cases, concerns about the sustainability of sovereign debt. "However, overall Europe continues to feature prominently among the most competitive regions in the world. As described above, six European countries are among the top 10, and twelve are among the top 20, as follows: Switzerland (1st), Sweden (2nd), Germany (5th), Finland (7th), the Netherlands (8th), Denmark (9th), the United Kingdom (12th), Norway (14th), France (15th), Austria (18th), Belgium (19th), and Luxembourg (20th). As we mentioned before, Switzerland retains its 1st place position, characterized by an excellent capacity for innovation and a very sophisticated business culture, ranked 4th for its business sophistication and 2nd for its innovation capacity. "Public institutions in Switzerland are among the most effective and transparent in the world (5th), receiving an even better comparative assessment this year than in past years. Governance structures ensure a level playing field, enhancing business confidence; these include an independent judiciary, strong rule of law, and a highly accountable public sector. Competitiveness is also buttressed by excellent infrastructure (6th), a well-functioning goods market (4th), and a highly developed financial market (8th) as well as a labor market that is among the most efficient in the world (2nd, just behind Singapore's)."[66]

It is interesting to study the new European Union member's competitiveness. The largest country among the new European Union (EU) members, Poland moves up by seven positions to 39th. This significant improvement for a second year in a row reflects the country's relatively stronger resistance to the economic crisis as a result of more prudent economic policies and its growing domestic market size. It is important to mention that Poland was the only European economy to register positive growth in 2009. "Despite the fallout of the economic crisis, Estonia and the Czech Republic remain the best performers within Eastern Europe, ranking 33rd and 36th, respectively. As in previous years, the countries' competitive strengths are based on a number of common features. They rely on excellent education and highly efficient and well-developed markets for goods, labor, and financial services, as well as a strong commitment to advancing technological readiness, particularly in the case of Estonia.

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66 www.weforum.org – The Global Competitiveness Report 2010 – 2011, pp. 14

In addition, Estonia's lead reflects solid institutions and improving macroeconomic stability, which is particularly commendable given that the region has been strongly affected by the economic crisis."[67]

Romania is one of the new EU member state and the position in the competitiveness performance across the EU27 countries is very low. However, in the global competitiveness Romania is included in the stage 2 of development. In the stage 2 of development are included other countries as Bulgaria, Russian Federation, Serbia, Macedonia, etc. In Romania was reported a good economic growth for years 2007-2008, and during the last decade the economic growth was arround 5% per year. Unfortunately, the years 2009 and 2010 were difficult, with many strong protests from public servants and retired people. At the beginning of the 2011 the economy of Romania is widely believed to start recovering, but the end of the year 2011 will show if the analyst predictions are accurate. According to the Global Competitiveness Report (GCI 2009-2010), Romania ranks the 64th (from 133 countries that the Global Competitiveness Report ranks), with 4 positions better than 2008 and with an irrelevant score improvement--4, 11 versus 4, 1 (on a scale from 1 to 7--the best situation). If we observe the Global Competitiveness Report (GCI 2010-2011), Romania ranks the 67th (from 139 countries that the Global Competitiveness Report ranks), with 3 positions worst than 2009 and the score is 4.16, very close to the last one.

Table 1: Rankings of the EU27 in the Global Competitiveness Index 2010–2011

Economy	Rank	Score
Sweden	2	5.56
Germany	5	5.39
Finland	7	5.37
Netherlands	8	5.33
Denmark	9	5.32
United Kingdom	12	5.25
France	15	5.13
Austria	18	5.09

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Belgium	19	5.07
Luxembourg	20	5.05
Ireland	29	4.74
Estonia	33	4.61
Czech Republic	36	4.57
Poland	39	4.51
Cyprus	40	4.50
Spain	42	4.49
Slovenia	45	4.42
Portugal	46	4.38
Lithuania	47	4.38
Italy	48	4.37
Malta	50	4.34
Hungary	52	4.33
Slovak Republic	60	4.25
Romania	67	4.16

Latvia	70	4.14
Bulgaria	71	4.13
Greece	83	3.99

Source: www.weforum.org – The Global Competitiveness Report 2010 – 2011

5. CONCLUSIONS:

The economic performance was a big political debate in the last decade. The economic crunch highlighted the difficulties of the each country and the possibility of economic development. The economic crises proved that Europe is not sufficiently equipped to face new global challenges such as the rise of large competitive economies, the need for energy efficiency and security, or the rapid pace of technological innovation. During the slow economic recovery, the global competitiveness became a priority for governments all over the world and the global competitiveness report presented the ranking for each country with the competitiveness score. According to the Global Competitiveness Report, competitive economies are those that have in place factors driving the productivity enhancements on which their present and future prosperity is built. It is shown in this report how a competitiveness-supporting economic environment can help national economies to support high incomes and ensure that the mechanisms enabling solid economic performance going into the future are in place.

Public institutions could stimulate the economic development for European countries and the European Union has proposed a new strategy—Europe 2020—for smart, sustainable, and inclusive growth. This strategy consists of consolidating public finances while promoting economic integration, investing in pan-European energy and transport infrastructure, and developing further information and communication technologies.

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SOFTWARE PACKAGE FOR PROFITABILITY PLANNING OF THE COMPANIES

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Abstract

To achieve high job performance, it is necessary the managers in various functions and departments to have information for the managers activities of the others sectors. If the flow of information is greater, the greater will be the knowledge and expertise in the company who are a source of competitive advantage and profitability.

Using technology for creation of software packages allow sectors managers to monitor and plan all activities and operations associated with production, sales and financing.

Today, choosing and designing a software package for planning the profitability is a major challenge for managers in companies.

The aim of this paper is to answer the question how managers can plan the profitability of the enterprise through simulation of variable and fixed costs, sales price and volume of production.

Key words: *profitability, break – even point, software packages, simulation, financial planning*

1. INTRODUCTION

In this paper, will be analyzed the problem of understanding and the usage of the profitability level from the managers and the application of the information systems during the decision-making process in deriving manager's decisions related to profitability.

The above concept includes the following relations: costs – level of production (sales) – profit. The main question pertains to the useful usage of the information systems during the process of alternative decision-making about the level of the variable costs, the scope of production and overall profits of the company.

During the course of implementing the planning process, the managers are facing insecurity and risk in deriving efficient and effective planning decisions. In many events, they can reasonably predict income and costs trends. But, very often their decision-making does not result with satisfied decisions. The effective and efficient decisions around the scope of production, how to change prices, marketing efforts or the possibility of capacity expansion will largely depend on the accuracy of predicting the relations between costs - level of production (sales) – profit.

The relations between costs - level of production (sales) – profit are based on the probable cost behavior and their influence on the final result i.e. profit. The cost behavior is under influence of numerous variables such as: scope of production, prices, efficiency, sales and marketing mix etc. that can limit the overall efforts for reducing the costs. Following the reasons, each financial analysis must

be done from the point of the amounts and changes of the limitations on the costs level. The understanding of the following relation: costs – scope of production (sales) – profit is very useful from the aspect of understanding the internal relations and relationships from which depends the profit level. Also, these relations have a great role in further more detail preparation of the different parts of the business plan. Planning the business success can be successfully based on the basic financial concept where different characteristics of the fixed and variable costs are taken into consideration. For successful planning of business activities of essential meaning for the management are the costs determinations of the costs that are planned to be spent in the planning period and to be put in relation with the production and sales. In opposite, the managers will not be in a situation to regulate costs amounts and that can negatively reflect the budgeting process as well as deriving other plans and decisions. The understanding of the basic concept of fixed and variable costs creates possibility that during the process of their comparison to be evaluated the efficiency of their business. Also, this concept is base for developing the second, not less important, financial concept for financial planning – the Figure on profitability level.

In the following text first, we will remind of the concept of profitability level and second, we will present software for connection of the profitability elements and variant planning of the earning alternatives.

2. THE CONCEPT OF PROFITABILITY PLANNING

The influence of the cost behavior can be clearly noticed in the following relations: costs – production level (sales) – profit when the profitability diagram will be presented. By using profitability analysis can be noticed the effects of different decisions that influence sales and costs of which depends the accomplished profit. The profitability point can be presented after determination of the variable costs, fixed costs and income. That is the activity level where the overall costs and incomes are equal. In other words, that is an output point in which the enterprise does not make any income or expenditures (See Figure 1 below).
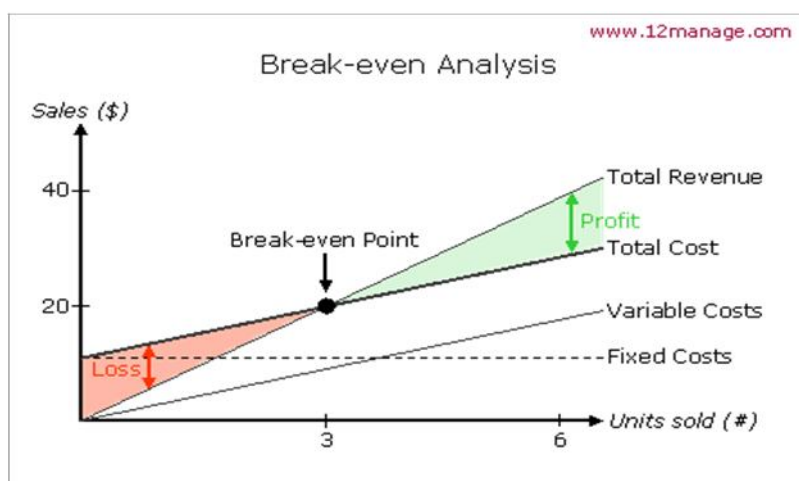
Fig. 1 Diagram of profitability[68]

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[68] http://www.12manage.com/methods_break-even_point.html

The manager's ability to appropriately control the costs can be higher if previously can be assumed the influence of the profitability point. In that sense, it is necessary for the account management to permanently analyze the cost behavior and to compare it with the profitability points, in order for the managers to get useful information for the influence of the higher and smaller changes of the costs during the decision-making process.

The profitability diagrams give the managers very useful information to quickly resemble the potential profits in the enterprise. The application of preliminary, non-official budget numbers as a base of the profitability diagram can create a possibility for the managers to impose variant changes in the budget if the assuming projection does not satisfy.

In order to understand what exactly is happening and how profitability diagram can be used, we will make modifications in diagram 2 (See Figure 2 below).
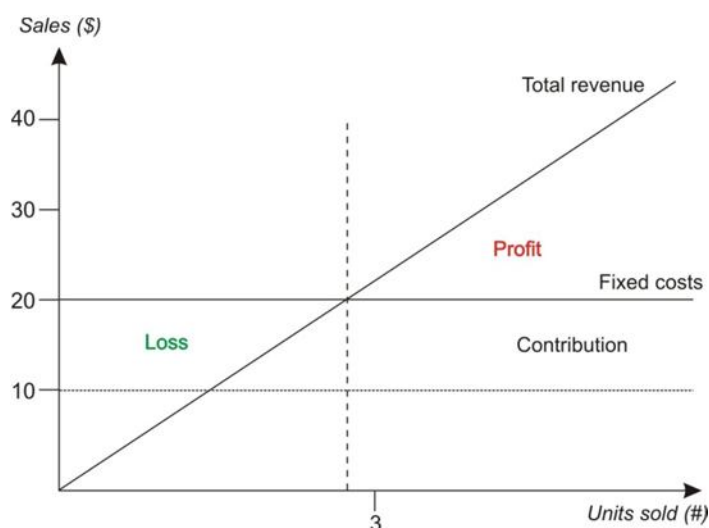
Fig. 2 A Modified profitability diagram[69]

The modifications of the profitability diagram are presented in Figure 2 and are comprised of variable costs and, second the fixed costs that are moving above the variable costs. The total costs line is almost identical with the line presented in Figure 1. But, what can be noticed is that an income line is increasing faster comparing to the variable costs line which means that for each additional activity is realized more income compared to already made variable costs. During the profitability analysis

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[69] Panovska, Violeta and Boshkoska, Meri (2010): „*Planning and Decision Making*", third edition, FAMIS, Bitola, R.Macedonia, p.196.

variable costs are very important determinant for implementing optimal level activities. When the variable costs ratio is known (total variable costs divided with the total sales), the total variable costs on each possible activity level can be determinant of deriving decision of about what level of production is needed for making profit.

In this sense, big role can play a so-called profit possibility situation that emerges as a difference between incomes from sales on one hand and, the variable costs on the other hand. Thus, the contribution is that part of the sales that covers fixed costs and remain belongs to profit. It is calculated by subtracting the variable costs from total sales.

For the contribution it can be said that is very important indicator that shows the power of the business to generate profit. Because of that reason, it is used by many enterprises during the business planning process.

A ration of contribution can be used in different ways by the managers. Contribution shows the part of the profit that can decrease or increase with every change in the level of activity. High ratio will be a reason for higher profit if production increases above profitability point. If production level fails below the profitability point, in that case the high ratio is a reason for higher loss. Low level ratio will require higher production level for creating noticeable profit increase. It is very important to remember the following: higher ratio, higher-level changes in profit in conditions when the scope of production is well above profitability point with a tendency of permanent increase.

If the business has a costs structure in which fixed costs are higher and the variable costs are lower per piece of production, in that case the contribution will be higher per production unit. But still there is a possibility of requiring increased production level before fixed costs will be fully covered. When the needed scope of production will be reached, the higher contribution per piece of production will result in rapid increase of the profitability and vice versa: if the profitability point is not achieved yet, the loss will rapidly increase. The relation between fixed and variable costs on one hand, and incomes on other, is very important from the point of effective and efficient business functioning;

In case when the business characterizes with low fixed costs and high variable costs per production unit, it is possible to achieve an income on a same level with the fixed costs but there will be slow profit realization. Very often, capital-intensive businesses are characterized with high fixed costs and low variable costs per production unit.

If the business has a small fixed assets and other fixed costs and makes delivery of products for low - level sales, there is a great probability that there will be a lower contribution per production unit. However, the managers can influence those relations and can increase the business profits. It is possible, for example, to make additional fixed costs for maintaining the working equipment, but during the production process to reduce some variable costs by eliminating a part of the workforce. This is such a cost exchange of one with other type of costs that leads to superior business performances. The experiences from practice point out that typical product business can have contribution ratio (a relationship between contribution and incomes) of 30% to 40%. If the fixed business costs are high (for example, if there is a presence of capital-intensive production process or other important fixed costs, such as: advertisements, marketing, propaganda and other administrative costs), then it will be necessary to reach an important high contribution. As an example, for those enterprises that make high costs for advertisements and enterprises that possess high-level technology, there is an immense need of a contribution ratio that equals to 60% in order to achieve profit.

This type of variant planning of the relations between total costs (variable and fixed) and the profit can be a subject of information software that will serve as a very valuable tool for management planning

and control of the profitability of the company. In the context of the above-mentioned, that can be illustrated in the model below (See Figure 3 below).
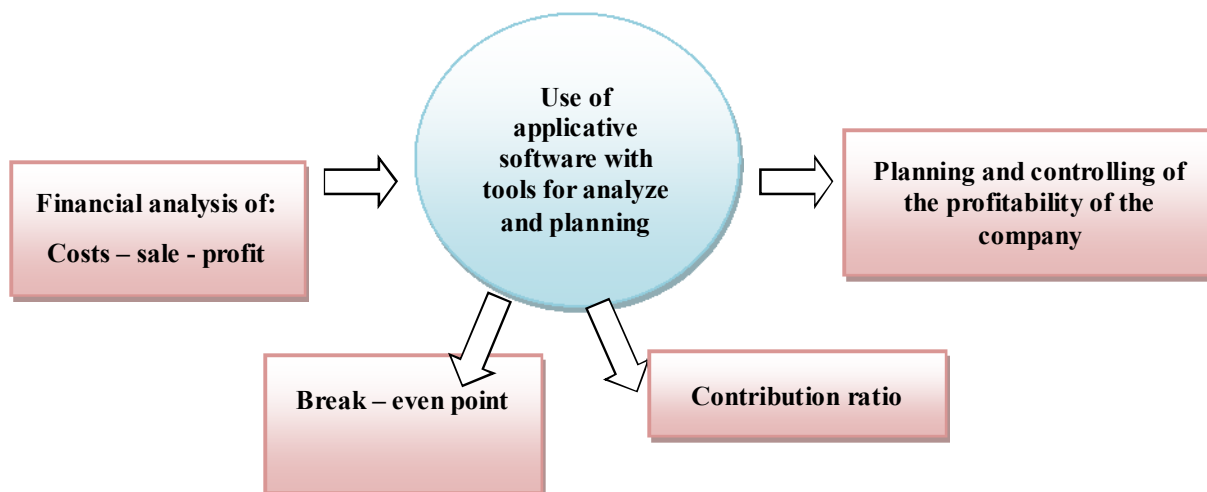
Fig. 3 A model for management planning and controlling of the company profitability by using an applicative software support

The relationships between costs and profit can be illustrated by using applicative software that gives valuable information about the profitability threshold. In other words, it provides information about the level of fixed and variable costs and the ratio of contribution or the meaning of the high and low-level contribution. This information can facilitate the decision-making process in the company that is of valuable importance for planning and controlling the company profitability. In that way, managers have information that helps them to predict costs and profit trends. All that will help the managers to derive decisions that are characterized with low level risk and increased security level.

In the following text below, will be depictured an applicative software by which the manager can perform simulation of the indicators of which depends the financial stability of the enterprise.

3. APPLICATIVE SOFTWARE FOR PROFITABILITY ENTERPRISE PLANNING

A changing business environment in which enterprises operate in big part influences the level of efficiency of the decisions that managers are adopting in relation to planning the business profitability. It will be very useful for the managers if they possess available applicative software that will enable them to be more efficient in planning the activities connected with the financial work of the enterprise. The managers by using the application described in this research can plan the enterprise profitability by simulating the data numbers presented in the enterprise balance of accounts and to visually control the income profit.

From the below presented picture, where the working window of the application is presented, can be noticed that fixed and variable costs that directly influence the income-profit are divided in details. This division is made to enable more efficient modeling and getting detail and accurate data about the profitability changes in the enterprise.
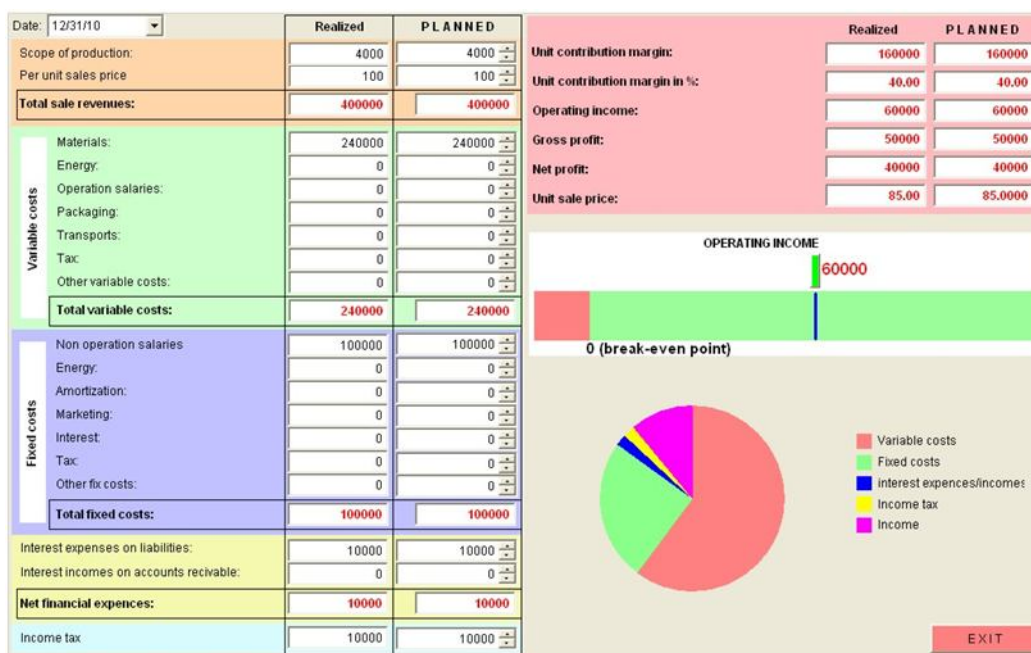
Picture 1. *Appearance of the program display*

In the initial application entering, in the above left-centered angle emerges the last date of data entering for the realized balance of accounts. Data fields of the balance account on the left side of the application window in both columns are filled with the values of the previously realized balance of accounts. The right column at the start gets the same values as the left column. But, close to the fields there are arrows by which different values can be changed or that can be done directly in value field where the desired amount can be filled.

On the upper-right side are displayed already calculated values of the **coverage margins, the margin rate of coverage, working income, gross income, net income and cost price.** Even for all these values there are two columns. The first column displays the values of the previously realized balance of accounts and in the second column are displayed total sums of the planned (expected) balance of accounts.

Under the aggregate results, a working income-profit is visually presented and possible values are displayed by existing band. The zero-point of the band (the border between the red and green part) is a profitability threshold for given values of the realized balance of accounts. The blue vertical line on the band displays an income-profit of the realized values of the balance of accounts. Above the band, there is a demonstrator that presents the planned working income in relation to the planned balance of accounts.

Because it is in the interest of the manager to see how changes costs can influence cost price (in other words what is their relative percent share) in the below-right part of the picture are visually presented the **fixed and variable costs, income tax, income/costs from interests and the total income.**

Picture 2. *Appearance of the program display of the unit sale price*

The visual image enables the manager to easily realize costs influence on the price per production unit. By using the graphic image, can be visually notice the proportion or the costs and income share in the total price.

3.1. PROFITABILITY SIMULATION BY BALANCE OF ACCOUNTS PLANNING

The simulation is executed by changing the data of already realized balance of accounts. The manager models (plans) the balance of accounts according financial activities that plans to undertake in the future work. The manager enters the planned values in the balance of accounts. In the application, according the planned data of the balance of payments, a planned income-profit is calculated and is visually presented by the demonstrator above the band of the realized income-profit. The application enables the manager to assess the expected profitability of the enterprise and in the same time to compare it with the realized profitability in the period that is used as base for modeling. By changing the data in the planned balance of accounts, the demonstrator of the planned income-profit moves left or right above the band of the realized income-profit. If the demonstrator's color is green, then the enterprise can work with the existing values of the balance of accounts and can generate profits. On the other hand, in the moment when the demonstrator will fail below profitability point or when the existing planned balance of accounts of the enterprise can not generate profits, then the demonstrator's color crosses from green to red color.

The application is a valuable tool that can be used by the manager in bringing his decisions for the next directions of the financial work of the enterprise. That enables the user (manager/s) to prepare and adopt many strategic alternatives for realizing higher income-profit ratio. A visual presentation of the planned income-profit in the working process represents a very powerful base in deriving important business decisions. Besides that, the visual presentation is used as a control mechanism about the share of the costs and income-profits in the fixed sales price which means a great decision support during the process of modeling the planned balance of accounts.

4. CONCLUSIONS

The analysis of profitability threshold has a very important role in deriving business decisions during the process of planning of the relationships between total costs, scope of production and enterprise profit. By using this type of analysis, the managers can plan the scope of the changed level of realized products that can influence the income-profit of the enterprise. In other words, how cost changes will influence enterprise profits?

The modification of the profitability threshold standard figure enables the manager to perform variant planning of the fixed and variable costs as well as possible income-profit alternatives. An income-profit possibility is contained in the difference between variable costs and income-profit possibilities. On the other hand, the possibility of income-profit comes up from the difference between sales income and variable costs.

In present days of unstable business environment, a great help for the manager is having appropriate software by which he can use it for enterprise profitability planning.

The software presented in this paper offers possibilities for variant planning of the relationship behavior between costs and profit. In this manner, the manager can obtain valuable information about what will happen with the enterprise profits if the costs decrease or increase and as a result, the manager will be in a situation to adopt optimal decision relating enterprise profitability.

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STATISTICAL RELATIONS BETWEEN RATIOS

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Abstract

The article presents main results of an investigation the initial purpose of which was to find a statistical confirmation to the logical relations between various financial ratios of enterprises. The research grounded on the public database of Statistics Estonia.

Statistical correlations between ratios turned out to be much lower than expected. While in the year of rapid economic growth (2006, GDP: +10.6%) most correlations were more or less explicable then in the year of recession (2008, GDP: -5.1%) the correlations were even weaker and more elusory. Moreover, the influence of recession reflected only in the profitability ratios while the average value of liquidity, solvency and activity ratios remained almost unchanged.

Therefore the traditional interpretation of most financial ratios and their ability to predict upcoming troubles was not confirmed statistically, at least at the times of rapid changes.

Key words: *ratio analysis, economic growth, recession, correlation, statistical relation.*

1. PROBLEM STATEMENT

Ratio analysis of the balance sheet and income statement is the spine of the analysis of financial statements. By comparing various parts of these main statements (ratios) more or less justified conclusions about the healthiness, success and future of the business units are drawn.

There are various logical connections and mutual dependencies between those ratios, therefore some of these indicators can be considered positive and others negative. In order to check the validity of these logical connections, and in hopes of discovering some unnoticed relations, a correlation analysis of various ratios has been carried out.

The first stage of the research grounded on the public database of Statistics Estonia, and it contained data from the year 2006 on all these enterprises with more than 20 employees that have been included in the selection of Statistics Estonia; the data were grouped by size, activities and regions.

The second stage of the research grounded on the selection of the same objects and indicators from the year 2008, and focused on the changes which had occurred during these two years. The dramatic changes in the general economic background should be considered the most influential factor for these developments – while 2006 represents the last year of the rapid growth (GNP: +10.6%) before the peak (2007), then 2008 is already the first year of economic recession (GNP: - 5.1%).

Initially all possible ratios (1089 indicators) from the balance sheet and income statement were constructed with the help of Mereste's Matrix Model [Mereste]. The basic idea of the Model is, in fact, quite simple. Selected absolute indicators (financial or non-financial) are placed in one column and

exactly the same indicators in the same order are placed into the row forming a cross table (matrix) filled with ratios. A simple example has been presented in Figure 1.

The approach was introduced at the beginning of the 1980s at Tallinn University of Technology by Professor Uno Mereste. Various kinds of derived theories, methodologies, techniques and logics were created at that time, turning this simple idea into a very powerful tool for analysing financial position, efficiency and other aspects of enterprises. Unfortunately most of them were discarded and forgotten in the process of transition to the market economy.

By eliminating all quotients by itself (33), inverse ratios (528) and divisions by zero from the possible ratios (1089 indicators in total), finally 458 ratios remained for the research. By selecting researchable ratios this way, in order to concentrate only on the statistical relations, the questions about the economic content of these indicators were intentionally ignored.

On the base of the selected ratios a correlation matrix with 104 424 paired relations was constructed. The results were somewhat surprising.

General logic would allege that solvency, intensive use of resources and profitability should correlate but the correlation matrix does not necessarily confirm that. Only 1.0% of the correlations between the investigated ratios were really high, i.e. the correlation coefficient was higher than 0.8 (or lower than -0.8). All of them were either directly connected (like leverage and solidity), or very close by their content (like net and operating return on assets), or statistical anomalies, which are created by dividing by very small (close to zero) figures. The latter operation produced immense but non-informative values for ratios which considerably distort statistical relations. For example, the correlation coefficient between equity to buyers' prepayments and financial assets per employee was 0.95.

At the same time the number of statistically independent ratios was surprisingly high. Either positive or negative correlation coefficient below 0.3 was in case of 82.4% of all ratios; below 0.1 even 44.6% of all ratios. Among those low correlation coefficients there were a lot of such indicators the higher or lower numerical value of which has customarily been considered either good (affecting results positively) or bad. Weak correlation coefficients should admonish analysts to be very cautious while classifying ratios into good or bad according to their numerical values.

To verify and illustrate the latter assertion, attention was focused on the relationship of the two most popular ratios of profitability – (Operating) Return on Assets (ROA) and (Net) Return on Equity (ROE) – with other ratios which have more or less obvious economic content. In addition to the ratios derived directly from the balance sheet and income statement, some indicators, including the average number of employees, were added. Selected ratios and their correlation coefficients are presented in Table 1, columns 4-5.

2. STATISTICAL CORRELATION BETWEEN RATIOS IN 2006

General logic would allege that solvency, intensive use of resources and profitability should correlate but the correlation matrix does not necessarily confirm that. Only 1.0% of the correlations between the investigated ratios were really high, i.e. the correlation coefficient was higher than 0.8 (or lower than -0.8). All of them were either directly connected (like leverage and solidity), or very close by their content (like net and operating return on assets), or statistical anomalies, which are created by dividing by very small (close to zero) figures. The latter operation produced immense but non-informative values for ratios which considerably distort statistical relations. For example, the correlation coefficient between equity to buyers' prepayments and financial assets per employee was 0.95.

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2.1. Profitability

The most intense statistical correlation of profitability ratios, predictably, occurs between themselves (Table 1, rows 1-2; correlation coefficient 0.85), and with the very close to them ratio – Return on Capital Employed – ROCE, (Table 1, row 3; 0.87 and 0.93 respectively). And that is it; no more dense correlations.

The correlation between the selected ratios (ROE, ROA) and (Operating) Profit Margin on Sales is already considerably lower (row 4; 0.56 and 0.64). The product of the latter ratio and Assets Turnover (row 5) is one of the selected profitability ratios – ROA, i.e. these ratios have a direct functional connection. However, the statistical connection (correlation) is not very high, whereat the other multiplier, the Assets Turnover, has even less correlation – 0.23. All that indicates that these particular ratios move usually to opposite directions, which is confirmed by their mutual correlation: -0.43 (not included in the Table).

It is interesting that in addition to that the correlation between the Assets Turnover and the other profitability ratio – ROE – is even higher (0.31), although they lack any direct functional connections.

2.2. Liquidity

Logically, the liquidity ratios (rows 7-9) should be the better (higher) the higher the profitability. The statistics confirm their positive correlation, although it is not very high: in case of ROA it is 0.4 – 0.43 and ROE even 0.2 – 0.27.

The dual meaning of liquidity ratios resist to the higher correlation: on the one hand these ratios really characterise short-term solvency, i.e. the higher the better, but on the other hand it may indicate to the inefficient usage of current assets. For example, it may be a result of dead (unemployed) cash or too much inventory. High liquidity ratio may be even illusory if current assets contain, for example, uncertain receivables and/or stale goods.

Even if the usage of current assets is rational, extreme liquidity refers to inefficient financial structure, i.e. the assets are financed too much by costly long term capital (equity and/or long term loans) instead of free liabilities (accounts payable etc.). This also explains the approximately twofold difference between the ROE and ROA - in case of ROA interest expenses have not been included in investigation.

A slight strengthening of the correlation in compliance with the increase in liquidity can also be considered more or less logical. It is rather surprising that the strengthening is so small and it cannot

be observed in case of ROA at all. More liquid assets are less illusory and unused cash can generally accumulate only if a company is doing well. This is also confirmed by the correlations of various parts of current assets (rows 10-12) where the percentage of cash has a slightly positive correlation (0.21 and 0.26), receivables altogether lack any correlation, and the percentage of inventory in current assets has negative correlation (-0.20 and -0.26) with profitability.

There is, of course, another possible explanation for this – the profitability of services is just higher than that of the businesses based on inventory (trade, manufacturing etc.) and that influences the general strength of correlations. Current research, though, does not investigate the differences between industries.

2.3. Capital structure, loans and interests

According to common understanding, the higher the profitability the lower the necessity for borrowed capital, i.e. leverage can be lower and solidity higher. Therefore, it is not a surprise that Debt-to-Assets Ratio (row 13) is in relatively strong correlation with ROA (-0.50).

At the same time it should be noted that the correlation between ROE and Debt-to-Assets Ratio is appreciably less dense (-0.27). There is also a logical explanation for that. High debt ratio is not necessarily a negative indicator. Another name for that is financial leverage (gearing), which means that reasonable use of borrowed capital will add potential to the enterprise and intensify the effect of equity i.e. increase ROE. Therefore that would be logical to expect even positive correlation between financial leverage and ROE.

Whereas the correlation is still negative, there is an indication to the fact that reasonable involvement of borrowed capital is dominated by the exigency which results from low profitability and insolvency. The percentage of borrowed capital can particularly increase as a result of decrease in equity caused by loss, which already leads to a negative correlation with profitability. Obviously, a weak negative correlation between the Debt-to-Assets Ratio and ROE has formed on the base of these two contradictory tendencies.

The correlation of the rest of the ratios of capital structure (rows14-15) with profitability is considerably lower – Capital Employed Rate virtually lacks any correlation (-0.09 and 0.03), and Long-term Capital Rate has a very low positive correlation with both profitability ratios (0.07 and 0.16).

In conjunction with borrowed capital it would be appropriate to look closer at the correlation between the interest expenses and profitability. Negative correlation between the Interest to Assets Ratio and profitability ratios (row 16) is natural in the light of the above argumentation about the borrowed capital – the more borrowed capital, the higher the interests – thereby the correlation with profitability is negative (-0.43 and -0.39). The fact that there is not notable variations between ROE and ROA, results probably from different profits– in case of equity net profit (i.e. profit after interest) and in case of assets operating profit (i.e. interest has not been deducted). Therefore these two ratios level out.

The positive correlation (0.19 and 0.35) between the Interest Coverage (row 17) and profitability ratios also meets the expectations; the only surprising fact is that the correlation is so low.

The positive correlation between the Average Interest Rate (row 18) and profitability (0.17 and 0.11) is a great surprise. It would be logical that the better off the enterprise, the easier it is to obtain a loan and the lower should the interest rate be. The author is unable to explain why statistics shows the opposite.

2.4. Asset structure and fixed assets

The correlation between asset structure and profitability exposes quite interesting facts. It becomes obvious that not only the inventory (row 19; -0.11 and -0.13), but also the percentage of fixed assets within them (row 20), has negative correlation with profitability (-0.20 and 0.24). That confirms the above allegations that the activities based on real assets are less profitable than the service, which is based on "soft" resources. Although those "soft" resources (people, know-how, image etc.) are generally not shown on the balance sheet (excluding goodwill), the balance sheet ratios, however, reveal a tendency, if one is really willing to notice that. The intangible assets (row 21) are the only ones among the fixed assets that have a weak, but still positive correlation with profitability ratios (0.15 and 0.12).

Long-term financial assets (row 22) do not have any statistical correlation with profitability (-0.1 and 0.00), although it could be presumed that successful enterprises invest more of their earnings into long-term financial investments.

Not only the percentage of fixed assets but also the fixed assets per employee (row 23) have low negative correlation with profitability (-0.09 and 0.17). At first sight it seems to be illogical because fixed assets should boost work efficiency and thereby also the profitability. It obviously applies only to the businesses based on real assets, and the above-mentioned effect of the "soft" assets counteracts here.

By the same reason the negative correlation of the percentage of depreciation (row 24) with profitability (-0.27 and -0.14) is logical in every respect, although it is unclear why it is twofold higher for ROE than for ROA.

In addition to that, the Depreciation Rate (row 25) i.e. the useful life of fixed assets has almost no statistical correlation with profitability (0.09 and 0.05).

2.5. Activity ratios

The Accounts Receivable Collection Period (row 26) has very weak negative correlation with profitability (-0.9 and -0.09). It is normal as this ratio has primary impact on cash flow and much less connection with profitability.

On the other hand, the Inventory Turnover Period (rows 27-28) is coherently correlated with profitability – the longer the inventory turnover period, the lower the profitability (-0.38 and -0.35; -0.46 and -0.31). That is entirely logical and the correlation could even be higher, as the probable lower profitability of asset based activity and lower efficiency of inventory merge here. An equalizing statistical phenomenon, which has to be investigated further, might occur here.

Two controversial processes influence the Payables Period (row 29) – on the one hand, successful enterprises are considered to be reliable and they are offered longer payment terms, which indicate a positive correlation with profitability. On the other hand, the businesses that experience economic difficulties tend to postpone the date of actual payments. As statistical correlation is negative, (-0.24 and -0.25), it could be concluded that the influence of the latter phenomenon to the profitability is more predominant.

2.6. Labour

The ratios related to labour (rows 30-31) are interesting in their own way. First of all, an extremely weak correlation between them is quite surprising. Thus, the Sales per Person (row 30) have just very

low positive correlation with profitability (0.11 and 0.12), although work efficiency could be one of the key factors in increasing profitability.

The very weak correlation between the Average Salary (row 31) and profitability (0.11 and 0.16) could be regarded as an even bigger surprise. A more lucrative business could potentially pay much higher salaries, and the already mentioned "soft" resources based activities have more qualified and highly paid labour. A very low positive correlation, however, indicates a possibility that in Estonia the low-cost labour is still one of the most common preconditions for making profit; the profit, to a great extent, is earned by economizing on salary expenses.

Apparently, the almost non-existent correlation of the last ratio in Table 1, the Percentage of Labour Expenses (row 31) with profitability (0.01 and 0.04), clearly contradicts the argumentations above. Assuming that the activities which are mainly based on "soft" resources are more remunerative, the salary expenses should be in quite high positive correlation with profitability. It should be true even irrespective of their probable higher salary range; it is just because presumably all other expenses should be appreciably lower than those of the activities which are based on real assets.

It should still be investigated further, what these extremely weak correlations between labour related ratios and profitability result from.

3. AVERAGE RATIOS OF ENTERPRISERS IN 2006 AND 2008

The columns 6-8 in Table 1 provide average ratios of the selected enterprises and the changes in the ratios during 2006 and 2008. It is logical that the biggest changes have occurred in profitability. Practically all the profitability ratios (rows 1-6) have dropped almost by half. In this section of the table 1 there is only one ratio, the Assets Turnover (row 5), which demonstrates significantly less decrease - only by 9%. The aforementioned ratio has been included in the section of profitability due to the DuPont formula – Return on Assets (ROA) = Profit/Sales multiplied by Sales/Assets – which refers to the fact that Return on Assets has decreased not that much due to the decrease in sales volume, but due to the decrease in prices or increase in expenses.

Most of the other ratios are surprisingly steady.

Despite economic recession the liquidity ratios (rows 7-9) have not noticeably changed, they have remained quite satisfactory. The only notable change is a fractional increase in the percentage of receivables (row 11) and a corresponding decrease of cash (row 10) in current assets; consequently, there is also a certain decrease in Cash Ratio (row 7). A warning of the coming debt crisis could be noticed in that change, although the numerical changes are quite insignificant yet.

The structure of capital (rows 13-18) has not virtually changed. In this section of the table 1 only the interest-related ratios, primarily the Interest Coverage (row 17), have gone through significant changes. There are not relevant data included in Table 1, but the initial data show that the percentage of loans in liabilities has increased, and as a result, the total interest expenses have appreciably risen. In combination with a remarkable drop in profits it brings along a drastic, almost threefold, decrease in the interest coverage, which is among the investigated ratios almost the only serious indication of deteriorated solvency.

The activity ratios (rows 26-29) have not changed at all, which refers to the fact that the companies' business operations have not been substantially rearranged.

The ratios related to assets (rows 19 - 25) and labour (rows 30 - 32) show some changes. Investments have grown during the good years, whereat assets per employee have grown by 35%. It has brought along an increase in the employee effectiveness – Sales per Person (row 30) have risen by 17%. This effect has been eliminated by the 34% increase in Average Salary (row 31), due to which the percentage of labour expenses among the total expenses has increased by 11%. So the reduction of salaries, which resulted from the economic recession, is not visible in the annual reports for year 2008 yet.

In conclusion it could be said that although profitability ratios have appreciably decreased due to the economic recession, it has not yet had impact on the short or long-term solvency, neither on the activity ratios nor the rest of the diagnostic ratios.

4. CHANGES IN STATISTICAL CORRELATIONS BETWEEN RATIOS IN 2006 AND 2008

The situation gets even more interesting when we investigate the changes in statistical correlations between the rest of ratios and the two key profitability ratios ROE and ROA in 2006 and 2008 (Table 1; columns 11-12).

Observing the strength of the correlations it catches the eye that the correlation of the majority of ratios with the profitability ratios has weakened; i.e. interpreting them as being positive or negative has become even more uncertain. It specifically applies to ROA.

The correlations between the profitability ratios themselves (rows 1-6) are continually very strong, whereat the impact of the Operating Profit Margin (row 4) on ROE, and on ROA in particular, has considerably increased. That confirms the conclusions drawn in the previous subsection that the enterprises' profitability in 2008 has been more influenced by the level of prices and expenses than by the sales volume. As to resources, the efficient use of labour (row 6) has become more important.

The changes in the correlations between the liquidity ratios (rows 7-9) and profitability could be regarded as the most drastic ones. In 2006, not a very strong but still clearly positive correlation is observed, while in 2008 all these correlations are notably weaker. In addition, the correlation between the most general liquidity ratio, the Current Ratio (row 9), and profitability has become completely non-existent. At the same time the numerical value of the latter has not changed much during the years in question.

The above phenomenon could be considered surprising, and it is rather difficult to find a rational explanation for that. Most likely the fact that the economically less successful enterprises are more interested in window dressing also plays an important role here. Therefore their valuations of liabilities, inventory and assets are more optimistic and the required write-down has probably not been done. For that reason the financial statements are less reliable and it is difficult to interpret the ratios.

It is possible to explain a considerable decrease in the correlation between the Debt-to-Assets Ratio (row 13) and ROA by the same reason.

A significant strengthening of the correlation between the Interest Coverage (row 17) and profitability ratios is logical. The lower the profit, the more considerable and significant are the differences between such ratios. As it has been mentioned in the previous subsection, the Interest Coverage is one of the few ratios which indicate a possible insolvency.

The correlations between the ratios related to usage of assets (rows 19-25) were very weak in 2006 as well, and it is impossible to point out any clear and reliable developments here.

The variations in the correlations of activity ratios (rows 26-29) are quite intriguing. The values of these ratios are practically the same in 2006 and 2008, but their correlations with profitability ratios have appreciably changed.

The correlation between the Collection Period (row 26) and profitability is weak both in 2006 and in 2008, but the change from negative to positive is worth mentioning anyway. It means that the extension of the collection period has been accompanied by a less decrease in profits. One of the logical explanations for the abovementioned changes could be an increase in the importance of payment terms as a sales argument during an economic recession. Another probable explanation could be the aforementioned possibility that the receivables contain more bad debts which have not been critically assessed and charged off.

Peculiar changes have occurred in Inventory Turnover Periods. While the negative correlation of Inventory (Sales) Turnover Period (row 27) with profitability has increased to some extent, the analogical correlations with Inventory (Costs) Turnover Period (row 28) have appreciably weakened.. It could be explained by structural shifts. Probably, the profitability has decreased more rapidly in the materials-intensive industries.

Changes have also taken place in the correlations between the Payables Period (row 29) and profitability ratios. The weak correlation which occurred in 2006 has become non-existent in 2008. It means that the connection between the length of the payables period and the economic performance has disappeared and entirely different considerations regarding the decisions about due dates and actual payments or deferrals are taken into account.

There were not any principal changes in the weak correlations of labour expenses.

5. CONCLUSIONS

The directions and strengths of statistical correlations are mostly logically explicable, although it has to be admitted that the above allegations are a bit hypothetical and speculative. In case of some ratios it was even hard to presume anything. Therefore, the real reasons behind the correlations between the ratios should still be ascertained.

For some ratios it can be alleged that thanks to the strong correlations between them, any of these ratios could be used to make certain generalisations. For example, if the overall success of an enterprise is assessed, it makes no big difference which profitability ratio (ROA, ROE or ROCE), and which profit (net or operating profit) is taken into account. Fundamentally, all combinations produce the same result. The ratios should only be distinguished in order to answer some more specific questions.

Actually, the statistical correlation between most of the ratios is quite low, even between the ratios which are logically densely connected. As reality cannot be erroneous, it refers to the inaccuracy of logic, or a potentiality of the existence of contradictious logics, or some not fully perceived connections. While in the year of rapid economic growth (2006, GDP: +10.6%) most correlations were more or less explicable then in the year of recession (2008, GDP: -5.1%) the correlations were even weaker and more elusory. Anyway, one should be very cautious to announce one or another ratio to be positive or negative.

The influence of recession reflected only in the profitability ratios while the average value of so called diagnostic ratios (liquidity, solvency and activity ratios) remained almost unchanged.

So the traditional interpretation of most financial ratios and their ability to predict upcoming troubles was not confirmed statistically, at least at the times of rapid changes.

Table 1. Correlations between Ratios and their chances from 2006 to 2008.

Nr	Name of the Ratio	Formula	Correlations coefficients 2006		Ratios of the Average Enterprise 2006	2008	2008/ 2006 change	Correlations coefficients 2008		Changes in correlation coefficients 2008-2006 ROE	ROA
			ROE	ROA				ROE	ROA		
1	2	3	4	5	6	7	**8**	9	10	**11**	**12**
	Profitability										
1	Return on Equity (ROE)	Net Profit (Loss) / Equity	1,00	0,85	0,20	0,09	**0,47**	1,00	0,88	**0,00**	**0,02**
2	Return on Assets (ROA)	Operating Profit / Assets	0,85	1,00	0,10	0,05	**0,46**	0,88	1,00	**0,02**	**0,00**
3	Return on Capital Employed (ROCE)	Operating Profit / (Short- and Long-term Loans + Equity)	0,87	0,93	0,13	0,06	**0,45**	0,89	0,98	**0,02**	**0,05**
4	(Operating) Profit Margin	Operating Profit / Sales	0,56	0,64	0,08	0,04	**0,51**	0,71	0,85	**0,15**	**0,21**
5	Assets Turnover	Sales / Assets	0,31	0,23	1,26	1,15	**0,91**	0,23	0,19	**-0,08**	**-0,04**
6	Net Profit to Employee	Net Profit / Number of Employees	0,44	0,43	102,67	62,26	**0,61**	0,67	0,76	**0,23**	**0,33**
	Liquidity and the structure of Current Assets										
7	Cash Ratio	Cash + Securities / Current Liabilities	0,27	0,43	0,23	0,17	**0,76**	0,14	0,19	**-0,12**	**-0,23**
8	Quick Ratio (Acid test)	Cash + Securities + Receivables / Current Liabilities	0,24	0,43	1,05	1,02	**0,97**	0,20	0,26	**-0,04**	**-0,16**
9	Current Ratio	Current Assets / Current Liabilities	0,20	0,40	1,48	1,43	**0,96**	0,06	0,09	**-0,14**	**-0,31**
10		Cash + Securities / Current Assets	0,21	0,26	0,33	0,24	**0,73**	0,16	0,16	**-0,05**	**-0,10**
11		Receivables / Current Assets	0,01	0,00	0,48	0,54	**1,12**	0,07	0,10	**0,05**	**0,10**
12		Inventory / Current Assets	-0,20	-0,24	0,29	0,29	**0,99**	-0,17	-0,20	**0,03**	**0,04**

1	2	3	4	5	6	7	8	9	10	11	12
	Solvency (Structure of capital, Interest)										
13	Debt-to-Assets Ratio	Liabilities / Assets	-0,27	-0,50	0,48	0,48	**1,00**	-0,25	-0,28	**0,02**	**0,22**
14	Capital Employed Rate	(Short and Long Term Loans + Equity) / Assets	-0,09	0,03	0,79	0,82	**1,04**	-0,13	-0,04	**-0,04**	**-0,07**
15	Long-term Capital Rate	(Long-term Liabilities) / Assets	0,07	0,16	0,71	0,72	**1,01**	-0,02	0,04	**-0,08**	**-0,13**
16		Interest Expenses / Assets	-0,43	-0,39	0,01	0,02	**1,29**	-0,42	-0,48	**0,01**	**-0,09**
17	Interest Coverage	Operating profit / Interest Expenses	0,19	0,35	8,22	2,94	**0,36**	0,47	0,57	**0,27**	**0,22**
18	Average Interest Rate	Interest Expenses / (Short- and Long-term Loans)	0,17	0,11	0,05	0,05	**1,15**	-0,01	-0,02	**-0,18**	**-0,14**
	Usage of Assets										
19		Inventory/ Assets	-0,11	-0,13	0,12	0,11	**0,93**	-0,09	-0,16	**0,02**	**-0,04**
20		Fixed Assets / Assets	-0,20	-0,24	0,57	0,60	**1,05**	-0,19	-0,13	**0,01**	**0,11**
21		Intangible Assets / Assets	0,15	0,12	0,01	0,02	**1,75**	0,03	0,04	**-0,12**	**-0,09**
22		Financial Assets / Assets	-0,01	0,00	0,13	0,17	**1,32**	0,06	-0,05	**0,07**	**-0,05**
23		Fixed Assets / Number of Employees	-0,09	-0,17	572,74	770,99	**1,35**	-0,10	-0,10	**-0,01**	**0,07**
24		Depreciation / Total Expenses	-0,27	-0,14	0,04	0,04	**1,02**	-0,13	-0,07	**0,14**	**0,07**
25	Depreciation rate	(Depreciation + Amortization) / (Tangible + Intangible Fixed Assets)	-0,09	0,05	0,10	0,10	**0,99**	0,01	-0,01	**0,10**	**-0,06**

1	2	3	4	5	6	7	8	9	10	11	12
	Activity										
26	Collection Period	Account receivable / Sales	-0,09	-0,09	0,09	0,09	**0,99**	0,04	0,11	**0,13**	**0,21**
27	Inventory (Sales) Turnover Period	Inventory / Sales	-0,38	-0,35	0,10	0,10	**1,01**	-0,39	-0,50	**-0,01**	**-0,15**
28	Inventory (Costs) Turnover Period	Inventory / Cost of Goods Sold	-0,46	-0,31	0,17	0,17	**1,00**	-0,13	-0,15	**0,33**	**0,16**
29	Payables period	Accounts Payable / Cost of Goods and Services Purchased	-0,24	-0,25	0,11	0,10	**0,97**	0,02	0,06	**0,26**	**0,31**
	Labour										
30	Sales per Person	Sales / Number of Employees	0,11	0,12	1 253	1 467	**1,17**	0,06	0,02	**-0,05**	**-0,10**
31	Average Salary	Labour Expenses / Number of Employees	0,11	0,16	156,32	209,74	**1,34**	0,16	0,07	**0,05**	**-0,09**
32		Labour Expenses / Total Expenses	0,01	0,04	0,13	0,15	**1,11**	0,08	0,15	**0,08**	**0,10**

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CORPORATE GOVERNANCE PRACTICES
IN CLOSED-END INVESTMENT FUNDS (Case Croatia)

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Abstract

This paper studies the corporate governance practices in closed-end investment funds, in the Croatian capital market, whereas the emphasis lays on exploring and defining the required characteristics of supervisory board members. The supervisory board as an institution is intended to provide supervision of administrative operations, as well as the control and monitoring of corporate actions. The study was conducted on a sample of influential stakeholders in closed-end funds: the owners, governments, and fund managers, which all determined professional, moral, and other features of the supervisory board members in order to identify and set a clear picture about required features of the supervisory board members. Therefore, the results of this research are aimed at them, but also at the wider investment public. Until now, the study which showed the attitude of influential interest groups towards the required characteristics of supervisory board members, has not been conducted in Croatia.

Key words: *closed-end investment funds, corporate governance, supervisory board, members of the board*

1. INTRODUCTION

Investment funds are institutional investors registered as companies that collect funds from general public, usually from individual investors and place them in the long term, sometimes short-term investments. (wmd.hr, 2010)

In the process of European Union integration, the legal acts that determine legal environment for this segment of the financial transactions, have been standardized with European Community law. After the Croatian accession to the European Union, the operations of the funds in the Republic of Croatia

shall be subject to the provisions of the Directive[70] and its subsequent amendments. Investment Funds Act, which entered into force on 1 January 2006 distinguishes two basic types of investment funds, which are: open and closed-end funds. (N.N.107/95) The paper will be considering closed-end funds. In June 2010, there were eight closed-end investment funds in Croatia, four of which were closed-end investment funds with a public offering for real estate investment (HPB Real ZIF Inc. (in liquidation), FIMA Proprius Inc., Jadran Kapital Inc., Quaestus Real Estate Company) and four closed-end investment funds with a public offering (Breza dd, Capital Fund Inc., Velebit dd, and Slavonski ZIF dd). Closed-end investment funds in Croatia were established before the open-end funds. Back in 1995, the first closed-end fund - BIRCH Inc (Breza Invest) started operating, aiming to gather funds for profitable investment. (Prospekt ZIF Breza Inc., 2010)

By auditing the financial statements from 31 December 2009 of closed-end funds that are currently operating in the Republic of Croatia and by researching the court register of companies in Croatia, it was found that the supervisory boards of closed-end funds had 5 members. (Sudreg.pravosudje.hr, 2010) [71]

Table 1 The number of supervisory boards members in closed-end investment funds operating on the Croatian territory

Closed-end funds with a public offering	Number of Supervisory Board members
ZIF BREZA Inc.	5
KAPITALNI FOND Inc.	5
VELEBIT Inc.	5
SLAVONSKI Inc..	5
ZIF FIMA PROPRIUS Inc..	5
HPB REAL ZIF Inc. (in liquidation)	5
JADRAN KAPITAL Inc..	5
QUAESTUS NEKRETNINE Inc.	5

Source: Adapted by the authors from data available on the website of the C-EIF

The importance of closed-end funds, other than through the earnings of individual and institutional investors and tax aspects of the wider community, can be viewed through a contribution to the development of financial intermediation. They influenced the change of credit markets structure, working against the banks and monopolized monetary policy whereas the profit was brought to banks

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[70] Council Directive on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) 85/611/EEC, 88/220/EC, 95/26/EC, 2000/64/EC, 2001/107/EC i 2001/108/EC);

[71] Investment Funds Act stipulates that the supervisory board of the closed-end investment fund has at least 5 members.

exclusively via their typical credit and deposit operations. This change of the structure was also influenced by other financial entities, such as savings banks, insurance companies and pension funds.

2.   INVESTMENT FUNDS AND CORPORATE GOVERNANCE

Croatian investment funds market is a dynamic segment of the financial system and therefore the establishment of its regulation and supervision as well as capital market development are the main determinants of its future growth and development. (Juric 2005) The process of Croatian European Union integration and its status of a candidate country for membership in the European Union, have increased the interest of domestic and foreign investors in Croatia. European Union accession process has led to the rapid liberalization of capital markets in investment banking, especially investment funds. European decisions have significantly influenced the development of the Croatian capital market and the rapid development of investment funds. The banks capital began overflowing from the areas of relatively low profits into the investment funds assets, which had a positive impact on the securities market reflation, market liquidity and the development of stock exchange operations. (Jošić, 2006)

Investment funds are potential generators of economic growth, together with insurance companies and pension funds. They possess a large amount of dispositional capital which they can use for bonds or shares floatation, in accordance with their own strategies and investment restrictions.

Figure 1 presents data on the number of active investment funds in the period from 2001 to the mid 2010. The table shows that in the observed period the number of open-end funds is constantly growing, while the closed-end funds record two reductions in the number of active funds, which occurred in 2003 and 2010. The reduction in 2003 occurred due to the status changes of ex privatization investment funds, which had to be transformed into the standard investment funds or holding companies[72], according to law (N.N.109/97). In 2010, the decrease in number of active closed-end funds was partly provoked by parliamentary decisions on transformation of real estate closed-end investment funds into real estate companies, and partly due to the liquidation of real estate investment funds.

Figure 2 shows the trends in net assets governed by investment funds over the period from 1999 till 30 June 2010. Note that the investment funds had the most assets in 2007, although they were outnumbered, seeing the number of active open-and closed-end funds. As evident from the previous charts, there was the highest number of open-end funds in 2009, and closed-end funds in 2008.

Corporate governance helps ensuring compliance of the company's ethical standards and applicable laws. Effective corporate governance is further provided through the external and internal control mechanisms. (Tipurić, 2006) The main reasons why so much attention is focused on corporate governance and why corporate governance has acquired a new dimension and a wider interest are the liberalization, deregulation of financial markets and banking business in the world, the sophistication of financial markets and greater freedom, which implies a greater responsibility. (Jalan, 2002)

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[72] The five PIFs were merged into the holding company, and they are as follows: Braiding Inc. PIF, PIF Home Fund Inc., PIF Expandia Fund Inc., PIF Sun Inc., Central National Fund PIF Inc.

Figure 1 The fluctuation in the number of investment funds from 2001 to 30 June 2010
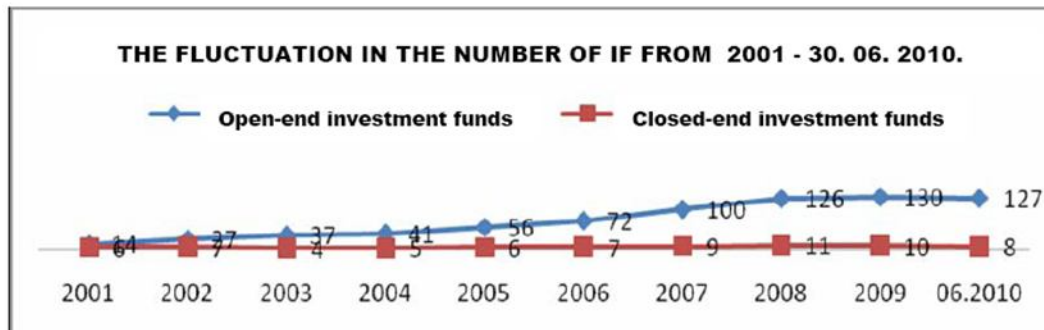
Source: HANFA, adapted by the authors

Figure 2 The trends in investment funds net value from 1999 to 30 June 2010
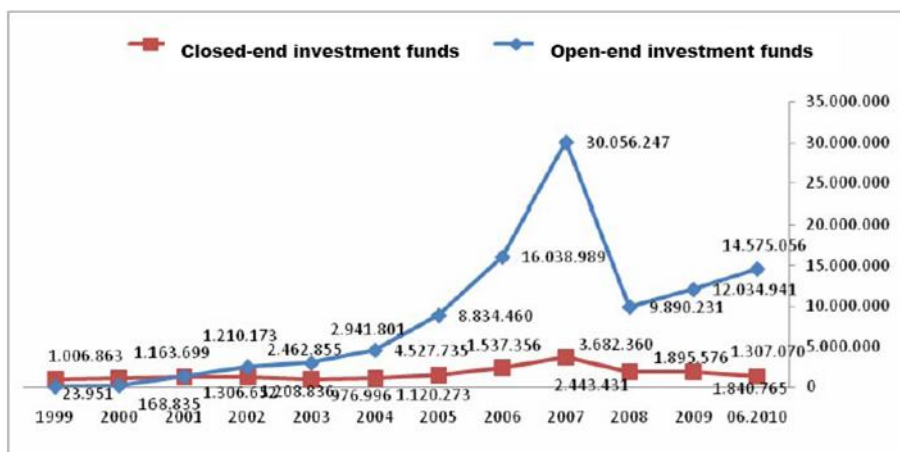
Source: HANFA, adapted by the authors

The independence of the supervisory board of administration has the advantage of two-tier board model. The existence of these two committees, according to some authors, helps reducing and removing the conflict of personal interests of managers, with the interests of the corporation. This is useful in situations where managers tend to exercise their own interests to the detriment of the company interests. However, there are no empirical data showing that the exact two-tier board model is more efficient than a one-tier board system. (Tipurić, 2006)

3. RESEARCH QUESTION, THE LITERATURE REVIEW AND DATA COLLECTION

In order to increase the quality of corporate governance in the supervision of the closed-end investment funds, a scientific research has been carried out. The direction of the study has been based

on the hypothesis: *H1 - Considering the views of stakeholders which had been identified by a research, it is required to define a set of professional, moral, and other characteristics of members of supervisory boards in closed-end funds.*

In accordance with the defined problem there are the following research objectives:

- Defining a set of professional, moral, and other characteristics of supervisory boards members,

- Finding out about the views of powerful interest groups on the required supervisory board member profile, in the closed-end investment fund,

- Based on the findings, defining a model of required supervisory board members features,

- Whether the various influential interest groups can identify different features for the selection of desirable characteristics of the supervisory board member

- Whether the various influential interest groups can identify the same criteria for selection of required characteristics of the supervisory board members

- Whether the various influential interest groups have different criteria for the same degree of importance

3.1. Literature review

Research on the role of corporate governance in the operations of financial institutions shows the current status, quality, gaps and opportunities to improve corporate governance. Mutual cooperation and communication management and senior management have been recognized as a primary responsibility of good corporate governance. (Kern & Duhmale, 2001) *Basel Committee on Banking Supervision*, an institution which provides banking supervision, in its guidelines states that corporate governance can be further improved by the quality reporting, laws and regulations on the capital market, the regulation of legal issues that provide work in a regulated environment without the corruption impact and through accounting and auditing standards. (Basel Committee, 2006) The financial crisis which is shaking the economy around the world, and which we have been witnessing for the last few years, is partly the result of weak corporate governance, says Kirkpatrick. (Kirkpatrick, 2009) Good corporate governance reduces business risks. In the same article the author points out that excessive risks, which many financial institutions were exposed to, prevented them to reach the higher management level as well as to appeal to the wider community due to weak corporate governance.

The results of the average premium of 11% and 16% that investors are willing to pay for good governance also confirm that good corporate governance reduces risks, increases the confidence of investors and may affect the stock price. (Korac-Kakabadse, Kakabadse, & Kouzmin, 2001) Effective corporate governance relies on the legislative framework of each country namely the company law, tax laws, laws that regulate business in the capital market, accounting and auditing standards, while all the gaps in existing legislation could be filled in with codes and recommendations to companies to use standards that are higher than those prescribed by law. (Weaklings, 2005)

3.2. Research methodology

The study used qualitative and quantitative methods. The questionnaire was used as a base quantitative research, and was sent to governments of companies managing investment funds, fund managers of closed-end investment funds and the owners - the shareholders of closed-end investment funds, whose

data were available on the website of the Central Depository Company. The subjects were asked to express their opinions and suggestions about the required features of the supervisory board members. These features have been divided into three groups: professional, ethical and other. Every feature data has been scaled that enabled ranking. For the further development of the model for the required features of Supervisory Board members, an advanced statistical method - factor analysis, has been used.

The influence of the owner has been observed through a percentage of ownership in the equity fund and through the number of supervisory board members appointed by the owners surveyed. These data has been placed into correlation with the professional features previously ranked by relevance using the methods of synthesis. This way, the connection between the professional features of the supervisory board members and equity criteria has been established.

4. CRITERIA FOR DETERMINING REQUIRED CHARACTERISTICS OF SUPERVISORY BOARD MEMBERS

The supervisory board of the closed-end investment fund, according to the Investment Fund Act have at least five members. The Act specifies in detail who can not be a member of the closed-end investment fund supervisory board.

Corporate Governance Code was adopted in Croatia in April 2007 (ZSE & HANFA, 2007). It has been established as a guide for creating a healthy corporate culture in order to achieve an optimal balance between companies' needs for competitiveness, growth and development while pursuing the highest standards for all elements of corporate governance and transparency, which are of extreme importance for the investment public. The objectives and principles were set forth in the introductory part which states that the aim of the Code is establishing high standards of corporate governance and the transparency in operations of joint stock companies in order to facilitate access to capital at lower costs. The fundamental principles, among others, point out that there are clearly defined procedures for the operation of the supervisory board, management and other bodies and structures that make important decisions. On 1 January 2011, The Code of Corporate Governance was rewieved and standardized with the current Capital Market Act, the Companies Act, as well as, with the Rules of the Zagreb Stock Exchange. It also follows the European directives in the field of corporate governance. However, in the Croatian Code of Corporate Governance, the specific characteristics of closed-end funds have not been taken into account.

Closed-end funds are important participants in the Croatian financial market, so there is justification for the research. The quality of the supervisory board and corporate governance is correlated with the selection of members for the supervisory board. The model of supervisory board members required features, obtained by the survey, could be presented as a proposal to interest groups for the corporate governance quality improvement in this sector of financial institutions.

5. RESEARCH RESULTS

The main objective of factor analysis application was validation and rationalization of the set model for the supervisory board members required features in closed-end investment funds. This was based on the ratings obtained from subjects who participated in the survey. The sample size of 50 respondents, N = 50, has been used in processing the data.

Professional Features

Figure 3 Graphic presentation of supervisory board (SB) members' expert features assessment

	N	M	SD	F-ratio
Shareholders	31	26.7	2.94	
Management	12	22.5	2.88	10.08
Fund managers	7	27.1	2.79	
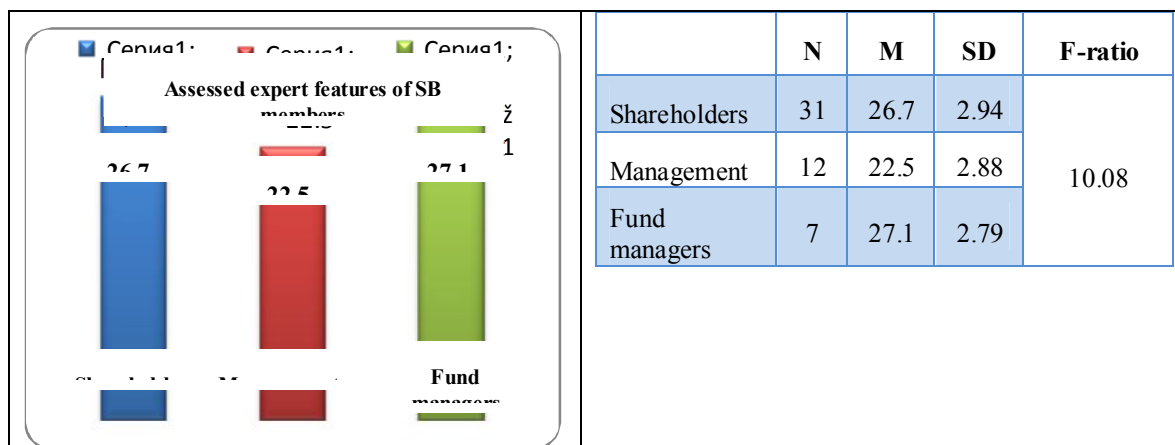
Figure 3 contains data that show that fund managers (M = 27.1, SD = 2.79) and shareholders (M = 26.7, SD = 2.94) estimated professional features as more important than the management estimated the same features (M = 22.5; SD = 2.88). The one-way analysis of variance shows that there are statistically significant differences in the assessment of expert features importance between the three target groups. (F = 10.08, p <, 01). By means of the Post hoc Bonferroni tests, it has been verified which stakeholder groups showed statistically significant differences in the assessments. The management assessments are significantly different compared to those of the stakeholders (Bonferroni=-4.24;p<,01) and fund managers (Bonferroni =- 4.63, p <, 01). The difference between shareholders and fund managers assessment of the professional features importance has not been confirmed.

Moral features

Figure 4 Graphic presentation of estimated moral features for supervisory board (SB) members by interest groups

	N	M	SD	F-ratio
Shareholders	31	9.1	1.73	
Management	12	10.7	0.89	4.48
Fund managers	7	9.4	1.27	
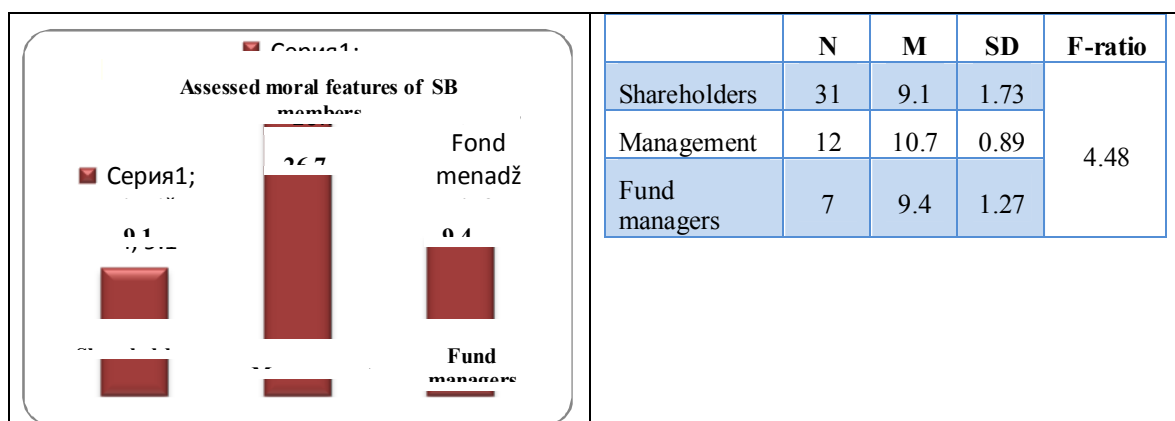
Figure 4 shows that the management estimates (M = 10.7, SD =0. 89) moral features as more important, than shareholders (M = 9.1, SD = 1.73) and fund managers (M = 9.4, SD = 1.27) estimate the same features. The one-way variance analysis shows that there are statistically significant differences between the three target groups assessment of moral features importance (F = 4.48, p <, 05). By means of the Post hoc Bonferroni tests it has been verified which interest groups showed statistically significant differences in the assessments. The management estimates were significantly different compared to the estimates of shareholders (Bonferroni =- 1.54, p < 05). However, there were no statistically significant differences between the estimates made by management and fund managers, nor were there any statistically significant differences between the assessment of the shareholders and fund managers.

Other features

If the content of questions from *the other features scale* is being analysed, it can be observed they are quite heterogeneous and involve a variety of features that are not normally expected to be interconnected. The questions "Do you agree that supervisory board member of closed - end investment funds can be politically exposed persons?", and „Do you agree that supervisory board member of closed - end investment funds should belong to a political party? "Basically affect the area of connectivity supervisory board closed - end investment funds with politics, so it could potentially involve the conflict of interest. While the questions "Do you agree that supervisory board member of the closed - end investment funds, which you are a fund manager of, shall represent the interests of the company owners that manage these closed - end investment funds? "And "Do you agree that membership in the supervisory board requires prior work experience in financial institutions? "more closely capture formal and technical features.

Figure 5 A graphic representation of responses to the question: Could members of supervisory boards be politically exposed persons?

	N	M	SD	F-ratio
Shareholders	31	1.6	0.92	
Management	12	1.3	0.65	0.40
Fund managers	7	1.4	0.79	
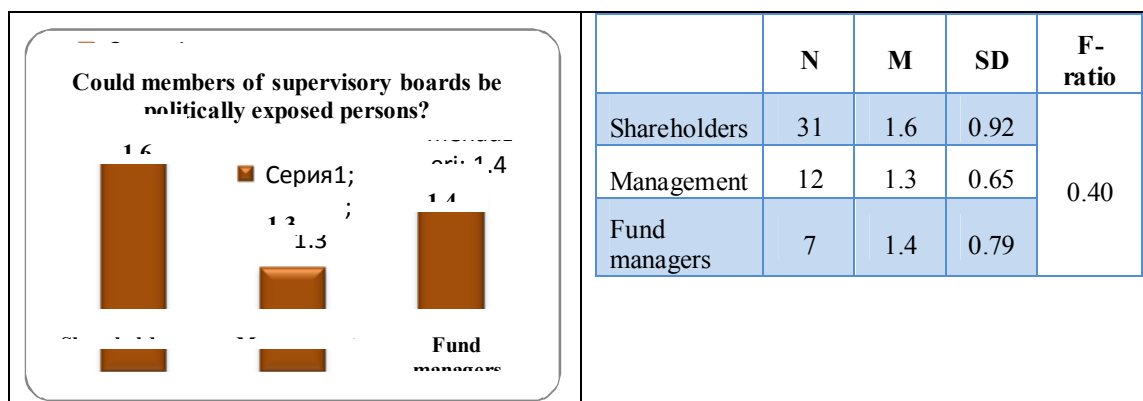
Figure 5 shows that all three target groups estimate that technically, the members of supervisory board should not be politically exposed persons. The all three stakeholders: shareholders (M = 1.6, SD =, 92), management (M = 1.3, SD =, 65) and fund managers (M = 1.4, SD =, 79); have an average answer to this question lower than 2. Although the answers of the three interest groups are very similar on average, there are slight differences in their estimates. Therefore, a one-way variance analysis has been conducted in order to check the significance of the statistical differences. As expected, there were no statistically significant differences obtained.

Figure 6 A graphic representation of responses to the question: "Do you agree that the membership of the closed - end investment funds supervisory board requires prior work experience in financial institutions?"

	N	M	SD	F-ratio
Shareholders	29	3.4	0.83	
Management	12	1.3	0.49	28.72
Fund managers	7	3.9	1.46	
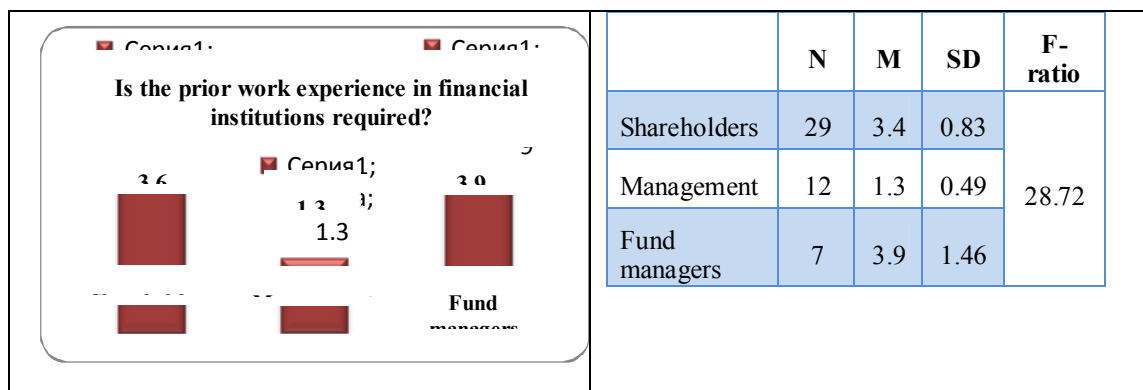
Figure 6 contains data that show that the fund managers (M = 3.9, SD = 1.46) most agree with the statement that supervisory board membership requires work experience in financial institutions, shareholders agree slightly less (M = 3.4; SD =, 83), while the management the least agree with the statement (M = 1.3, SD =, 49). A one-way variance analysis has been conducted to check whether the obtained differences are statistically significant. The results of the analysis showed that there were significant differences in the evaluation of the importance of experience in financial institutions to perform functions in supervisory board, between different interest groups (F = 28.72, p <. 01). Post hoc Bonferroni tests verified which stakeholder groups showed statistically significant differences in the estimates. It was found that the assessments of shareholders (Bonferroni = 2.11, p <. 01) and fund managers (Bonferroni = 2.52, p <.01) were significantly higher than the estimates made by management, until a significant difference between the estimates of shareholders and fund managers was found.

Using the methods for the processing the data of the questionnaire considering other features of the supervisory board members, the obtained results have been compared with the regulations of the Investment Funds Act.

6. FINDINGS OF THE HYPOTHESIS RESEARCH

In accordance with the defined problem, the research objectives have been defined and implemented through the following steps:

- A set of professional, moral, and other characteristics of supervisory boards members has been defined; the research has been carried out in order to identify the attitudes of influential interest groups considering the supervisory board members required features

- Based on the findings, the model of the closed - end investment funds supervisory board members required features, has been defined, which *confirms the hypothesis*.

- A set of supervisory board members required features are:
  - Professional characteristics: knowledge of capital markets and the supervision institutions; knowledge of the real estate market in real estate funds; knowledge of risk management in

business areas of investment funds; the necessary knowledge in the field of analysis of financial statements; a university degree

- o <u>Moral characteristics</u>: members of supervisory board can not be associated to the fund or management of a company; members of the supervisory board of a closed-end investment fund can not simultaneously be members of another closed-end investment funds

- o <u>Other characteristics</u>: members of supervisory board may not be politically exposed nor can they belong to any political party; for the membership in the supervisory board of a closed-end investment fund, a prior work experience in financial institutions is required

By comparing the features that have been subjected to the analysis with the provisions of the Investment Funds Act relating to election of supervisory board members, it can be concluded that different stakeholders have different perceptions of the importance of professional, moral, and other features, required for the members of supervisory board, from the features that are prescribed by the law.

The results showed:

- • That it is possible to define a set of required professional, moral, and other characteristics of supervisory board members in closed-end investment funds,

  That different interest groups have different perceptions of the professional, moral, and other features importance, for members of the supervisory boards

- • That different interest groups have different perceptions of the importance of professional, moral, and other features for supervisory board members from the features that are regulated by the Investment Funds Act

- • It is not possible to identify the influence of the owner on management based on the supervisory board members expert features

7. CONCLUSION

The research on the criteria for the selection of supervisory board members required features in closed-end investment funds, brings contribution to quality raising in the process for electing members of supervisory boards in closed-end investment funds, and consequently, to corporate governance of investment funds. By the appliance of the selected research methods, the data has been collected and processed and then used in defining the model of supervisory board members required characteristics. This could be presented to interest groups as a proposal for corporate governance quality raising, in the sector of closed-end investment funds.

The social justification of the research is based on the fact that closed-end investment funds are important participants of the Croatian financial market and therefore there is justification for carrying out research on such a sample. The scientific contribution of the research shows the possibility of wider application of the obtained model for supervisory board members required features in closed-end funds. Moreover, since the closed-end investment funds operate as joint-stock companies that are liable to regulations of Companies Act and the Investment Funds Act, it is possible to apply the resulting model even beyond the ordinary joint-stock companies, that is, on all those companies that do business in accordance with the provisions of the Companies Act and are required to have a

supervisory board. The quality of the supervisory board of a company is the basis of corporate governance quality.

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ANALYSIS OF THE CURRENT STATE OF CORPORATE GOVERNANCE IN CROATIA

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Abstract

Croatia started to adopt the principles of corporate governance mainly due to the pressure of the international community, in the period following the shift of ownership in companies. The proper implementation of corporate governance principles is essential for the economic development and for faster capital market growth. The framework of corporate governance code includes the equitable treatment of shareholders, the role of stakeholders, disclosure and transparency, board responsibilities and all this elements becoming essential in the period of privatisation and post-privatization period. The Croatian Financial Services Supervisory Agency (Cro. HANFA) and The Zagreb Stock Exchange (Cro. Zagrebačka burza) made a Code of corporate governance that was adopted in 2007. The Code passed a revision and from January 2011, there is a new Code that it is adjusted with actual law and new capital market regulation in Croatia.

The focus of this paper is on current state of corporate governance in Croatia 20 years after process of privatization started. Also the author wants to show the changes in Croatian law and regulation according to the requirement of European Union which are directly connected with process of corporate governance. At the end, the author gives conclusions and some implication for further research.

Key words: *corporate governance, capital markets, current state, Croatia*

1. INTRODUCTION

Before entering transition period in the 90-ties, Croatia had a specific form of ownership. The type of ownership was referred to as public ownership, which denied both state ownership and private ownership. The transformation of public ownership into a state ownership was a starting point of the privatization process in Croatia and followed process of corporate governance.

After privatization, a system of corporate governance started to be developed. The OECD defines corporate governance as *"a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined."* (OECD principles of corporate governance) OECD has defined six groups of principles of ensuring rights and obligations of shareholders, the board of directors (Management board and Supervisory board), but also other interest groups (stakeholders) in the company. In Croatia, there are defined five groups of principles of corporate governance that followed principles of OECD corporate governance. Also, some companies applied their own principles of

corporate governance, even before the Code of corporate governance was adopted on the national level.

The system of corporate governance in Croatia is based on state laws, as well as international standards and internal corporate regulations such as organisational rules and business ethics. In order to adjust to the laws and legislation of the European Union, Croatia has adopted the Code of corporate governance in April 2007. But still, Croatia adopted Code of corporate governance relatively late, later than many other transitional countries. For example, Slovenia adopted Code of corporate governance that provides a recommendation towards a better way of managing the company in April 2004. Also, in most EU companies today, the corporate governance dominates almost all business processes and financial and economic issues. In Croatia, in the last few years, it is becoming more obvious that for the development of financial market is important to realise a regulated relationship between the company owners (shareholders, principals) and hired managers (agents). This relationship is described with agency theory that becoming a subject of many research in Croatia, as well in other countries. That makes comparing process more easily. In Croatia, the Code is not an obligatory for business entity, but the presence of a corporate governance code enhances confidence of potential investors in a company's efficiency, thus improving its position on the capital market. It must be noted, that those companies which applied the Code do not have necessary positive business results, but the potential investors usually look differently on those companies and usually on develop capital market they are ready to pay premium price for their shares. In Croatia, still there is not visible this direct relationship.

This study investigates the Croatian introduction to the process of corporate governance. In the article, the author made an analysis through the period, and tried to look into a sequence of events connected to the corporate governance in Croatia. Also, the author made a monitoring of annual questionnaires of Code of corporate governance, which are obligatory for each company on the capital markets. This annual questionnaire is a part of annual financial report of each company listed on the Zagreb Stock Exchange. If improvements want to be achieved it is necessary not only to apply the principals of the Code of corporate governance but also to analyze them constantly and evaluate the results of their application or make certain sanctions for violation of the principles.

Also, the author made a view on global economic crisis that made an impact, and uncertainty became a state of most Croatian industrial sectors, especially in way of investments. The author' opinion is that this crisis has to be a new chance for develop improved corporate governance model and successful development of financial institutions and capital market.

2. RESEARCH QUESTION, LITERATURE REVIEW AND THE DATA COLLECTION

Before the presentation the current state of corporate governance in Croatia, it must be noted that the main object of analysis in this research paper are companies which are listed in quotation of Zagreb Stock Exchange, institutional investors that applied Code of corporate governance (like banking institutions, pension funds, and in a certain way investment funds), institutions important for pursuing the process of corporate governance (The Croatian Financial Services Supervisory Agency, The Zagreb Stock Exchange) and some legal aspects of corporate governance.

The main research question is: *Has Croatia made a progress in corporate governance since the process of privatization started?* The hypothesis in this research paper is based on the fact that corporate governance plays important role in company performance than ever before and one reason of its business success is putting an emphasis on the principles of corporate governance. The author opinion is that Croatia made a certain development in the process of corporate governance. But

unfortunately, because of lot of affaires connected with corruption in some big and important Croatian companies' progress in the corporate governance process is minimized.

First, the author presents the results of extensive literature review of the corporate governance in Croatia, but also in some other countries tried to make a comparison. The system of corporate governance in different countries varies both on the legal basis and according to traditional business condition. After that, the author presents the results that were gathered through qualitative analysis through sequence of events connected to the process of corporate governance in Croatia.

The research results and conclusions are presented at the end of the paper.

2.1.   Literature review

As is stands in the document The state of corporate governance in India made by KPMG in India *"Good corporate governance is characterized by a firm commitment and adoption of ethical practices by an organization across its entire value chain and in all of its dealings with a wide group of stakeholders encompassing employees, customers, vendors, regulators and shareholders (including the minority shareholders), in both good and bad times. To achieve this, certain checks and practices need to be whole-heartedly embraced."* (KPMG, The state of corporate governance in India) This definition of good corporate governance process could be easily adopted in each country and of course in each business activity. The research on companies listed on stock exchange in India shows that respondents believe that corporate governance should be practice through principles of corporate governance, but also there is a need for stronger regulatory review. It is interesting that the same conclusion get supervisory institutions in Croatia.

There are lots of researches about current state of corporate governance in selected countries. The author only took in consideration a few of them, by her opinion the most relevant. In their research paper Muhamet and others though that the corporate governance of the financial sector has important implications for the stability of the whole economy. They made a research in the banking and insurance system in Kosovo that is relatively new, established after the 1999 war. They made a comparison between the rules and regulations of the banking system in Kosovo with the OECD and they found out that most of the regulations are concerned with financial reporting and disclosure (Muhamet et al., 2009). Stewart and Yermo in their research paper from 2008, made a connection between pension funds and corporate governance. They identified some of main governance weaknesses in pension fund systems around the OECD area and in selected non-OECD countries (Stewart and Yermo 2008).

In his research Kern on UK banks came to conclusion that the major corporate governance challenge for banking institutions is principal – agents' problem when bank management is not aligned with banks owners. (Kern, 2004)

In UK, there is a new Code of Corporate Governance that is in forced from 28 June 2010. The main differences from previous version of the Code are that directors from FTSE 350 companies have to be elected annually. Also, the Code contains specific reference to diversity, like gender diversity and lot of other recommendation for role of chairman, board effectiveness (New UK corporate governance code in force from 28 June 2010). In Croatia, from 2011, there is a new revised Code of corporate governance. It is better than previous, but it is not elaborate in details like UK Code of corporate governance.

Table 1. Selected studies about corporate governance process

Author / Year	Country	Issue
Cingula and Klacmer, 2003	Croatia	- The principles of corporate governance rely on their interconnection with strategic business goals, predefined by a company in its business plan.
Kern, 2004	UK	- the major corporate governance challenge for banking institutions is principal – agents' problem when bank management is not aligned with banks owners
Muhamet and others, 2009	Kosovo	- comparison between the rules and regulations of the banking system in Kosovo with the OECD - found out that most of the regulations are concerned with financial reporting and disclosure
Stewart and Yermo, 2008	OECD area	- identification main governance weaknesses in pension fund system
Gonan Božac, 2008	Croatia	- Supervisory board members are usually less educated than members of Management board and that they should be introduces more properly into the business of the company
Gonan Božac and Šumberac, 2008	Croatia	- The changes in Company Act; the companies are free to choose between two corporate governance systems. During their lifetime companies can change this decision.

3. CORPORATE GOVERNANCE IN CROATIA

Croatia started to adopt the principles of corporate governance mainly due to the influence of the international business community, in the period following the shift of ownership in companies. The principles of corporate governance rely on their interconnection with strategic business goals, predefined by a company in its business plan. Applying the principles of corporate governance enables both the company and the country it is based in to improve their economic efficiency and competitive advantages (Cingula and Klacmer, 2005.). Establishing a good corporate governance framework makes it possible to run efficient business activity in companies.

In Croatia at first, principles of corporate governance started to implement in companies which had undertaken restructuring processes and after establishing stability measures into their business activity. At the beginning of the privatization and implementation of the principles, the most effective corporate governance practice was found in companies owned by foreign shareholders. (Cingula and Klacmer, 2005.)

Table 2. Fazes of development corporate governance process in Croatia

Year	Institution/Law/Company	Issue
1989	Law of Privatization	- first instances of company privatization, the period of transition from the socialist system into a capitalist one
1999	Pliva d.d.	- one of the first companies to acknowledge the importance of corporate governance
2000	the Croatian Employers' Association; The Croatian Securities Commission[73]	- initiated the founding of the Corporate Governance Board
June 2001	Corporate Governance Board	- submitted their report on the state of affairs and measures to be taken, under the title of "Corporate Governance in Croatia: Key Problems and Recommendations for the Improvement of Corporate Governance"
January 2004	The revised Company Act[74]	- Members of Management Board are personally responsible for running the overall business, whereas the role of the Supervisory Board is limited to supervising the business activity; the members of the Supervisory Board can indirectly influence decisions made by the Management Board
March 2004	New Corporate Governance Board	- founded by Varaždin and Zagreb Stock Exchanges, the Ministry of Finances and the Croatian Securities Commission; a view to developing a Code on Corporate Governance as soon as possible
January 2006	the Croatian Financial Services Supervisory Agency (HANFA)	- the agency consolidated the activities and took the jurisdictions over independent specialized regulations; the most important institution that regulates and influences the changes on capital market
December 2006	Varaždin Stock Exchange and Zagreb Stock Exchange	- merger between two stock exchanges
April 2007	Croatian Financial Services Supervisory Agency and the Zagreb Stock Exchange	- adoption of the Code of Corporate Governance; the appliance and acceptance of the code principles is not obligatory for companies listed on the capital market
September 2007	The Croatian Association of certified Supervisory board members (HUCNO)	- The main goal of the existence and activity of the Association is development of good practice of corporate governance in Croatia

[73] Today formal successor is Croatian Financial Services Supervisory Agency

[74] Official Gazette NO. 111/93, 34/99, 52/00, 118/03

April 2008	the new Company Act[75]	-	provides the possibility of the Anglo-American corporate governance model appliance
September 2010	Association of Pension Funds	-	adoption of the Code of participation pension funds in corporate governance
January 2011	The revised Code of Corporate Governance	-	adjusted with actual law and new capital market regulation

Corporate governance principles, at first were adopted mostly by big Croatian companies which had even before international reputation. They adopted corporate governance principles on the corporate level, even before the Code was adopted on national level. Also, it must be pointed that at the same time those companies were only companies providing public access to information about their business results and other important information for investors, shareholders and all other stakeholders. It is interesting to note that these companies can connect themselves directly to international financial markets and are treated by their individual characteristics - not the characteristics of national economy to which they belong (Cingula and Klacmer, 2003). The Croatian Financial Services Supervisory Agency (cro. HANFA) and The Zagreb Stock Exchange (Cro. Zagrebačka burza) with the aim of stabilization of financial market and creation of corporate governance culture made a Code of corporate governance that was adopted in 2007. The Code passed a revision and from January 2011, there is a new Code that it is adjusted with actual law and new capital market regulation in Croatia. The development of the company and capital market law in European Union introduces new standards adopted as well in Croatia. In Croatia, the Code is not an obligatory for business entity, it is only a recommendation. The usage of the code was determined by the Companies Act, according to which the management and supervisory board members of a joint stock company are obliged to declare to conduct in accordance with the corporate governance principles, at the end of each year.

The fundamental groups of principles of the Croatian Code of corporate governance are: (1) Business transparency and disclosure, (2) Clearly elaborated conduct procedures for management board, supervisory board and other respective company bodies that make important decisions, (3) Avoiding the conflict of interest, (4) Efficient internal control, (5) Efficient responsibility system. (The Corporate Governance Code, 2010)

Differences of the first and the revised Code can be found in the structure, whereas the Code from 2007 is divided into seven chapters - objectives and principles, disclosure, bodies of the company, auditing and internal control mechanisms, investor relations, stakeholders and disclosure of compliance with Code provisions and the Code form 2010 has five parts - recitals, corporate governance carriers (shareholders and shareholders assembly, supervisory and management board), auditing and internal control mechanisms (internal and external auditors), and transparency and public operations (public disclosure, relationships with investors) and the implementation of the Code. Differences also exist in the annual questionnaire which is a part of both editions of the Code.

While in the Code from 2007 the role of the questionnaire was not specified, the Code which is applied from 2011 clearly indicates that usage of the Code is review and overseen through professional services of the Zagreb Stock Exchange and that the Zagreb Stock Exchange and also the Croatian Financial Services Supervisory Agency will annually publish, through their websites,

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[75] Official Gazette, No 107 from 19 October 2007

information on companies that conciliated their business with the recommendations of the Code. Given that up to this date this has not been the practice, it is believed that the publication of these data could encourage companies to comply as far as possible to the recommendations of the Code of Corporate Governance.

It is assumed that companies in Croatia, if there are no legal obligations and regulations concerning their business, they do not necessarily respect all the principles and recommendations that can be found in the non-binding document such as the Code of Corporate Governance. All this adversely affects the company's business culture and broader dimensions of it are reflected in overall economic situation in the country. One of the principles which affected the process of corporate governance is clearly elaborated conduct procedures for management board, supervisory board and other respective company bodies that make important decisions. Gonan Božac in her research from 2008 pointed that Supervisory board members are usually less educated than members of Management board and that they should be introduces more properly into the business of the company. (Gonan Božac, 2008)

Croatian corporate governance model is based on the German corporate governance model (continental corporate governance model), which differs the Company Assembly and two dominant company bodies (*two-tier system),* namely the Managing Board and the Supervisory Board with different tasks. However, the new Company Act from April 2008 provides the possibility of the Anglo-American corporate governance model appliance. This model introduces a single board (*one-tier system*), the Board of Directors. Up to this moment (April 2011), there are few Croatian companies that have been transformed according to the Anglo-American model. The first company that made a transformation was tourist company Arenaturis d.d., and the main reason is in its foreign ownership. The owners of this company are more familiar with one-tier system and corporate governance based on the Anglo-American corporate governance model. The changes in Company Act were supported by the Slovenian example, where single board system was introduced 2006. The companies are free to choose between two corporate governance systems. During their lifetime companies can change this decision. (Gonan Božac and Šumberac, 2008)

Also in Croatia, in 2007 started to work The Croatian Association of certified Supervisory board members. It is a non-profit and independent legal entity. The main goal of the existence and activity of the Association is development of good practice of corporate governance in Croatia. The Associattion is a member of **the European Confederation of Directors' Associations (**ecoDa) with the mission to promote Corporate Governance, to promote the role of directors towards shareholders and corporate stakeholders, and to promote the success of its national institute (http://www.ecoda.org)

3.1.   Corporate governance in financial sector

The concept of implementation of the principles of corporate governance in financial sector is a relative new, but it could be observe in correlation with business companies. *But still, c*orporate governance in banking institutions and some other institutional investors as a specific financial intermediary has a lot of differences in order to other business companies. The main difference is in large number of stakeholders, all with different interest.

Traditionally, the Croatian financial system is the bank-based Continental system. End of the year 2010, there were 32 banks and 2 savings banks in Croatia (six major banks, three medium-sized banks and 25 small banks), but it must be noted that the Croatian banking sector is highly concentrated and that the five large banking group (Zagrebačka banka, Privredna banka, Erste & Steiermaerkische banka, Raiffeisenbank Austrija, Societe Generale-Splitska banka) control for around 75 percent of the total assets in the industry. (Bilten o bankama, 2010) In 2007 Croatian National Bank (cro. HNB) gave

its standpoint on corporate governance in the banking institution. With a new laws and sets of rules, Croatian National Bank wants to influence on better corporate governance in banking institutions. One of the presumptions is that better management leads to better process of corporate governance.

Banking institution but also some institutional investors (pension funds) are one of the most important segments of any national economy, so it is important that those institutions provide qualitative, transparent, efficient and good corporate governance practice.

For the first time, pension funds in 2010 adopted the Code of participation pension funds in corporate governance. The Code defines the basic principles and rules of responsible behaviour of members of the *Association for the management of pension funds and pension insurance companies* in the corporate governance process of joint stock companies in which the pension funds have substantial stakes in the ownership structure. Pension funds as an important part of capital markets through their participation in corporate governance have goal to become strong stabilizers of the market and to contribute to the transparency of the operations of companies' in which they invest. (www.hgk.hr) It is important to say that at the end of the first decade of 21st century the link between pension fund governance and corporate governance has been recognised. Other institutional investors in Croatia do not have their own Code, but still some of them adopted the Code of corporate governance declared on national level.

3.2. Corporate governance and capital market

Corporate governance is directly related to the development of capital market and everything that a developed capital market offers. (Cingula and Klacmer, 2005.) Principles of corporate governance are essential for the economic development and for the faster capital market growth. The general situation on capital market shows that the Code and the principles are reserved for those companies that have already achieved recognizable competitiveness and reputation on international markets.

Today, in Croatia there is one formally regulated capital market: *Zagreb Stock Exchange*.

The equitable treatment of shareholders, transparency and disclosure of all business information required by the investors and all other stakeholders, timely and accurate information and the role of the members of Management board or Supervisory board are important for potential investors for further investing. By accepting the principles of corporate governance, companies improve their position on domestic and international capital markets, and achieve a better chance of attracting potential investors (Cingula and Klacmer, 2003).

Corporate governance is dealing with relationship between two authorities in the company, managers (agents) and owners (principals) but also stakeholder's interest is not isolated. This relationship is known as an agency theory and there are lots of opinions how this relationship needs to function. As is stands in the paper Critical Overview of Agency Theory from Podrug and other, this theory is controversial, but important. (Podrug et al., 2010) The interaction of a company's corporate governance and the value of company's shares are reflected upon the interest of potential investors. Their interest stems from information at their disposal.

The companies all around the world were affected by the current economic crisis that started in 2007 in USA. Mostly, the crisis manifests in the downturn in investments needed for long-term projects but also in decreasing interest of investors on the capital market. Over this period, a lot of affairs in Croatian companies were disposes but the question about what is good corporate governance in companies is still unanswered. Through improvements of the process of corporate governance, Croatia can aspect development of capital markets.

4. CONCLUSION

The institution that deals with corporate governance issues is The Croatian Financial Services Supervisory Agency, which is the supervisory institution over institutions and process on the capital market in Croatia. But this institution is not accountable for implementation of corporate governance principles in companies. Today, corporate governance principles in Croatia are standardized through recommendation, like in many other transitional or more develop countries. In the future the intention of OECD is unification of corporate governance principles at the international level. This could help to integrate national business entities into a global market community. But, for sure, this is not an easy task to do.

The question is: *Has Croatia made a progress in corporate governance since the process of privatization started?* After a presentation of all events connected with corporate governance process in Croatia, it could be conclude that there is a shift into better issues, but still there is a space for improvements. Croatian companies have to get into a practice not just implement but also operate in accordance with principles of corporate governance.

Qualitative analysis of annual questionnaire shows that companies in most cases avoid the public disclosure of the information that concern fees and remuneration of supervisory board, management and the independent external auditor through their own websites. In the context of transparency of the business, disclosure of such information should be a standard item. Surely certain penalty measures should be carried out for companies that do not abide to the recommendations of the Code of Corporate Governance, so that in the future the culture of corporate governance can be discussed and not the lack of it.

The limitation of this paper is consideration of only qualitative analysis. For sure, quantitative analysis of each segments (capital markets, financial institutions, companies …) connected with process of corporate governance will give different information. That leaves place for further research.

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THE ASSESSMENT OF *CLIENT SATISFACTION* IN THE INSURANCE SECTOR

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Abstract

The aim of this paper is to discuss the client satisfaction assessment's role in the insurance industry. In the paper we describe how the customer portfolio analysis suggests that customer retention (the measure of detention or "preservation" of existing customers) would have a strong impact on the profit levels of insurance companies, especially after the liberalization of car tariffs (mass market for insurance products is the best) which made the loyalty of the customer base even more important. In an increasing highly competitive market is no longer sufficient to grow only in premium volume; in fact the Italian insurance business in the coming years, according to the analysis of many economic institutions and insurance, will double.

Key words: *Insurance, customer satisfaction, ICT*

It has become clear that in the insurance market there has been a real revolution that has led to changes in the market, strategies of companies, offering products and services, in the manner of distribution of insurance products. The introduction of new technologies in the insurance sector has led to further revisions to both the internal processes and to external ones for the companies, especially distribution.

In fact, companies are aware of the fact that the real competitive challenge in the insurance sector is to play on the distribution front and on the ability of firms to coordinate the traditional channels with the innovative ones. Thereby, it will be possible to create customers' values and gain competitive advantage compared to competitors.

The key benefits that customers and potential "online" customers, for example, may have from the technological revolution are numerous and can be summarized as follows[76]

- Ability to examine and, in some cases, to buy insurance products any time, seven days a week;

- Offer greater transparency and access to a larger number of products, with the possibility to compare the proposals of many companies to find the best deal in real time;

- Significant price reductions compared to products purchased through traditional channels, with the power to block the online requested quote;

- Acceleration of policies take-up and, in some cases, immediate insurance coverage;

- Simplification of the complaint claims and streamlining of the winding-up proceedings;

- Opportunity to provide on-line consulting services and information made available on the websites of the companies.

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[76] A Coviello "E-insurance: la distribuzione innovativa dei prodotti assicurativi e finanziari", G. Giappichelli editore- Torino, 2009.

- Besides the advantages discussed so far, a number of disadvantages can also occur for online shoppers:

- Difficulties the customer encounters in the establishment of some tasks on-line (quote request, personal data entry etc.);

- Inability to achieve highly customized products (especially for insurance and financial life product);

- Inability to establish a personal relationship with the seller and have a custom-insurance financial advice;

- Difficulty to pay online the policies taken out (concerning the security of transactions or complex payment procedures);

- No immediate availability of documents certifying insurance coverage and required by law (for example, the mark of the insurance policies car insurance).

The observation highlighted so far made us give increasing importance to the operation and the characteristics of new distribution channels. But it is also essential to identify the potential that they may express, both in terms of knowledge and interaction with the customer, and in terms of *satisfaction customer*[77]

The evolution of competitive scenarios (from the early 90's) led the senior management to adopt the principles of customer satisfaction. Satisfying customers should be, always, the goal of every business that wants to sell products and services[78]

For the company the client is an increasingly scarce resource, and therefore expensive and difficult to manage: he is a precious heritage for the company and here is[79] therefore, the need to develop methods and processes by which to measure the value of this valuable resource to manage it.

The basis of this value is customer satisfaction: a satisfied customer is worth much more than an indifferent customer, a dissatisfied customer, however, is a floating mine organizations normally do not know.

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[77] The importance of customer satisfaction as a strategic objective is supported by some market trends. Among the causes of orientation to customer satisfaction, Busacca (1994, op. Cit.) cites 4 structural trends of supply and demand relationship: a) The gradual increase in competitive pressure, which increases the need for businesses to get psychological closer to the customer. b) The emergence of new sources of competitive advantage related to the development of the intangible resources related to the added value of the brand, product, and in general all the features that surround the physicality of the product / service. c) Increasing the technological complexity of products / services. d) A dynamic evolution of the demand was driven more than ever before by a consumer looking for superior quality products and services, and in general in a consumer who seeks the integration of multiple consumer needs. (Fabris, 1995, op. Cit.). By the time the service component becomes important, it wraps and supports the product in all processes of consumption, a measure of customer satisfaction becomes a cornerstone needed to achieve "competitive advantage".

[78] In fact we know that it becomes the primary objective when the company adopts the principles of marketing by which products and services are designed, delivered and presented to the market based on customer needs, which is still limited distribution.

[79] It 's worth nothing that its value "does not appear in the budget", but those resources belong to the so-called "invisible", as those resources based on information or incorporate - (such as consumer confidence, brand image, the ability of management, etc..) and they are increasingly regarded as key attributes to create the competitive advantage of a company. (H. Itami, 1988)

Customer satisfaction is, therefore, an obvious topic perhaps known by many companies, but basically little or nothing from the management point of view, so, to start the wise management of customer satisfaction, it must first be known, explored and therefore, '"measured"[80]

For this reason, the customer's attention has been widespread in the companies for a few years and it goes beyond the traditional marketing approaches proposed by: the attention to each customer[81]

The issue of client satisfaction in service industries is difficult to define, because of the characteristics of intangibility (the process of service delivery is aimed at satisfying the need and not the production of a physical good), heterogeneity (there are no exactly standards services, nor always identical to themselves, because they depend from company to company, depending on personal contact, so the quality specifications are set within a range of acceptable quality levels within a margin of natural variation), perishability (inability to keep the results of production processes for future moments of sale, hence the need to synchronize demand and supply) and inseparability (the time between processing and delivery) of the service.

This aspect enhances the contact between staff and customers. This is called the "moment of truth", in which the customer perceives the quality of the service actually[82]. And it's 'necessary to improve training and recruitment of contact, in order to make the customer's participation, the process of service delivery insurance, as productive as possible[83].

For this reason, it's been years since it was given emphasis to political loyalty, also called "customer retention" and exploitation of the "retention"[84]

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[80] As turning the concept into a quantitative measure of customer satisfaction, customer satisfaction is inseparable from the concept of quality of product / service. That status is further defined in terms of perceived quality. One of the contributions still used in the measurement of customer satisfaction, focused on the survey of perceived quality of the product, is the model of Servqual Parasuraman, Zeithaml and Berry. The authors construct a measure of perceived quality, customer satisfaction and then, through a comparison between: the expectations with which the client approaches the type of product / service (in terms of having the service), perceptions of product / service that occurred after the consumption / use (in terms of the contingent being of service). The model Servqual has identified a number of areas of inquiry that characterize the quality of the product / service. The authors, through the application of factorial techniques, identified 5 areas that characterize the customer satisfaction: tangible Aspects , Reliability, Responsiveness, capacity of assurance, empathy. Source: Parasuraman, Zeithaml and Berry, 1994 (op. cit.)

[81] Among the most common headwords of our times *people satisfaction* is the most typical, in its many and complex interpretations, often abused. "people satisfaction" means a program of knowledge and usefulness beyond the customer, where the difference is not merely nominal, but generating a different perspective of action and massively involving different actors, from the citizen, to management, politicians , from a co-relational. The people satisfaction was designed in Mantua in 2000 by a public manager (and evaluator): This term has been popular in Italy and abroad (where they recorded only the generation of American people's satisfaction). People satisfaction is a new concept where different viewpoints are integrated with each other, they will be joined, converge in a sufficiently comprehensive and do not let their individual destiny. People satisfaction becomes a method of quality assessment that, starting from individuals, structures, different perspectives, trying to make them compatible and coordinated with a particular purpose. The assessment involves both a direct and immediate use (what to do here and now), and a cognitive (related to the model of learning organization).

[82] Cfr. Normann, 1992, op. cit.

[83] Nevertheless, the customer must physically reach, such as by spreading the insurance agencies in the area

[84] Cfr. F.R.Reichheld, W.F.Sasser 1990, op. cit

In the insurance sector, customer portfolio analysis suggests that *customer retention* (the measure of detention or "preservation" of existing customers) have a strong impact on the profit levels of[85] insurance companies, especially after the liberalization of car tariffs (mass market for insurance products is the best) which made the loyalty of the customer base even more important.

It would seem, in fact, that the best way to compete is to satisfy their customers rather than attack the competition. In fact, it is much more difficult to acquire a new customer than repeat sales to the existing customers.

Since the change of the service provider has a cost for the customer, generally well-disposed towards the old company, demonstrating a degree of loyalty variable, but in any case, consistent. Since, in the process of service delivery insurance, it is always possible that the latter does not fully meet the customer, misunderstandings can arise that build up if the company does not intervene in time managing these negative situations and turning in their favor (eg handling complaints and making them clear, because the obvious and recognized claims by the company are certainly less harmful in terms of customer loyalty, than those unspoken and unheard). Hence the emphasis of the insurance companies upon strategies to maintain and/or increase customer satisfaction.

However, what interests the insurance company is the *customer loyalty,* which is manifested in the attitude of the repurchase, and it is, therefore, a conclusive customer satisfaction index. Since, in view of *marketing,* the service consists of a set of attributes or characteristics on which the customer defines his preferences, the customer satisfaction must be measured on attributes or characteristics of the service, and not on the service itself. Customers, in fact, define their own preferences on salient features of the service; individuals, in fact for perceptual-cognitive (related to the ability of the human mind to process information), are not able to define preferences and processing information on ' complete set of attributes of a product / service. Therefore, if you are able to identify the salient attributes of a service, you identify those actually affect your choice[86]

Another idea to be analyzed, in the survey on customer satisfaction, is the definition of his *expectations*. The latter can be considered a prediction, a statement about the future and on the possibility that the product / service shows events compared to positive or negative attributes. So, the customer opens up to a shopping experience using a set of expectations where he comes, however, unprepared[87]

According to another definition, a merely legal meaning, the expectation would not be a prediction, but something akin to a "should", what the customer thinks about the characteristics of the product/service. While in the first case, the individual does not value the regulatory provision (whether expected or not), in the second case the expectation is more evaluated, measuring the service experience on the basis of a regulatory element (what it should contain a life insurance policy).

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[85] The rate of customer retention by 92% recently, while that of major companies is 95%. In other words, companies show a greater ability to retain customers than average (Cfr.Girelli, op. Cit.).

[86] While taking into account it each feature has a decisive role in the choice, and this weight has a strong subjective component

[87] Cfr. Normann, 1992, op. cit.

The next step is the *performance*. The customer has chosen, he experiences the service through the purchase and use, and the experience translates into a *performance* evaluation of perceived service through[88] selected attributes.

At this point, the picture is divided further, as it theorizes a product decomposable into attributes on which the customer defines the expectations, enters the purchase process with these expectations, he experiences the service and he is able, in the experiment, to articulate separately their perceptions of various attributes[89]

The idea that the individual is assumed, after the experience of the consumer, is to be able to discern, attribute by attribute, the level of *performance* observed. If this is plausible, then it is possible to note a discrepancy between the observed and the expected quality *(disconfirmation)*.

The *disconfirmation* is positive when the perceived quality exceeds expectations (I was expecting an average standard employee but I found a very friendly and warm person who has taken charge of my problem with life insurance policy); nothing when there is any difference between expectations and perceptions, negative when perceived quality is below expectations.

As a result, customer satisfaction is the result of the buying and exploiting process and, resulting from a comparison of service performance and expectations for each of the attributes.

In other words, *client satisfaction* is a summary derived from the aggregation of individual experiential different experiments, a psychological state is not immediately observable, depending on the coupling of the emotions surrounding the confirmation of expectations with the previous sensations.

This model of representation, in other words, assumes that it is possible to separate the psychological state from the attributes, or it's possible to understand the determinants of the dissatisfaction of the customer[90] .

The reasons for customer satisfaction should be analyzed, therefore, and determine whether a link exists between this psychological state and the customer's attitude to the service. Loyalty to the company, in fact, stems from this relatively stable attitude. The analysis, therefore, shouldn't merely observe whether the individual repeat purchase from the same company, but also determine the propensity to future policy and other insurance services with the same company (brand loyalty).

The formation of judgments of satisfaction is based on the summation of a number of attributes, not large. The final satisfaction, in short, is an algebraic summation of differences, multiplied by the

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[88] The term performance has a technical aspect. In this case, the crucial problem is not the objective performance of the policy or financial product and insurance in general, but the perceived performance. In general, there should be a permanent and substantial gap between these two levels. This does not mean that the two concepts are separate and normally, there may be among them, the differences.

[89] cfr. Carù A., op. cit

[90] While keeping in mind that the client satisfaction is a psychological phenomenon undetectable by definition, because what we analyze is the buying behaviour and buy-back (due to the psychological phenomenon to be analyzed). For example, one can estimate what proportion of individuals who bought the policy rc car from an insurance company will renew the next year with the same company, or how they are satisfied with that policy.

weight of that attribute and summed for each attribute under consideration. Individuals, in fact, facing a multidimensional experience, tend to offset each positive and negative experiences (addition rule)[91]

One may legitimately ask whether the expectations remain stable in the shopping experience. And it's 'known that, individually, both a trend toward stability (inertia) and an adjustment mechanism are realized in.

The latter situation occurs when there is cognitive dissonance. Individuals, in fact, are uncomfortable if they perceive a strong discrepancy between expectation and *performance.* If the gap persists, the individual claims for psychological costs to reduce it. By doing it, he may choose to "fix" the expectations, *performance,* or move side to change the company, turning to another company.

In the insurance sector, we know little experience using systems to monitor *client satisfaction,* although it is felt among the experts, the importance of conducting evaluations focused on customer satisfaction.

From the foreign literature in the insurance sector - mostly empirical work - the following elements emerge:

- The customer, faced with the choice of the policy, processes information using a variety of sources;

- Usually, the customer does not do any large *shopping* , limited or referred to an agent;

- *The* overall *client satisfaction* is a function of three key elements:

> 1. satisfaction about the relationship and contact with sales staff;
>
> 2. satisfaction about the product / service insurance;
>
> 3. satisfaction with the insurance company providing the service[92]

- The *client satisfaction,* compared to his own product/service purchased (the policy), decreases when an individual has been exposed to messages from other companies, conveyed by the media;

- For a complete verification of *client satisfaction* is not enough to ask the customers to describe their dissatisfaction about the products / services but also the *latent dissatisfaction* of customers[93] should be investigated.

- Events where the customer service has failed, have a strong impact on customer satisfaction against the insurance company. If the individual remembers where the company (as a whole) has failed to adequately respond to his problem, it significantly reduces the satisfaction with the company, demonstrating that the latter is the key component of *client satisfaction* overall;

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[91] However, there are also non-compensatory rules, consisting, for example, in selecting one or a few attributes and impose thresholds(treshold), discarding all the alternatives that do not meet these values, regardless of performance on other attributes. See Norman,op. cit.

[92] Some empirical studies show that overall customer satisfaction depends, first, on the satisfaction with the company, and secondly, the satisfaction with personal contact and only thirdly by satisfaction with the product / service insurance (CG Armistead, G . Clark, 1994).

[93] This type of analysis, in fact, aimed at identifying the customer dissatisfaction that the same are not able to express (usually for a lack of knowledge about technique that prevents the customer to define the will and / or needs) results in the achievement of significant and lasting competitive advantage (Stalk G. Jr., PecautDK, Burnett B, 1997).

- Personal contacts have a strong positive impact in relation to satisfaction with personal contact. In this perspective, post-sales activities, while not an immediate sales, are a strong investment in the client.

If this is the scenario where to play the satisfaction of the customer, we need to think about expanding the market share of existing customers, and while looking for new ones.

In general, the increase of customer's loyalty can produce very positive impact on the cost side: from one hand, it reduces the cost of advertising and communication (loyal and satisfied customers will implement a "word of mouth" by sending the company a good image that has a positive impact on both the dissatisfied customers and potential customers), from the other, it increases the costs of competitors (the more a customer is loyal, the more expensive is for a competitor to subtract the customer to the company). A loyal customer, also reduces the costs of managing the relationship, making it smooth and manageable conflicts, frictions and problems.

As you can see, the customer's loyalty has measurable economic impacts. The change of the company (which in the insurance sector is a growing phenomenon, although still minor, when viewed from the outside) is an event of dramatic discontinuity, although it is generated by a process that begins before its manifestation. We must therefore act on that process, and the models and techniques discussed previously are placed precisely in order to control and increase over time, customer satisfaction.

Certainly the growth of declared (or latent) dissatisfaction is also due to the growth of critical competence in the market that produces the most severe judgments of the past on goods and services used: this is reflected in a more open- minded attitude and globally oriented to the customer by companies. On the other hand more informed evaluations can grasp, perhaps more than once, the signs of innovation from the world supply.

Critical areas appear to keep alive the attention, ultimately, especially related to the growing demand for new skills which made the sign above the agency network (which is not, in my humble opinion, adequately satisfied), together with the need to continue to pursue the path of the mix-transparency communication (enjoyed by the insured very much) to "teach" customers the proper use of policies. Nevertheless, a priority for the customer satisfaction's issue is to retain, to detain, and to counteract the danger represented by the downward price competition; facing the offers charges of "convenience" in terms of cost, the temptation to leave his company is strong, if the customer is not held by other satisfaction factors[94] which can not be placed but on the floor of the report and additional services.

In conclusion, in a becoming highly competitive market (in recent years, several thousand insurance agencies have gone out of business) is no longer sufficient to grow only in premium volume. Needless to say, in fact, that the Italian insurance business in the coming years, according to the analysis of many economic institutions and insurance, will double.

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[94]As far as, the ratio is matched by the Eurisko survey conducted on behalf of ANIA recently, aimed at analyzing the degree of satisfaction of the insured and its evolution (Report on customer satisfaction in the insurance industry - Eurisko / Ania - April 2004).The survey is the apparent image of a more pragmatic and attentive customer value, which is accompanied by a more general increase in expectations in relation to the quality insurance service. It is positively reflected an overall satisfaction of the insured against the Italian services provided by companies. Ultimately, customer satisfaction has been evaluating regularly by ANIA since 1994. Monitoring the satisfaction of the insured has the objective to monitor market trends, highlighting the expectations of consumers in the insurance sector, the indices of satisfaction, any potential.

This development, in anticipation of the aging Italian population and the ongoing liberalization and privatization in our country (in the health sector, social security, etc..) will cover life insurance, supplemental security, health insurance policies. It will involve a wider spread between the insurance citizens through higher quality of the service, offer tailored policies and targeted to the needs of customers, management and implementing adequate expertise of the insurance contract, especially in what is still the weak link of relationship with the insured: the stage of settling claims.

It is clear, then, that competition rather than pricing, will have to measure the ability to grasp the opportunities offered by new technologies and certified quality of the contractual relationship of the services offered and solvency, all aimed at the ability to establish collaborative relationships and based on trust between the insurance company and its stakeholders (customers and intermediaries primarily).

In fact, a remarkable act of emancipation is on, from the customer's distribution channel (wide availability of statistics and comparisons, direct electronic distribution channels) that gives him the opportunity to compare and change the products and companies, which would make the insurance market more transparent and switching costs continuing to fall. This is the result in a market increasingly oriented to customer needs.

It will also pay more attention to respect the rights of clients[95] (in terms of fairness, trust, transparency and speed of contract damages, as set out in the "Charter of rights of the insured," that companies adhere to 'EU agreed to meet), if you want to achieve customer loyalty, as well as acquire new ones.

In other words, from the ability to "listen" to customers (internal and external) will depend on the skill which meet the requirements that determine, then, the criteria of choice of policies (increasingly oriented, clients, research a relationship of trust, image, service quality, *performance,* convenience of access and price); therefore ,a modern insurance company will measure its success, primarily on *customer satisfaction*.

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[95] So far, in fact, the protection of clients' rights was, in some way,ensured by the intervention of legislation and / or authoritative, based on the conflict of the relationship between insurance companies and clients as measured by the complaints that come from ISVAP dissatisfied customers.

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THE IMPACT OF INSURANCE FOR ECONOMIC GROWTH: THE EVIDENCE FROM CENTRAL AND SOUTHEASTER EUROPE

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Abstract

The aim of this paper is to empirically examine relationship between insurance sector development and economic growth in 10 transition countries in Central and Southeastern Europe. We use the country-specific fixed effects models for panel data analysis using annual insurance premium data for non-life, life and total insurance for the period 1998 - 2010 allowing each cross-sectional unit to have a different intercept term serving as an unobserved random variable that is potentially correlated with the observed regressors. We don't find evidence for a growth-supporting role of nonlife insurance, while life and total insurance according to our findings, positively and significantly affects economic growth. These results could be useful for regional governments that seek to improve economic growth as they suggest the need for implementation of stimulative policies for the development of insurance industry.

Key words: *insurance, economic growth, Central and Southeastern Europe*

1. INTRODUCTION

The thesis of the existence of a link between financial sector and economic development is a topic of perennial debate. This thesis finds its origins in the writings of Bagehot in the late nineteenth century. According to Bagehot (1873) financial intermediation was essential for rapid industrialization of England at the beginning of the nineteenth century. Bagehot allegethe that English financial system is useful because it is easily adjustable. Political economists believe that capital goes to the most profitable projects and rapidly leaves the less profitable. In this way the funds are directed towards those projects that are profitable, creates positive effects on economic development. Much more precise about the role of the financial sector on economic development is Schumpeter (1912) who noted that the role of financial intermediaries in economic development consists in identifying and funding those entrepreneurs who have the best chance for successful implementation of innovative and production processes. Contrary to these claims Robinson (1952), supports the position where Keynes argued that where finance companies are leaders inevitably follow. In other words, the growth in financial sector primarily as a result of the demands of its services by the real sector, which takes place in the process of its development.

According to the finance-growth nexus theory financial development promotes economic growth through channels of marginal productivity of capital, efficiency of channeling saving to investment, saving rate and technological innovation Levine (1997). Affecting economic growth through the channels is realized by functions of financial intermediaries. Financial intermediaries have an advantage over direct financing in economies of scale that result from costs shared. Additionally, large amount of funds enables financial intermediaries to be more easily diversified than individual

economic units. The reduction in transaction costs, as the main function of financial intermediaries, was first introduced by Gurley and Shaw (1960). According to the traditional theory of financial intermediation the real-world market is characterized by frictions that include transaction costs and asymmetric information.

An alternative argument for the existence of financial intermediaries is information asymmetry that was first suggested by Leland and Pyle (1977). According to their theory, financial intermediaries are information collectors of borrowers' financial prospects for solving the problem of adverse selection. Financial intermediaries can signal their informed status by investing their wealth in assets about which they have special knowledge. Diamond (1984) suggests that financial intermediaries act as delegated monitors to overcome asymmetric information and in that way reduce the problem of moral hazard.

Allen and Santomero (1998) as a result of changes in financial environment related to deregulation, improved provision of information through technological progress, and financial innovation suggest improvements in the traditional theory of financial intermediation. According to their view, the theory should also take into account risk management activities of financial intermediaries and reduction of participation costs.

Also, a numerous empirical studies confirm that financial intermediation plays a growth-supporting role. Empirical research conducted by King and Levine (1993) about the impact of the banking sector on the development of the economy showed that the banking sector contributes to economic growth and that there is a positive causal relationship between banking sector and economic growth (Levine, 1997; Loayza, and Beck, 2000). Also, research conducted by Levine and Zervos (1996), the impact of exchange together with the banking sector on economic growth, shows that both activities have a major impact on economic growth.

Among financial intermediaries, in performing functions of financial system insurance companies is growing in importance. Total world written real premiums increased by 50 percent between 1998 and 2010 (52 percent in the life insurance business and 49 percent in the non life insurance one), from US$ 2.2 trillion to US$ 4.3 trillion. Emerging Markets have recently experienced significantly faster real growth of their insurance sectors than industrialized countries (330 percent versus 58 percent between 1998 and 2010), reflecting liberalization and financial integration after the implementation of structural reforms.

But, unlike other financial activities there are relatively small number of empirical research on the impact of the insurance industry on economic growth. Although this activity has been somewhat neglected by the authors, however insurance industry can not only contribute to economic growth through issuing insurance policies they collect funds and transfer them to deficit economic units for financing real investment but also through complementarity with the banking sector and market shares, may contribute to their development. In the first case, the insurance conjunction with the banking sector may lead to encouraging the approval of bank loans by reducing the costs of the companies on the capital market, which would affect the economic growth by increasing demand for financial services Grace and Rebello (1993). Also, property insurance can facilitate bank intermediation, for example by partial protection that would affect the reduction of credit risk to promoting higher levels of lending Zou and Adams (2006). In terms of impact on the stock market, the development of insurance, especially life insurance, may contribute to its development through investment funds (savings) in stocks and bonds USAID (2006).

In this context, the main objective of this paper is to examine the impact of the insurance industry on economic growth. Our sample consists of 10 transition economies in Central and Southeastern Europe in the period from 1998 to 2010. As proxy of insurance sector development we using annual insurance premium data for non-life, life and total insurance. We apply country specific fixed effects panel data regression model with common coefficients across all cross-section members of the pool.

The paper is organized as follows. Section 2 presents a summary of the relationship between insurance market activity and economic growth. Section 3 gives the review of the empirical studies of the relationship between insurance sector and economic growth. In section 4 we present data and methodology. The results of the empirical research are given in section 5. The paper finishes with some concluding remarks and suggestions for the future work that are outlined in section 6.

2. CONTRIBUTION OF INSURANCE FOR ECONOMIC DEVELOPMENT

The importance that has insurance to economic growth is discussed at the first UNCTAD conference in 1964 where he stated the following "developed national market for insurance and reinsurance is an essential feature of economic growth." Insurance not only facilitates economic transactions, by taking risks and damages but also promote and financial intermediation Ward and Zurbruegg (2000). More specifically, by ensuring financial stability, promote, mobilize savings, facilitate trade, enabling more efficient risk management, dampen losses, allowing efficient allocation of capital, and can also be a substitute or supplement to government social programs Skipper (2001). Moreover, empirical evidence from developed economies shows that insurance companies are among the largest employers, investors and taxpayers in the U.S. Insurance Information Institute (2009), Great Britain Association of British Insurers (2009) and E.U. Comité Européen des Assurances (2009).

Given the importance of insurance in the economic literature, Skipper (1997) further emphasizes the importance of insurance and claims that it is not just a feature but a necessity for economic growth. While it highlights the lack of research that contributes to the relationship between insurance and economic growth is not very comprehensible. Namely, unlike banks whose contribution to economic growth as a theoretical and empirical is quite covered, the insurance relationship with economic growth is very rare subject in economic literature. Given the numerous functions of insurance companies in the financial system that performed directly or indirectly it is necessary to perform their detailed analysis of their contribution to economic growth.

In literature a number of authors (Rejda, 2005; Skipper and Kwon, 2007; Dorfman, 2008) highlight the following benefits of insurance on the economy:

1) Improve the financial stability of people and companies through the transfer of risk

2) Allows an increase of social protection which reduces the pressure on the country,

3) Better allocation of capital through the diversification of risks

4) Improving financial intermediation, increase liquidity and savings mobilization

In addition to labor will explain how the execution of these functions can affect economic growth.

2.1 Improving the financial stability of people and companies

The basic function of insurance is risk transfer by the insured to the insurer. Provision of insurance creates certainty for individuals and business entities that damages would be reimbursed. The feeling of security is a necessity for society to be able to function effectively and achieve creative achievement. In other words, insurance creates a smooth base for undertaking investments as a precondition for economic growth. By assuming the risk by insurance companies comes to reducing uncertainty and volatility in the economy and reduce the impact of the crisis potential of micro and macro level. Through the ability to transfer risk and damage compensation are encouraged economic agents with risk aversion of purchasing goods, especially those with greater value, and taking investment, and not just those covering existing products and manufacturing processes but also those that involve technological change, which achieves output and employment, that encourages economic growth. As mentioned by Ward and Zurbruegg (2000) "... without access to insurance products from companies will be willing to develop new products."

However, the use of insurance may cause moral hazard by the owners of companies that may have adverse effects on the economy. By ensuring that not only enables the insured to cover potential losses in case of occurrence of a harmful event, but can also be discouraged from taking preventive measures to reduce potential damage. Research on the impact of benefited insurance for workers and productivity conducted by Butler and Gardner (1998) showed that companies who use the insurance benefit have lower productivity, it increases the number of injuries, and also increases the period of sick leave than the companies that benefited not offer insurance

2.2 Provides social protection which reduces the pressure on the country

In all developed countries, there is an ongoing debate about the necessity of revising the existing social protection of the state. The structure of the population changes over a longer life expectancy, increasing numbers of elderly and comes to falling birth rates. At the same time, people expect to receive a high level of health care, higher pensions and other social benefits. Because of these facts population move from a pay-as-you-go (PAYG) system to privately funded schemes favours the growth of the insurance industry and facilitates capital market development with increasing supply of long-term savings, Holsboer (1999) sees the interaction between the insurance and economic growth as bidirectional. Holsboer builds on a model based on Aaron (1966):

interest rate (r), growth of the working population (n), the economic growth rate (g); superior benefits of the pay-as-you-go pension system if r < n+g; superior benefits of the funded pension system if r > n+g; and both pension systems providing equal benefits if r = n+g;

Thus would increase the supply of funds by state financial institutions for financing of certain investments that would give positive economic growth. It can potentially be achieved through more efficient allocation of resources and reduce the tax burden.

2.3 Improving financial intermediation, increase liquidity and savings mobilization

Among the authors who first pointed out the importance of liquidity for economic growth is Hicks (1969), who stressed that the industrial revolution in England occurred primarily as a result of improving the capital market which reduce liquidity risk. The Industrial Revolution assumed long-term disposal of assets that no transformation of the liquidity that enable industrial capital market development would be disabled. In other words, by reducing the risk of liquidity, which in part creates the insurer may have a positive effect on economic growth. From these facts emerges the role of insurance because it provides through funding of long-term development projects while meeting the

demands for liquidity by the holders of money. Projects characterized by high productivity often characterized high illiquidity. On the other hand, subjects with excess cash liquidity prefer that because their savings would have missed the biggest limit productivity of capital. By combining the liquid assets and illiquid its investment portfolio insurers provide liquidity to its insured, but in a limited way (in case of damaging event, or through purchase of insurance and advances to certain types of life insurance) while long-term financing productive investments. If long-term funds used to finance technological innovation, reduction of liquidity will affect the rate of technological change.

Catalan, Impavido and Musalem (2000) explore the development of contractual savings and their effect on other financial intermediaries and markets. Due to the nature of contractual savings institutions these face a lower possibility of runs against their assets, but on the other hand they have to bear long-term liabilities in their model. These two factors enable them to seek long-term investments, so that the maturity of the assets can be balanced against the liabilities and an additional advantage on banks could be taken. As a second participant the policyholder (household) enters the system and his intention to keep his direct liquid assets on a specific level forces him to restore his liquidity position and to sell illiquid assets in favour of liquid, while maintaining his engagement for contractual savings. So contractual savings and the rigid liquidity level of the households drive the capital market development. Catalan et al (2000) support the insurance-growth nexus by emphasising the institution's intermediary function, either by direct channel usage (portfolio setup) or by using other channels, mainly capital market development, connected to the insurance nexus.

However, there is a contrary opinion, under which reduce liquidity risk by increasing consumer and mortgage loans by financial intermediaries (insurance companies who can influence directly through the approval of loans or indirectly through the (right restrictions or endorsment restrictions) may cause negative impact on the rate of saving, and thus economic growth Jappelli and Pagano (1994).

2.4 Better allocation of capital through the diversification of risks

Besides the basic function of insurance (risk taking) insurance companies can contribute to economic growth through the collection of cash funds and their allocation. Insurance companies in the process raise funds from a number of spatially dispersed entities associated with the collection of funds reduce transaction costs, the informational asymmetry exceeding, realize diversification, provide partial liquidity, which achieved positive effects on growth through the allocation of capital and technical innovation . Individually small, but large amounts of total assets in akumilirani insurance companies, enabling efficient implementation of projects, which promote the allocation of funds and contributes to economic growth.

The link between financial sector and economic growth that is achieved through diversification of Risk modeliral Saint-Paul (1992), while King and Levin (1993) analyzed this connection through the influence of diversification on the stimulation of technological innovation. Through diversification of risk insurance companies are encouraged holders of surplus cash in ranking of their insurance companies. In this way influence the efficient allocation of capital, or allowing it to invest in projects that is typical to large amounts and high risks. Namely, individual investors whose individual small amounts of funds does not allow for diversified investments, avoid finance major, high risk and profitable projects. In contrast, insurance companies have the opportunity through the accumulation of large amounts of funds to carry out their ranking in several projects, which neupeshnite investments in some projects are reimbursed with proceeds from other projects. Reducing risk through diversification increases the effective allocation of resources, thus affecting economic growth. Same effects of diversification are realized through technological innovation, where insurance companies reduce risk by funding more innovative projects unrelated to each other.

Despite these advantages of diversification Devereux and Smith (1994) emphasize its negative effects and say it would negatively affect the rate of saving, so the link between diversification and economic growth is still not clear enough.

3. REVIEW OF THE EMPIRICAL LITERATURE

In this section we present a brief sublimate of empirical literature concerning the relationship between insurance sector and economic growth. When it is noted that often the relationship between insurance sector and economic growth is explored in panel context (studies of groups of countries).

The first research of the links of insurance and economic growth focused on the economy of insurance development. Among the first empirical research that confirmed the positive impact of growth of economy on demand for insurance is the study of Beenstock, Dickinson and Khajurja (1986). By using time series data for ten industrialized countries for the period 1970-1981 found that life insurance is directly dependent on income, measured as GDP per capita. Furthermore, other authors such as Hussels, Ward and Zurbruegg (2005) and Arena (2008) performed a series of empirical research on the impact of economy on life and non-life insurance. In this research the insurance premium was dependent variable, while income in the economy as explanatory variable. In all studies confirmed the that life and non-life insurance directly depend upon economic development. impact

The issue of insurance industry development impact on economic growth has only recently attracted researchers. Given the fact that our research is primarily focused on determining the impact of insurance on economic growth further in the paper will devote more attention to several studies whose narrow focus is the analysis of the direct relationship of insurance and economic growth.

The study of Ward and Zurbruegg (2000) investigates the relationship between economic development and the insurance market for the period 1961-1996, with the use of real GDP of nine OECD countries as a measure of economic activity and total premiums as a measure of insurance activity . Their research shows that insurance industry affect economic growth in two countries (Canada and Japan), while in the case of Italy there is a bidirectional link between insurance and economic growth. However, this relationship is weaker and less significant than the two above mentioned countries. For other countries in the survey is not proved that there is interaction between insurance and the economy. The authors conclude that the impact of insurance on economic growth depends on a number of circumstances specific to a particular country, such as cultural, regulatory and legal environment, development of financial intermediation and the impact of moral hazard in insurance. Webb, Grace and Skipper (2002) examine whether banks, life and nonlife insurers individually and collectively contribute to economic growth, They use cross-country data for 55 countries for the period 1980-1996 year. As a measure of the impact of insurance on economic development used by the authors is insurance penetration (insurance premium to GDP) for both life and non-life insurance, respectively. Research has shown that the penetration of life insurance is significantly positive correlated with economic growth, and that relationship is mutual. In addition, they stated that there is no link between economic development and non-life insurance.

Kugler and Ofoghi (2005) examined the relationship between the size of insurance markets and economic growth in the UK for the period 1966-2003 on the long-term insurance, and for the period 1971-2003 on general insurance. For most of the variables with at least 5% level of significance, their research found that there is a long-term integration between development in insurance market size and economic growth. Compared with Ward and Zurbruegg, which as a measure of the activity of insurance use the total premium, in this study the authors use disaggregated data to measure market

size. The net written premium for each market in the insurance industry in United Kingdom. is used as a measure of the size of that market. The market is divided into long-term insurance market, which includes life insurance, annuities, individual pensions and general insurance market, which include car insurance, liability insurance, property insurance, transport insurance and reinsurance. Their research found that there is a long-term causality between the growth of insurance market and economic growth for eight of the nine classes of insurance (except pecuniary loss insurance). Causality in the short term there is in life insurance and insurance against pecuniary loss to economic growth. There is evidence of bilateral long-term relation between economic growth and ensuring the three categories of insurance, with greater impact by the economic growth of the insurance on growth than the growth impact of insurance on economic growth.

Another empirical analysis of a country is made by Adams et al. (2005) which explores the historical relation between banking, insurance and economic growth in Sweden in the period 1830-1998. Insurance development is measured by annual premiums for non-life and life insurance. They use time series data and econometric tests of causality. The results show that the development of banking, but not the insurance impact on economic growth during the XIX century until the twentieth century this relationship is in reverse. The results of the analysis indicate that the banking sector has a dominant influence on economic growth and demand for insurance, while the growth of insurance is more influenced by economic growth, than it contributes to the economic growth.

Haiss and Sumegi (2008) examined the impact of insurance on economic growth, as measured by GDP, on a sample of 29 countries belonging to the European Economic Area. Countries used in the analysis are the EU-15, Norway, Switzerland, Iceland, the new EU member states and EU candidates (Turkey and Croatia). From the EU countries Lithuania was omitted due to lack of data, and only few data were available for Croatia and Latvia. For testing the impact of insurance on economic growth using regression model and use panel data for the period 1992-2005 year. As dependent variable they use real GDP at constant year 2000 prices in constant 2000 US Dollars per employee while as explanatory variables they use gross premium income (three separate variables for total, non-life and life premium) calculated in constant year 2000 prices and US Dollars, physical capital stock at constant year 2000 prices in constant 2000 US Dollars per employee and human capital stock constructed as index using weighted employee education figures and R&D expenditure, interest (10-year government bond yields, secondary market, annual average) and inflation rate. Due to the short time period covered they assume the slope coefficients in the growth equation to be independently distributed and hence homogenous per year. They conducted the same tests for two country groups, one consisting of the EU-15, Norway, Switzerland and Iceland and the other pooling the New EU Member States from Central and Eastern Europe Countries and EU membership candidates (Turkey and Croatia). They found positive impact of life insurance on GDP growth for the first group of countries. For the second group, they found a larger impact of liability insurance. Additionally, their findings emphasize the impact of the real interest rate and the level of economic development of the insurance-growth nexus.

Empirical study of the Arena (2008) on the relationship between insurance and economic growth includes 56 countries (as developed and developing countries) for the period 1976-2004 year. Insurance premiums are used as proxies of total and life and non-life insurance activity separately. Results show positive and significant effect of life and non-life insurance on economic growth. Impact of life insurance on economic growth is the high only for developed countries. In the case of non-life insurance, its impact is significant in both developed and developing countries, but this impact is greater in developed countries than in the developing countries.

Although there are strong theoretical explanations for the positive impact of the insurance sector on economic growth, the results of empirical research conducted to date are different. However, we can say that the number of empirical studies is relatively small, especially compared to those of bank contribution to economic growth Levine (1997), Valverde (2004), (Dawson 2008). Moreover, the impact of insurance on the growth of the economy in transition countries is examined separately, as part of a study Haiss and Sümegi, (2008). Based on the analysis of theoretical foundations and empirical research will further focus on empirical analysis.

4. DATA AND METHODOLOGY

In our research of insurance development and economic growth nexus, we estimate standard growth equation using a panel dataset consisting of 10 transition countries in Central and Southeastern Europe (Bulgaria, Croatia, Czech Republic, Hungary, Lithuania, Poland, Romania, Slovakia, Slovenia, and Ukraine) over the period of 1998-2010. In order to get more observations we used annual panel data. Table 1 presents the descriptive statistics for all the variables used in the regressions.

Table 1 Descriptive Statistics

Variable	Mean	Median	Minimum	Maximum	Std. Dev
GDP growth	3,40769	4,30000	-14,8000	12,1000	4,33705
Total insurance premium	2661,84	1596,00	99,0000	24403,0	3581,33
Non life insurance premium	1754,95	1117,50	82,0000	14761,0	2107,03
Life insurance premium	998,131	345,000	2,00000	14460,0	1917,50
GDP per capita	8,25808	6,55000	0,630000	27,0300	5,69056
Private credit	47,3323	48,3000	0,300000	95,7000	19,9690
Stock capitalization	5,83231	2,40000	0,100000	34,2000	7,91710
Export	53,7308	54,0000	23,0000	103,000	16,6038
Investment	24,7000	25,0000	11,0000	38,0000	4,59634
Education	93,9923	95,0000	78,0000	108,000	5,94874
Government spending	46,4015	45,0500	2,90000	79,7000	16,2153
Inflation	7,68538	4,75000	-3,70000	55,2000	9,29149

Data are obtained from various sources. Insurance premium data are obtained from Sigma, Swiss Re Economic Research & Consulting, Swiss Re, Zurich and national insurance associations. Education is obtained from EdStats, World Bank. GDP, private credit, stock capitalization, government spending, Export, Investment and Inflation are obtained from World development indicators (WDI) database.

Our analysis focuses on the impact of insurance on economic growth and interection ofinsurance in promoting economic growth. As insurers collect premiums for their risk transfer and indemnification services, insurance premiums are used as a standard measure of insurance market development in insurance literature. However, some researchers use total premiums (e.g. Ward and Zurbruegg, 2000; Adams et al., 2009) while others use disagregated data for life and non-life insurance (e.g. Webb, Grace and Skipper, 2002; Haiss and Sumegi, 2008; Arena, 2008). Life and non-life insurers offer different protection services to individuals and businesses. While life insurers offer medium and long-term protection products with savings elements, non-life insurers offer medium and short-term indemnification products. As a result, their effect to economic growth might be different and by using total insurance premiums we will fail to account for different market forces as suggested by Browne and Kim (1993). However, while recognising its weaknesses, as a measure that depicts economic growth we use annual insurance premium data in US $ for non-life, life and total insurance. We hypothesise positive impact of premiums for non-life, life and total insurance on economic growth. Factors that we use as control variables that may explain economic growth include the following: premiums for non-life, life and total insurance, GDP percapita, private credit, stock capitalization, government spending, export, education, investment and inflation.

The second control variable is the initial level of economic development, measured by GDP per capita. This variable is introduced in the model to capture the convergence effect, or the tendency of the economic growth rate to converge across countries. The expected sign of the parameter of the initial level of economic development variable is positive.

The next two are financial variables - banking and stock market development. Numerious studies (e.g. Gertler, 1988; Pagano, 1993; King and Levine, 1993; Levine, 1999; Levine and Zervos, 1998; Beck and Levine, 2004) have showed that better developed financial systems have positive effect on economic growth. In the empirical literature inconsitencies exist regarding the complementarity and supplementarity effect between banks and capital market development and thus their conjoint effect on economic growth, as it is reviewed by Arena (2008). In insurance related literature some researchers use only the effect of banking (e.g. Ward and Zurbruegg, 2000; Webb, Grace and Skipper, 2002, Adams et al., 2009) while others examine the effect of capital market development as well (e.g. Arena, 2008). We assume that both banking and capital markets are important for economic growth. Following mentioned previous studies in insurance related literature and banking related literature (e.g. King and Levine, 1993; Beck and Levine, 2004) we use the ratio of bank credit to private sector in relation to GDP (private credit). We hypothesise positive impact of banking on economic growth. Following Arena (2008) as a proxy for capital market development effect on economic growth we use stock capitalization divided by GDP. We hypothesise positive impact of capital market development on economic growth.

The next variable used in our research as a determinant of economic growth is exports. As a measure of exports, we use the exports of goods and services in relation to GDP. Export is one of the factors, considered even in traditional Keynesian theory, that can facilitate economic growth. Empirical studies have confirmed that export positively affect economic growth (e.g. Marin, 1992; Vohra, 2001). Foreign trade is also present as additional explanatory variable in insurance related literature that examines how insurance market development affects economic growth (e.g. Webb, Grace and Skipper, 2002; Arena, 2008).. We expect that exports are positively related to economic growth.

The following control variable is investment. We follow common practice for this variable by using gross capital formation (formerly gross domestic investment) as a proxy for investment. Gross capital

formation consists of outlays on additions to the fixed assets of the economy plus the net changes in the level of inventors. The expected sign of the coefficient is positive.

A positive sign is also expected for the coefficient of education variable. Education accounts for human capital. Although there are a number of measures of the education variable, in the empirical studies of determinants of economic growth, the most commonly used measures are primary or secondary enrollments. We use secondary gross enrollment ratio, which indicates ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

The government has an important role for the establishment of framework for private sector development in every economy. However, numerous theoretical and empirical research suggest that the larger government consumption the less developed will be financial system, and especially insurance industry. For example, Beenstock, Dickinson and Khajurja (1986) found that life insurance premiums vary inversely with social security coverage. If government provide indemnification for property losses, disability, retirement and health care, individuals will have less incentives to purchase insurance Skipper and Kwon (2007), the fact that was especially emphasised during the communist era in Eastern Europe Dorfman (2008). Also, greater government consumption is generaly considered to decrease the efficiency of investments as its investments are directed by political and social considerations (e.g. Webb, Grace and Skipper, 2002; Dorfman, 2008). Therefore, general goverment consumption is usually used as a control variable when depicting economic growth in both banking related literature (e.g. King and Levine, 1993; Levine, 1998; Levin, Loayza and Beck, 2000; Berthelemy and Varoudakis, 1996; Ahlin and Pang, 2008) and insurance related literature (e.g. Ward and Zurbruegg, 2000; Webb, Grace and Skipper, 2002; Arena, 2008). We measure government expenditure as a ratio of general goverment expenditures to GDP. We hypothesise negative relationship between government expenditures and economic growth.

The last variable used to control for other influences on economic growth is the inflation rate. It is used to account for monetary discipline. It is expressed by the GDP deflator (annual percentage). With this variable, we expect a negative correlation with economic growth.

Given the cross-sectional and time-series data, we use country specific fixed effects panel data regression model with common coefficients across all cross-section members of the pool. The general equation to be estimated using pooled least squares is:

$$y_{it} = \alpha_i + x_{it}\beta + u_{it}, \tag{1}$$

where y_{it} is a dependent variable, x_{it} is a vector of independent variables, u_{it} is a scalar disturbance term, i indexes country in a cross section, and t indexes time measured in years. Since the error terms u_{it} are potentially serially correlated and heteroskedastic, we propose an autoregressive process of first order: $u_{it} = pu_{it-1} + e_{it}$, where e_{it} is white noise. Model incorporates White's consistent covariance matrix (White, 1980), for dealing with heteroskedasticity. In the model, we use one-period lagged regressors.

The models that we use in our research is the fixed-effects model for next three model specifications:

(GDP growth)it = αi + β1(Total insurance premium)it + β2(GDP per capita)it + β3(Private credit)it + β4(Stock capitalization,)it + β5(Government spending)it + β6(Export)it + β7(Education)it + β8(Investment)it + β9(Inflation)it +uit (2)

(GDP growth)it = αi + β1(Non life insurance premium)it + β2(GDP per capita)it + β3(Private credit)it + β4(Stock capitalization,)it + β5(Government spending)it + β6(Export)it + β7(Education)it

$+ β8(Investment)it + β9(Inflation)it +uit$
(3)

$(GDP\ growth)it = αi + β1(\ Life\ insurance\ premium)it + β2(GDP\ per\ capita)it + β3(Private\ credit)it + β4(Stock\ capitalization,)it + β5(Government\ spending)it + β6(Export)it + β7(Education)it + β8(Investment)it + β9(Inflation)it +uit$ (4)

Before running the regression an Im, Pesaran and Shin, panel unit-root test, which is based on the Dickey-Fuller procedure was employed to test the stationarity of the variables in order to avoid the spurious regression. Im, Pesaran and Shin denoted IPS proposed a test for the presence of unit roots in panels that combines information from the time series dimension with that from the cross section dimension, such that fewer time observations are required for the test to have power. Since the IPS test has been found to have superior test power by researchers in economics to analyze long-run relationships in panel data, we will also employ this procedure in this study. IPS begins by specifying a separate ADF regression for each cross-section with individual effects and no time trend:

$$\Delta y_{it} = \alpha_i + \rho_i y_{i,t\ 1} + \sum_{j=1}^{p_i} \beta_{ij} \Delta y_{i,t\ j} + \varepsilon_{it} \qquad (5)$$

where $i = 1, . . .,N$ and $t = 1, . . .,T$

IPS use separate unit root tests for the N cross-section units. Their test is based on the Augmented Dickey-fuller (ADF) statistics averaged across groups. After estimating the separate ADF regressions, the average of the t-statistics for p_1 from the individual ADF regressions, $t_{iT_i}(p_i)$:

$$\bar{t}_{NT} = \frac{1}{N} \sum_{i=1}^{N} t_{iT}(p_i \beta_i) \qquad (6)$$

The t-bar is then standardized and it is shown that the standardized t-bar statistic converges to the standard normal distribution as N and $T \to \infty$. Im, Pesaran and Shin (1997) showed that t-bar test has better performance when N and T are small. They proposed a cross-sectionally demeaned version of both test to be used in the case where the errors in different regressions contain a common time-specific component.

The results of the unit root test are presented in Table 2. While the null hypothesis of the unit-root was rejected for four of the twelve variables, the obtained results indicate that there was a unit root in total insurance premium, non life insurance premium life insurance premium, GDP per capita, private credit, stock capitalization, export and investment. In general, all tests indicate the presence of a unit root in each series of data. To solve the problem of non-stationarity, the series were differenced.

Table 2 Panel Unit Root Test – Im, Pesaran and Shin (IPS)

Variable	Level	First order difference
	Constant	Constant
GDP growth	-2,27465**	--3,88438***
Total insurance premium	-0,621604	-2,57787***
Non life insurance premium	-0,914008	-2,7902***
Life insurance premium	-0,517672	-2,67063***
GDP per capita	-0,169312	-2,66544***
Private credit	-0,419786	-2,67634***
Stock capitalization	-1,76568	-3,42837***
Export	-1,5729	-3,38814***
Investment	-1,90325	-3,0267***
Education	-1,97298*	-3,01632***
Government spending	-2,34668**	-2,89564***
Inflation	-3,54377**	-5,15395***

*,**and***indicates test statistic is significant at the 10%, 5% and 1% level.

5. EMPIRICAL RESULTS

The estimates of the parameters of the models for three specifications using lagged values are presented in the following table.

Table 3 Estimation results – OLS using one-period lagged regressors (part 1)

	Dependent variable: economic growth		
	(1)	(2)	(3)
const	1,81114** (0,769506)	1,79677** (12,5658)	1,663 ** (0,74096)
Non life insurance premium	-0,00046439 (0,000573334)		
Life insurance premium		0,0012934*** (0,00024241)	
Total insurance premium			0,000489763* (0,000250373)
GDP per capita	-2,11816 *** (0,392717)	-2,65955*** (0,415644)	-2,51193*** (0,430342)
Private credit	-0,121796 (0,0959241)	-0,0614423* (0,0318027)	-0,0587764* (0,0313402)
Stock capitalization	0,192816** (0,0761593)	0,203917** (0,0782791)	0,197522 ** (0,0763292)
Export	0,0104133 (0,0896728)	0,0112507 (0,0904388)	0,0209689 (0,093098)
Investment	0,0848536 (0,0952044)	0,100611 (0,0983545)	0,0873248 (0,0989231)
Education	-0,0863628 (0,143983)	-0,107968 (0,147021)	-0,0810857 (0,146186)
Government spending	0,00119137 (0,0581949)	-0,000513993 (0,0562645)	-0,000134327 (0,058194)
Inflation	-0,199673* (0,118727)	-0,190216 (0,120566)	-0,209581* (0,124862)
Mean dependent var	0,008182	0,008182	0,008182
Sum squared resid	1746,692	1638,535	1727,734
R-squared	0,436184	0,471096	0,442304
F(18, 111)	3,911120	4,502998	4,009512
Log-likelihood	-308,1582	-304,6425	-307,5579

Schwarz criterion	705,6255	698,5941	704,4250
S.D. dependent var	5,331216	5,331216	5,331216

Table 3 Estimation results – OLS using one-period lagged regressors (part 2)

S.E. of regression	4,381144	4,243333	4,357303
Adjusted R-squared	0,324660	0,366478	0,331990
P-value(F)	0,000472	0,000384	0,000252
Akaike criterion	654,3164	647,2850	653,1159
Hannan-Quinn	675,1276	668,0962	673,9271
Durbin-Watson	2,394223	2,355583	2,380798

Standard errors in parentheses. ***, **, * denote statistical significance at the 1, 5, 10 percent level

According to the results for the first model specification the the signs for the non-life insurance is negative, and is not significant, as in Webb, Grace and Skipper (2002) and Haiss and Sumegi (2008) studies. Differences in results compared to other studies may be caused by the usage of premiums as the indicator in contrast to Davies and Hu (2004), different time periods Catalan et al., (2000) and differences in the country samples Boon (2005).

Furthermore, from the results of the second model we can conclude that the growth of life insurance positively affects economic growth, and there is significant. But, although the results of our analysis showed that life insurance is significant, we still find mild, evidence for a positive role of the life insurance sector vis-à-vis GDP growth. This weak evidence for the life insurance branch of the insurance growth nexus over the last decade fits the diminished strength of the bank-growth-nexus found by Rousseau and Wachtel (2005) when they also use recent data vs. stronger links found with earlier data. We understand the similarly low significance of the bank and the insurance sectors in recent analysis as evidence for both sectors having to face the same changes. In an alternative explanation, one could argue that the life insurance sector could pick up the growth-enhancing role hitherto attributed to the bank sector. The mildly positive impact of the life insurance sector then could be attributed to the "saving substitution effect" and the investment channel.

From the results of the analysis from the third model we can conclude that the growth of total insurance positively affects economic growth. although with less statistical significance from 10%, unlike life insurance where we have 1% statistical significance.The results of the analysis showed that the financial sector, in this case the insurance sector is not only a passive follower of economic growth, but its determinant. The contribution of insurance to the economic growth achieved by its participation in the execution of the given functions of financial system, and primarily those relating to risk management, accumulation and allocation of monetary funds. Namely, the organization of communities at risk of the principle of reciprocity, ie by reducing transaction costs and information asymmetry in the transmission of financial resources, insurers limit affecting productivity of capital and technological innovations in the rate of saving. Additionally, increasing the efficiency of financial intermediation can reduce the cost of mediation or part of the savings used to settle of that cost, further of forementioned features would make a positive impact on economic growth

As for all other independent variables coefficients government expenditures in the first specifications, GDP per capita, private credit, and educations in all three specifications) our results are rather unexpected. They are also inconsistent with previous studies that focused on developed markets. We presume that the possible explanation for this anomaly might be the fact that the state of domestic capital markets development and the role of banking in economic growth is still in its infacy. Therefore, government expenditure role in economic growth is most probably exaggerated in current state of economic development. The reason for the negative effect of educations input may be found in the special construction used for the index. As in Arena (2008) the results for GDP per capita is are negative and significant.

4. CONCLUSIONS

Using fixed effects panel data regression model with common coefficients across all cross-section members of the pool we examined whether insurance, contribute to economic growth across sample of 10 transition countries in Central and Southeastern Europe in the period from 1998 to 2010. According to our results we don't find evidence for a growth-supporting role of nonlife insurance, while life and total insurance positively and significantly affects economic growth insurance development promotes economic growth. Thus, functions of insurance companies - providing means of risk management and performing mobilization and allocation of resources - are important for economic growth and is in line with previous studies and with our hypothesis.

The findings from this study could be suggestive for insurance sector's policy makers. The key is to implement the policies that are going to provide institutional improvements, encourage competition, and contribute to increasing efficiency, especially in risk management, and product development of insurance companies.

In the future research of insurance-growth, besides annual insurance premium, insurance development could be measured by insurance penetration, insurance density and by the assets of insurance companies. Also, research of interrelationship between insurance and nonfinancial sectors of the economy in the promotion of economic growth should be of interest for further research. Finally, the results from panel study such as ours might hide actual results for specific countries. Therefore, in addition to longer time periods, further research of the issue of how insurance market development promotes economic growth should focus on per country analyses.

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ANALYSIS OF FOREIGN ECONOMIC RELATIONS
OF THE KRASNODAR REGION WITH ITS MAIN TRADE PARTNERS

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Abstract

In this article are analyzing foreign economic relations of the Krasnodar region with Turkey, Finland, Ukraine and Germany. Theses countries are considered as main trade partners because they constitute 85% of foreign trade turnover of the Krasnodar region. The author gives characteristics of export and import transactions of the Krasnodar region with its main trade partners and shows its complex significance for the economic development of the Krasnodar region. It is emphasized that foreign economic relations of the Krasnodar region have its impact not only on the socio-economic development of the region, but also on the development of the whole Russia. At the end of the article the author suggest to the department of foreign economic activity main tasks the solution of which can make Krasnodar region be able to compete with foreign manufacturers and occupy its niche in the export of high technological products on international markets.

Key words: *foreign economic relations, global economy, foreign trade, main trade partners, export and import transactions, foreign trade turnover, socio-economic development.*

1.INTRODUCTION

The foreign economic relations of the Krasnodar region have a major impact not only on the socio-economic development of the region, but also on the development of the whole country, and more importantly, have a great influence on the integration of Russia into the global economy. One of the ways in which Russia is able to integrate into the global economy is its joining the World Trade Organization (WTO).

According to Maslov A. and Barsukova A. the main aims of Russian integration into the WTO are:

- access to the international mechanism for resolving trade disputes;

- creation of better climate for foreign investments;

- aligning Russian legislation with WTO rules [5].

However joining the WTO conceals the threat of seizure of the internal Russian market by technologically qualitative, competitive production that will pose a serious threat to the development of domestic material production. This includes small businesses, which are not only more vulnerable than big businesses but are also not as protected as them, and their production will not stand competition with foreign production. "The most serious consequences of integration into international economic space will be where imports will supplant enterprises which are city-or budgetcreative. In this way, it will affect most painfully the regions where light industry prevails" [5]. All of this is

considered as probability based in logic. It seems that the negative consequences are unavoidable. Hopefully, advantages of Russian entry to WTO will compensate for them.

2. FOREIGN TRADE OF THE KRASNODAR REGION

Foreign trade is the main form of foreign economic relations, providing efficient specialization of each country in the international division of labor. The greater the volume of foreign trade operation, the higher the possibilities of the country to incorporate into the global economy and to accelerate its own development.

The volume of goods turnover across southern borders is constantly growing.

Table 1 – Foreign trade (in real term prices), million U.S. dollars [1, p. 391].

Region	1998				2008			
	With countries not in the CIS		With countries of the CIS		With countries not in the CIS		With countries of the CIS	
	Export	Import	Export	Import	Export	Import	Export	Import
Russia	57614,4	32266,1	13699,4	11313,4	398103	230429	69809	36611
Southern Federal District	1790,2	2061,1	369,7	662,4	11720,8	8139,7	3483,7	2941,3
The Krasnodar region	532,4	464,4	32,6	104,1	3601,8	3006,6	657,2	504,3

The geography of foreign economic relations of the Krasnodar region is very extensive. More than eighty countries take part in foreign trade in the region, invest money in it, and establish joint enterprises. In 2010, according to the Krasnodar Department of Statistics in the territory of the Krasnodar region 787 companies with the participation of foreign capital were registered.

The goods structure of exports and imports of the Krasnodar region is similar to the goods structure of exports and imports of Russia.

Table 2 – The import goods structure of the Krasnodar region [1, p. 395].

	2000	2004	2005	2006	2007	2008	2009
Million U.S. dollars							
All goods	572	943	1407	1862	2647	3486	2760
including: provisions	144	374	631	903	1226	1312	1350
mineral commodities	4	9	16	18	71	375	203
chemical production,	51	92	163	182	236	289	196

caoutchouc							
woods, pulp and paper products	37	46	43	56	69	83	68
textile products, footwear	18	29	64	103	90	89	84
metals, precious stones and their products	101	57	98	147	242	245	220
machinery, equipment and transport	181	282	316	344	522	874	493
other goods	36	54	76	109	191	219	146
	2000	2004	2005	2006	2007	2008	2009
	In percents to the total						
All goods	100	100	100	100	100	100	100
including: provisions	25,2	39,7	44,8	48,5	46,3	37,6	48,9
mineral commodities	0,7	0,9	1,1	1,0	2,7	10,8	7,3
chemical production, caoutchouc	8,9	9,7	11,6	9,8	8,9	8,3	7,1
woods, pulp and paper products	6,5	4,9	3,1	3,0	2,6	2,4	2,5

Table 2 – The import goods structure of the Krasnodar region /continuation1/

	2000	2004	2005	2006	2007	2008	2009
	In percents to the total						
textile products, footwear	3,1	3,1	4,5	5,5	3,4	2,5	3,0
metals, precious stones and their products	17,7	6,1	7,0	7,9	9,1	7,0	8,0
machinery, equipment and transport	31,6	29,9	22,5	18,5	19,7	25,1	17,9
other goods	6,3	5,7	5,4	5,9	7,2	6,3	5,3

According to the table's data, we can see that the import of provisions and of agricultural raw materials in recent years increased greatly (by 1206 million U.S. dollars between 2000 and 2009). Although the import of provisions is just 4 million U.S. dollars more than its export, it is obvious that the Krasnodar region has problems in agriculture. The reason is that the production of the region, especially in the field of livestock farming, is not internally competitive and especially lacks competitivity in external markets. Overcoming this backwardness will take more than one decade of intensive selection work.

Table 3 – The export goods structure of the Krasnodar region [1, p. 396]

	2000	2004	2005	2006	2007	2008	2009
Million U.S. dollars							
All goods	979	904	1577	2839	4011	5184	3636
including: provisions	64	220	430	610	1398	1151	1346
mineral commodities	760	251	691	1723	1901	3240	1828
chemical production, caoutchouc	30	53	61	63	118	219	56
woods, pulp and paper products	37	51	65	81	88	56	31
textile products, footwear	2	3	2	2	1	1	1
metals, precious stones and their products	38	233	217	252	302	323	261
machinery, equipment and transport	40	59	88	80	171	176	97
other goods	8	34	23	28	32	18	16
	2000	2004	2005	2006	2007	2008	2009
In percents to the total							
All goods	100	100	100	100	100	100	100
including: provisions	6,5	24,3	27,3	21,5	34,9	22,2	37,0
mineral commodities	77,6	27,8	43,8	60,7	47,4	62,5	50,3
chemical production, caoutchouc	3,1	5,9	3,9	2,2	2,9	4,2	1,5
woods, pulp and paper products	3,8	5,6	4,1	2,8	2,2	1,1	0,9
textile products, footwear	0,2	0,3	0,1	0,1	0,0	0,0	0,0
metals, precious stones and their products	3,9	25,8	13,7	8,9	7,5	6,2	7,2
machinery, equipment and transport	4,1	6,5	5,6	2,8	4,3	3,4	2,7
other goods	0,8	3,8	1,5	1,0	0,8	0,4	0,4

Mineral commodities lead the goods structure of exports (50 % of the entire export from the Krasnodar region in 2009). An increase in the export of machinery and equipment was marked until 2008. However, in the post-crisis period, the slump in the export of this production happened again.

In 2009 foreign trade turnover of the Krasnodar region was 6608. 4 million U.S. dollars, which is 1,3 % of the foreign trade turnover of Russia [2]. In comparison with 2005 the share of the region increased by 1,5 times. Turkey, Finland, Ukraine, Egypt, Italy, China, Syria and Germany became main foreign trade partners (they constitute 85% of foreign trade turnover of the Krasnodar region) (table 4).

Table 4 – Foreign trade turnover with the main partners of the Krasnodar region in 2009 (million U.S. dollars) [2, p.16]
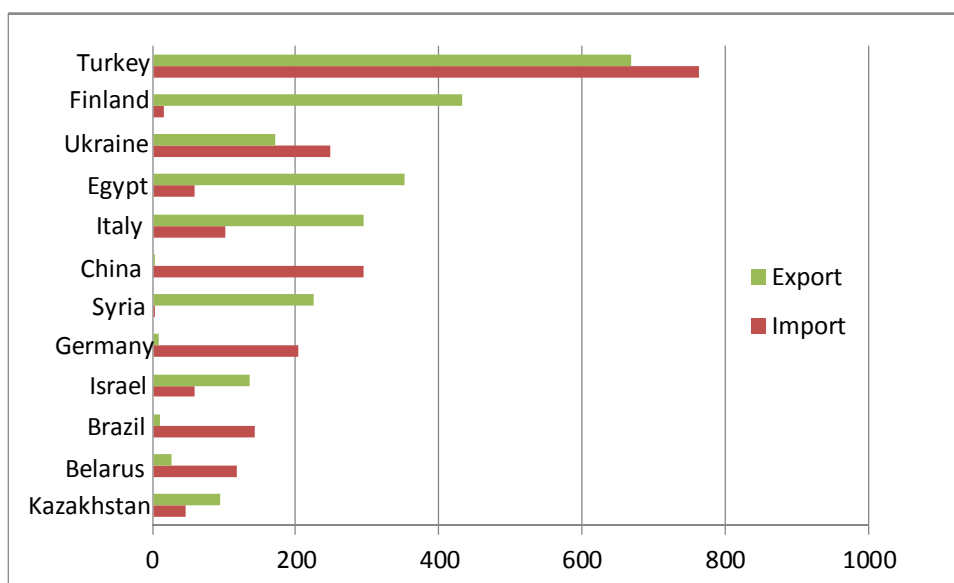
The significance of each of these countries for the economic development of the region is complex.

3. FOREIGN ECONOMIC RELATIONS OF THE KRASNODAR REGION WITH TURKEY

Turkey is a long established partner of the Krasnodar region. In 2009 foreign trade turnover in the Krasnodar region with Turkey was 1.4 billion U.S. dollars (22% of the foreign trade turnover of the Krasnodar region). It is nine times more than it was in 2000.

In 2009 export transactions amounted to 667.2 million U.S. dollars. Import transactions amounted to 762.4 million U.S. dollars. Balance of trade was negative and amounted to -95,2 million U.S. dollars [6].
In 2010 the share of Turkish imports to the Krasnodar region was 1078.2 million U.S. dollars, which is 14% from the whole import to the Krasnodar region. [3, p.74].

The import goods structure of the Krasnodar region with Turkey (2009) [2, p.39]:

- provisions and raw materials for its production (tomatoes, citrus plants, grapes, nuts, peaches, cucumbers) (436.3 million U.S. dollars),

-mineral commodities (cement) (6.2 million U.S. dollars).

Table 5 - The dynamics of foreign trade turnover of Turkey with the Krasnodar region from 2004 to 2009
(million U.S. dollars) [6].

	2000	2004	2005	2006	2007	2008	2009
Turnover	157	361,5	644,6	909,7	1343,1	1761,4	1388,2
Export	112	198,4	341,7	497,6	665,9	961,2	667,2
Import	45	162,9	302,8	412,1	677,2	800,2	762,4
Balance	67	35,5	38,9	85,5	-11,4	161	-95,2

The export goods structure of the Krasnodar region with Turkey (2009) [2, p.36]:

-mineral commodities (oil products) (324.5 million U.S. dollars),
-wheat and wheat-rye mixture (161.5 million U.S. dollars),
-semi-finished products from iron and unalloyed steel (73.8 million U.S. dollars),
-rice (12.5 million U.S. dollars).

The export-import goods structure of the Krasnodar region with Turkey reflects the general tendency formed in the region. Back in 2003 there was significant shift in export structure towards a sharp increase in exports of mineral fuels, mainly exported to foreign countries (particularly to Turkey). High-tech export of the region, which in the recent past constituted a quarter of exports, acquires a persistent downward trend. The value of exports of mineral commodities more than ten times exceeds the value of machinery and equipment exports. This is extra proof of the weakness of the region's technological development and its lack of demand for innovative industrial design with a sufficiently high level of scientific potential. Moreover, this is evidence of a lack of investments in the development and introduction of high technologies into industrial fields in the light of an obvious dependence of the trade balance and the overall economy on the conditions and price fluctuations in the world oil market.

About fifty Russian-Turkish enterprises of various kinds are registered and operate within the territory of the Krasnodar region. The largest - the production of building materials (LLC "ABS - Kuban", LLC "Star-Plast", CJSC "System Aluminium", CJSC "Proc"), wood and wood products manufacturing companies (LLC "Unza", LLC "Orman", LLC "Akja ", LLC "Polyus ", LLC "Barus", LLC   "Wood-Trade", LLC "Leader-Az. Tour ", LLC" Farwarter ", LLC "Maz-Les", LLC "TBK-South ", LLC "Capitolina", LLC "AKMANLAR-LES") and others.

The direction of Russian-Turkish enterprises in the Krasnodar region indicates that Turkish investors are interested in investing, primarily in manufacturing and trade. Apart from this, due to being the main rival of the Krasnodar region in tourism, Turkey is purposefully investing its capital into the tourism industry of Krasnodar region, and creating both ownership and co-ownership, which will generate her income, compensating losses in competitiveness.

Having analyzed foreign economic relations with Turkey, we can conclude that the cooperation of the Krasnodar region and Turkey is mutually beneficial. Moreover, the preservation of partnership is important for the economic development of Russia as a whole. Russia carries out foreign trade transport of such goods as oil and oil products via the Turkish straits. Due to the fact that the straits are

national territory the preservation of its ecology is a task not only for Turkey, but for all the Black Sea States.

By unit weight in foreign trade turnover, (due to export transactions (7% of total foreign trade turnover)) the second leading trading partner of the Krasnodar region in 2009 was Finland.

4. FOREIGN ECONOMIC RELATIONS OF THE KRASNODAR REGION WITH FINLAND

Finland has been the main importer of electricity from Russia among the member states of the European Community, since the early 1960s to the present. According to Custom's statistics, Finland is listed as an importer of the region's power, but in reality the Krasnodar region is just a transit zone through which power is supplied to Finland. The "export" of electricity to Finland began to be recorded in 2006. Moreover, if in 2007 the income of the region for the transit of power amounted 0.4 million U.S. dollars, then in 2009, it was already 432 million U.S. dollars [2, p.32]. In other respects, the partnership of the Krasnodar region with Finland is limited by visits of Finish delegations and just by planning of cooperation in future. It may be the case that in future, Finland will invest in fields that contribute to the economic development of the region. In 2009, Finland's contribution to the authorized capital of organizations within the Krasnodar region, with the participation of foreign capital, amounted to 8% of the total contribution of all partner countries.

5. COOPERATION OF THE KRASNODAR RIGION WITH UKRAINE

The third leading partner in the share of foreign trade turnover of the Krasnodar region (6%) is Ukraine.

Taking into account the geographical position of the territory, the administration of the Krasnodar region pays particular attention to the development of foreign economic relations with Ukraine.

Nowadays Ukraine is among the five largest counterpart countries of the Krasnodar region. In 2009 the trade turnover of the Krasnodar region and Ukraine amounted to 410.4 million U.S. dollars. Import was realized at 247.8 million U.S. dollars. The volume of exports amounted to 162.5 million U.S. dollars. The trade balance was negative and amounted to -85.3 million U.S. dollars [6].

The import goods structure of the Krasnodar region with Ukraine (2009) [6]:

-oil and oil products (124.6 million U.S. dollars),

-tugs and pushers (20.1 million U.S. dollars),

-parts of railway locomotives (4.6 million U.S. dollars),

-crushed soya (3.9 million U.S. dollars)

-dining manufacture (3.1 million U.S. dollars).

The export goods structure of the Krasnodar region with Ukraine (2009) [6]:

-oil and oils products (130.9 million U.S. dollars),

-canned vegetables (2.1 million U.S. dollars),

-mineral fertilizers (15.6 million U.S. dollars).

On the territory of the Krasnodar region more than twenty joint Russian-Ukrainian enterprises carry out their activities. The predominant kinds of activity are trade, construction, construction and repair works and the manufacturing of decoration materials.

6. FOREIGN ECONOMIC RELATIONS OF THE KRASNODAR REGION WITH GERMANY

The cooperation of the Krasnodar region with Germany must also be noted. In the past five years, Germany has consistently ranked among the largest foreign trade partners of the region. In 2009, the foreign trade turnover of the Krasnodar region with Germany amounted to 211 million U.S. dollars (4% of foreign trade turnover of the region). Export transactions amounted to 8 million U.S. dollars. Imports – 203 million U.S. dollars. The trade balance was negative and amounted to -195 million U.S. dollars [2, p.32]. For the entire history of trade relations the import of goods from Germany has always exceeded the export. In comparison with the year 2000 the import of goods from Germany has increased by 4 times.

The import goods structure of the Krasnodar region with Germany (2009) [2, p.37]:
- machinery and mechanisms for harvesting and threshing agricultural crops (20% from the total volume of import with Germany)
- machines and devices for lifting, handling, loading and unloading (11%)
- equipment for working with soil (6%)
- extracts, essences and concentrates of coffee, products on the basis of extracts, essences, concentrates of coffee, tea or mate (3%)

The export goods structure of the Krasnodar region with Germany (2009) [2, p.37]:

- raw and sawn timber (more than 300 thousand dollars of the USA).

In 2009 on the territory of the region sixty-eight companies with German investments were registered. The biggest of them are: OJSC "Knauf Gips Psebai", whose largest shareholder is the German firm "Knauf". "Knauf Gips Psebai" delivers up to 60% of production to all regions of Russia and countries of the CIS; LLC "KLAAS" - production of agricultural equipment; CJSC "Okerlund and Rauzing Kuban" – production of packaging materials and containers for industrial purposes; CJSC "Tetra Pak-Kuban" - mediation in the sale of products for industrial purposes.

Cooperation with Germany is very important for the Krasnodar region. Germany is interested in long-term projects. In 2009, Germany invested 114.3 million U.S. dollars in the economy of the region [4, p.372]. About 70% of imported equipment on the fields of Kuban is German. As a result of partnership with Germany new technologies and new work places have appeared in the region.

7. CONCLUSION

In this way, we can see that the main trade partners tie the region with the economic communities of Asia, Europe and the CIS. Undoubtedly, the Krasnodar region is of interest for many countries. The main forms of the introduction into the foreign economy are organizations with foreign capital participation. 787 such organizations are registered on the territory of the Krasnodar region. However,

not all of these companies contribute to the development of new technologies, which the region greatly needs.

Of course, you can borrow or buy technology from other countries, but it is not possible to create your own unique competing products in this way. Industries that correspond to the priorities of socio-economic development of Russia, determine the special status of the Krasnodar region in the country's economy and also industries, in which the Krasnodar region can currently compete with foreign manufacturers – agriculture, transport and tourism. Therefore, the main aim of the department of foreign economic activity in the short term should be attraction of investments into these economic areas of the region.

Among other tasks of the department should be:

- supporting and promoting the image of the Krasnodar region as an economically developing and attractive investment region of Russia, both in Russia and abroad;

- assisting the government authorities, enterprises, institutions and organizations of the Krasnodar region in the implementation of trade-economic, scientific, technological, cultural and humanitarian cooperation with foreign and local partners;

- forecasting and analyzing in the sphere of the international and foreign economic cooperation of the Krasnodar region;

- developing and expanding trade and economic, scientific and technical, cultural and humanitarian cooperation of the Krasnodar region.

It is possible that by solving these problems the Krasnodar region will eventually be able to compete with foreign manufacturers and occupy its niche in the export of high technological products on international markets.

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ICT AND AGRIBUSINESS

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Abstract

Today, the approach to the development of the information systems is oriented to the implementation of the portal solutions which enable us a web access to the information and applications with an effective possibility of management and administration. Here, we are able to find typical user groups with quite specific information needs that would find the specialized web portal very useful. This is because such a kind of portal could offer them "everything at once and at one place", it means all of their needs would be satisfied immediately and users do not have to waste time with an information search at other places.

On the contrary to the public portals, here we should not have a problem with finding a proper economic model. The implementation of the enterprise portal can significantly lower user support expenses of company's own employees.

Another goal of this article is to show the project of the portal solution, presenting data from agribusiness (plant and livestock production, economics, commerce etc.) for better farm management and development. This project can provide farm managers with the much needed data analyses.

INTRODUCTION

The global economics is nothing else than worldwide trade with goods, services, labor, funds and information. Not so long ago, the bipolar geopolitical world model crashed and instead there is a new dynamic one, but in the same fragile global environment. The globalization is managed by the new technologies, which enable to do many company's activities. The problem is that global enterprises need to interconnect with its customers, suppliers, employees and partners around the world.

The changes which are underway right now are characterized by great superlatives - we talk about tectonic shifts, revolutionary changes, about completely new paradigm. The economics of network intelligence's new age is a digital economics. Inside the classical economics all of the information flow was done in a physical manner: money was sent in cash, checks, invoices, the same as in-person meetings of business partners were organized. In new economics the basic form of information is digitalized - such information is reduced to mere bits saved in computers and is flowing through network in light speed. Thanks to the mentioned binary code and computers, information and its interchange and communication is changing to well organized shift of zeros and ones. The whole new world is opening and is full of possibilities and opportunities.

This way, the new economics becomes a "qualified economics" (the economics of knowledge), because an increasing amount of human knowledge is applied to every sort of goods and production procedures. Inside the digital economics the competition doesn't come only from competitors but we

can say that it comes from everywhere. This is the time when information has a digital shape and is stored in interconnected networks, it "breaks walls" and no business is saved from competition.

In the near future, the industry and agriculture is going to be focused upon. The industrial revolution and industry era brought transformation of agriculture and similarly at present time the agriculture and industry is changing again as we say "in the time of network intelligence". The industry production is more and more influenced by computer managed machines - robots. The farmer has computers even in his tractor. If his cows get sick, he can easily access network and can determine diagnose interactively. He is also able to verify the product prices on a stock market.

The Internet is a key component of the new economics. The theory of a new economics supposes that the major influence has the network character of the Internet, whereas we do not care about its technical implementation. The network means a completely new way of spreading information.

The development and usage of Internet technologies for business demands shows that the Internet makes the business strategy more important than ever. It is an extraordinarily significant technology and as such it is no surprise that more and more people pay attention to it these times. During the general Internet "intoxication" many people thought that the Internet is going to change everything and that the most part of known competition fundamentals and rules are going to be invalid or useless. This kind of reaction can be natural but could be dangerous, too. Until now, the work experience has proved that in the introductory level of incoming new significant technology the market signals can be unreliable. New technologies are encouraging businesses to the uncontrollable experiments. These experiments are often economically unmaintainable. As a result the market is deflected from normal behavior and it is necessary to interpret it with caution. The same thing holds true for the development of Internet business.

The development showed us, that so called virtual activities do not separate limit needs for physical activities; on the contrary, they often significantly increase the need for physical activity. The result is that the traditional and Internet activities combine themselves and so it becomes even stronger. In the established business it is possible to strategically use the Internet technology for:

- support, improvement and broadening of services
- increase of effectiveness
- strengthening of main competing company advantages

As soon as the majority of companies begin to use the Internet technology, the Internet becomes neutral from the competing point of view. Without the ability to handle the usage of the Internet the companies will not be able to successfully survive but from the successful usage they are not going to gain any special competing advantage. Strong competing advantages will be derived from traditionally strong company suit - offer of unique products, guarantee of product functionality, extremely good product knowledge and personal services. The Internet technology will be able to strengthen these traditional advantages by including them in the specific system. Strategy which will be able to integrate the Internet with the traditional competing advantages and methods of competition on markets should be able to prevail according to many indices. In this way the potential competitive advantage is founded for established businesses. To integrate the Internet for already established businesses does not mean to simply use the Internet of established work processes. The business success will be influenced by the ability to achieve Internet integration to traditional activities or find new combinations of the Internet with a traditional approach.

RESULTS

The whole agrarian sector is under the pressure of global competition. Production methods and distribution channels essentially influence company's development. Expansion to foreign markets is very limited due to the character of production. A major part of managers sees the effective usage of ICT as a key stone for next development. The research of expansion, usage and supposed development of ICT is being done in most business branches in the Czech Republic. In the agrarian sector this research has not been completed yet. The situation in agricultural businesses was investigated by the help of questionnaire forms. The level of usage and processing of ICT and information is going to be analyzed on the basis of a questionnaire and as a result the project of acceptable solution for agricultural businesses will be proposed. In questionnaire forms there were laid out questions about the level of usage of data processing systems in the crop and livestock production and questions about the level of Internet usage.

The present situation of information systems usage in agricultural businesses is shown in the following graph. Respondents answered questions about the usage of information systems according to their origin:

1. part job application - applications supporting separate processes (crop and livestock production, economics and so on), which are not mutually integrated

2. applications itself - applications developed in agricultural businesses by their own computer departments

3. applications supplied by a system integrator

4. applications supplied on the basis of a job order - system creation according to the needs of particular applicants
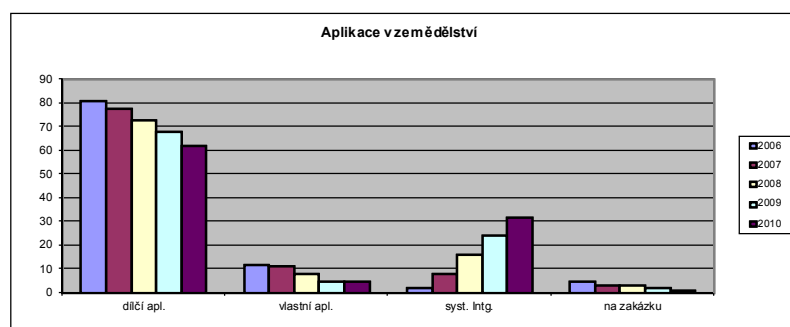
Graph no. 1 – agriculture application types

The major part of respondents uses "part job application", since 2000 there is steady but slow decrease of usage part job applications, but this drop is not very evident. Even in agriculture there is spread of the application usage from system integrators, including the management modules, but this kind of applications is used only in large businesses (acreage of 1000 ha and above).

The investigation was aimed at the usage of the Internet for communication, gaining information, advertisement and communication with customers, direct selling of goods. The investigation is being held with the same group of respondents since 2000. The graph shows the relatively high usage of the
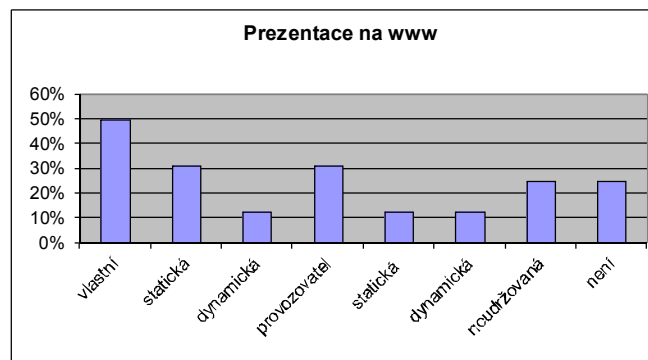
Graph no. 2 – Presentation of companies on www pages

Internet for communication, gaining information and communications with customers. The biggest growth was indicated in the usage of the Internet for communication with customers during the last year from the whole five year cycle. The percentage (about 60%) for usage of the Internet of advertisement is lower. Respondents point out that for some of them   this kind of advertisement is useless because the circle of customers and suppliers is closed and so it is not going to bring them any competitive advantage.

The investigation of ICT usage is also aimed at the usage of the Internet for advertisement. The same question was laid out to respondents in agricultural businesses. Questions were aimed at the way of presentation on the Internet. Potential customers are influenced by the way of addressing, it means by the quality of www presentation. Respondents were answering the questions of presentation methods on www pages. From realized investigation we can deduce that 65% of respondents have www pages. Manner in which these pages are made is shown in graph no. 2.

The major part of respondents has its own www pages. In the observed group of businesses of the agrarian sector 50% of respondents have their own www pages and from this amount 31% are static ones.

Operators ensure www presentations for agrarian businesses from 31% and from this amount only 13% answered the question if their www pages are static affirmatively. In ZZN businesses the operator takes care of only 14% www presentations and on question if they are dynamic or static responded no one.

Interesting is also The answer to the question if the www presentations are cared for regularly is also interesting. In businesses of agrarian sector 25% answered positively, in the ZZN group no one answered positively. It is important to have the web presentation up to date due to high daily visits.

From the observed sample of businesses it is apparent that we have businesses that do not have www presentation yet - in the agrarian sector group 25% do not have any and in the ZZN businesses group 14% only.

DISCUSSION

The information became the real strategic commodity. The right information in the right time in the right place is the most valuable commodity stuff. In the Czech Republic the agricultural businesses feel the lack of information from corporate environment, the same as from outside. Often, the information is present in the businesses but is in different reciprocally noncommunicative databases and so the work with it is not easy. Possible solution which is available is on the basis of portal.

The agriculture is specific for its user groups with specific information needs. For these groups the specialized portal would be very suitable because of its ability to gather all needed information and services at one place. Informative corporational portals for decision making support enable access to information which is used during the process of decision making.

Informative corporational portal includes applications which enable users to access internal as well as external information and data which is used during the process of decision making. Informative corporational portal comprises and ensures:

- www interface to enable portal services in needed quality according to the user requests

- data inserting and its specification for shipment

- search engines and filters

- tools for cooperation support - office systems, groupware systems which enable communication among users

- tools for support of decision making - enable to process data in analytic systems

- structural and nonstructural data - structural data are transaction data from data storages, OLAP data from corporate systems, nonstructural data represented by documents e.g. email messages, information gathered from the Internet, Netnews and so on.

Depending on the character of used tool it is possible to divide corporate portals on portals for decision support portal, collaborative portal and knowledge portal which ensures the process of knowledge creation and its integration, support for individual and group education, acquiring of information.

Through the portal users are able to access inquired information and usually also gain the access to the tools which enable to work with data itself - data modeling and analyses. Decision support portal (DS-P) is used for work with the data obtained from data storages.

Company's DS-P proposal

1. database, source of knowledge - basic data, knowledge granted by specialists, corporate managers

2. modules of information systems (ERP), DSS-tools, BI-tools - modules of information systems which enable us to work with data above data in databases and to present this data

3. services - web services, Internet services

4. portal accesses - mobile communication, Internet browsers, external frameworks

The DS-P portal solution creates environment which provides corporate information and information from the outside environment to users. Now the users do not have the access to all data at once, very

often they use simple pen and paper for data processing, some of them are able to transfer data to Excel and work above this data in Excel. But both of these alternatives are not the best solution.

CONCLUSION

The results from made inquiries show that we can find the usage of information systems in agriculture in all businesses. But most of the businesses have only partial applications. The solution and mainly the usage of data from these information systems are often influenced by the computer literacy of business managers. There is enough information in businesses but it is hard to obtain this information, further work with it and use it in decision making process. The solution is proposed by portal access and the creation of portal solution enriched by the knowledge.

Every group of users can have the portal created and modified according to their needs at their disposal. This enables them to process only information valuable for them and also enables them to have access only to information and services which they need for their work.

- Services like access to the email or online communication (chat) or make available files (e.g. documents) - in this case, the business portals are going to be very similar to the public ones

- Ability to enable access for users to different internal applications run in the company framework (e.g. its accounting, storage keeping, CRM and so on). This can be achieved by creating a special interconnection between these applications and portal which enable to work with applications through the portal. From the user point of view the portal has usually the shape of www pages, so in fact the user works with applications through the www interface. The advantages that result from this solution include among others that the user is able to use the portal services from everywhere and any equipment that has a browser implemented. So the dependency on one platform (e.g. PC platform) is in this way eliminated and nothing stands in the way of usage e.g. PDA devices.

- Specific information which he finds out by himself from any other information resources - e.g. parts of www pages from other servers and if need be the whole www pages. Again, it is necessary to "hand tailor" already mentioned interconnecting item which on one side gathers needed information and on the other side it hands over it to the portal and through it to the users.

The important characteristic of business portals is going to be the treatment of different levels of access rights, logging procedures and other aspects from area of data security. If the portal itself has enough authentic information about the user's identity and his classification, then it is able to give him such privileges which the user needs for his work. The portal can also ensure unified logging (single sign-on) in the case of access to different external sources (as soon as the portal knows the user identity it is able to sign him in by itself).

The agricultural businesses ICT equipment and the ability of managers to use ICT increased rapidly last years. At the same time the requirements for output quality are also increasing. The DS-P portal solutions will not only enable access to the data but also add knowledge value.

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REVERSE LOGISTICS AS A COMPETITIVE ADVANTAGE OF COMPANY

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Abstract

Marketing theorists and practitioners have so many occupied by encouraging and promoting the new needs that they forget to question the physical distribution of products and services. In other words, Supply side of marketing is already too long neglected. For this reason, it is now very popular in the world to discuss the logistics, they are the leaders in business understand that it is necessary to better organize the second half of the marketing - logistics. Logistics Management is primarily aimed at obtaining a competitive position through cost reductions and flexibility in customer care. Logistics Management is a serious managerial career. Through the logistics channels actually carried information from supplier to buyer is very efficient and reliable. Of course it is essential to the delivery of goods to meet the needs generated by the first part of marketing. Environment and logistics are closely related since logistics is one of the generators can be harmful impact on the environment. With proper organization of logistics may greatly contribute to preserving the environment. Certainly be necessary in the future more and more attention to a circular flow of cargo, where we have to design new products should think about the processes disburdening environmental and reverse logistics.

Key words: *ecology, logistics management, marketing management, material flow, supply chain.*

1. INTRODUCTION

After-sales logistics, with its activities (after-sales service and logistics reliever) may be an important source of competitive advantage, not only significant cost savings, which allows, but requires special emphasis on the deepening of relations between sellers and buyers, which is a necessary result of mutual contacts and exchanges of information, even after completion of the transaction.

After-sales logistics is the last of the phases of the logistics process and unfortunately some less important and neglected area. Through its activities may be one of the key factors for improving the company's position in the market due to the deepening of relations with customers, as it impacts on construction of greater mutual trust.

After-sales logistics activities are (Logožar 2004, 69):

- after-sales service and dealer service
- reverse logistics.

After-sales services of the seller include:

- installation and trial operation of machinery,
- service, current and investment maintenance,

- delivery of the necessary spare parts (spare parts logistics).

Reliever logistics include:

- return transportation assets (trucks, containers, reusable packaging, etc..),

- re-use for the disposal of waste or residue of the manufacturing process,

- claims for damaged or incorrectly delivered.

Waste transport logistics is gaining importance as its only in the last decade. Companies with the help of a defense logistics achieve strategic objectives and enhance their competitive capacity and optimize their logistics services including the administration of these activities in the external supply (Dur, Evans 2008, 2617). In this field of research, we observed that, given this a lot more written in the developed world, which is understandable since there are also ecological awareness level much higher than in Slovenia. From this perspective, it is not surprising that in our companies recently discovered in this area has a large internal reserves.

2. OBJECTIVES, HYPOTHESIS AND METHODES OF RESEARCH

In exploring these issues we set the following objectives:

- examine the literature in the field of logistics exculpatory in Slovenia and abroad,

- find the best concepts in the logistics firms exculpatory,

- connect their experiences in the economy in this field with the findings of the profession.

In exploring we tested hypothesis:

- H1: Logistics represents a reliever in the perception of Slovenian managers still very small source of competitive advantage

We used the following research methods:

- method of examining primary sources of literature,

- method of analysis,

- method of synthesis,

- method of compilation,

- method of description,

- method of komparision,

- method of generalization,

- method of specialization,

- classification method.

Using the deductive method was performed under general positions which are defined by the theory and hypothesis, concrete conclusions about the dependence of the phenomena that we have analyzed.

3. GENERAL INFORMATION ON SUPPLY CHAIN

Logistics is a collection of functional operations on a particular route repeated again and again, during which the raw material is processed into a finished product. Since the raw materials and stores are not located in the same place and because the specific product produced (assembly parts) in different places (even countries), have crucial importance of logistics strategy. However, even after the product has arrived at its destination, the logistics are not finished, as it is necessary to provide for recycling of old or damaged products. Direct supply chain refers to the temporal and spatial distinctions between sources of raw materials necessary to an undertaking, and the place of processing - production. And similarly for temporal and spatial boundaries between production and consumption.

Given the similarities in the activities between the two chains (chain of physical supply and physical distribution chain), both activities can be integrated into the logistics business. Management of business logistics can be called supply chain management and supply chain management (SCM). With the growing ecological awareness of the population, has begun the search for new business opportunities in the logistics management exculpatory at all stages of life cycles of old and new products. Waste transport logistics plays an important role in establishing green supply chains (Efendgil, Onut, Kongar 2008, 269).

4. REVERSE LOGISTICS

Of course, in addition to the supply (cost) a lot of companies engaged in logistics and recycling of their products and residues from the manufacture and packaging. Product life path with the logistics point of view does not end with delivery of product to the consumer. Product is the time to wear out, damaged or corrupt, so it returns to its source (the company) for repair or recycling. Logistical relief channel (aftermarket distribution) can be used whole or part of the existing logistics channels used for travel route of the product from raw material to its consumer. In certain cases it is necessary to create a defense logistics channels completely new, which is for certain companies because of their nature of work, branched infastrukture, lack of resources, even insurmountable problem. Often the production plant, which can not afford to simply close the logistics of the relief, which otherwise can be a success for ecologists, a new problem and challenge for economists and managers.

In developed countries, the concern for ecology is increasingly present. Companies must also logistics services in sourcing, manufacturing and sale of goods to arrange for a huge amount of scrap and other materials, and packaging.

This area of logistics services company called reliever logistics, including:

- after-sales activities of collecting,

- preparation,

- transport of materials suitable for recycling from the city, where they occur, to the final consumer.

This method allows the company getting its products from the market for reuse, recycling or disposal. Production scrap, waste or packaging waste collected and transported by means of:

- assembly of containers,

- transport packaging,

- internal transport,

- manipulation of residues from smaller to larger containers,

- preparation and interim storage and disposal.

Logistics company needs relief for the following reasons (Logožar 2004, 80):

- because of its reputation, which can be wasted, as they appear in public as a polluter of the environment too;

- the legislation, which is increasingly difficult to conduct the business of packaging waste or residues;

- the responsibility for management of hazardous waste by the public utility companies willing to remove only under specific conditions (additional cost to the company);

- removal costs due to higher production of unsorted scrap or packaging.

Relieving logistics objectives are focused on ecological awareness of people, employees and management (ie reducing the burden on the natural environment) and economic goals (creating a cost-effective and customer-oriented trade and information flows). In the course of business logistics have specific tasks exculpatory more subordinate role of logistics (inventory management, delivery door to door), and there are some new tasks such as collecting and sorting scrap.

Collection and recycling of products is becoming more interesting. With the expansion of green technologies and green supply chains, businesses are providing more resources and production capacities, which are concentrated in an ever smaller number of locations. In this way, in modern enterprises easier to ensure that the circular flow from input to output and back (Srivastava 2008, 535).

5. FACILITIES OF REVERSE LOGISTIC

In the literature are very different definitions of logistics exculpatory items, such as. (Logožar 2004, 81):

- waste.

- residue,

- secondary,

- semi-relieve the goods,

- inferior, useless goods,

- the goods with a technical foul.

Since no definition is not implemented, in order to facilitate understanding of the three criteria necessary to define a hierarchy of concepts. The first criterion relates to the actual destination of the goods, the value of the second and third on the chemical composition of substances, physiological

condition, etc.. As with any manufacturing or distribution process in addition to the desired products appear essential items that do not meet the goals of the company, this will output side business components generally designated as scrap.

Residues in the company normally split into two groups. The first are residues that have no value for the company where these residues are generated, and therefore not eligible for re-treatment, it is waste. The second group includes residues that can be reused or. recyclable. Recycling may indicate a circular flow of production or other processes where process residues and represent the return and re-use of waste raw materials in production.

Circular flows of materials can take place:

- the re-use (eg computer parts),

- the continued use (eg plastic packaging such as a bucket),

- the re-use (eg, iron scrap in the steel industry),

- the continued use (eg wood panels from sawdust).

When designing the packaging is necessary to consider some rules (supporting areas are: packaging, logistics, ecology) in the following order (Logožar 2004, 84):

- minimize the amount of packaging (primary purpose of packaging the product includes protection against external impacts);

- reusable containers (logistics from supplier to end user and back, supply chain);

- use of natural biodegradable materials (such as eco-friendly materials);

- ensuring the recycling of packaging, or return (ecology).

6. OBJECTIVES OF REVERSE LOGISTICS

Objectives exculpatory logistics are highly related (Logožar 2004, 86):

- the economic objectives, which means improving the viability, by increasing the amount of scrap recycled by the company, reducing the amount of residue for disposal, which means businesses reduce costs;

- the objectives with respect to environmental protection: because companies reduce the burden on natural resources, logistics reliever on the input promotes the recycling of residues and the savings in the use of scarce resources, the goal of the outputs is equal to the pressure relief logistics, namely the recycling of residues.

The objectives of environmental protection and economic objectives are sufficiently exculpatory logistics consistent and peaceful time, when the residue conversion processes of production and consumption of raw materials reduces environmental pollution and also reduce the total cost of business.

The task of exonerating the use of applied logistics logistics methods (Logožar 2004, 87):

- to support the concept that reducing the range of subjects exculpatory logistics;

- optimize the processes of recycling recovered materials, intermediate products, finished products;
- the collection, transportation and storage logistics exculpatory items.

The aim of these activities is the application of the concept of environmentally-friendly circular economy. Will be necessary to create production systems on the one hand provide a more rational use of raw materials and energy resources and limiting the formation of residues. This would allow the return of residues from the production and consumption in the circular flow conversion process.

7. TWISTING PACKAGING

When should you start thinking about the environmental impact of logistics and relief? The best response is an early stage of development of the base product, at the latest, on the development of the external shape of the base product.

Environmentally conscious practices in the industry and commerce at all cost-effective treatment is the so-called Twisting the concept of packaging or packaging material in circulation. This is the sound management of ancillary packaging elements - the so-called management obračljivo packaging minimal or no impact on environment.

Normally this is the case of transport packaging and not the primary packaging, which may be several benefits. Industrial supply chain, even a small distance usually develop optimal packaging solution in terms of Twisting a package that is cost effective and better than a single solution. Twisting example shown in next Figure.

Figure 1: Twisting Packaging from EPP's.
Source: Internal company resources Fragmat - Tim Laško, September 2011

8 CONCLUSION

Based on field research we conducted in the summer of 2009 and 2010 and involved directors / heads of marketing, logistics and manufacturing representative firms in the industry in Slovenia, the hypothesis:

- H1: Logistics represents a reliever in the perception of Slovenian managers still very small source of competitive advantage.

- is confirmed.

Vision for the development of supply chain management in modern enterprises will have to include the following functional components of the given sequence order: (Logistic Guide 2004, 34)

• planning demand,

• planning and scheduling of production,

• planning and provision of supplies,

• planning and implementation of logistics (storage and transport) and logistics exculpatory.

Companies should have in planning the development, irrespective of the activity covered by the question remains what will happen in ten, fifteen or twenty years in terms of logistics and relationship to the environment or that. ecology and sustainable development.

In the domestic logistics profession are aware that in accordance with the possibilities made much of the logistical infrastructure (introduction of new means of transport, rationalization of costs, etc..), But the economic crisis and the rapid spread of telecommunications and information technology sets new challenges for us as an example. changes in logistics processes and the possibility of implementation of the logistics business in the long run and enforce exculpatory increasingly necessary logistics. At the same time, the question arises, whether current economic policies of developed economies in the world at all correct? We need to really focus on reducing emissions forced the biggest polluters, while encouraging the increasing use of individuals? In Europe and the world would require a radical change of mentality, that people would play a role in achieving sustainable development, which in the long term interest of us all and a duty to leave this planet earth to our descendants, that it can continue to live in dignity (According to an article, Prosperity Without Growth, Keith Walker, Steel Times International, September 2011).

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BANK CREDIT ACTIVITY AND ECONOMIC GROWTH
IN THE REPUBLIC OF CROATIA

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Abstract

In this paper the author employs a cointegration approach and Granger causality tests in order to estimate the impact of credits to business companies, households and government on economic growth in Croatia. The efficiency of the Croatian monetary authority and government to halt negative trends in the growth rate of GDP during the recession has been analysed. The main results shows that there is one cointegrating vector between the pairs GDP growth – total credit growth and GDP growth – corporate credit growth, and there is no cointegration between GDP growth – state credit growth and GDP growth – credit household growth. Granger Causality tests suggest that GDP growth affects the variable of total loans, and a further sectoral analysis shows that there is no Granger causality in either direction between GDP growth and credit growth to government and to households, while there is Granger causality between the growth of corporate loans and GDP growth.

Key words: *recession, bank credit activity, economic growth, Croatia*

1. INTRODUCTION

Generally speaking, the financial system is a complex mechanism involving many types of institutions: banks, insurance companies, investment funds, stock and bond markets, etc. The financial system channels millions of Dollars, Euros, etc. from savers (financial surplus units) toward entrepreneurs, government and consumers (financial deficit units).

If we analyze the structure of financial sources, we will find that there are three groups of financial structures (Šonje, 2005). Examples of the first group are countries with highly developed capital markets such as USA, UK, Sweden and Finland. In these countries, in addition to well-developed capital markets, there is a highly developed portfolio of bank loans to the private sector, which indicates that banks and capital markets in these countries have evolved in parallel, rather than in a competitive relationship. The second group comprises countries with somewhat less developed capital markets, but with very highly developed banking markets. Examples of these are Japan, Germany and Italy, followed by Denmark, and Ireland. The third group consists of countries with relatively developed credit portfolios and relatively underdeveloped capital markets. Examples are Austria, Belgium and Portugal.

The focus of media attention on the stock market (stock exchange) gives the impression that stocks are the most important source of financing but this is not the case, either for the stock market or for the issuing of bonds. Reasons for that can be found in the asymmetric information[96] that leads to improper

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[96] When one party possesses insufficient information about the other to make correct decisions in a transaction.

selection (a problem of asymmetric information prior to a transaction) and moral hazard (a problem of asymmetric information following a transaction). Only large and stable companies have sufficiently easy access to capital markets to finance its activities. Individuals and small businesses are less likely to get funds by issuing marketable securities, and instead usually choose financing through banks, which is why indirect funding that includes financial intermediaries is more important than direct funding in the first group of countries, and even more so in countries from the second and third group described above.

Theoretically there are four possibilities concerning the causal relationship between financial development (which can be broadly defined as an increase in the volume of financial services of banks and other financial intermediaries and financial transactions on the capital market) and economic growth (which can be defined as the GDP growth rate that refers to the quantitative part of economic development):

1. Financial development and economic growth are not causally related. There is no significant relationship between these variables in either direction and any correlation between them is merely the result of historical coincidence when both variables rise or fall almost at the same time;

2. Financial development follows economic growth. Economic growth causes the development and growth of financial and credit institutions;

3. Financial development causes economic growth. The causal relationship runs from financial development toward economic growth; financial development being just one among many determinants of economic growth, and

4. Financial development is an obstacle to economic growth. Here, as in hypothesis 3, the line of causation runs from financial development to economic growth, but financial development has a destabilising effect on economic growth.

In the history of economic thought there have been a number of theorists who supported one of these four hypotheses, the third being the most widely accepted. Explanations have generally been based on the allocative role of financial markets as determining their positive effect on economic growth. Schumpeter (1934) was the first to seek scientific confirmation for this thesis. He assumed that banks identify entrepreneurs with good growth prospects, and therefore help to reallocate resources to their most productive uses. Proponents of this view are called Schumpeterians, though the origin of this idea is much older, and can be traced back in the history of economic thought to Adam Smith and David Ricardo. More recently the work of Levine (1998) stands out. He describes a number of channels through which financial progress can affect allocative efficiency, including information gathering, diversification, financing and monitoring.

King and Levine (1993) show that the development of banks (measured by total liquid assets of financial intermediaries divided by GDP) can be an explanatory factor in economic growth in a sample of more than 80 countries. Loayza and Beck (2000) confirm these finding and develop the model using measures of bank development that include only credit to private enterprises, excluding lending to private households.

Levine and Zervos (1998) empirically assess the relationship between growth and both variables: capital markets and banks. They found that market liquidity and banking sector development are both

strong predictors of economic growth. However, the standard OLS approach taken by the authors does not take into account either potential simultaneity bias, or the routine inclusion of lagged dependent variables; moreover their sample was limited due to lack of data.

For these reasons, Levine and Beck (2004) re-develop the Levine and Zervos (1998) model, and again investigate the relationship between capital markets, banks and economic growth. Specifically, they examine how much each individual independent variable (the capital market and the banking system) affects economic growth by controlling for simultaneous bias, omitted variable bias, and the routine inclusion of lagged dependent variables in regressions. The authors come to the following conclusions: first, that the development of financial markets and banks have a statistical and econometric positive impact on economic growth, second, the results are not the result of simultaneous bias, omitted variables or the specific effects of a particular country, and third, the models suggest an independent relationship between growth and each individual variable, which means that there is an independent impact from both stock market development and bank development on economic growth.

Based upon an analysis of the literature and a wide range of research results it can be concluded that most authors in their work confirms the theoretical assumption that there is a strong interdependence between economic growth and development of the financial system.

This paper examines the correlation between bank credits and economic growth in Croatia by examining the existence of bilateral cointegrating vectors between the growth rates of total loans, then looks at the growth rate of loans to government, enterprises and households separately, in relation to the growth rates of GDP. The direction of causation is determined by the Granger causal test.

The motive for the study was the credit crunch that occurred in Croatia in late 2007 and the evaluation of various government and monetary authority programs for encouraging bank credit activity. An additional motive is the insufficient number of papers exploring the connection between certain types of credit activity and economic growth in Croatia.

The rest of the paper is organized as follows. After this introductory section, which has offered a short review of relevant papers dealing with the related issues as well as an outline of the structure of the work; the second part of the paper presents a consideration of the various programs of encouraging bank lending. The third part includes the brief presentation of the econometric methods used in the empirical research, the data, and the main results of the research. The fourth part offers some concluding remarks about the relations between credits and economic growth and a scientifically supported evaluation of programs designed to encourage credit in Croatia.

2 PROGRAMMES AND MEASURES TO ENCOURAGE LENDING IN CROATIA

The issue of programs and measures to encourage bank lending includes various activities by the CNB and government. In Croatia, the CNB and government undertake some co-ordinated joint measures, and also some measures taken by each side independently.

2.1. Policy Decisions of the CNB

The CNB noted that Croatia was gradually been entering a phase of recession, and as a result found themselves called on to make an adequate response to the new financial circumstances, both internal and external. In order to ensure the stability and liquidity of the banking system, the CNB made a series of Decisions among which outstands the following: The first policy Decision was taken in

October 2008. That was Decision to reverse the Decision of the marginal reserve requirement[97] in order to increase the foreign currency liquidity of banks. Then, in November of the same year, the reserve requirement rate was reduced from 17% to 14% which released 8.4 billion Kuna into liquidity. In February 2010 this rate was further reduced to 13%, which freed up a further 2.9 billion Kuna for financing the government and HBOR programs for encouraging bank credit activity (discussed below).

In January, and then again in February 2009 the CNB decided to reduce the rate of minimum coverage of foreign currency liabilities by foreign currency claims, first from 28.5% to 25% (in January) and then from 25% to 20% (in February), which gave the banking system access to a total of 18.25 billion Kuna. In March 2011 the Governor of the CNB decided on an additional easing of the rates of minimum coverage of foreign currency liabilities by foreign currency claims from 20% to 17%, which meant for bankers 6.3 billion Kuna of newly available funds.

In addition, one of the most recent measures (June 2011) which will reduce the lending interest rate is the Decision of the CNB to reduce the discount rate from 9% to 7% which will reduce the default interest rate in business relations to 15%, and in relations between the companies and individuals to 12%. With this Decision the highest contractual interest rate in transactions between legal persons can be 22.5%, and between legal and natural persons 12%.

It seems that the expansive reaction of the CNB to the emerging credit crisis and credit crunch was well timed, and succeeded in maintaining an adequate stability of the financial system.

2.2. Programs A, A+, B, B+ and C

The Government in 2010 in cooperation with the central bank and the HBOR introduced three models (A, B and C) in order to encourage entrepreneurship and economic recovery. In early 2011, models A and B were developed into A+ and B+.

Model A, (A+) is a program that designed to overcome difficulties in the economy and to eliminate the negative effects of the global economic and financial crisis. Loan funds are made available to Croatian entrepreneurs to strengthen their competitiveness, to achieve, maintain and improve their liquidity and to maintain and expand their current businesses. Funds for the implementation of the Programme are provided by commercial banks and the HBOR in the ratio 60%:40%. Application requirements are: a debt ratio (total liabilities/assets) less than or equal to 0.90, a current liquidity ratio (current assets/current liabilities) greater than or equal to 0.75, and no recorded loss during at least one year since 2007 (Net profit ≥ 0) (www.hbor.hr).

The objective of the B and B+ model is improvements of an entrepreneurs' ability to launch and implement viable investment projects by providing funds for that purpose through the issuance of state guarantees from a guarantee fund through the HBOR. Guaranteed loans are only available to Croatian entrepreneurs, and users of guarantees are commercial banks that have received a warranty quota at auction. Warranty quotas are granted to partially cover the risk to banks, up to 30% of the loan principal, to a maximum of 50 million Kuna. Guarantees are granted only for loans intended to fund Greenfield investments and for completion of already initiated investments.

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[97] The National Bank in 2006 introduced a marginal reserve requirement on the increase of foreign liabilities. At the end of that year the CNB made a decision about the compulsory purchase of CNB bills (which was canceled in November 2009). All those decisions were made in order to slow down too rapid credit expansion based on borrowing by Croatian banks with their parent banks abroad, which fostered the growth of foreign debt.

An analysis of available data (www.hbor.hr) shows that in 2010 through model A (Loan Programme for Economic Recovery and Development) 2.5 billion Kunas was taken up in loans. Through model B only 107 million Kunas was loaned, while model C has not so far been implemented. In 2011 until now (July 2011) through model A+ an additional 600 million Kuna was injected into the economy and through model B+ only an additional 22 million Kuna.

2.3. Housing loan support program

In March 2011 an Act on subsidies and government guarantees of housing loans was passed in order to overcome adverse conditions in the house building industry, and to help house buyers. Under this legislation, citizen can request state guarantees and subsidized loans to purchase a new apartment directly from the investors, whose selling price with VAT amounts to not more than € 1,900/sq.m. The buyer takes a loan from the bank and the state pays half of the monthly annuity for the first four years of repayment. In addition, the state is obliged to pay the interest on the loan should the borrower be unable to meet the payment due to unemployment (NN 31/11). The idea was to reduce the reluctance to make long-term debt commitments due to a fear job loss at a time of rising unemployment.

The Agency for Transactions and Mediation in Real Estate (APN)[98] in its latest report on the implementation of this Act published information showing that until July 2011 they had received 834 applications of which 786 had been approved, which means that about 550 million Kuna of new housing loans were made through this program.

It is too early to give a final evaluation of the effectiveness of measures to encourage lending, but certainly it can be observed that these measures operate largely in favour of the banks and investors. In particular, banks, due to a reduced demand for housing, have on their balance sheets many bad loans given to construction firms, which cannot be charged until the investors sell the apartments. Losses that result from a miscalculation by investors and the banks that fund them will be realized only when builders sell homes at lower prices. When that happens they will record a loss and will be unable to repay the full amount of the bank loan, and because of that banks will have to write off part of the loan. Thus it can be expected that this measure to prevent any further decline in property prices will be well received by both builders and banks. However, this program of encouraging housing loans is unlikely to solve the problem of the frozen billion of Kuna that builders cannot repay to the banks and that banks can not charge the builder.

3. EMPIRICAL RESEARCH ON THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND BANK LENDING – A COINTEGRATION APPROACH

3.1. Methodology

If two or more series are cointegrated, it implies that they have a long-term equilibrium relationship, with possible occasional deviations from this equilibrium in the short- term. This concept is the basis for the cointegration test of economic growth and bank lending. If we are dealing with non stationary time series that we believe are cointegrated, we can use (at least) three methods for testing cointegration: Engle-Granger, Enle-Yoova and Johansen. This paper will use the Johansen technique,

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[98] The APN is a mediator between the Ministry of Environmental Protection, Physical Planning and Construction and commercial banks. The APN was established by a government Act (NN 45/97), and has permission to purchase or exchange real estate in Croatia, either on its own behalf or on behalf of Republic of Croatia.

and it is based on the concept of weak stationarity. A test that is used for testing stationarity (Unit Root Test) was developed by Dickey and Fuller (1979). The test is based on following model:

$$\Delta y_t = \psi \, y_{t-1} + \delta x_t' + u_t \ (1)$$

Where: y_t = the value at time t, y_{t-1} = the value arising in the previous time point *(t-1)*, ψ = estimated parameter that is used to assess stationarity of the series, δ = estimated parameter, x_t' = exogenous regressors (which may or may not appear in the model) and u_t = white noise.

The basic objective of the test is to examine the null hypothesis H_0: $\psi=0$. If this hypothesis is accepted, that means that the series contains a unit root. It also means that the variance of the series *y* increases with time and tends to ∞. If the null hypothesis is rejected, it follows that the series is stationary. The test is conducted by calculating the ratio of the estimated parameter ψ and its standard error:

$$t(\hat{\psi}) = \frac{\hat{\psi}}{se(\hat{\psi})} \ (2)$$

This model assumes that u_t are not autocorrelated, however, u_t, will be autocorrelated if there are autocorrelations of the dependent variable Δy_t. In that case, the solution is to expand the model (1) using *p* lags of the dependent variable:

$$\Delta y_t = \psi \, y_{t-1} + \delta x_t' + \sum_{i=1}^{p} \alpha_i \Delta y_{t-i} + u_t \ (3)$$

With this extension, this test statistic is called the Augmented Dickey-Filler test (ADF). The test statistic is still applied to ψ using (2), and the same critical values.

The optimal number of lags (*p*) can be determined with *Information criteria*. The three most popular information criteria are Akaike's (AIC), Schwarz's – Bayesian (SBIC) and Hannan - Quinn (HQIC) information criterion. We will use the number of lags that minimize the value of the employed information criterion.

Beside the ADF, the Phillips-Perron (PP) test is also often used in practice. The PP test is based upon a somewhat more comprehensive theory of unit root non-stationarity, but it is similar to the ADF test.

Series that are stationary in levels are said to be I(0). Those that are stationary after the first differentiation, are integrated of order 1 - I(1), and those series that became stationary after the second differentiation are I(2), etc. The degree of stationarity is closely associated with the concept of cointegration. In most cases, if two I(1) variables are linearly combined, then the combination will also be I(1). If you combine the variables that are I(d) and I(b), where d > b, then their linear combination will be I(d), and if d < b, then their linear combination will be I(b).

The Johansen method of cointegration detection is based on the VAR (Vector autoregressive model). The VAR model and Johansen technique are briefly explained below.

Suppose we have *g* variables (g $\geq$ 2) and that they are all I(1). It can be expressed as the VAR(k) (4) that contains these variables with k lags:

$$\underset{(g,1)}{\underset{y_t}{\begin{bmatrix} y_{1t} \\ y_{2t} \\ \vdots \\ y_{gt} \end{bmatrix}}} = \underset{(g,g)}{\underset{\beta_1}{\begin{bmatrix} \beta_{111} & \beta_{112} & \cdots & \beta_{11g} \\ \beta_{211} & \beta_{212} & \cdots & \beta_{21g} \\ \vdots & \vdots & \vdots & \vdots \\ \beta_{g11} & \beta_{g12} & \cdots & \beta_{g1g} \end{bmatrix}}} \cdot \underset{(g,1)}{\underset{y_{t-1}}{\begin{bmatrix} y_{1t-1} \\ y_{2t-1} \\ \vdots \\ y_{gt-1} \end{bmatrix}}} + \underset{(g,g)}{\underset{\beta_2}{\begin{bmatrix} \beta_{121} & \beta_{122} & \cdots & \beta_{12g} \\ \beta_{221} & \beta_{222} & \cdots & \beta_{22g} \\ \vdots & \vdots & \vdots & \vdots \\ \beta_{g21} & \beta_{g22} & \cdots & \beta_{g2g} \end{bmatrix}}} \cdot \underset{(g,1)}{\underset{y_{t-2}}{\begin{bmatrix} y_{1t-2} \\ y_{2t-2} \\ \vdots \\ y_{gt-2} \end{bmatrix}}} + \ldots + \underset{(g,g)}{\underset{\beta_k}{\begin{bmatrix} \beta_{1k1} & \beta_{1k2} & \cdots & \beta_{1kg} \\ \beta_{2k1} & \beta_{2k2} & \cdots & \beta_{2kg} \\ \vdots & \vdots & \vdots & \vdots \\ \beta_{gk1} & \beta_{gk2} & \cdots & \beta_{gkg} \end{bmatrix}}} \cdot \underset{(g,1)}{\underset{y_{t-k}}{\begin{bmatrix} y_{1t-k} \\ y_{2t-k} \\ \vdots \\ y_{gt-k} \end{bmatrix}}} + \underset{(g,1)}{\underset{u_t}{\begin{bmatrix} u_{1t} \\ u_{2t} \\ \vdots \\ u_{gt} \end{bmatrix}}} \quad (4)$$

In order to use the Johansen test, the VAR above needs to be turned into a vector error correction model (VECM) (Harris, R., Sollis, R., 2003, 521) of the form:

$$\Delta y_t = \Pi\, y_{t-k} + \Gamma_1 \Delta y_{t-1} + \Gamma_2 \Delta y_{t-2} + \ldots + \Gamma_{k-1} \Delta y_{t-(k-1)} + u_t \quad (5)$$

where: $\Pi = \left(\sum_{i=1}^{k} \beta_i \right) - I_g$, and $\Gamma_i = \left(\sum_{j=1}^{i} \beta_j \right) - I_g$,

(β_i – above defined matrix, and I_g unit matrix of order g)

The Π matrix can be defined as a long-term coefficient matrix since in equilibrium, all the Δy_{t-i} will be zero. Also in a long-term u_t the matrix should be equal to zero.

The Johansen test is based on an examination of the rank of the Π matrix via its eigenvalues. If the time series variables are not cointegrated, the rank of the Π matrix will not be significantly different from zero, i.e. the number of eigenvalues that are significantly different from zero will be less than the number of variables in the VAR model.

In practice two test statistics for cointegration under the Johansen approach are used. These are:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{g} \ln\left(1 - \hat{\lambda}_i\right) (6) \text{ and}$$

$$\lambda_{max}(r, r+1) = -T \ln\left(1 - \hat{\lambda}_{r+1}\right) (7),$$

Where r is the number of cointegrating vectors under the null hypothesis, and λ_i is the estimated value for the ith ordered eigenvalue from the Π matrix. Obviously, the larger λ_i is, the more negative will be $\ln(1 - \lambda_i)$, and therefore the larger will be the test statistic.

The expression (6) is a test which uses all eigenvalues jointly and where the null hypothesis is H_0 is that the number of cointegrating vectors is less than or equal to r, and the alternative hypothesis (H_1) is that this number is greater than r. The expression (7) is used on each eigenvalue separately, and has as its null hypothesis that the number of cointegrating vectors is r against an alternative of $r + 1$.

3.2 Data

The input data consist of the real quarterly growth rates (in comparison with the corresponding quarter of previous year) of Croatian GDP, (GDP_GROWTH); the quarterly growth rates of bank claims against the non-bank sector (TOT_CREDIT_GROWTH) that is divided into the quarterly growth rates of claims against the government (STATE_CREDIT _GROWTH), private enterprises (CORPORATE_CREDIT_GROWTH) and claims against households (HOUSEHOLD_CREDIT_GROWTH). Growth rates are calculated based on data of the Central

Bureau of Statistics (GDP data) and the Croatian National Bank (the data on the lending activities of banks). The analysed period is from the first quarter of 1999 through the first quarter of 2011, which makes a total of 49 observations.

Table 1: Descriptive stats

	GDP_GROWTH	STATE_CREDIT_GROWTH	CORPORATE_CREDIT_GROWTH	HOUSEHOLD_CREDIT_GROWTH	TOT_CREDIT_GROWTH
Mean	2.492571	31.17573	10.04819	19.08138	13.10582
Median	3.803000	25.71173	9.556775	19.29339	12.94971
Maximum	7.012000	94.84487	24.78861	44.22476	29.27762
Minimum	-6.900000	-17.67533	-13.31243	-3.232245	-7.031796
Std. Dev.	3.528748	26.05634	9.513201	11.69689	9.312182
Skewness	-1.142827	0.681891	-0.357811	0.012199	-0.210300
Kurtosis	3.561974	2.942704	2.583901	2.436722	2.100796
Jarque-Bera	11.31089	3.804003	1.399058	0.648999	2.012006
Probability	0.003498	0.149270	0.496819	0.722889	0.365678

If we analyze the data in Table 1 we can conclude that the highest standard deviation is shown by the growth rate of lending to the government (STATE_CREDIT_GROWTH), and the lowest standard deviation is shown by the growth rate of GDP (GDP_GROWTH). The distribution STATE_CREDIT_GROWTH and HOUSEHOLD_CREDIT_GROWTH have a long right tail, while the distribution GDP_GROWTH, CORPORATE_CREDIT_GROWTH and TOT_CREDIT_GROWTH have long left tail. In addition, distribution CORPORATE_CREDIT_GROWTH, HOUSEHOLD_CREDIT_GROWTH and TOT_CREDIT_GROWTH are more peaked (leptokurtic) relative to the normal distribution, while GDP_GROWTH are flatter distributions (platykurtic) compared to a normal distribution. Distribution STATE_CREDIT_GROWTH has kurtosis almost the same as a normal distribution.

Furthermore, the results of descriptive statistical analysis and graphs in Figure 1 indicate that loans to the state achieved the highest growth rate of 94.84% in the second quarter of 2009 because of reduced Croatian government borrowing from abroad (due to the global financial crisis and high cost of foreign sources) and its concentration on the domestic financial market. This crowded out the private sector and has changed the structure of the claims which now looks as shown in figure 2.

The highest growth rate of lending to households was in the first quarter of 2003, and the highest growth rate of lending to private enterprises was in the fourth quarter of 2002 and the third quarter of 2006. The growth rate of lending to enterprises closely follows the growth rate of GDP. It is necessary to point out that there is a steady decrease of growth rates of lending to households from 2007 to 2010, and a negative rate in 2009. In 2007 that was the consequence of the Decision of CNB on the compulsory purchase of CNB bills as well as the Decision on a monthly limit on bank credit growth of 0.5%.
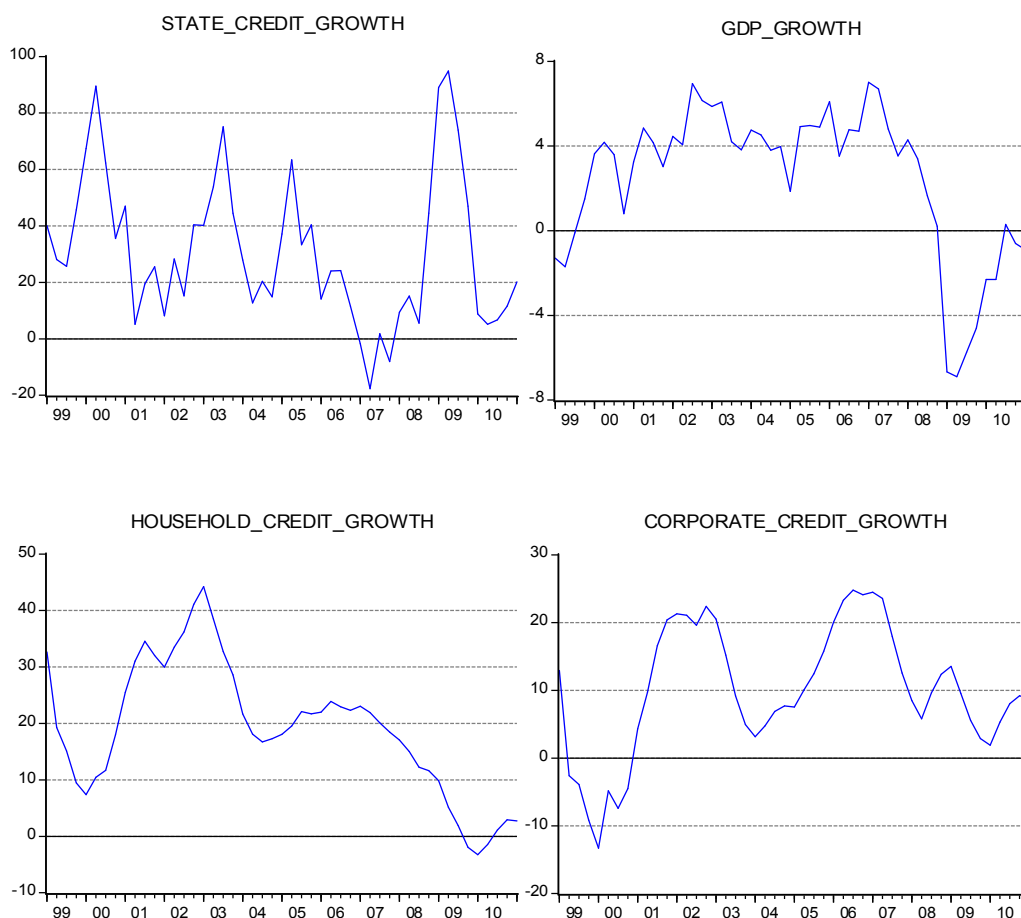
Figure 1: Quarterly growth rates of bank claims against the state, corporations and households and quarterly growth rates of GDP compared with the corresponding quarter of previous year; Source: Author's calculation based on data from the Croatian Bureau of Statistics and the Croatian National Bank
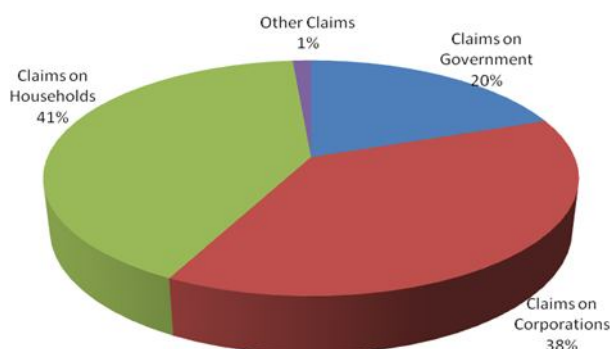
Figure 2: The structure of bank claims by sector in March 2011; Source: Croatian National Bank Bulletin, No. 170, Zagreb, May 2011

For the period 2008-2009 this is a consequence of low demand for loans due to unfavourable economic conditions (rising unemployment and fear of job loss), growth in interest rates (which are primarily explained with increased country risk) and the tighter lending conditions. Loans to enterprises also recorded a negative trend during 2009 when we have the lowest growth rate since 1999 and 2003. During 2010 loans to all sectors increased, but it should be emphasised that one part of this increase was because of exchange rate changes, particularly because of the weakening of the Kuna against the Swiss franc by about 14%.

Despite the slight decrease in lending rates, measures taken by the CNB, the implementation of A, A +, B, B + and C programmes, and the high liquidity of the banking system, adverse macroeconomic conditions continue to slow down the recovery of credit activity.

Figure 3 shows the growth rate of bank claims on other sectors[99] compared with growth rate of GDP. One can clearly notice the several phases of credit cycles. In the first cycle we have a sharp slowdown in credit growth until the end of 1999 when there begins a cycle of re-growth of bank credit activities. This period coincides with the perception of reduced political risk after the elections on January the 3rd, and the consolidation and privatization of the banking system. The increasing the rate of growth of bank claims lasted until 2003 when the government changed again, and when we have again slightly slower growth until 2005. After 2005 the credit activity of banks again gradually accelerates and reaches its local maximum of 22.81% in early 2007. In that year, due to concern about a growing foreign debt, the CNB introduced measures to slowdown credit growth.
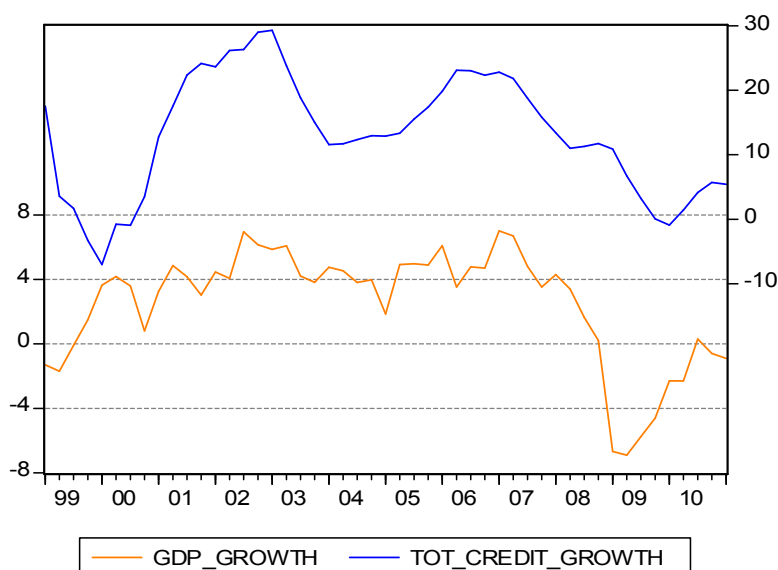
Figure 3: The growth rates of bank claims on other sectors and growth rates of GDP compared with the corresponding quarter of previous year; Source: Author's calculation based on data from the Croatian Bureau of Statistics and the Croatian National Bank

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[99] "Other sectors" includes corporations, households, local government and other financial institutions. Loans to corporations and to households make up over 95% of this credit aggregate - Source: www.hnb.hr.

In the graph of Figure 3 we can see that credit growth rate varies much more than the growth rate of real GDP. However, the graph also indicates that the analysed series could be correlated. At the end of 1999 and early 2000 we can notice the lag of credit growth rate behind the GDP growth rate. This is because at the end of 1999 the credit portfolios of banks over which bankruptcy or rehabilitation process had started were removed from the data. In fact, the Second Croatian banking crisis (Kraft, 1999) began in March 1998 when the fifth-largest bank collapsed (and rehabilitated). After its fall there was collapses of a series of small and medium-sized banks. In 1998 the Council of the Croatian National Bank started bankruptcy proceedings in two banks. In March and April 1999 six more major bankruptcies were launched. These nine institutions together comprise 12% of the total assets of the banking system. Because of this we have a shift of the growth rate of banks' claims and the growth rate of GDP, which disappears in early 2001. Therefore, in order to get more realistic results that describe the studied relationships, a cointegration analysis was conducted on data from Q1 2001 - Q1 2011, which makes a total of 41 observations.

3.3. Cointegration of bank loans growth rate and the GDP growth rate

Cointegration analysis with the Johansen method requires an assessment of whether all variables are I(1). The results of the ADF and PP tests are shown below.

Table 2: ADF i PP test of time series in levels and in first differences

Series	Lag	ADF*	Critical value 5%	PP*	Critical value 5%
In levels					
GDP_GROWTH	0	-2.204894	-2.922449	-2.308994	-2.922449
TOT_CREDIT_GROWTH	10	-0.867301	-2.933158	-2.454093	-2.922449
STATE_CREDIT_GROWTH	10	-2.739281	-2.933158	-2.807720	-2.922449
CORPORATE_CREDIT_GROWTH	8	-2.347355	-2.929734	-2.545962	-2.922449
HOUSEHOLD_CREDIT_GROWTH	8	-0.288264	-2.929734	-2.369386	-2.922449
In first differences					
GDP_GROWTH	0	-9.123248	-2.922449	-9.123248	-2.922449
TOT_CREDIT_GROWTH	10	-3.890087	-2.935001	-3.345891	-2.922449
STATE_CREDIT_GROWTH	7	-3.728399	-2.929734	-6.387443	-2.922449
CORPORATE_CREDIT_GROWTH	10	-3.665154	-2.935001	-4.005873	-2.922449
HOUSEHOLD_CREDIT_GROWTH	7	-4.386092	-2.929734	-4.185741	-2.922449

* Note: ADF and PP tests were carried out including the intercept in the test equation

In financial practice, the original series typically contain a unit root, i.e. they are non-stationary in their initial levels, but their differentiation usually gives stationary series. Both unit root tests with a

significance level of 5% indicate that all time series are non-stationary (have a unit root) in their basic level, but after differentiation we have a stationary series

After we have verified that we have I(1) time series, we can examine the integration of the observed time series by the Johansen cointegration methods. Cointegration tests allow us to determine whether a series of growth of loans to the government, households and enterprises move together in a long-run with the movement of the time series of GDP growth, with the possibility of short-run divergences. Figure 1 indicates that the time series contains a deterministic trend component, which is taken into account when choosing the cointegration test specification.

Table 3: Johansen bilateral cointegration test and correlation coefficient

Testing the integration between GDP_GROWTH and TOT_CREDIT_GROWTH						
Maximum rank	Trace statistic	Critical Value	Prob.	Max-Eingen Statistic	Critical Value	Prob.
0	18.67926*	15.49471	0.0160	15.87277*	14.26460	0.0276
1	2.806491	3.841466	0.0939	2.806491	3.841466	0.0939
Correlation GDP_GROWTH – TOT_CREDIT_GROWTH: 0.764936						
Testing the integration between GDP_GROWTH and STATE_CREDIT_GROWTH						
Maximum rank	Trace statistic	Critical Value	Prob.	Max-Eingen Statistic	Critical Value	Prob.
0	11.27140	15.49471	0.1953	10.65126	14.26460	0.1726
1	0.620133	3.841466	0.4310	0.620133	3.841466	0.4310
Correlation GDP_GROWTH – STATE_CREDIT_GROWTH: -0.467524						
Testing the integration between GDP_GROWTH and CREDIT_HOUSEHOLD_GROWTH						
Maximum rank	Trace statistic	Critical Value	Prob.	Max-Eingen Statistic	Critical Value	Prob.
0	9.531997	15.49471	0.3184	6.840592	14.26460	0.5082
1	2.691405	3.841466	0.1009	2.691405	3.841466	0.1009
Correlation GDP_GROWTH – CREDIT_HOUSEHOLD_GROWTH: 0.772329						
Testing the integration between GDP_GROWTH and CORPORATE_CREDIT_GROWTH						
Maximum rank	Trace statistic	Critical Value	Prob.	Max-Eingen Statistic	Critical Value	Prob.
0	23.53896*	15.49471	0.0025	21.42046*	14.26460	0.0031
1	2.118502	3.841466	0.1455	2.118502	3.841466	0.1455
Correlation GDP_GROWTH – CORPORATE_CREDIT_GROWTH: 0.499398						

Note: * denotes λ_{trace} and λ_{max} values that suggests rejection of the hypothesis H_0. Significance level is 5%.

Analysis of the bilateral cointegration of the time series shows that there is one cointegrating vector between the pairs GDP_GROWTH - TOT_CREDIT_GROWTH and GDP_GROWTH - CORPORATE_CREDIT_GROWTH, and there is no cointegration between GDP_GROWTH - STATE_CREDIT_GROWTH and GDP_GROWTH - CREDIT_HOUSEHOLD_GROWTH. This

result shows that future fluctuations in GDP growth can be associated with the movement of growth rate of loans to private enterprises and the growth rate of total loans. Presence of these connections can be attributed to the influence of private investment, i.e. entrepreneurial activities. In particular, some activities might not be tenable if unsupported by an adequate bank credit. So it is very important that banks could give such support, first of all to private enterprises, and then to others applying for loans.

The existence of a correlation does not necessarily imply causality between the analyzed phenomena. There are a large number of established correlation relationships that are simply spurious and meaningless. Economists debate the significance of observed correlations between economic variables, and the extent to which there may be some theoretical causal link.

The approach of Granger (1969) to determining whether X causes Y is to see how much of the current Y can be explained by past values of Y, and then to see whether adding lagged values of X can improve the explanation. It is said that Y is Granger-caused by X if X helps in the prediction of Y, or, in other words, if the coefficients of the lagged X's are statistically significant. It is necessary to bear in mind that it is possible for there to be a two-way causality; X Granger-causes Y and Y Granger-causes X. The result of Granger Causality tests are shown in table 4. The models include 5 lags and 41 observations (2001 Q1 - 2011 Q1).

Table 4: Pairwise Granger Causality test

Null Hypothesis:	F-Statistic	Probability
TOT_CREDIT_GROWTH does not Granger-Cause GDP_GROWTH	1.81397	0.14022
GDP_GROWTH does not Granger-Cause TOT_CREDIT_GROWTH	3.52822*	0.01258
STATE_CREDIT_GROWTH does not Granger-Cause GDP_GROWTH	0.94417	0.46704
GDP_GROWTH does not Granger-Cause STATE_CREDIT_GROWTH	1.18929	0.33786
CORPORATE_CREDIT_GROWTH does not Granger-Cause GDP_GROWTH	3.97009*	0.00699
GDP_GROWTH does not Granger-Cause CORPORATE_CREDIT_GROWTH	2.17896	0.08300
HOUSEHOLD_CREDIT_GROWTH does not-Granger Cause GDP_GROWTH	1.00875	0.42973
GDP_GROWTH does not Granger-Cause HOUSEHOLD_CREDIT_GROWTH	1.51114	0.21598

Note: * denotes the null hypotheses that are rejected according to F-statistic (significance level 5%)

These results must be treated with caution because they are based on a time series with only 41 observations. However, the results are very interesting. Granger Causality tests suggest that GDP growth affects the variable of total loans, and a further sectoral analysis of the underlying loan allocation shows that there is no Granger causality in either direction between GDP growth and credit

growth to government and to households, while there is Granger causality between the growth of corporate loans and GDP growth. The direction of causality goes from corporate growth toward GDP growth. The above results are in accordance with the bilateral Johansen tests presented in Table 3.

4. CONCLUSION

Results obtained from empirical research suggest the high importance of bank lending in the economy. Thus it is very important to implement adequate monetary and government policy in order to overcome the observed credit crunch in the financial system, by encouraging those credit activities that are directed towards private enterprises. When considering bank credit activity we should always keep in mind that bankers are primarily concerned with their risk and return ratio. If they assess that it is less risky to finance households or the state (meaning that the funds will be directed mainly towards consumption and less on investment), rather than private enterprises, and if there are no concrete measures by monetary authorities or government encouraging lending to the corporations, banks will direct their money toward households and not to entrepreneurs.

The analysis described in this paper showed the effects of each type of bank loan. It is clear that the behaviour of banks, which is understandable from their point of view, does not leave much space for a faster economic recovery. Also, it should be noted that any further deterioration of private enterprise will mean an increased risk associated with loans to households and to the state as both of them generate revenues from corporations (households through salaries, and the state through taxes). Therefore, any efforts by the monetary authorities and government to encourage bank lending to enterprises should be supported. Government programs A, A+, B, B+ and C are very important because they are directed specifically towards business. However the results, measured in total loans given through the current programs, are still only very modest. It is necessary to consider further enhancement of these programs as well as introducing further measures directed towards the financing of corporations.

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C o n t e n t s