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and Business Development – 2013

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COMPARATIVE ANALYSIS OF GMO RISK PERCEPTION GAP BETWEEN EU CONSUMERS AND LATVIAN EXPERTS INVOLVED IN GMO DECISION MAKING PROCESS

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Abstract. Abstract. This research is the first step to provide comparative analysis of genetically modified organisms' (GMO) risk perception gap between EU consumers and EU experts involved in GMO decision making process. The aim of this paper is to provide information just of Latvian experts involved at decision making process, this study covers Latvian experts' point of view, finds out main reasons and outline main factors associated with risk perception of GMO. To compare risk perception gap this paper summarizes also the main factors that influence EU consumers' risk perception towards GMO: health and safety aspects, impact on environment, social economic considerations, public knowledge and attitude, the role of media and stakeholders, confidence in the institutions responsible for decision-making and ethical concerns. According information and data available and taking into account author's prepared surveys and obtained data comparative analysis of GMO risk perception gap between EU consumers and Latvian experts has been performed. As a result conclusions have been conducted to better understand differences between risk perception among different players in the field of GMO.

Key words: *EU, decision making, GMO, risks assessment, risk perception*

JEL code: D81, D91, I18, O31, Q18

Introduction

The purpose of this research is to find out risk perception gap between EU consumers and Latvian experts involved in GMO decision making process. Comparative analysis of available data of EU consumers' risk perception was summarized to compare it with data obtained from survey on opinion of Latvian experts.

In order to better understand consumers' preferences it is necessary understand level of risks and benefit perception. Encountering for the first time with new product it is clear that the consumer will look upon with suspicion. This situation confronts the people with an uncertainty before purchase and expected negative results create risk perception.

In the market where supply of products is huge there is a dilemma for consumer to decide between tested and new product, between certainty and possible risk resulted from the new technologies. Research results showed that perceived benefits had the most important influence on consumer purchase decisions, such as environmental impact and health related concerns (Fortin and Renton, 2003).

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Research results and discussion

This study summarizes available information and identifies the key factors that generate GMO risk perception. Many kind of different literature and scientific data were analysed to find out public risks perception in different parts of the world and comparative analyse was performed to see the differences among countries considered.

Before conducting of survey the hypothesis was posed that risk perception among different players in the field of GMO differs because of level of knowledge. Although according Miller and Conko, 2000, concerns regarding GMO cannot simply be imputed to a lack of consumer knowledge in biology.

According Kayabası, A. and Mucan, 2011, the attitudes and perceptions of the consumers towards GM food have nine dimensions: the perceived environmental risk, the perceived benefit, long-term effects on human health, risk for the world, attitudes towards labelling, attitudes towards purchase, attitudes in terms of cultural- spiritual and moral values, perception of knowledge level and the perceived risk respectively. The most explanatory factor is the possible risks of GM food on human health in the long term. The least explanatory factor solution is the attitudes towards cultural- spiritual and moral values. Additionally another important result provided by the research is that the consumers do not have sufficient information regarding GM food. It was found out what consumers have medium level of knowledge about gene technology.

A study by Krystallis et al. (2007) contrasted consumer and expert perceptions concerning several dimensions relevant to GMOs, and found significantly differing views and attitudes. The survey was conducted in four different European countries indicating the different expert and consumer perspectives on food risk management, in order to assess the participants' reactions to these. It was found that, though there were areas of agreement between the experts and consumers (for example, they agreed that consumers lack relevant knowledge, that food safety is a shared responsibility and that scientific uncertainty cannot be completely avoided), there were other areas where disagreement remained (for example, on the acceptability of economic interests in food risk management and the role and quality of media reporting).

One of the reasons of European consumers' opposition to GMO is that their advantages in food production are often considered to be weak or non-existent, while their risks are considered to be substantial. Risk perception causes a stronger influence than benefit perception (Moon and Balasubramanian, 2001).

Consequences of genetic engineering are not directly observable and difficult to control. Acceptability thus depends on many factors related to perception of risks and to the importance of benefits that justify or offset them. But risk perception of GMOs have been extended to a very wide field, including many socio-economic or political aspects, knowledge of the risk and familiarity with it, scientific uncertainty, controversy, delay in the appearance of undesirable consequences, advantages – or disadvantages – for the person exposed etc. (Bonny, S., 2003).

The research by Marris, C. et al. reveals a more complex picture, in which the distinctions often made between 'real risk' and 'perceived risk', between 'risk' and 'ethical' concerns, or between 'scientific' and 'non-scientific' concerns, are blurred.

1. Methods

The first stage of an EU experts' survey was conducted during January, 2013. The relevant experts from Latvia involved in GMO issues were selected and interviewed. The experts were selected taken into account their activities in the field of GMO. These experts are mostly researchers at local universities and experts from state administration.

The experts were asked to complete survey of 21 questions that elicited information about role of expert's institution in decision making process, opinion towards use of GMO in food/feed and cultivation, risks and benefits of GMO, satisfaction with the process of issue of permission, public access to information on different aspects of GMO and public ability to interpret and understand scientific information.

Most of the selected experts were first contacted personally. After briefly informing them about the purpose of the survey, incentives to participate were offered in form of a free copy of the final report. It was assumed that the results would interest them since they also revealed how other experts assess GMO decision making process and different aspects of GMO. They were also assured that their views would be kept confidential. The selected experts then either accepted or refused to participate. 19 questionnaires were distributed and 15 were returned. Refusal to participate in the survey can be explained by the sensitivity of the GMO issue in some groups of population.

The first two questions were about role of expert's institution in decision making process towards GM food/feed and cultivation of GM plants. In responding, the participants had to choose one of four options (plus "Other") and to assess level of involvement on a scale from one to ten; "one" indicated "not involved at all", respectively; "ten" indicated "strongly involved", respectively. Figure below shows the aggregated results regarding general role of expert's institution at decision making and rate of involvement in different processes. The y-axis shows the rating scale from one to ten and the x-axis lists the four main segments at decision making process (plus "Other").
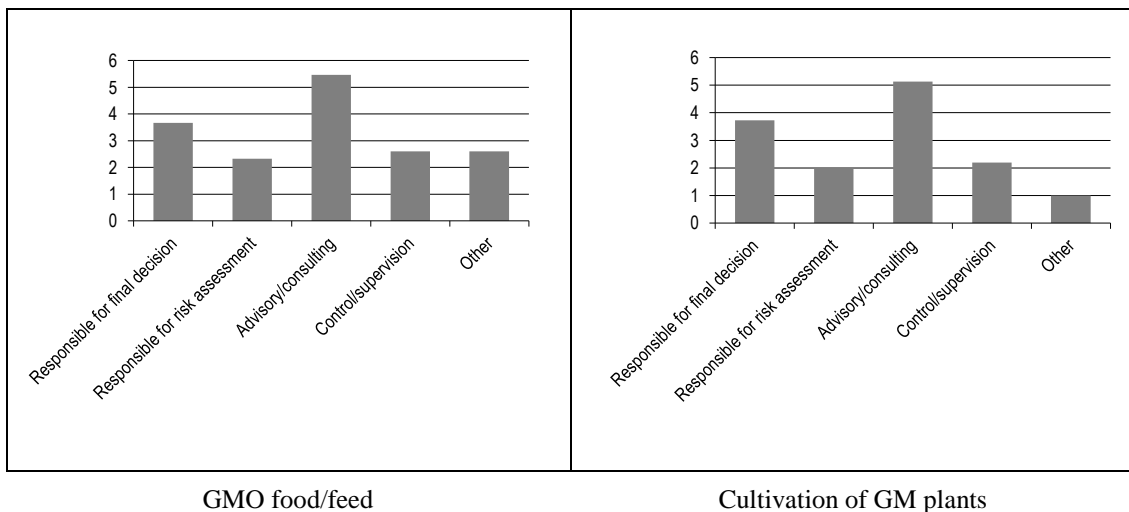
GMO food/feed   Cultivation of GM plants

Source: author's calculations based on expert (n=15) survey results obtained on January, 2013

Fig. 1. **Role of expert's institution in decision making process and rate of involvement**

The first results collected from survey were used to compare and find out the gap of risk perceptions between Latvian experts and EU consumers regarding GMO. Parallel to experts' survey an analysis of risk perception of EU consumers was carried out using information available and different scientific data sources.

2. Results

To compare the gap of risk perceptions between Latvian experts and EU consumers regarding GMO, the series of questions were analysed. The full survey is available from the author upon request. The questions regarding experts' opinion towards use of GMO in food/feed and for cultivation as well as

towards risks GMO can cause to human/animal health and environment allows us to make some conclusions regarding experts' risk perception.

First of all answers to 2 of the questions were analysed to compare official opinion of institution involved in decision making process with personal opinion of expert employed by this respective institution. The results in Table 1 show that official opinion of institution involved in decision making process is not defined in many institutions (regarding food – in 46.7% cases, regarding feed – 40% and regarding cultivation – 33.3%). Hence we may conclude that experts often express their personal opinion instead of an official one during decision making process towards use of GMO in food/feed or for cultivation. Table 1 shows that institutions in 26.7% consider that decision regarding use of GMO in food and feed should be taken based on case by case approach. We also can observe that attitude regarding cultivation of GMO in 53.3% cases are negative and institutions are very cautious on this score.

Table 1

Official opinion of institution of Latvia involved in decision making towards use of GMO

Official opinion	Food		Feed		Cultivation		Other uses	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
In favour	2	13.3	3	20.0	-	-	2 (contained use)	100.0
Case by case	4	26.7	4	26.7	1	6.7	-	
Against	1	6.7	1	6.7	8	53.3	-	
Don't know	1	6.7	1	6.7	1	6.7	-	
Official opinion not defined	7	46.7	6	40	5	33.3	-	
Total	15	100.0	15	100.0	15	100.0	2	100.0

Source: author's calculations based on expert (n=15) survey results obtained on January, 2013

From Table 2 we can see that experts mostly have defined their personal opinion towards use of GMO in food/feed and for cultivation, there are just some cases experts haven't defined their attitude. From results obtained we can observe that more than half of experts 53.3% don't support cultivation of GMO like their institutions, but if we compare official opinion of institutions and personal opinions of experts towards use of GMO in food/feed we can conclude that opinions vary. Just 13.3% of institutions support use of GMO in food and 20% in feed in comparison with experts' support – 26.7% regarding food and 33.3% regarding feed. Analysing data obtained it is visible that experts are more supportive regarding use of GMO in food and feed in compare with official opinion of institutions and both – institutions and experts are more cautious regarding cultivation of GM plants.

Table 2

Personal opinion of experts towards use of GMO

Official opinion	Food		Feed		Cultivation		Other uses	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
In favour	4	26.7	5	33.3	2	13.3	2 (contained use)	100.0
Case by case	4	26.7	5	33.3	4	26.7	-	
Against	4	26.7	3	20.0	8	53.3	-	
Don't know	3	20.0	2	13.3	1	6.6	-	
Total	15	100.0	15	100.0	15	100.0	2	100.0

Source: author's calculations based on expert (n=15) survey results obtained on January, 2013

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Besides personal opinion regarding use of GMO in food/feed and for cultivation the experts were also asked to express their opinion regarding risk GMO can cause to human/animal health and to environment (Table 3).

Table 3

**Expert's personal opinion regarding risk GM food/feed can cause
to human/animal health and environment**

Expert's opinion regarding risk of GM food/feed to human/animal health	Frequency	Per cent	Expert's opinion regarding risk of GMO to environment	Frequency	Per cent
Safe as its conventional counterparts	3	20.0	Safe as its conventional counterparts	1	6.7
More safe than unsafe	3	20.0	More safe than unsafe	-	-
Depends on case by case	7	46.7	Depends on case by case	7	46.7
More unsafe than safe	1	6.7	More unsafe than safe	2	13.3
It can cause significant risk to human health	1	6.7	It can cause significant risk to environment	5	33.3
Total	15	100.0	Total	15	100.0

Source: author's calculations based on expert (n=15) survey results obtained on January, 2013

Almost half of experts 46.7% think that it is not possible to consider risk of GMO equipollent, they are sure that it is complex issue and every GMO should be assessed case by case.

Just one of the experts is sure that GMO food/feed can cause significant risk to human or animal health and 5 of experts are sure that cultivation of GMO can cause significant risk to environment. Mostly experts are cautious assessing possible risk of GMO. 20% of experts are sure that GM food and feed are safe as its conventional counterparts and 20% think that it is more safe than unsafe. Different picture is in the field of cultivation where 33.3% experts think that GMO can cause significant risk to environment.

Main statistical indicators there examined regarding responses on question − what is a role of your institution in decision making process towards GM food/feed and cultivation of GMO. Involvement in decision making process is described using the mean, median and extreme values in Table 4 and Table 5.

Table 4

Main statistical indicators of the experts' responses on question – *what is a role of your institution in decision making process towards GM food/feed?*

Statistics	Responsible for final decision	Responsible for risk assessment	Advisory/ consulting	Control/ supervision	Other
Number	15	15	15	15	15
Mean	3.67	2.33	5.47	2.60	2.60
Median	1.00	1.00	6.00	1.00	1.00
Mode	1	1	1	1	1
Variance	10.524	6.095	10.695	11.400	11.400
Range	9	9	9	9	9
Minimum	1	1	1	1	1
Maximum	10	10	10	10	10

Source: Author's calculations, evaluation scale 1 – 10, where 1 – not involved at all and 10 – strongly involved

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As it is visible from Table 4 and Table 5 the mean role of institution in decision making process towards use of GMO for GM food and feed is 3.67% − for final decision, 2.33% − for risks assessment, 5.47% − for advisory and consulting and 2.6% − for control and supervision. Mostly inquired experts are involved in GM food/feed decision making process as advisors and consultants. Expert evaluation's on question − what is a role of your institution in decision making process towards GM food/feed? covers all possible range of all statements, arithmetic means differ from 2.33 till 5.47 but still the most of experts gave the lowest evaluations which is indicated by mode (Table 4).

Table 5

Main statistical indicators of the experts' responses on question – *what is a role of your institution in decision making process towards use of GMO for cultivation?*

Statistics	Responsible for final decision	Responsible for risk assessment	Advisory/ consulting	Control/ supervision	Other (please, specify)
Valid	15	15	15	15	15
Mean	3.73	2.00	5.13	2.20	1.00
Median	1.00	1.00	5.00	1.00	1.00
Mode	1	1	1	1	1
Variance	12.067	6.000	11.838	10.029	.000
Range	9	9	9	9	0
Minimum	1	1	1	1	1
Maximum	10	10	10	10	1

Source: Author's calculations, evaluation scale 1 – 10, where 1 – not involved at all and 10 – strongly involved

Analogical situation is in the field of cultivation of GM plant where the mean 3.73% of experts are involved in final decision, 2.0% − in risks assessment, 5.13% − in advisory and consulting and 2.2% in control and supervision. Although arithmetic means of expert evaluations differ from 2.0 till 5.13, most of the experts gave the lowest evaluation which is indicated by mode (Table 5).

Analysing data obtained from Tale 4 and 5 we can conclude that every single expert is mostly involved in one area at decision making process towards use of GMO for food/feed or cultivation. It explains why modes for all areas in both tables are 1.

Conclusions

The survey results presented in this paper is just the first step towards investigating of risk perception gap between EU consumers and EU experts involved in GMO decision making process. This paper:

1. Represents the first research of its kind investigating opinion of Latvian experts involved at decision making process on GM food/feed and cultivation of GM plants:

The survey results show that official opinion of many Latvian institutions involved in decision making process is not defined. Latvian experts often express their personal opinion instead of an official one during decision making process towards use of GMO in food/feed or for cultivation. Latvian experts mostly have defined their personal opinion towards use of GMO in food/feed and for cultivation, there are just some cases experts haven't defined their attitude. Analysing data obtained it is visible that experts are more supportive regarding use of GMO in food and feed in compare with official opinion of institutions and both − institutions and experts are more cautious regarding cultivation of GM plants. Almost half of experts think that it is not possible to consider risk of GMO equipollent, they are sure that it is complex issue and every GMO should be assessed using case by case approach.

2. Examines the EU consumers' risk perception:

According data obtained and literature analysed EU consumers' risk perception depends and is influenced by many different factors: consumer level of education, the role of media and stakeholders, social economic considerations, confidence in the regulatory institutions, ethical concerns, freedom of choice (mandatory labelling) and possible benefits of GMO.

Among all, the high risk regarding human health and environment associated with GMO as perceived by the respondents seems to be the main obstacle to the consumer's acceptance of such products. People weigh risk information as more important than benefit information, thus the difficulty of selling benefits against possible risks.

Comparing existing data there seems no doubt that Europeans are more sensitive to the potential risks that GMO may pose to human health and the environment. Consumers from Europe countries are highly suspicious and their indisposition to buy GM products, in these countries, rooted in centuries of traditions and agricultural practices.

In many studies respondents mention lack of credible information sources which reinforces the necessity to educate the general public to be more aware of GMO with more objective scientific information.

Also, the result of the studies analysed pointed to the importance of GMO labelling in all countries, implying the need to provide the consumer with more information on GM products so that the consumer confidence can be established. Moreover, the price factor was significant in determining consuming GM food in some countries, suggesting that lower price can be a useful tool to stimulate GM food buying.

It was also found that confidence in regulatory authorities involved in decision making and control process impact willingness to purchase GM food in number of countries.

3. Compares the gap of risk perception between Latvian experts and EU consumers:

For this moment it is not possible to provide full picture towards risk perception gap between EU consumers and EU experts involved in GMO decision making process as just results from Latvia are obtained and analysed. From previous studies and data available we know that consumers tend to reject the use of GMO in food production (Bredahl, L.). Latvian experts in this study are somewhat positive towards use of GMO in food and feed and many of them consider that GM food/feed is as safe as conventional products or more safe than unsafe. Mostly experts are involved in advisory and consulting issues and these data could indicate that experts have become familiar with gene engineering technology and are more open and educated in these questions and are able to see also benefits this technology can provide to consumers.

Respondents are clearly more concerned about use of GMO for cultivation as consider GMO can cause significant risk to environment. It is also necessary to take into account that there is no any deliberate release into environment in Latvia and Latvian experts have more theoretical knowledge than practical experience. Competent authority of Latvia – Food and Veterinary Service has not received any application regarding developing of GMO field trials. Therefore Latvia has quiet limited experience regarding assessment and activities in the field of deliberate release into environment. And it could favour cautious attitude among experts regarding cultivation of GMO.

In general estimating experts' attitude towards risk GMO can cause to human/animal health and environment we can conclude that it is based on case by case principle. Almost half of respondents are sure every single GMO have to be assessed individually.

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DETERMINANTS OF SOVEREIGN CREDIT RATINGS – EXAMPLE OF LATVIA

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Abstract. Countries can borrow from foreign and domestic creditors by issuing bonds, but two countries will rarely pay the same interest, even if they are similar. The usual explanation is that investors demand an additional risk premium, so long-term interest rates vary because countries are perceived to have different probabilities of default or different credit risk.

The paper investigates the determinants of sovereign credit risk ratings of Latvia from 1997 to 2012 assigned by the three leading credit rating agencies, Moody's Investment Service, Fitch and Standard and Poor's. Conducted analysis of sovereign credit ratings, by using first, an alignment and transformation of the rating scales into values and second, ordinary least squares regression, indicates key rating determinants. From the initial number of variables that can be used according to previous studies on the topic, GDP growth rate and unemployment are used in the model to explain actual credit ratings of Latvia in 1997-2012 and predict future ones in 2013-2014. According to the model, long-term foreign currency rating of Latvia is predicted to improve by the end of 2014 from currently assigned rating levels by two notches either by a single credit rating agency or by one notch by two rating agencies, but still being in the lower medium grade category.

Collected data on the changes of the Latvia's credit ratings can be used to forecast the sovereign borrowing costs of Latvia, after joining to euro-zone.

Key words: *credit rating, sovereign debt, GDP, unemployment*
JEL code: C41, H30

Introduction

Countries can borrow from foreign and domestic creditors by issuing (often, but not always, long-term) bonds, but no two countries pay the same interest, even if they are economically and politically similar. Conversely, countries with different historical experiences and unequal macroeconomic conditions sometimes borrow at similar rates. The usual explanation is that investors demand payment for additional risk, so long- term interest rates vary because countries have different probabilities of default or different credit risk. This paper investigates the determinants of country risk premiums, which usually are measured by sovereign credit risk ratings (Zilinsky J., 2009).

The relevance of rating the creditworthiness of sovereign borrowers arises from the fact that national governments are by far the largest issuers on capital markets and also because those country ratings are seen as a ceiling to public and private sector issues.

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This paper studies the factors that seem to play an important role in determining sovereign debt rating. For that purpose, we collected information concerning several quantitative variables for Latvia and also the ratings assigned to those countries by Standard & Poor's, Fitch and Moody's from 1997 till 2012. With this sectional sample an attempt is made to replicate the effective ratings given by those 3 agencies. This is done using both a linear and a logistic transformation of the rating levels.

The purpose of the research presented in the paper is to understand, which variables appear to be the most relevant to determine a Latvia's credit rating and forecast possible credit ratings for 2013-2014.

The authors of the paper define the following objectives to achieve the purpose of the study: (1) To understand the determinants of country's credit rating; (2) To test ratings determinants against Latvian actual ratings; (3) To identify possible development of Latvian credit ratings in 2013-2014.

To achieve the purpose of the research the authors used a systematic, logical and comparative analysis, analysis of statistical data and generalization as well as ordinary least squares regression.

The paper consists of 3 sections. Section 1 focuses on the background of the research – other research findings and conclusions. Section 2 deals with the case study of Latvia, its credit ratings determinants and it further development. Section 3 presents the conclusions.

1. Background of the research

Different authors have approached this question of credit ratings determinants in different ways. For instance, Edwards (1984), Cline (1995), and Cline and Barnes (1997) find that domestic variables such as GDP growth and export growth are significant determinants of country spreads in developing countries. Other studies have documented that higher credit ratings translate into lower country spreads (Cantor and Packer, 1996; Eichengreen and Mody, 2000). In turn, credit ratings have been found to respond strongly to domestic macroeconomic conditions. For example, Cantor and Packer (1996) estimate that about 80% of variations in credit ratings are explained by variations in per capita income, external debt burden, inflationary experience, default history, and the level of economic development. Cantor and Packer conclude, based on their own work and the related literature extant, that there exists significant information content of macroeconomic indicators in the pricing of sovereign risk.

On the other extreme of the spectrum, a number of authors have assumed that country spreads are exogenous to domestic conditions in emerging countries. For instance, Neumeyer and Perri (2001) assume that the country spread and the US interest rate follow a bi-variate, first-order, autoregressive process. They find that interest rate shocks explain 50% of output fluctuations in Argentina, and conclude, more generally, that interest rate shocks are an important factor for explaining business cycles in emerging countries.

Another important issue in understanding the macroeconomic effects of movements in country interest rates in emerging economies is the role of world interest rates. Understanding the contribution of world interest rate shocks to aggregate fluctuations in developing countries is complicated by the fact that country interest rates do not respond one-for-one to movements in the world interest rate. In other words, emerging country spreads respond to changes in the world interest rate. This fact has been documented in a number of studies (some of which are referenced above).

Economists R.Cantor (1996) and F.Packer (1996) presented the first systematic analysis of the determinants and impact of the sovereign credit ratings assigned by the two leading U.S. agencies, Moody's Investors Service and Standard and Poor's. Like other credit ratings, sovereign ratings are assessments of the relative likelihood that a borrower will default on its obligations. They find that the ordering of risks they imply is broadly consistent with macroeconomic fundamentals. Of the large number of criteria used by Moody's and Standard and Poor's in their assignment of sovereign ratings, six factors appear to play an important role in determining a country's rating:
1) per capita income;
2) GDP growth;

3) inflation;
4) external debt;
5) level of economic development;
6) default history.

- *Per capita income*. The greater the potential tax base of the borrowing country, the greater the ability of a government to repay debt. This variable can also serve as a proxy for the level of political stability and other important factors.
- *GDP growth*. A relatively high rate of economic growth suggests that a country's existing debt burden will become easier to service over time.
- *Inflation*. A high rate of inflation points to structural problems in the government's finances. When a government appears unable or unwilling to pay for current budgetary expenses through taxes or debt issuance, it must resort to inflationary money finance. Public dissatisfaction with inflation may in turn lead to political instability.
- *External debt*. A higher debt burden should correspond to a higher risk of default. The weight of the burden increases as a country's foreign currency debt rises relative to its foreign currency earnings (exports).
- *Economic development*. Although level of development is already measured by our per capita income variable, the rating agencies appear to factor a threshold effect into the relationship between economic development and risk. That is, once countries reach a certain income or level of development, they may be less likely to default. They proxy for this minimum income or development level with a simple indicator variable noting whether or not a country is classified as industrialized by the International Monetary Fund.
- *Default history*. Other things being equal, a country that has defaulted on debt in the recent past is widely perceived as a high credit risk. Both theoretical considerations of the role of reputation in sovereign debt (Eaton 1996) and related empirical evidence indicate that defaulting sovereigns suffer a severe decline in their standing with creditors (Ozler 1991). They factor in credit reputation by using an indicator variable that notes whether or not a country has defaulted on its international bank debt since 1970.

More surprising, however, is the lack of a clear correlation between ratings and fiscal and external balances. This finding may reflect endogeneity in both fiscal policy and international capital flows: countries trying to improve their credit standings may opt for more conservative fiscal policies, and the supply of international capital may be restricted for some low-rated countries.

Portugal economist A.Afonso (2002) studied the factors that seem to play an important role in determining sovereign debt rating. For that purpose he collected information concerning several quantitative and qualitative variables for a universe of 81 developed and developing countries, and also the ratings assigned to those countries by Standard & Poor's and Moody's in June 2001. The rating classification of sovereign public debt is, somehow, an assessment of the economic, financial and political situation of an economy, giving also a measure of the country development.

To assess the credit risk of governments is not an easy task. One must take into account both solvency facts and aspects such as the stability of the political system, social cohesion and the degree of interdependence with international economic and financial systems.

After a first analysis, the following variables were selected:
1) per capita GDP;
2) inflation rate;
3) GDP real growth rate;
4) development indicator;
5) default indicator;
6) external debt-exports ratio (this variable is only relevant for developing countries);
7) government deficit as a percentage of GDP.

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GDP per capita is supposedly a measure of the country development and can be seen as an indicator of the tax basis available in the economy. Therefore, the bigger GDP per capita the more likely is the attribution of a higher rating level. Regarding inflation everyone should expect to see a negative relation between the level of the rating and inflation rate. Economy real growth should positively correlated with the rating levels. The degree of development is an indicators which has one of the highest correlations with the rating level, around 0.85 for the country sample used in A.Afonso (2002) research. Obviously, a history of partial or total defaults ends up being penalized with lower rating levels. A country where external debt-to-export ratio is high is more likely to be adversely affected by changes in the terms of trade or a decrease in foreign demand. Budget surpluses should be positively correlated with higher ratings, but the model without the budget balance variable and with GDP real growth rate seem to be statistically more adequate. A.Afonso study finalized with the finding, that the variables that seem to have statistically significant explanatory power for the rating levels are: GDP per capita, external debt as a percentage of exports, the level of economic development, default history, real growth rate and the inflation rate.

2. Research

2.1. Current rating systems

The conventional opinion is that there are three leading and worldwide recognized rating agencies- Moody's Investment Service, Standard and Poor's and Fitch.

Table 1

Alignment and Transformation of Rating Variables

Moody's	S&P	Fitch	Explanation	Rank
Aaa	AAA	AAA	Prime	1
Aa1	AA+	AA+		2
Aa2	AA	AA	High grade	3
Aa3	AA-	AA-		4
A1	A+	A+		5
A2	A	A	Upper medium grade	6
A3	A-	A-		7
Baa1	BBB+	BBB+		8
Baa2	BBB	BBB	Lower medium grade	9
Baa3	BBB-	BBB-		10
Ba1	BB+	BB+	Non-investment grade	11
Ba2	BB	BB	Speculative	12
Ba3	BB-	BB-		13
B1	B+	B+		14
B2	B	B	Highly speculative	15
B3	B-	B-		16
Caa1	CCC+		Substantial risks	17
Caa2	CCC		Extremely speculative	18
Caa3	CCC-	CCC		19
Ca	CC		In default with little prospects for recovery	20
	C			21
C	C	DDD	In default	22

Source: Standard & Poor's, Moody's Investment Service and Fitch Rating Agency

Their role and credibility has been discussed a lot in the light of the recent financial crisis, when a number of top-rated financial institutions failed to meet their debt obligations. In their recent paper, McClintock Ekins and Calabria (2012) argue that the financial markets would have been better served during the financial crisis 2007-2009, if the credit rating agency industry had been more competitive. In fact, there is an oligopoly among credit rating agencies, which, according to the above-mentioned article, was caused by the regulatory framework and will stay till major reforms are implemented. Therefore, for the purpose of this study long-term foreign currency rating variables assigned by three leading rating agencies Moody's Investment Service, Standard and Poor's and Fitch are going to be assessed. To enable further analysis of factors impacting rating variables, they are aligned and transformed into numbers, which are shown in the Table 1.

2.2. Latvian economy and credit ratings

The Republic of Latvia has a track record of credit ratings assigned by the international rating agencies since 1997. Its fast economic development started in 2004, which can be explained by a membership in the European Union. In particular, there was a spectacular growth of foreign trade volumes facilitated by the trade integration while financial integration boosted capital inflows into the country. During 2004-2008 Latvia experienced acceleration of the economic growth, which, unfortunately also created substantial imbalances. For instance, debt driven investments outpaced savings, which contributed to a growth of an external debt to unsustainable levels. Also current account deficit rose sharply and inflation accelerated. In 2008-2009 Latvia faced a major economic crisis, which was caused by both fall of the internal consumption and decrease of the external demand. Even though major economic imbalances were corrected as a result of the crisis, it caused a massive contraction of the GDP and pushed Latvia to engange into the international financial aid programme. During the period from 1997 to 2012 Latvia has gone through both an economic boom and hard lending, which also had a substantial impact on country's credit rating variables (Figure 1).
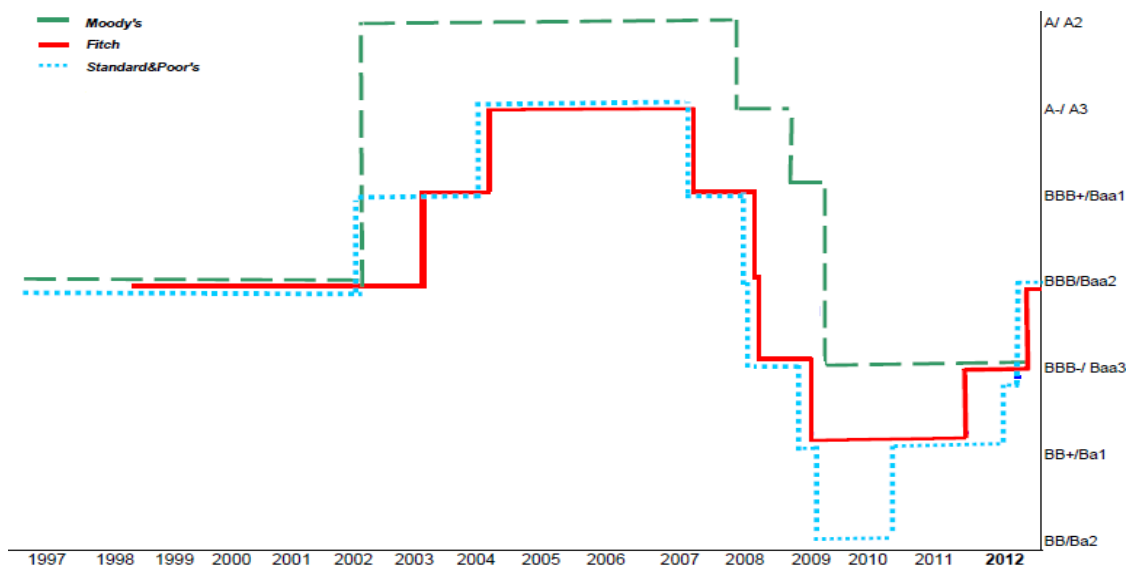
Source: Author's construction based on State Treasury of the Republic of Latvia on 2012.12.25 (http://www.kase.gov.lv)

Fig. 1. **Long Term Foreign Currency Rating Developments of Latvia**

In 2010 Latvia returned to an economic growth and managed to put its fiscal balance under control. Thus it regained trust from the financial markets and started to enjoy credit rating upgrades. In 2012 Latvia had similar credit ratings as back in 1997 (except one assigned by Moody's, which was one notch higher than in 2012), however at much stronger levels of macroeconomic indicators and positive growth prospects.

2.3. Credit rating determinants

Following macroeconomic indicators are being analysed for the purpose of the study of the country's long term credit rating in foreign currency: GDP per capita; inflation rate; GDP real growth rate; development indicator; default indicator; external debt-exports ratio; government deficit as a percentage of GDP. The impact of these indicators on country's long-term credit rating in foreign currency is assessed by using the ordinary least squares regression:

$$RATING_i = \alpha_0 + \alpha_1 GDPPC_i + \alpha_2 INFL_i + \alpha_3 GDPGR_i + \alpha_4 DEVELOP_i + \alpha_5 DEBTX_i + \alpha_6 DEF_i + \alpha_7 BUDGET_i \tag{1}$$

where:
RATING – quantitative variable, obtained by the ordinary least squares regression,
GDPPC – GDP per capita,
INFL – inflation rate,
GDPGR – real GDP growth rate,
DEVELOP – indicator of developed country ={0, developing country; 1, developed country},
DEBTX – external debt-to-exports ratio,
DEF – indicator of default ={0, without default; 1, with default}
BUDGET – budget balance as a percentage of GDP.

2.4. Estimates for Latvia

To assess the impact of macroeconomic indicators on Latvia's long-term credit rating in foreign currency, average long term foreign currency credit rating is calculated by assigning equal weighs to corresponding rating variables of S&P, Moody's and Fitch from 1997 to 2012 in accordance to ranking in the Table 1 – Alignment and Transformation of Rating Variables. Provided that Latvia in the period from 1997 to 2012 has been classified as a developing country and has no default history, both the indicator of a developed country and indicator of default are not included into the ordinary least squares regression model of Latvia's average credit rating variables. Thus, the initial equation for the Latvia's average long-term credit rating variables in foreign currency is stated as:

$$RATING_i = \alpha_0 + \alpha_1 GDPPC_i + \alpha_2 INFL_i + \alpha_3 GDPGR_i + \alpha_4 DEBTX_i + \alpha_5 BUDGET_i \tag{2}$$

where:
RATING – quantitative variable, obtained by the ordinary least squares regression,
GDPPC – GDP per capita,
INFL – inflation rate,
GDPGR – real GDP growth rate,
DEBTX – external debt-to-exports ratio,
BUDGET – budget balance as a percentage of GDP.

The estimation of equation is stated in the Table 2.

Table 2

Estimation of Equation of Average Long Term Foreign Currency Rating Variables of Latvia

	Coefficient	Std. Error	t-ratio	p-value	Sign.
Const	8.4572	0.808681	10.4580	<0.00001	99%
GDPPC	0.000417383	0.000116522	3.5820	0.00500	99%
GDPGR	-0.0690874	0.0585097	-1.1808	0.26501	-
INFL	0.0615455	0.0725816	0.8479	0.41630	-
BUDGET	-0.403843	0.189781	-2.1279	0.05923	90%
DEBTX	-2.47759	0.532941	-4.6489	0.00091	99%

R-squared	0.873061	Adjusted R-squared	0.809591

Source: Author's calculations

The estimation provides to some extent contradictory results because, according to the equation, higher GDP per capita contributes to a weaker credit rating while higher external debt-to-exports ratio improves credit rating. Both are in conflict with the common logic, which assumes that higher GDP per capita should improve credit rating because of more space for austerity measures, if needed, while higher external debt-to-exports ratio should mean lesser ability of a country to meet its foreign debt obligations. Other findings are considered to be logical – higher GDP growth and fiscal surplus improves credit rating while inflation has a negative impact on it. It is important to note that there are sixteen observations (1997-2012) while the given equation has six variables, including a constant. In order to make an equation statistically more reliable, only two variables and a constant will be assessed in further analyses. Furthermore, two more variables are included for the purpose of the analysis:

1. Unemployment (UNEMPL). For instance, studies by Bayoumi et al. (1995) suggest a positive correlation between the unemployment rate and the credit spreads of US public debt;
2. External Government Debt to Exports Ratio (GDEBTX). Study by Kumhof et al. (2004) provides valuable insights into importance of the external government debt especially for developing countries.

Thus, Latvia's average long-term credit rating variables in foreign currency are assessed by choosing two variables from the list below, which produce an ordinary least squares regression with the highest explanatory power:
RATING – quantitative variable, obtained by the ordinary least squares regression,
GDPPC – GDP per capita,
INFL – inflation rate,
GDPGR – real GDP growth rate,
DEBTX – external debt-to-exports ratio,
BUDGET – budget balance as a percentage of GDP,
UNEMPL – unemployment,
GDEBTX – external government debt-to-exports ratio.

The equation below proved to provide the highest explanatory power for the Latvia's average long-term credit rating variables in foreign currency:

$$\text{RATING}_i = 6.04 - 0.0863495 * \text{GDPGR}_i + 0.236117 * \text{UNEMPL}_i \qquad (3)$$

Statistical indicators for the equation are summarized in the Table 3.

Table 3

**Equation of Impact of GDP Growth and Unemployment of Average
Long Term Foreign Currency Rating Variables of Latvia**

	Coefficient	Std. Error	t-ratio	p-value	Sign.
const	6.04027	0.669013	9.0286	<0.00001	99%
GDPGR	-0.0863495	0.0252577	-3.4187	0.00457	99%
UNEMPL	0.236117	0.0470762	5.0156	0.00024	99%

R-squared	0.831289	Adjusted R-squared	0.805333

Source: Author's calculations

All variables of the equation are statistically significant at 99% confidence level while adjusted R-squared coefficient is 0.805. The equation says that a GDP growth of 1% point per year improves an average credit rating by 0.086 units (according to the ranking in the Table 1 – Long Term Foreign Currency Rating Developments of Latvia.) while 1% point increase in unemployment makes an average credit rating worse by 0.236 units according to the same table. The constant variable of 6.04 places Latvia at the single "A" rating category (upper medium grade), provided that both GDP growth and unemployment are zero value or compensate each other. The equation logic and its variables make a clear economic sense because both GDP growth and unemployment have a direct impact on tax collections while tax collections for Latvia have been the main source of state revenues and thus constitute a capability to meet government liabilities, including its foreign currency denominated debt.

2.5. Constructing the rating curve

The regression equation (3) obtained in the previous section enables us to model the average credit rating variables for Latvia for 2013 and 2014 provided that there are estimates for the unemployment and GDP growth. Macroindicator forecasts are summarized in the Table 4.

Table 4

Macro Indicator Forecasts for 2013 and 2014

Source of Estimate	GDP Growth		Unemployment	
	2013	2014	2013	2014
Nordea Bank AB	2.50%	3.90%	14.50%	12.80%
DNB Bank ASA	3.00%	3.00%	12.00%	9.50%
Citadele Bank AS	1.50%	3.00%	17.00%	15.50%
Swedbank AB	3.50%	5.20%	13.70%	11.50%
Ministry of Finance (LR)	3.70%	4.00%	14.30%	13.00%
Average	2.84%	3.82%	14.30%	12.46%

Source: Author's calculations based on forecasts of these credit institutions

By using the regression equation (3), Latvia's average long-term credit rating variables in foreign currency are calculated and compared to actual ones on the figure 2.
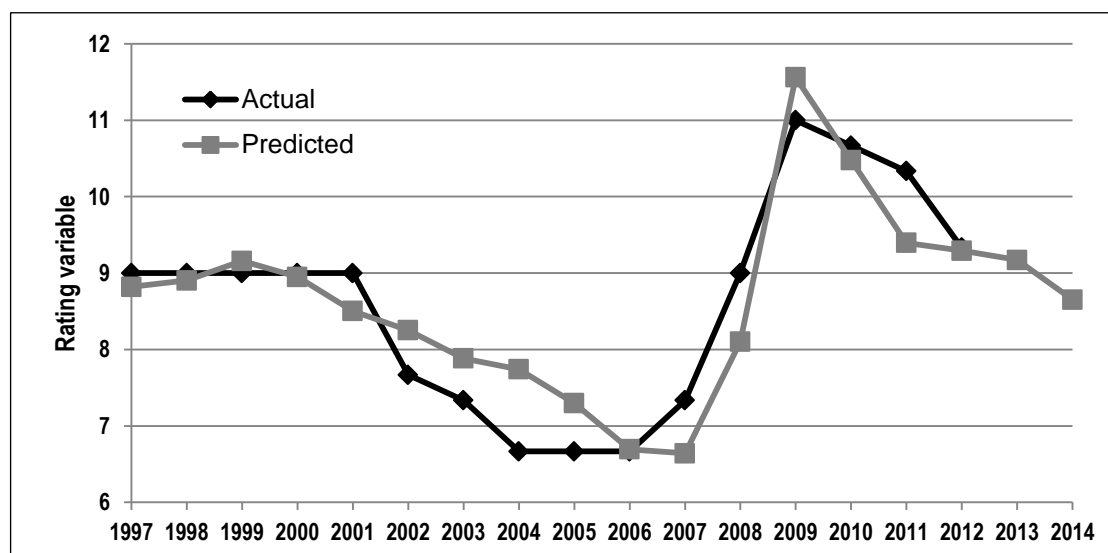
Source: Author's construction

Fig. 2. **Actual vs. Predicted Average Credit Rating of Latvia 1997-2013**

According to the regression equation (3) and data from macro indicator forecasts from the Table 4, predicted average long-term foreign currency rating of Latvia is estimated at 9.17 in 2013 and 8,65 in 2014. The difference of 0.68 rating points between the average credit rating in 2012 and predicted one in 2014 translates into credit rating upgrades by two notches by one rating agency in the next two years. Mathematically, the model predicts a 50% chance of one notch credit rating upgrade in 2013 by one rating agency (i.e. placing the average credit rating close to Baa2/BBB or assigning 9.17 points according to the model) while the rest 50% chance is transferred to 2014. In addition, there is 100% chance of one notch credit rating upgrade in 2014 by one rating agency (~ one rating agency upgrades its credit rating to Baa1/BBB+ while two others leave at Baa2/BBB placing the average credit rating still close to Baa2/BBB or assigning 8.65 points according to the model). Despite both recent and predicted rating improvements, the average long-term credit rating in foreign currency of Latvia by the end of 2014 is forecasted to stay within the lower medium investment grade category.

Conclusions

This study aims to figure out determinants of the Latvia's long-term credit rating in foreign currency assigned by three major agencies: Moody's, Fitch and S&P. According to previous studies, such determinants normally are GDP per capita, external debt as a percentage of exports, real growth rate, fiscal deficit, unemployment rate and the inflation rate.

The initial estimation provided to some extent contradictory results because higher GDP per capita contributed to a weaker credit rating while higher external debt-to-exports ratio improved one. The regression was adjusted to an actual number of (smaller in case of Latvia than for other countries) by choosing only two most important variables and a constant in further analyses. The derived equation with a high explanatory power suggested that these two variables are GDP growth and unemployment. Furthermore, the equation stated that GDP growth of 1% point per year improves an average credit rating

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by 0.086 units of while 1% point increase in unemployment makes an average credit rating worse by 0.236 units. For instance, assuming a natural unemployment level of 5% and GDP growth of 3%, the equation produces a credit rating variable of 6.96, which puts Latvia into an upper investment grade of A3/A-, which Latvia enjoyed from 2004 till 2007.

According to the equation and based on macro forecasts of leading institutions, long-term foreign currency rating of Latvia is predicted to improve by the end of 2014 from currently assigned BBB-/Baa3 (one agency) and BBB/Baa2 (two agencies) to BBB+/Baa1 (one agency) and BBB/Baa2 (two agencies) while still being in the lower medium grade category. Possible Latvia's joining of Eurozone in 2014 can additionally influence the credit ratings, as it can work-out as an accelerator for all macroeconomic indicators, if this event is not already included in banks economic forecasts for the years 2013-2014.

Future analysis could take into consideration the problem of determining factors with an impact on long-term local currency credit ratings of Latvia. The paper focuses only on the regression equation with two macroeconomic variables, which provides the highest explanatory power. However, it is still can be useful to study other regression equations, which demonstrated lower explanatory power in case of Latvia, by testing them on countries with a low two-digit number years of economic track record. Besides, it is worth attempting to elaborate the regression by smoothening input data in a logical way, for instance, by replacing annual ones by average ones for medium term periods (e.g., three year average rolling inflation instead of one year inflation etc.).

The Latvian case is also interesting because all three major credit rating agencies provided sovereign credit rating coverage for already fifteen years. One of the problems for further researches can be studying the difference in the explanatory power of the regression model if only one of credit rating agencies is taken into account and to what extent adding one more agency improves the explanatory power of the model.

Finally, as we collected data on the changes of the Latvia's credit ratings, we can pursue next research regarding the sovereign borrowing costs of Latvia, based on possible credit rating development, after joining to euro-zone.

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REGIONAL DEVELOPMENT AND BUSINESS GROWTH SIMULATION PROGRAM – AN APPROPRIATE TOOL FOR CROSS BORDER REGIONAL ANALYSIS

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Abstract. The theoretical and practical aspects of cross border regional development are presented in the article. The conceptual view of cross border region, regional development, regional disparities are provided. The specifics of measurement the regional development by the index is provided by the stages of index calculation. The empirical analysis of regional development is done by the help of Regional development and business growth simulation program, which was created on the base of the Latvia – Lithuania Cross Border Cooperation Programme 2007-2013 project "Formation of methodological framework of regional business growth promotion (LT-LV)" (project No. LV-LT/1.1/LLIII-152/2010), which was implemented by three partners: Kaunas University of Technology, Klaipeda University and Liepaja University. The specification and wide range of the use of the Program is presented in the article on the example of Klaipeda-Kurzeme cross border region by the 2008-2011 years. The theoretical and empirical analysis proved that the Regional development and business growth simulation program is an appropriate tool for regional economics analysis.

Key words: *cross-border region, regional development, index, simulation program*
JEL code: R110

Introduction

Nowadays as a response to processes of globalization and regional integration, seeking to be economically active, competitive and do not lose own reputation it is significant to invoke all conceivable measures for economical and social stability assurance and business development promotion in regions for so small countries as Lithuania and Latvia in Baltic Sea region and all Europe-wide. In today's economy no one region, especially small country's region, is not autonomous and functions as an integral part of the larger economic system, directly depending on its constituent entities. Therefore, each country and its formative regions are looking for the new niches and unused opportunities for the strengthening of its economic potential and development. However the competitive uniqueness searching itself should not distinguish country from its external neighbours. On the contrary,-the economic and social cooperation of cross-border countries, different countries' inhabitants, entrepreneurs, investors use of neighbouring countries advantages promote more rapid development of the regions, as well as contribute for the

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growing of the whole national economy. Otherwise, the lack of cooperation determines that these regions become economically "distant" for the territories of slower development.

In both foreign and Lithuanian and Latvian authors' research works region and its constituent economic, social and business development is often analysed and evaluated, also are identified the rates determining economic and social development, calculated regional differentiation, attempted to determine causes of regions' economic and social status differences, finding the ways for the cohesion increasing between the regions. However, scientific literature pays more attention for the problem analysis of the same country regions' economic-social development. There is a lack of a more academic approach about regions of different border countries' as one region, problem evaluation of economic-social development. Formation of different countries' border regions as one region, socio-economic development of methodological basis formation complicates social and economic development indicators of two different countries which are often calculated differently in multifarious countries using heterogeneous methods. The absence of methodological measures and guidelines estimating economic-social development of cross-border regions becomes one of the obstacles hindering the development of real cross-border identification of current situation and promising prevision, what prerequisite condition is necessary for decision making, promoting effective development of cross border regions.

In order to solve the lack of methodological measures on cross border regional analysis, the project "Formation of methodological framework of regional business growth promotion (LT-LV)" (Project No. LV-LT/1.1/LLIII-152/2010), was implementing by Kaunas University of Technology also universities of Klaipeda and Liepaja. This project was implemented on the base of the Latvia – Lithuania Cross Border Cooperation Programme 2007-2013 project. During this project these results were achieved:

- The methodology for determining the cross-border regional business growth promotion factors;
- The statistical analysis of Lithuanian-Latvian cross-border regional business growth and applied business growth promotion means;
- The demand for business growth promotion means of business entities in the cross-border regions;
- The Lithuanian-Latvian cross-border regions business growth promotion strategy.

On the base of the above mentioned results and in order to promote regional development, reduce regional disparities not only between the same countries but also between regions of different countries and to create an easily usable and understandable tool, the Regional development and business growth simulation program (hereinafter,-Program) was created.

The aim of research: to present and practically apply the Regional development and business growth simulation program on the example of Latvian-Lithuanian cross-border region.

Research methods: systematic and logical comparative literature analysis, empirical research, performed using systematic analysis of secondary information sources.

Conceptual view of regional development in cross border region

Regional development issues became especially popular among Lithuanian and Latvian scientists when countries joined the European Union and started intensive assimilation of EU Structural Funds support. Regional development problems and aspects were analyzed in Lithuania (Bruneckienė, Palekiene 2012, Bruneckienė, Krušinskas 2011, Baležentis and others 2010, Kilijonienė and others 2010, Kilijonienė, Simanavičienė 2009, 2008, Svetikas, Dzemyda 2009 a, 2009 b, Ginevičius, Podvezko 2009 Snieška, Bruneckienė 2009, Melnikas 2008, Mačys 2005) as in Latvia (Vesperis 2010, Latvian State Regional development agency 2009 Karnitis, Kucinskis 2009, Vanags, Vilka 2006, Vaidere and others 2006, Vanags and others 2005) scientists. In order to analyze the problematic of regional development

and simply use the Program, the main concepts of regional development should be introduced. On the base of these concepts the use of the Program is created.

Scientists of different fields identify border region differently depending on the research aim, but many of them emphasize the territorial unit consisting of two or more countries' territories. Usually the cross-border region is defined as the administrative territorial unit consisting of two or more neighbouring countries territories' which has its own identity and some common historical, cultural and socio-economic characteristics, but the authorities represent the needs of different countries and political-legal rates. This definition of the border region allows appreciate the cross-border region as the integral region of two or more countries.

Different scientists variously named the region development concept, depending on research aim, but mostly of them emphasized changing of social economical dimensions in respect of time. Usually the regional development is named as a viability and attractiveness change of region's economical and social state by quantitative and qualitative aspect. The application of this definition allows evaluate the regions' development as a cyclical process when the result becomes significant input, determining the result. The analysis of regional development and business development relationship determined that there is a direct relationship between these dimensions. Researches indicated (Dumčiuvienė and others 2011) that regional policy aimed to regional development promoting has direct impact for business development in the region: if regional policy is ineffective, the region will lose the economic, social position against other regions and will attract less investment to the region, human capital, new technologies, etc., thereby suspending business development. Thus, the regional development related with business development in accordance with these two following aspects: the competitiveness of the enterprises themselves and conditions to remain competitive in both local and international measure.

As in foreign as in Lithuanian and Latvian authors' researches more often is analysed regional differentiation, attempting to establish appearing reasons of regions social, economical and environmental state differences and disparities, searching the ways for the union increasing between the regions. Different scientists named the regional development disparities differently, depending on the research aim but many of them emphasized the comparative differences of social and economic dimensions. Usually the regions' development disparities are named as a viability and attractiveness change of region's economical and social state by quantitative and qualitative aspect comparing the different regions.

In the scientific literature and in the Strategic European Union and individual countries also in regional documents were accepted that the social-economic disparities must be reduced, - both between the same and between different countries. In their researches (Perkmann 2007, 2005, 2003, Gabbe 2006) emphasize that active economical and social cooperation of different countries' of cross-border regions can be successful measure enable to activate socio-economic life in these regions, which let successful potential use of the cross-border region, transforming this region to growth area centre. In addition, formed cross-border co-operation provides more power and opportunities for local and regional authorities to participate in decision-making processes, creates a new control (multi) level over the entire of all national and European institutional system.

Seeking to promote regional development and reduce regional disparities not only between the same country but also different countries' regions it is necessity of patient and consistent work of government, business and academic institutions, also individual communities', creating cooperation of cross-border regions promoting measures and initiatives. If government authorities or other interested parties will not have the tools or measures how to analyse the economic and social problems of cross-border regions, they will not always can identify them and justify the solution of them. If situation in cross-border region will be not constantly evaluated and analysed, it will raise the danger of the wrong development directions choosing and issues related with them. Also, it will not be possible to compare it in accordance with time change aspect and in this way it will prevent the effectiveness of initiated decisions.

Index calculation stages

Before presenting the areas of the use of the Program, it is important to shortly introduce the algorithm of regional economic analysis by an index. Studies have shown, that in order to examine the problem in a complex way, it is recommended to analyse it in indexes. Mathematicians and statisticians (Giovannini and others (2005), Saisana and others (2005)) defined the index as the combination of mathematical parameters and their groups. Representatives of social groups (Huggins 2003, Wignaraja et al., 2004, Freudenberg (2003)) define a composite index as an artificially made-up instrument of quantitative and qualitative measurement of a particular sphere. The index consists of sub-indicators; hence, the objects under examination can be ranked on the ground of it. It is emphasized that multi-criteria conceptions (e.g. competitiveness, industrialization, coherence, the integration of markets, the development of knowledge society, etc.) are measured by the index most accurately as they cannot be measured by a single index only. By the assistance of the index is pursuing complex evaluating of economical and / or social country's or region's development aspects therefore, according to it interested parties (e.g. economists, politicians, scientists, entrepreneurs and others.) analyse economic environment, economic policy and competitiveness strategy effectiveness, private and public sector activities, competitive strengths and weaknesses, and other information.

The calculation stages of the index are distinguished in figure 1.

1 stage	IDENTIFICATION OF FACTORS AND INDICATORS MEANINGS
2 stage	NORMALIZATION OF INDICATORS' VALUES
3 stage	DETERMINING OF WEIGHT COEFFICIENTS
4 stage	INDEX CALCULATION
5 stage	ROBUSTNESS/ SENSITIVITY ANALYSIS
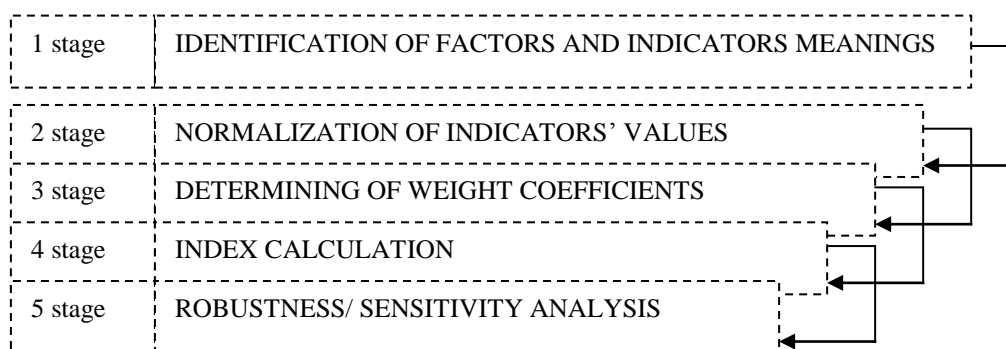
It is very important to have the methodological principles how to analyse the regional economics. For this purpose it is important to identify the factors of regional development, classify them and identify the indicators, presenting them. In the scientific literature are distinguished different models for analysing of countries' economical and business development: M. Porter's the "National Diamond" model, Rugman, D'Cruz and Verbeke "Double Diamond" model, Cho "Nine factors'" model, Martin "Regional competitiveness hats" model, Lengyel "Pyramid model of Regional Competitiveness", De Vet "Regional competitiveness tree" model, Rutkauskas "Harmonious competitiveness of country/region, Gardiner, Martin, Tyler "Pyramids of regional competitiveness", Begg "Labyrinth of regional competitiveness" and others. Although the analysed models are theoretically and empirically reasonable, they are not designated for the analysing of cross-border regions development and can not be directly adapted, especially those, which were created for analysing of large and economically developed countries competitiveness and development evaluation. This proves the importance of the 1 stage in the process of index calculation.

On purpose to assess statistical significance of cross-border economical-social development, it is significant to consider the unified system of indicators. It is emphasized, that the main problem choosing indicators representing cross-border development, – the limited opportunities of official statistical data

receiving (Lithuania and Latvia), and different calculation methods of the same data among the countries. For economical-social and business development evaluation of cross-border region are recommended relative indicators. If relative indicators are not submitted by statistics departments of Lithuania and/or Latvia, it is proposed to calculate them using the primary data of statistics departments. If there is a lack of statistical data for the certain indicators calculation, they should be eliminated from the further research. In case when in one of the countries are impossible to calculate the indicator, this indicator should be rejected in another country too.

Regional development is a complex phenomenon, which is determined by numerous factors, expressed in various indicators and metrics. In order to compare different indicators, their values must be normalized. Although for the index calculation are applied various methods of data normalization, though for the economical-social problems analysing, especially for the regions of the different countries, the most commonly used standard deviation from the average, distance from minimal and maximal meaning and the distance methods from the group leader or average.

Weight coefficients are determined for each factor and their groups promoting regional development. This phase is assigned to the complex one because the index size and rank depend directly on weight coefficients existence, their size and means of coefficients' determination. It is advised to check, how the calculated index and rank vary with the different weight coefficients' determination methods.

The scientific literature analysis reveals that the weight coefficients' determination sources may include:

- Authors' opinion, who have established competitiveness index;
- Social opinion, based on public hearing, various economic researches, conclusions of expert group;
- Strategic plans of development or priorities identified by the government;
- Statistical-mathematical techniques.

At index calculation stage, is formed function of the index calculation and calculating the final result. Although the mathematical expression of the index can have additive or functional expression however it is recommended to express the function by additive expression in business development region.

The value of index and its rank can change, depending on variables, rating and ponderability coefficients granting and calculation methods of the same index. Due to this reason analysis of index reliability is performing in the fifth stage. Researches have showed that the mostly often are used methods of robustness and sensitivity. Saisana and others (2005) stated that the robustness and sensitivity analysis describes index reliability and substantiates clearness of its calculation. Researches have shown that most potential sources of uncertainty include: selection of factors and indicators and combination into the general system methodology, data quality, data rating and methods of ponderability coefficients ranking. For the analysis of index reliability scientists often use the correlation analysis. If there is a strong correlation (between the variables of the same or different groups), then the index is less sensitive for the lack of data or ponderability coefficient fixing problems.

Specification of Regional development and business growth simulation program

This program is the analysis tool of regional economic and social development, which allows to calculate a composite index from the different indicators and to make the statistical reliability analysis of the gained results. The novelty of the program is based on the fact, that:

1. For the first time a programme on economic modelling was created both in Lithuania and Latvia allowing calculating indexes and ranks automatically.
2. The programme allows every researcher to create his/her personal research and basing on it to

perform the economic and social analysis as well as the analysis of business development of the region considering the particularity of the research.

The benefit of the use of the program is based on the fact, that:

1. The programme reflects the means of economic analysis well known in the world (the Competitiveness Index of the World Economic Index; Corruption Perceptions Index of Transparency International)
2. It is convenient to use because the general result (Index) is expressed in one meaning (it is much more convenient than to search for tendencies among many of different indexes) and the results may be ranked.
3. The programme performs a lot of boring calculations for the researcher.
4. The languages of the programme – Lithuanian, English and Latvian; thus excellent conditions for cooperation exist.
5. The programme is associated with Excel – it allows to export and import data and thus facilitate the entry of data and its further analysis.

The wide range of the use of the Program is based on the fact, that:

1. Allows entering unlimited number of regions, periods and indexes;
2. In case of the shortage of the inputted data allows removing the data, to replace by the average or to foresee the missing values;
3. Allows grouping the indexes;
4. Allows rationing the values of the indicators according to 4 different rationing methods;
5. Allows establishing the weight ratios for each indicator and / or their groups.
6. Allows calculating the index of each region and performing ranking according to it following the order of the descending importance.
7. Allows performing the analysis of the received results:
   - Pearson and Kendall correlation analysis of factors;
   - The analysis of the results applying different methods of rationing;
   - The analysis of the results applying different scenarios of the establishment of weight ratios;
   - The analysis of the results applying different indicators.
8. Allows providing the results in tables and diagrams.

The results of practical use of the program are presented further in the article.

Methodology of the analysis of Lithuanian-Latvian cross border region development

In this article the cross border region of Lithuania-Latvia is referred as one region consisting of Klaipeda (Lithuania), and Kurzeme (Latvia) regions. The statistical data of 2008-2011 years will be used in order to measure the development of Klaipeda and Kurzeme regions.

The factors for regional development evaluation in Lithuanian and Latvian cross-border region are grouped into three categories: activity's conditions, demand's conditions and companies competitiveness. The factors characterizing activity's conditions are divided into human and knowledge resources, capital (investment attraction), engineering and social infrastructure. The factors defining demand's conditions are divided into local and external market demand. The factors characterizing companies' competitiveness are distinguished into the companies' productivity, competitive strategy and business

strategy groups. The index of cross-border regional development (CMRDI) is expressed by linear equation:

$$CBRDI = (w_1) AC + (w_2) DC + (w_3) CC \tag{1}$$
$$AC = (w_4) HR + (w_5) KR + (w_6) K + (w_7) ESI \tag{2}$$
$$DC = (w_8) DLM + (w_9) DEM \tag{3}$$
$$CC = (w_{10}) CPS + (w_{11}) BS \tag{4}$$
$$HR = (w_{12}) RM + (w_{13}) RA \tag{5}$$
$$KR = (w_{14}) SE \tag{6}$$
$$K = (w_{15}) IA \tag{7}$$
$$ESI = (w_{16}) EI + (w_{17}) SI \tag{8}$$
$$EI = (w_{18}) TI + (w_{19}) ITT \tag{9}$$
$$SI = (w_{20}) HSS + (w_{21}) CS + (w_{22}) PS \tag{10}$$
$$DLM = (w_{23}) SSLMD + (w_{24}) MW \tag{11}$$
$$DEM = (w_{25}) TA \tag{12}$$
$$CPS = (w_{26}) WPP + (w_{27}) PGDP \tag{13}$$
$$BS = (w_{28}) CEA \tag{14}$$

where:
PRPI – index of cross-border region development;
AC – activity's conditions;
DC – demand's conditions;
CC– competitiveness of companies;
HR – human resources;
KR – knowledge resources;
K – capital;
ESI – Engineering and social infrastructure;
DLM – Demand of the local market;
DEM – Demand of the external market;
CPS – productivity of companies and competitiveness strategies;
BS – business structure;
RM – Number of residents and migration;
RA – structure of residents' age;
SE – Infrastructure of studies and education;
IA – investment attractiveness of the region;
EI – Engineering infrastructure;
SI – Social infrastructure;
TI – transport infrastructure;
ITT – Information Technologies and Telecommunications;
HSS – Health and social security;
CS – culture and sport;
PS – Public security;
SSLMD – Scale and structure of local market demand;
MW – level of material welfare;
TA – tourist attractiveness;
WPP – number of created work places and productivity;
PGDP – part of created GDP;
CEA – abundance of companies and economical activity;
W_i – weight coefficient of i factor.

For the analysis of cross border regional development, 26 indicators, which are available at Lithuania and Latvia, were selected (see table 1).

Table1

The factors and indicators of regional development of Lithuania and Latvia cross-border region

Factor	Indicator, the units of measurement
ACTIVITY'S CONDITIONS	
HUMAN RESOURCES	
Number of residents and migration	Number of residents, persons
	Residents' migration (local and international) balance per 10 000 residents, persons
Age structure of residents	Percentage of working age residents, per cent
	Residents of dependent age (0-14 years)
KNOWLEDGE RESOURCES	
Infrastructure of studies and education	Number of persons pursuing the high education (at Universities and Colleges) per 1000 residents.
CAPITAL (INVESTMENT ATTRACTION)	
Regional investment attraction	Capital investments per 1 person, the monetary unit
ENGINEERING AND SOCIAL INFRASTRUCTURE	
ENGINEERING INFRASTRUCTURE	
Transport infrastructure	The density of the asphalted roads, km/km^2
	The quantity of goods transported by land roads 1 million tones per 1000 residents.
Information technologies and telecommunications	The part of the households having computer, in per cents.
SOCIAL INFRASTRUCTURE	
Health and social security	Number of beds per 10 000 residents, in pieces
	Number of social risk families, per 1000 residents.
Culture and sport	Number of art collectives per 1000 residents
	Number of participants of sport competitions and health events per 1000 residents
Public security	Recorded criminal activities per 100.000 residents.
DEMAND'S CONDITIONS	
DEMAND OF LOCAL MARKET	
Measure and structure of local market demand	The density of residents for 1 km^2 for person.
	Comparative part of city residents, in per cents (urbanization level)
	Average consumption expenditures for a member of household per month, the monetary unit.
Level of material welfare	Gross average monthly wage, the monetary unit in cross-border region.
	Average disposable income for one member of the household per month, the monetary unit.
DEMAND OF EXTERNAL MARKET	
Tourist attraction	Number of accommodated quests in accommodation institutions per 1000 residents.
	Level of hotels occupation in per cents.
COMPETITIVENESS OF COMPANIES	
COMPANIES' PRODUCTIVITY AND COMPETITIVE STRATEGIES	
Number and productivity of created workplaces	Created value-added of 1 employee working in processing industry
	Unemployment level in per cents
The part of created GDP	The relative part of region GDP, from country's GDP in per cents.
BUSINESS STRUCTURE	
Companies' abundance and economical activity	Number of active economy subjects per 1000 residents.
	Number of large companies (250 and more employees) per 100.000 residents.

Because of the space limitation in the article, the wide range of the use of the Program is not able to present in the article. The main results, gained by applying the equal weight coefficients to all factors of regional development and by using the distance from an average method of the normalization, will be presented in the article.

Results of the development analysis of Lithuanian-Latvian cross border region

The Program, according to the method of data normalization and weight coefficients scenarios indicated by research author automatically calculates the index and ranks providing the results in the table and diagram (see Fig. 2).
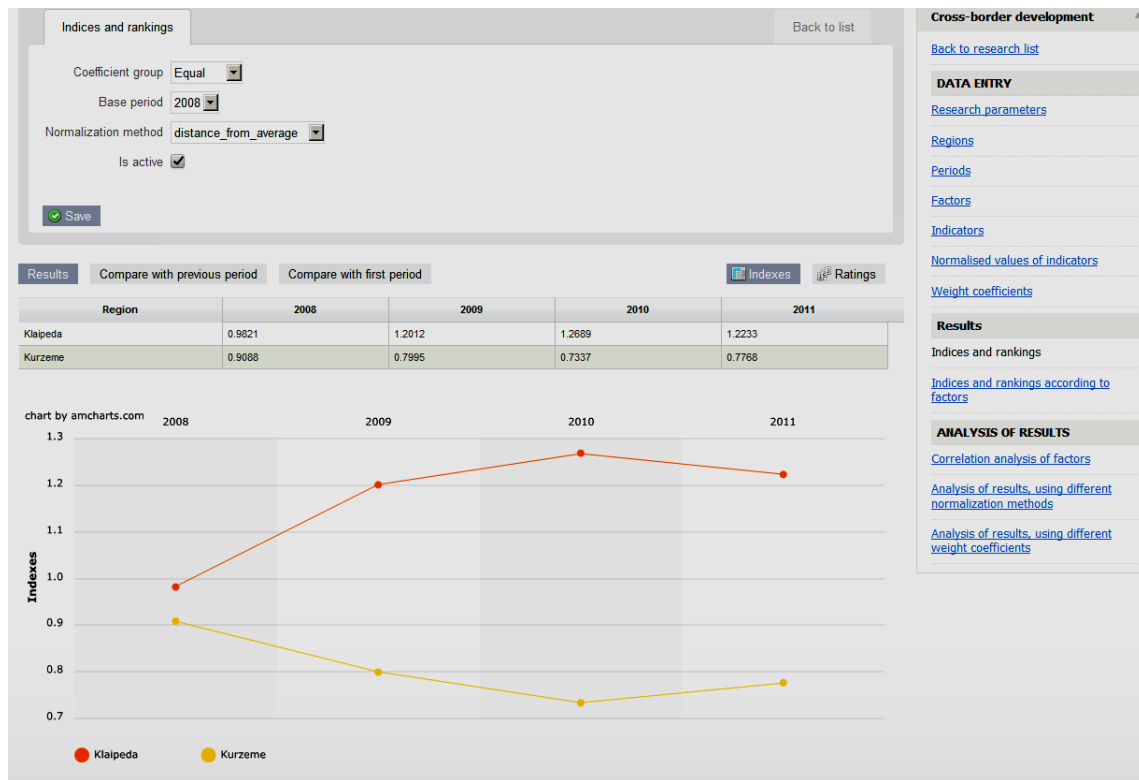
Fig. 2. **The index of cross-border regional development in 2008-2011 years**

The regional development disparities of Klaipeda and Kurzeme shows CMRDI width (see Fig. 2). The biggest difference in cross border region was in 2010. During the analysed period, the lowest regional disparity was in 2008. After the effect of the worldwide economic crisis, the regional disparities started expand. This shows that the cross border region is developed unequally, if we look to that region as whole region.

The Program allows analyse not only the general indexes and ranks, but also indexes and ranks in accordance with individual factors or their groups. The analysis of separate factors let identifying the

strengths and weakness of the region. Main strength of cross-border region is the closeness of the sea. It has a great importance in the development of the region, since it contributes the economic cooperation with other countries. The favourable location ensures a transportation corridor for both Europe and CIS country cargo and passenger flows, and it is attractive for domestic and foreign tourists. All transport types are represented in cross-border region. The export of native origin goods in the cross-border region concludes the bigger part of the region's GDP, than at an average in both countries. The main weaknesses of cross-border region are decreasing density of population and negative change of population quantity. Despite of similar location, political and socio-economical situation of Klaipeda and Kurzeme region, both frontier areas have the differences, too. Main differences are in infrastructure; such characteristics are strengths for Klaipeda region and weaknesses for Kurzeme region: quality of roads, situation in seaports and airport. Differences are in development tendencies; strengths for Klaipeda region are increased disposable income and increasing monthly (gross) wages, direct foreign investments for one inhabitant, which increased more than at an average; increased tourists flow and decreased amount of social risk families. Strengths for Kurzeme region are decreased criminality and sufficient set of social services.

Seeking to analyse the relationship between the strength of the factors, the program automatically calculates correlation coefficients of Pearson and Kendall and provides them in the correlation matrix (see Figure 3).
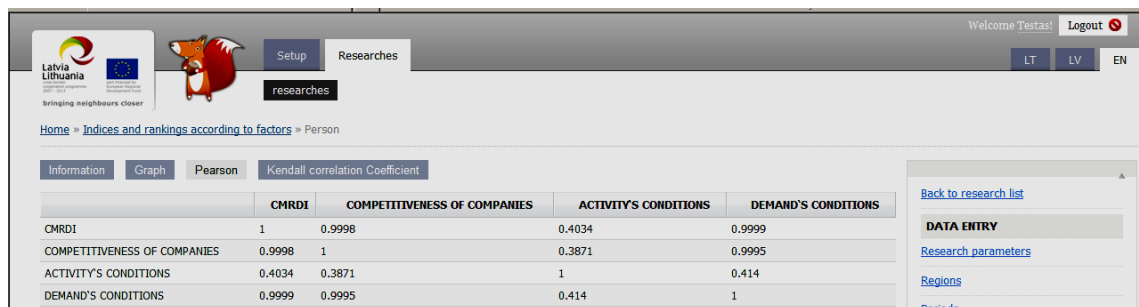
Fig. 2. **The Pearson correlation coefficients of factors groups.**

The Program doesn't calculate the statistical reliability of calculations and this should be done in other programs, such as Excel or SPSS. From the gained results we can see, that the competitiveness of companies and the demand condition have biggest influence on development of Klaipeda and Kurzeme cross border region.

The program allows detailed relationship analysis of individual factors or their groups, choosing corresponding region, period, data normalization method and ponderability coefficients scenarios and indicating variables for Pearson and Kendall correlation coefficients. It is identified, that the number of residents and migration, transport infrastructure, level of material welfare, tourist attraction and number and productivity of created workplaces have the biggest influence on the development of Klaipeda and Kurzeme cross border region. This information is useful for strategic planning and identification of priorities of cross border regional development.

The program also allows analyse and compare results obtained by different methods of data normalization applying or determining different weight coefficients scenarios. This type analysis of reciprocal results allows make conclusion for the research author about sensitivity of obtained results from selected index calculation method. The analysis proved, that determining of weight coefficients have more impact on the results of regional development analysis than data normalization method.

Jurgita Bruņeckiene, Lilita Ābele

Conclusions, proposals, recommendations

1. Regional development cannot be completely defined by one or several indicators, thus complex measurement of development is a must. The researches proved that the measurement by an index helps to solve the problem of a complex measurement of regional development.
2. It is suggested to calculate the index via the following stages: Identification of factors and indicators meanings; Normalization of indicators' values; Determining of weight coefficients; Index calculation and Robustness/ sensitivity analysis.
3. Empirical application of the Program proved that it is appropriate means for analysis of regional development, strategic planning, information and advertisement of a region.
4. The empirical analysis of cross border regional development index showed, that Klaipeda-Kurzeme region is not equally developed. The biggest regional disparity was in 2010.
5. The empirical analysis let to identify the priorities of Klaipeda-Kurzeme cross border regional development:
   - Increasing of initiative and business activities. It is an engine of economics` activity in cross-border region.
   - Sufficient qualitative and quantitative amount of human resources. Entrepreneurs have increasing need in work force; local demand (consumption) should be increased, too.
   - Infrastructure and accessibility. Cross-border region territories and business offers should be accessible and easily exploitable.
   - Increasing of external demand, promoting cross-border tourism attraction. Local businesses should develop competitive tourism directions and tourism products.
   - Cross-border region economic cooperation should be improved in priority in the sphere of promoting business growth and tourism development.
6. The Program as an analysis tool can be useful for:
   - Ministries and municipalities responsible for equal development of the country's regions;
   - Companies and organizations analysing and assessing the development of Lithuania's and Latvia's regions and business sector;
   - Students and scientists analysing the economy of regions and the strategic planning of regions.
7. The Program is only the tool for analysis of economic and social development. It can help for researcher, economist or politician to identify the main problem of regional development, to justify the problem solving solution and analyse effectiveness of its implementation. It is expected that created methodological basis will contribute to business development, economical and social cooperation promoting and social-economical development between cross-border region of Lithuania and Latvia and other regions.

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THE POSSIBILITIES OF INCREASING THE COMPETITIVENESS IN HEALTH CARE INDUSTRY

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Abstract. The main indicators of the health care industry in Latvia do not show competitive results in comparing with other European countries. What kind of indicators are important in evaluating health care industry's development and market structure, what are the causes and effects, this is essential theme. Topical is to do research on how the theory research of competitiveness in combining with a health care industry's analysis research can indicate the possibilities of increasing the competitiveness in health care industry in Latvia.

Aim of the research is by doing the research of competitiveness theoretical aspects and health care industry's analysis to indicate the possibilities of increasing the competitiveness in health care industry in Latvia.

In order to achieve the research aim, qualitative and quantitative research methods are used. The competition environment of private health care sector is researched. The research base constitutes of private health care companies of Latvia that provide with ambulatory services.

Main results and findings show the necessity of change in health care industry by focusing on the value for patients. The main health care industry's indicators of Latvia are below the average of European countries. Latvian private health care companies are taking into consideration only few main indicators influencing the company's competitiveness, but it is important to evaluate factors which are significant for patients. These conditions require companies to think about continuous improvements and development. Private health care companies in Latvia do not have united standards with criteria indicating how to recognize the better services and how to compare them.

Key words: *competitiveness, companies, strategy, health care, market structure*

JEL code: I110, L190

Introduction

One of the government responsibilities is to provide its inhabitants with available health care services, but the financial fund for health care services per one inhabitant in Latvia is one of the smallest in European Union and this does not stimulate the development of the health care industry of Latvia.

In the framework of current health care budget, the state is able to provide health care services, covered by state funding, in a limited amount despite the structural reforms in industry when optimization events occurred. So the health care system in Latvia does not work effectively enough and is not so

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patient centric as it used to be. One part of patients have no choice as to pay for health care services by themselves. According to this, private health care sector has a significant role.

The main indicators of the health care industry in Latvia do not show competitive results in comparing with other European countries. What kind of indicators are important in evaluating health care industry's development and market structure, what are the causes and effects, this is essential theme.

Topical is to do research on how the theory research of competitiveness and health care company strategy in combining with a health care industry's analysis research can indicate the possibilities of increasing the competitiveness in health care industry in Latvia.

During recent years, the demand for private health care services in Latvia has not been growing because of the decreased population and low solvency. The number of health care companies has increased in the result of hospital restructuring and changes in system so that the patients have been redistributed among the companies.

Aim of the research is by doing the research of competitiveness theoretical aspects and health care industry's analysis to indicate the possibilities of increasing the competitiveness in health care industry in Latvia.

In order to achieve the research aim, qualitative and quantitative research methods are used. The competition environment of private health care sector is researched.

In order to analyse the competitiveness and health care industry of Latvia different author works and institution data are researched. The novelty of the theme is to look at factors which are important for patients.

The private health care companies are dealing with difficulties because of too dynamic changes in environment when they are not able to balance their capabilities with change in insufficient demand. This all increases the competition for private health care companies and they need to tailor to this changing environment and should think strategically smarter to compete in a longer run. The focus on patient's needs and factors that are more valuable for patients can be also a key to competitiveness improvements.

Competitiveness in health care industry

In order to be competitive in the market, the factors influencing competitiveness should be analysed and the company which is able to balance its capabilities in the market can be more competitive. Competition promotes new solutions, values. Every private health care company is involved in competition environment, some are more, some less, but the approaches that companies use to be better in the market and be more competitive are different. Health care organizations started to use strategic management concepts only for the past 25 to 30 years (Swayne, Duncan, Ginter, 2006) and lots of the methods adopted by health care companies were developed in the business sector.

The competition fundamentally is a mechanism (Oļevskis, 2007) that transforms the seller and buyer's chaotic interaction into an arranged process and determines productivity of commercial activity. Competition also puts companies to work for products and services at better price. Competitiveness can be defined as an ability to compete in a certain market, ability to compete for beneficial conditions. Patient's choice can be an important contribution to company's competitive advantage.

According to authors (Fornaciari, Callens, 2012) the competition rules can maximise the consumer welfare by promoting efficient use of resource. As well as promoting high output, low price, different services, high quality, innovation etc.

Health is an important investment and driver for development, and important results of the development. Investment in healthcare is crucial to successful development of modern societies (World Health Organization, 2011).

Through measuring financial, human and technical resources (European Commission, 2011), the healthcare providers can combine these data with managerial choices, it is possible to assess and measure the performance of healthcare providers and the whole system.

The authors (Does, Niemeijer, Heuvel, 2013) indicate that health care quality performance indicators are inadequate to inform the public to make the right choices in Netherlands. This shows the importance of the health care questions globally.

Globally the health care industry systems are not very successful because of the increasing costs in the industry. The speed of information turnover and social network channels has created an environment where patient knows more about health care processes and has a wider choice of health care providers. This emphasizes the patient's centric role in the composition of health care industry's competition environment.

The authors (Porter, Teisberg, 2006) in United States of America have came to fact that in order to reform the health care, the competition in the field itself needs to be reformed first. In order to reform the competition, first of all the strategies should be transformed, pricing approaches and measurement practises. They have also shown that value based competition in health care industry has a significant impact, because improves the value to customers.

The core aim of the new European health policy (World Health Organization, 2011) – Health 2020 – is to promote and strengthen the innovative ways of working across the sector and agency boundaries for health and well-being. The leading professor of competitive strategy Michael E. Porter and Professor Elizabeth O. Teisberg have stressed the importance of value based competition and value of health care delivered.

In 21st century medical technology is often delivered with 19th century organization structures (Porter M. E., 2011), management practices, there should be taken into account that creating positive-sum competition on value is integral to health care reform in every country.

The recent findings show that despite the fact that health level is improving globally; there still are relevant inequalities between the regions. This indicates the incompleteness in health care systems and inefficient use of the available resources and knowledge. Health care system ought to be adjusted to the changing environment, the increasing uncertainty, the social and demographic factors, as well as to changes in the value system.

Power and authority in health care is not concentrated in the hand of government alone (World Health Organization, 2011), because health is the responsibility of the whole society and all market players who have a critical role in governance for health.

The future trend shows (OECD, 2011) that the extent to which public spending on health may be affected will depend on the relative priority allocated to health and demonstrated benefits in terms of better health outcomes, there will be growing pressures on health institutions and health care providers to demonstrate efficiency how the resources are allocated and spent.

Further, the activities of private health care companies that contribute significantly to the health care system are more reflected, because they are adding value by measuring the progress of their activity, by investing in technologies, by implementing innovation, by improving their efficiency, patient satisfaction level, and overall performance through competing for better position in the market. This may lead to improvements of health care system and well-being.

In the situation when the available resources for company growth and development are limited, health care companies should try to use their limited resources in a more efficient way. That is why managers should try to find new and better ways of analysing their company and to come to solutions. However, measuring the performance is a complex process, not only in the health care system, but also in a health care company. Patient is not only the company's contribution but also the result of this process. One of the ways to provide benefits to patient's health is through focusing on values that are important for patients.

The entrance and exit of the Latvian health care market is not completely free due to special knowledge, education, training, specialized licence. The demand in health care industry in general can be described as inflexible, because a patient does not have a very wide spectrum of choice for the price level. Furthermore, in the case of health problems there usually are no alternative solutions or substitute services in health care, because not all health care companies can provide the necessary type of service. There will be always question how worthy is the health and appropriate health care service.

According to Global Competitiveness index 2012-2013 (World Economic Forum, 2012), based on its 4th pillar Health and Primary education, Latvia is ranked as 48th among 144 economies by infant mortality, deaths / 1 000 live births, but according to life expectancy Latvia is ranked as 70th. These figures indicate the necessity of improvements in health care. According to Euro Health Consumer index 2012 (Health Consumer Powerhouse, 2012) according to special indicators in each 5 sub-discipline category: patient rights and information, waiting time for treatment, outcomes, range and reach of services, and pharmaceuticals, Latvia is ranked as the 31st among 34 countries. The results can be evaluated negatively because in this list only Romania, Bulgaria and Serbia have worse results. The results show that there is not sufficient orientation towards satisfaction of patient's needs. In comparison Lithuania and Estonia rank respectively the 26th and 18th. These figures do not indicate that Latvian health care industry is strong in comparison with other countries.

The Figure 1. shows the weight of human health and social work gross domestic product of Latvia, as it can be seen the human health and social work gross domestic weight has decreasing tendency from the period of 1995 to 2011 which can be explained with the government priorities, structural reforms, budget and other related factors.
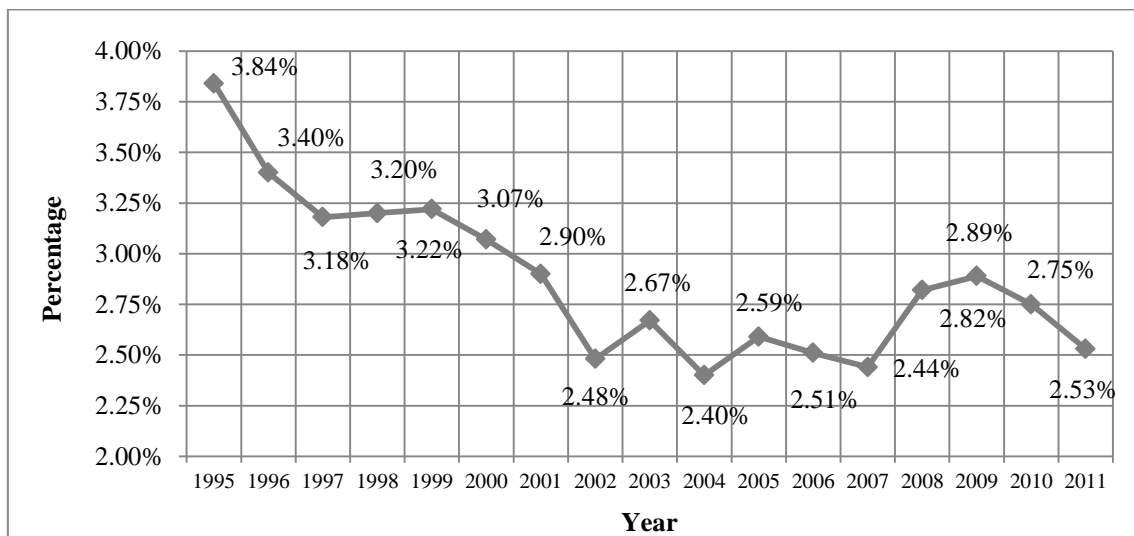
Source: author's calculation based on GDP data at current prices of Central Statistical Bureau of Latvia

Fig. 1. **Gross Domestic Product of Human Health and Social Work at Current Prices
in Latvia from 1995-2011, Weight in %**

The number of health care institutions providing outpatient services in Latvia has increasing tendency and this also reflects the private health care sector development. The situation is reflected in Figure 2.
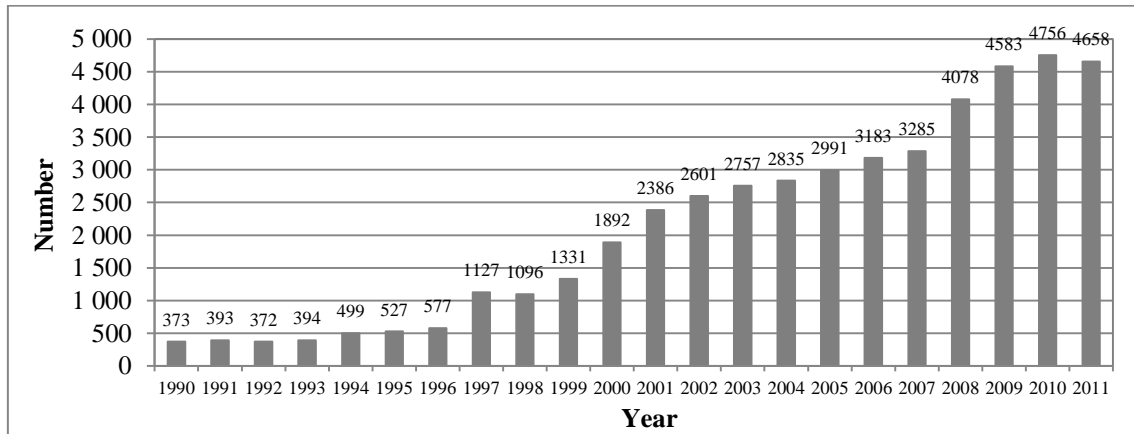
Source: author's construction based on data of Central Statistical Bureau of Latvia

Fig. 2. **The Number of Health Care Institutions Providing Outpatient Services –
Total in Latvia from the 1990-2011**

The number of hospitals in Latvia during the years of 1990-2011 has decreasing tendency due to structural reforms in health care industry. The results can be viewed in Figure 3.
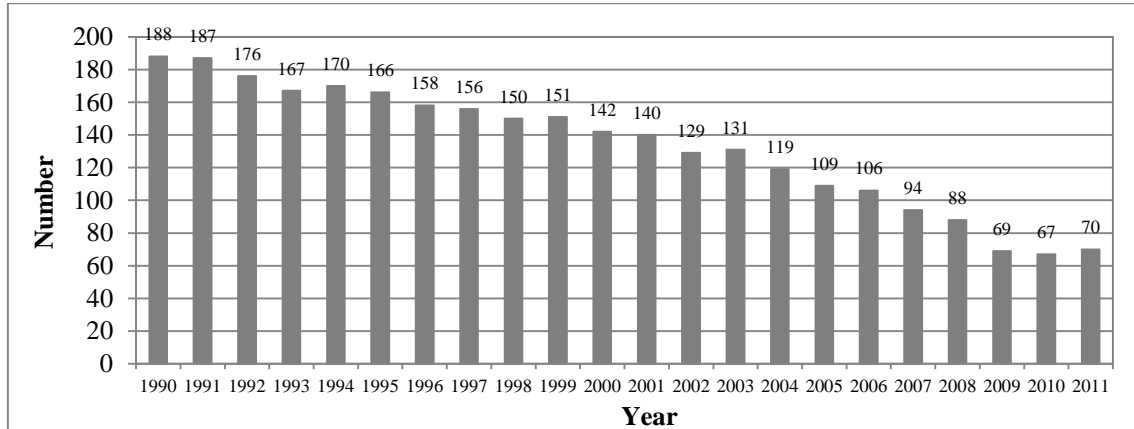
Source: author's construction based on data of Central Statistical Bureau of Latvia

Fig. 3. **The Number of Hospitals in Latvia from the 1990-2011**

According to Pearson Correlation coefficient there is close relationship between the number of hospitals in Figure 3 and the number of health care institutions providing outpatient services – total in Figure 2, because the correlation coefficient between them is minus 0.979982154 at a close range to minus 1, which means negative correlation when increase in one variable results in decrease in another variable. This allows to make conclusion that the number of health care institutions providing outpatient services increased due to hospital restructuring in Latvia and this also developed the private health care company sector in Latvia. As a result the competition in private health care sector intensified and this has influenced the whole competition environment of health care industry in Latvia.

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As a result, it can be concluded that the development stage of Latvian health care system falls behind the average development of health systems in other European countries. The growth rate is slow in the industry and health care service availability is not provided in the highest quality in the whole country. Although, it should be also mentioned that while using the limited funding that health care has in Latvia in comparison with other European countries, the health care industry operates positively.

The author came to conclusion that factors that influence health care industry are related with economic situation effects, the number of competitors, the influence on price policy, patient solvency, patients' information level about health care providers, services.

In conclusion, level of development in health care industry in Latvia cannot be evaluated positively, but increase of the competition pressure has indicated improvement and this shows perspective in health care sector in the future.

In order to find out the important factors influencing competitiveness from the perspective of private health care company's patient, the survey has been carried out. The aim was to find out factors what are more important in choosing the private health care company from the patient point of view.

The majority of patients evaluate the private health care sector competition in Latvia as intensive 26% and moderately intensive 32%, however 23% of the respondents reply that in their opinion, there is no intensive competition. This can be explained by subjective factors, because patients are interested in more intensive competition due to possible competition benefits provided. 19% have no idea about the competition intensity.

The results of Figure 4. reflect what are those factors that allow making conclusions about the competition level in industry. The most often marked factor is various campaigns for patients. The second most answered factor is price level and the third is quality. Those respondents who answered that in health care industry the competition is intensive also think that new types of services in the industry can be a factor that influences the competition.
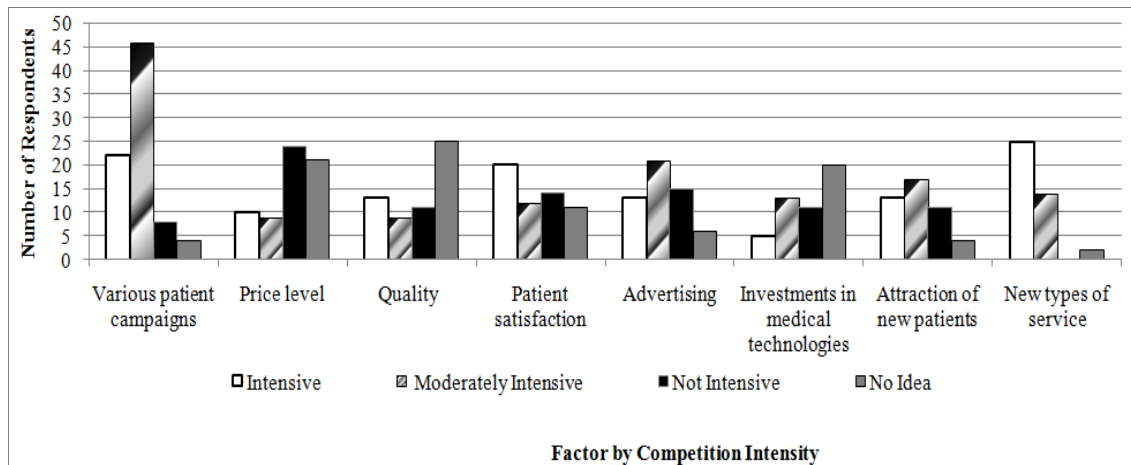
Source: author's calculations based on survey data by the author

Fig. 4. **Factors Influencing Private Health Care Industry's Competition Level in Latvia
from the Patient Point of View**

When categorizing factors in four groups, the survey results, reflected in Table 1, disclose that the first priority from the patient point of view in evaluating financial factors is for profitability ratios, the second priority to net turnover, from internal organization patients mostly appreciate medical equipment and technical support and interest in providing qualitative service. The priority from personnel learning and

growth is for personnel educational level and precise identification of patient's problem, but as the second priority is availability of health care services.

Table 1

The Most Important Factors of Competitiveness Divided by the Balanced Scorecard Group

Group	First Priority	Second Priority
Financial	Profitability ratios	Net turnover
Internal Organization	Medical equipment and technical support	Interest to provide qualitative health care service for patient
Personnel Learning and Growth	Personnel education, qualification level	Investments in staff training and development
Customer Relationship	Precise identification of patients' problems	Availability of health care services

Source: author's calculations based on survey data by the author

Finally, by focusing on factors which are significant for patients, the health care companies can increase their competitiveness due to better value giving for patients and this can lead to higher competitiveness of the health care industry.

Conclusions, proposals, recommendations

1. The necessity of change in health care industry is needed. The focus should be on the value for patients, for instance, their needs, factors that are important for them in order to improve their health.
2. The speed of information turnover and social network channels have created an environment where patient knows more about the health care processes and has a wider choice of health care providers. These are aspects that intensified the competition between the market players.
3. The Latvian health care industry's indicators do not show very competitive results in comparison with other European countries.
4. The number of health care institutions providing outpatient services in Latvia increased due to hospital restructuring in Latvia and this also developed the private health care company sector in Latvia. As a result the competition in private health care sector intensified and this has influenced the whole competition environment of health care industry in Latvia.
5. Important factors influencing health care company's competitiveness are related with precise identification of patients' problems, availability of health care services, personnel education, qualification level, investments in staff training and development, medical equipment and technical support, interest to provide qualitative health care service for patient, profitability ratios, net turnover according to patient point of view.
6. Health care companies should regularly carry out surveys about factors which are significant for patients in order to find out aspects that are important for patients.
7. It is recommended for health care companies to evaluate factors which are significant for patients and focus on them. This can increase the patient flow to health care company as well the competitiveness of the health care company and lead to higher competitiveness of the health care industry.
8. Through concentrating to factors which are more important for patients also the criteria's of how to recognize the better services and how to compare them can be pointed out. These criteria can be used when evaluating health care providers.

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The research results of Latvian health care industry's patients' surveys carried out by the author of the paper.

IMPLEMENTATION OF "EUROPE 2020" STRATEGY EMPLOYMENT TARGETS IN LATVIA AND EU COUNTRIES

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Abstract. European Council adopted Europe 2020 Strategy in 2010 taking into consideration long-term challenges. The Strategy that will transforms EU and ensures high employment level, productivity and social cohesion in EU. The strategy towards smart, sustainable and inclusive growth is way to improve countries productivity and competitiveness. Objectives of the strategy are expressed in five targets and one of them is employment target. The aim of the paper is to analyse "Europe 2020" strategy employment targets in the EU-27 has to reach by 2020, as well as, national employment target of Latvia. In the given research such methods as the analysis of the literature and advanced papers in the field of employment in EU were used. Reflecting the "Europe 2020" strategy, core focus is on jobs. Assessment of challenges under the Employment Policy Guidelines and progress towards the EU headline and national employment rate targets compare to current and projected 2020 rates. In the result of this research key indicators of labour market performance in Latvia have been compared with EU countries.

Key words: *employment, employment targets, "EU 2020" strategy*

JEL code: E2, E6

Introduction

Macroeconomic questions have changed over the years and have usually been motivated by a concern to understand the actual economic problems. One of the goals of economic policy is to achieve full employment. High unemployment rates are a major economic and social problem to achieve full employment. The questions are: what determines the level of employment and unemployment? What actions governments take to increase employment and smooth out fluctuations in unemployment? What are objectives of EU for the current decade? What are main measures envisaged to reach employment target?

The aim of the paper is explore "Europe 2020"stategy employment target let out progress and challenges in Latvia and EU countries. To reach the aim, analysis of special literature and statistical data on employment and unemployment indicators and national employment rate targets compare to current and projected 2020 rates in Latvia and EU countries. Part I is dedicated to employment rate target at EU level. Part II contains the analysis of employment and unemployment trends in Latvia and EU countries. The paper investigates impacts of the crisis on employment. Part III takes up different labour market policies to enhance job creation.

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1. Employment rate targets

The "Europe 2020"strategy adopted by the European council on 17 June 2010 is the common agenda for EU countries to improve competitiveness and productivity. The key objectives are expressed in five targets at the EU level. Progress towards the five targets is monitored by means of eight indicators and three sub indicators.

Reflecting the core focus of the Europe 2020 strategy on jobs, the European council adopted a headline target for the employment rate of the population aged 20-64 to increase to at least 75%, including through the greater involvement of women, older workers and the better integration of migrants in the work force.

The quantitative objective set by Latvia in the context of implementing the EU 2020 strategy is to reach an employment rate of 73% in the age group of 20-64 by 2020. Table 1 presents national employment targets in EU countries, as defined in the National Reform Programs. 12 of EU countries set the goal < 75%, 5 – 75% and 9 > 75%. Average employment rate target is EU 73.7-74.0% and EU-17 average is 73.8-74.2%.

Table 1

National employment rate targets

< 75%	75%	> 75%
BE (73.2), EL (70), ES (74), IE (69-71), IT (67-69), LT (72.8), LU (73), LV (73), MT (62.9), PL (71), RO (70), SK (72)	CZ, FR, HU, PT, SI UK n.a.	AT (77-78), BG (76), CY (75-77), DE (77), DK (80), EE (76), FI (78), NL (80), SE (>80)

Source: author's construction based on European Commission, 2012

Table 2 shows employment rate aged 20-64 from 2008 to 2012 in EU countries. Denmark. Estonia, Cyprus, Latvia, the Netherlands, Austria, Finland and Sweden had employment rate above EU target 75% in 2008.

The economic crisis had an effect on employment. Compared to 2010 the EU employment rate did not increase in 2012 and stood at 68.5%, which is still significantly below the pre-crisis level of 70.3%. As only marginal increases are expected for 2013 and 2014 reaching the Europe 2020 target will require considerable effort. This means that the employment rate will have to increase by over 6 percentage points in order to reach the target of 75%.

Differences between EU countries are large – 2008 Malta had the lowest employment rate 59.1% and Sweden the highest at 80.4%. In 2011 Greece had the lowest employment rate at 59.9% and Sweden the highest at 79.4%. The same situation in 2012: Greece had the lowest employment rate at 55.3% and Sweden the highest at 79.4%. Latvia had 75.8% in 2008 and 66.3% in 2011 and 68.2% in 2012 (Table 2).

Austria, Denmark, Germany, the Netherlands and Sweden has employment rate above the EU target of 75% in 2011 and in 2012. The highest distant from national target is in Hungary 12.9 percentage points and Greece and Spain (both – 14.7 percentage points). Germany is 0.3 percentage points below its national target in 2012. According to European Commission estimated average annual 2011-2020 employment growth necessary to reach national target: EU average 0.8%, EU-27 average 0.9%, EA-17 average 0.7% and Latvia – 2%. Taking into account data of 2012 the author's estimates shows that Latvia to reach the national target (73%) will need an average annual employment rate growth by 0.6 percentage point till 2020. But to reach EU average target (75%) – 0.85 percentage point.

Table 2

Employment rate aged 20 to 64 in EU (%)

	2008	**2009**	**2010**	**2011**	**2012**
Austria (AT)	75.1	74.7	74.9	75.2	75.6
Belgium (BE)	68.0	47.1	67.6	67.3	67.2
Bulgaria (BG)	70.7	68.8	65.4	62.9	63.0
Czech Republic (CZ)	72.4	70.9	70.4	70.9	71.5
Cyprus (CY)	76.5	75.7	75.4	73.4	70.2
Denmark (DK)	79.7	77.5	75.8	75.7	75.4
Estonia (EE)	77.0	69.9	66.7	70.4	72.1
Finland (FI)	75.8	73.5	73.0	73.8	74.0
France (FR)	70.4	69.4	69.2	69.2	69.3
Germany (DE)	74.0	74.2	74.9	76.3	76.7
Greece (EL)	66.5	65.8	64.0	59.9	55.3
Hungary (HU)	61.9	60.5	60.4	60.7	62.1
Ireland (IE)	72.3	67.1	65.0	63.8	63.7
Italy (IT)	63.0	61.7	61.1	61.2	61.0
Latvia (LV)	**75.8**	**67.1**	**65.0**	**66.3**	**68.2**
Lithuania (LV)	72.0	67.2	64.4	67.0	68.7
Luxembourg (LU)	68.8	70.4	70.7	70.1	71.4
Malta (MT)	59.1	58.8	60.1	61.5	63.1
Netherlands (NL)	78.9	78.8	76.8	77.0	77.2
Poland (PL)	65.0	64.9	64.6	64.8	64.7
Portugal (PT)	73.1	71.2	70.5	69.1	66.5
Romania (RO)	64.4	63.5	63.3	62.8	63.8
Slovak Republic (SK)	68.8	66.4	64.6	65.1	65.1
Slovenia (SI)	73.0	71.9	70.3	68.4	68.3
Spain (ES)	68.3	63.7	62.5	61.6	59.3
Sweden (SE)	80.4	78.3	78.7	79.4	79.4
United Kingdom (UK)	75.2	73.9	73.6	73.6	74.2
European Union	**70.3**	**69.0**	**68.6**	**68.6**	**68.5**

Source: Eurostat, Employment rate, by sex, 2013

EU must increase its overall employment rate: the employment rate is particularly low for women (62.3% against 75% for men aged 20-64 in 2011) and older workers, aged 55-64 (47.4% against 60% in the US and 65% in Japan).

In a long-term progress on EU employment target depend on economic growth and macroeconomic policies, especially suitable labour market policies.

2. Employment and unemployment trends

Fluctuations in employment follow closely the fluctuations in real GDP. Labour market conditions in the EU have worsened continuously, reflecting the deterioration in the overall economic situation and the heightened uncertainty. Since the second half of 2011, growth of the European Union in general and the

euro zone in particular has been weak (Figure 1). The EU economy continues to struggle with the post-financial crisis correction.
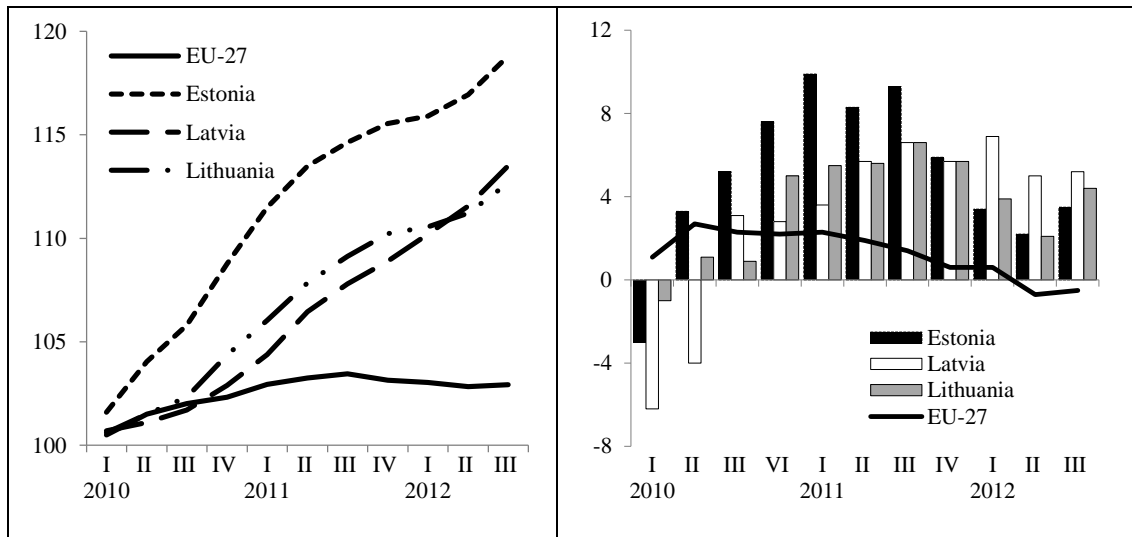
Seasonally adjusted data, 4th quarter of 2009 = 100   Against the respective period of the previous year, %

Source: Ministry of Economics of Latvia, Economic Development of Latvia, December 2012, page 17

Fig. 1. **GDP Dynamics by Quarters in Baltic countries and Latvia**

Despite the weak economic growth in the EU, the economy of Latvia, Estonia and Lithuania kept growing rather fast in 2011-2012.

The situation in the labour market in Latvia has been improved within a year along with the increasing economic activities. The number of employed increased by 2.8% in 2012 compared to 2011. At the same time, the unemployment rate dropped by 1.3 percentage points constituting on average 14.9% in 2012. The situation in the labour market in Latvia is expected to continue improving also in the next years; moreover, improvements will be explicitly observed in terms of wages and job opportunities. At the same time, considering the expected weak economic growth in the European Union recovery in Latvia is going to be moderate.

The response of employment to growth has been quite uneven across EU countries in correspondence to different economic structures and policy settings. The highest increase in employment growth (Figure 2) was in Estonia and decrease in Greece in 2011. In 2011, the number of employed in EU average has increased by 0.2%. Employment expansion lost pace in the second half of 2011.

Employment expanded at moderate pace in manufacturing and more strongly in wholesale and retail trade (European Commission, 2012, 35 p.).

In the line with weak economic activity in 2012 employment decreased by 0.1%.

The recent labour market trends are partly the result of cyclical movements, and notably of the deep economic crisis, but they are also due to structural and institutional labour market challenges affecting economic activity and the performance of labour markets. For example, consistently implemented economic policy in the previous years has fostered improvement of macroeconomic situation and as result it contributes positively to the growth and employment in Latvia.
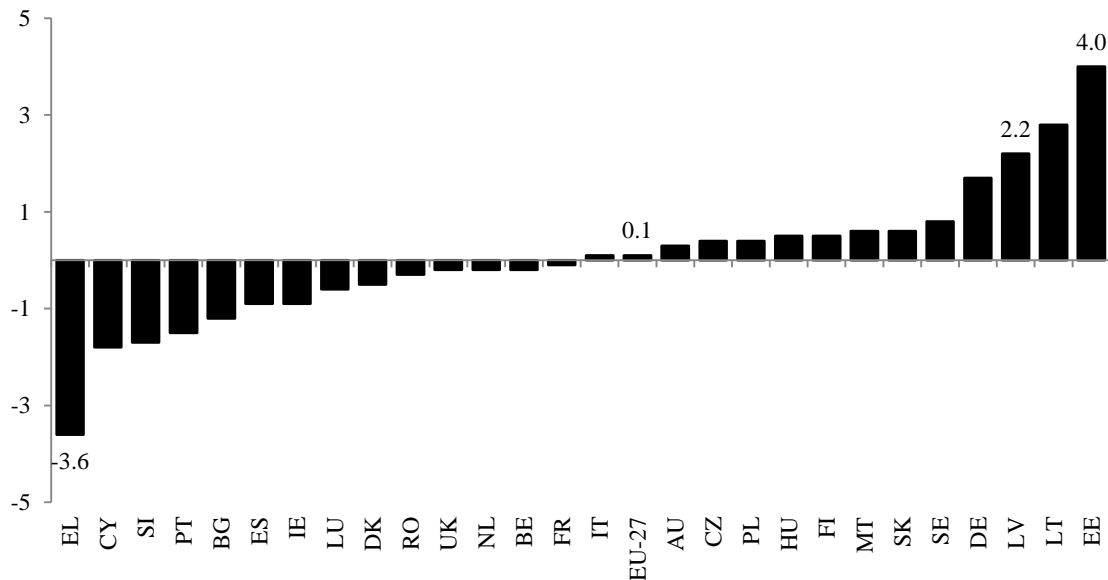
Source: Eurostat

Fig. 2. **Changes in employment growth in EU in 2011 (percentage points)**

When employment falls, the unemployment rises. There are four major flows between labour market states:

- Employed workers become unemployed by voluntary quitting or being laid off;
- Unemployed workers obtain employment by being newly hired or being recalled to a job from which they were temporarily laid off;
- Those in the labour force, whether employed or unemployed, can leave the labour force by retiring or otherwise deciding against taking or seeking work for pay (dropped out);
- Those who never worked or looked for a job expand the labour force by newly entering t, while those who have dropped out do so by re-entering the labour force (Ehrenberg Ronald G., Smith Robert S., 1988).

Labour market turnover presents flows into and out of unemployment, and between jobs.

Unemployment moves with the business cycle. Some factors that determine cyclical unemployment are: migration and demographics, minimum wages, growth characteristics of different sectors of the economy, unemployment insurance, importance of trade unions, labour taxes (high tax rates may also give a boost to the underground economy) and etc.

Examine the international experience with episodes of severe banking crisis to identify empirical similarities, Carmen M. Reinhart in the article "The Economic and Fiscal Consequences of Financial Crises" (2009) some of findings (about employment, unemployment and output) could be summarized as following:

- There are profound declines in output and employment;
- The unemployment rate rises an average of 7 percentage points over the down phase of the cycle, which lasts four years on average;
- Real GDP per capita falls (from peak to trough) an average of more than 9%, and the duration of downturn averages roughly two years.

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Schumpeter in the article "The great mismatch" analysing youth unemployment and gap between education and employment, said that McKinsey argues "A big part of the problem is that educators and employers operate in parallel universes – and that a big part of the solution lies to bring these two parts together: obliging educators to step into employers' shoes and employers into educators', and students to move between the two." Education can at least help to deal with an absurd mismatch that has saddled the world no just with a shortage of jobs but a shortage of skills as well (The Economist, December 8, 2012).

The EU labour market have been characterised during the 2008-2009 recession and after recession. During 2008-2009 job creation was inefficient to offset the losses in employment, as a result high unemployment.

The current weakening in the labour market is result of worsening economic activity linked the aggregation of crisis. In some countries debt crisis required a resolute fiscal adjustment, which had an impact on employment and output. Tightening the fiscal condition linked to the ongoing delivering process compounded the impact of the debt crisis. Growing share of employment is on the temporary contracts.

The distribution of employment between permanent (73.4%), temporary (12.0%) and self-employment (14.6%) differs considerable across EU in 2011, with Mediterranean countries as well as Poland characterized by strong segmentation. At EU level share of permanent employment was almost unchanged in 2011, but relative strong increase took place in Romania and Portugal, as share of self-employed decreased. Distribution of employment between was such: permanent (83.9%), temporary (5.8%) and self-employment (10.3%) in Latvia in 2011 (European Commission, 2012, p. 31).

Unemployment data record high differences between EU countries. It was growing since 2008. In 2011 high unemployment rates in Baltic countries started falling. The unemployment divergence is partly the result of differences in developments in economic activity and partly the outcome of different responses of unemployed to growth. The reduction in unemployment related with stabilizing financial markets (fiscal consolidation) in Baltic countries (Figure 3).
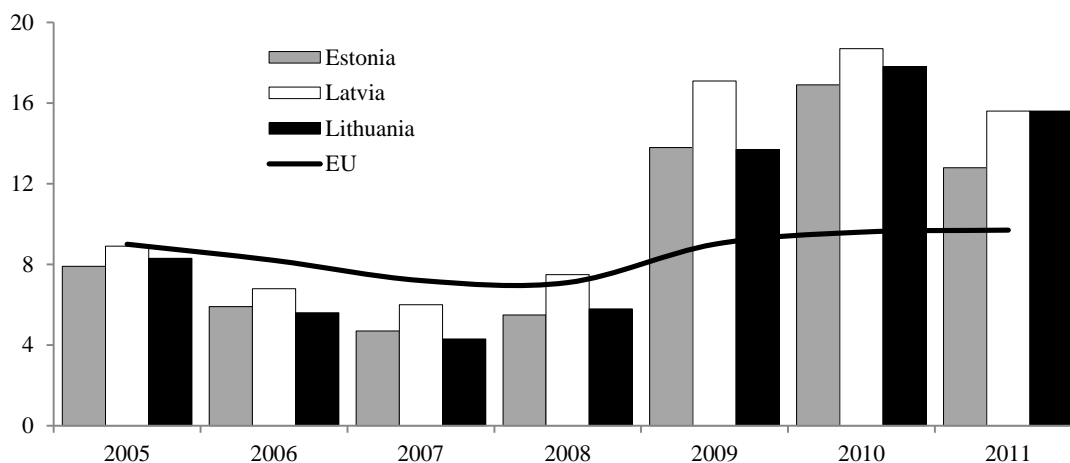
Source: Eurostat

Fig. 3. **Unemployment rate in Baltic countries and EU, age group 15-74
(% of age group 15-74 years)**

Four years after the absence financial crisis job finding rates remains low in most EU countries. Duration of unemployment has been in the most EU countries; the highest increase was in Ireland, Estonia, Latvia, Lithuania, Slovakia and Spain.

The economic crisis is having an exceptionally severe impact on young people. Youth unemployment rates for those aged 15-24 increased dramatically in Greece, Portugal, and Spain and remained high in Baltic countries. 7.5 million Europeans aged 15-24 are neither in employment nor in education or training. Youth unemployment rate varied from 7.6% (the Netherlands) to 46.4% (Spain) in 2011.

Why unemployment is so high? The question is about unemployment nature – whether it is mostly structural or cyclical? Structural unemployment means that there is mismatch between skills demanded and skills available in the labour market. Its level is determined both by institutional factors and fiscal measures (unemployment benefits, tax rates). Empirically the structural unemployment rate cannot be observed (structural unemployment rate has to be estimated). Cyclical unemployment suggests that the major constraint for creating new jobs is lack of demand.

The evidence indicates that unemployment becomes increasingly structural. The "Beveridge curve" for the euro area has clearly been shifting outward since 2010. According to 2012 data, structural unemployment rates above EU average were in Spain, Latvia, Ireland, Portugal, Lithuania, Slovakia, Estonia, Bulgaria, Hungary and France. Austria, the Netherlands, Luxembourg and Denmark have significantly lower structural unemployment rate, close to actual (European Commission, 2012, p. 5).

3. Labour market policies to enhance job creation

Labour market policies include:
- Labour market participation;
- Job creation;
- Labour market functioning, combating segmentation;
- Active labour market policies;
- Adequate and employment oriented social security system.

Table 3 shows policy direction to reach the objective, which are planed on labour demand side and labour supply side in Latvia.

In order to facilitate real progress towards the overall national targets, it is necessary to focus on the most vulnerable labour market groups. Job retraining, incentives to improve mobility or tax incentives are possible measures to reduce unemployment and increase employment.

While passive labour market policies are aimed at providing income support to the unemployed, as active labour market policies aim at improving employability of job seeker. The majority of policy instruments were intended to increase employability, improve the matching process and facilitate labour market transactions, reinforcing activating and supporting employment by cutting labour cost.

Starting from 2010, the need to address long-term labour market weakness and large imbalances in a number of EU countries, led to the rapid phasing-out of crisis-related measures and to an intense structural reform activity. Reform intensity in the field of unemployment and other welfare-related benefits was overall stable over the period 2008-2011. Activation and job-search assistance policies have remained one of the most widely used policies to fight unemployment. New strategies and action plans have been desired to improve matching, by focusing on reinforced individual support and an early activation (Finland, France, Spain, Portugal, Denmark, Ireland, Sweden, Luxembourg), especially of the young and long-term unemployed. A wide range measures have been adopted to enhance the training offer (Greece, Lithuania, Sweden, Spain, Latvia, Luxembourg, Bulgaria, Estonia, Denmark, Ireland, Belgium and Germany) (European Commission, 2012, p. 50).

Table 3

Policy directions to reach the objective in Latvia

For improving labour supply	For improving labour demand
Active labour market and lifelong learning policy measures which correspond to the situation in the labour market and flexible to implement.	Structural reforms in goods and services market.
Improvement of quality of work environment, development of normative framework of legal relationships in the labour market and labour protection.	Improvement of business environment.
Timely identification of labour market needs.	
Reduction of undeclared employment.	
Promotion of self-employment and business.	
Improvement of social infrastructure and care services and increase availability of thereof.	
Reforms in educational system.	

Source: author's construction based on Ministry of Economics, 2010, p. 79

In particular, the youth unemployed are a policy concern. According to European Commission assessment Member States, in particular those with the highest youth unemployment rates should take decisive measures in the following four main areas (European Commission, 2011, pp. 7-8):

- Preventing early-school leaving;
- Developing skills that are relevant to the labour market;
- Supporting a first work experience and on-the-job training;
- Access to the labour market: getting a (first) job.

The primary responsibility for tackling youth unemployment lies with Member States, including at regional and local levels. Their authorities finance education and social programmes and have the policy levers and the budget to support youth employment schemes. The EU level can play a supportive role in helping Member States to improve the employment and educational situation of young people in two ways:

- By reviewing national policies and performances, highlighting priorities from an EU perspective and suggesting lines for action based on good practices;
- By providing financial support to national and cross-border action in line with agreed priorities: this is done by a variety of programmes, notably the European Social Fund and other EU programmes such as the Lifelong Learning Programme, Youth in Action. Other EU funds such as the European Regional Development Fund, the European Agricultural Rural Development Fund, the European Fisheries Fund or the European Fund for the Integration of third-country nationals also support measures helping to tackle youth unemployment (European Commission, 2011, p. 6).

The Commission adopted the Youth Employment Package on 5 December 2012. It includes a proposal for a Council Recommendation on Establishing a Youth Guarantee, launches a second-stage social partner consultation on a Quality Framework on Traineeships, announces a European Alliance for Apprenticeships and outlines ways to reduce obstacles to mobility for young people.

To tackle the problem, Latvia is already implementing the following measures targeted at young unemployed:

- Wage subsidies for young people;
- Profession trials (young unemployed can try out 3 professions which could help them to choose a profession;
- Support for unemployed youth participating in voluntary work;

Additionally, young people can participate in measures targeted to all the unemployed (professional and general training, professional consultations, career guidance, training at the request of the employer, business start-ups, public works etc.) implemented by the Latvian State Employment Agency.

Latvia implements several measures to reduce early school leaving, such as pedagogical correction programme, tracking and monitoring systems. One of the new instruments in Latvia is development of career education system and revision of the existing system. Development and implementation of flexible education programmes by providing the opportunity to acquire labour market demanded qualifications in a short period of time is other instrument to increase employment level. Job search assistance are being developed in order to improve matching of unemployed individuals to vacant jobs and select most appropriate support measures for individuals.

The situation in EU identifies reduction of structural unemployment risk and ensuring better matching in the labour market as one of the key macro-structural bottlenecks for growth and jobs. Therefore, the emphasis of policy making is more than ever on structural measures supporting labour market adjustment and enchasing growth and competitiveness to achieve target set in Europe 2020 strategy.

Conclusions

1. The economic crisis had an effect on employment. Compared to 2010 the EU employment rate did not increase in 2012 and stood at 68.5%, which is still significantly below the pre-crisis level of 70.3%. This means that the employment rate will have to increase by over 6 percentage points in order to reach the target of 75%.
2. There are large differences among the factors that affect different response of EU labour markets to the crisis. Differences between EU countries are large: in 2012 Greece had the lowest employment rate at 55.3% (aged 20-64) and Sweden had the highest at 79.4%. Latvia had 75.8% in 2008 and 66.3% in 2011 and 68.2% in 2012.
3. Employment rate depends on changes in labour market and unemployment rate and causes of unemployment. According to 2012 data, structural unemployment rates above EU average were in Spain, Latvia, Ireland, Portugal, Lithuania, Slovakia, Estonia, Bulgaria, Hungary and France. Youth unemployment rates increased dramatically in Greece, Portugal, and Spain and remained high in Baltic countries.
4. According to national targets and in order to make real progress towards the common goal it is necessary to focus on enchasing growth and competitiveness and addressing most vulnerable labour market groups: young people, older workers.
5. In light of the much differentiated labour market conditions across Europe, the policy response needs to be differentiated and coordinated.
6. The emphasis of policy making is more than ever on structural measures supporting labour market adjustment and enchasing growth and competitiveness to achieve target set in Europe 2020 strategy.

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DRINKING WATER QUALITY MANAGEMENT IN LATVIA: INTEGRATIVE AND ADAPTIVE APPROACH

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Abstract. The paper aims to develop a drinking water quality management model in country comprising integrative and adaptive management principles. A large part of problems are connected with institutional structure, including the dispersed drinking water quality supervision system, inadequate overall coordination of functions and responsibilities, insufficient capacity of institutions, lack of regularity in drinking water quality supervision. Another problem group is related to communication and collaboration issues: insufficient collaboration between target groups in different levels, inadequate way of information. The current research is based on sociological research methods: interviews and questionnaires involving respondents from principal target groups: state institutions, water management enterprises, municipalities, experts and population. The contribution of integrated approach leads to the management model, which involves: drinking water protection, water safety, public health and local planning issues. Accordingly, the adaptive approach leads to operative and flexible decisions and solutions, more effective planning, efficient provision of water resource infrastructure, learning from shortcomings and indicating a need for overall environmental assessments and research, as well as, comprehensive environmental communication. The adaptive water management has an important role for water-based infrastructure systems development, especially in rural municipalities.

Key words: *drinking water management, integrative management, adaptive management*

JEL code: Q25

Introduction

Drinking water safety framework

Freshwater resources for drinking water supply are nature resources, which have an important role for public health, environmental quality, economical development and ecosystems health. Drinking water safety is an important issue; that depends on water escalating abstraction, increasing pollution and urgency of various kind of security risks (Status Report.., 2008).

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The Word Health Organization (WHO) Guidelines outline a preventive management for "framework for safe drinking water" that comprises the following principal components:

- health based targets consequent on an evaluation of health concerns;
- water supply system assessment for the whole water supply cycle: from the catchment and its source through treatment to the point of consumption;
- operational monitoring of the control measures in the drinking water supply;
- management plans regarding to system assessment, monitoring and actions to be taken (Guidelines for.., 2011).

Drinking water safety should be ensured by development of institutional framework, where:

- a competent coordinating national level authority provide a framework of health based targets and legislation,
- water management institutions ensure the operation of properly managed water supply systems comprising adequate infrastructure, regular water quality control, operational monitoring and good operating practice and
- supervision institution who is responsible for external surveillance through periodic audit of all aspects of safety (Foster, 2012; The Bonn Charter.., 2004).

The most effective means for providing the safety of a drinking water supply are comprehensive risk assessment and risk management approaches that comprises all steps in water supply from catchment to consumer − such approaches have been applied in Water safety plans (WSP). There are following principal components to any WSP:

- a supply system assessment ensuring the supplying water meets regulatory targets;
- provision of operational monitoring and control measures, identification of risks in a drinking water system;
- management plans, which describe actions taken during various operational conditions and define monitoring and communication plans (Guidelines for.., 2011).

In most countries, the national body responsible for the supervison of drinking-water supply is the Ministry of Health (or public health) and its regional or departmental offices. In some countries, it may be an environmental protection agency; in others, the environmental health departments of local government.

Applied management approaches

Water resource management have been expressed in various dimensions, striving improvement in nature environment, economic efficiency and social equity. Therefore the application of various environmental management approaches in drinking water supply sector are issues which attracted attention (Engle et al, 2011; Pahl-Wostl et al, 2007).

For the past two decades integrated approaches to water management have been developed and are being implemented. Integrated water resource management involves: integration of various aims and the corresponding products/results (economic effectivity, social justice, ecological protection), integration of all water resources (surface, ground waters, eastures), multi users – a variety of water use (Integrated water.., 2000).

Current approaches to realizing integrated water management build on a command and control paradigm that has been dominating the water management community for decades. Such a paradigm requires that system behavior be highly predictable (Engle et al, 2011; Pahl-Wostl, 2007a). The increasing awareness of the complexity of water quality and safety problems has encouraged the development of new management approaches based on the insight that there is increasing rate of complexity and more

unpredictable issues in water management (Kwasniak, 2010; Pahl-Wostl, 2007). Rogers (Rogers et al, 2003) stressed the need for more flexible governance systems and to take uncertainty into account. Rees (Rees, 2002) addresses the need for new strategies to manage risks in integrated water resource management and emphasizes the need to consider economic, social, and political uncertainties, which are often of more importance than environmental uncertainties. Adaptive management could be defined as a systematic process for improving management policies and practices by learning from the outcomes of management strategies that have already been implemented (Armitage, 2005; Tyler, 2008).

Complex social-ecological systems cannot be predicted and controlled, and a more adaptive approach is required; various researchers focused to adaptive management approach taking into account wide range of processes in ecological, economic, and socio-political dimensions (Pahl-Wostl, 2002; Stankey et al, 2005). The comprehensive research of the combination of management frameworks had been done is the NeWater project (New Approaches..), which underscores the need for both: adaptive and integrated water resources management (Pahl-Wostl et al, 2007). Adaptive management promotes flexible decision making that can be adjusted in the face of various uncertainties. The best known type of uncertainty is a lack of knowledge due to the limited availability and the variability of data in water management. Another type of uncertainties relates to socioeconomic issues and human behavior (diferent stakeholder perceptions and understanding about caused problems and appropriate solutions) (Lee, 1999; Williams, 2011).

Adaptive capacity is a principal term, which refers to the ability of social or ecological system to adapt to change and respond to impacts (Armitage, 2005); in most cases in water management adaptive capacity describes the social and institutional relationships and extent in which social stakeholders are able to avoid current management problems.

The following adaptive capacity aspects could characterize some water management problem solutions: actors must be able to process the necessary information and draw meaningful conclusions and they must combine different types of knowledge's (Armitage, 2005; Lee, 1999). The level of communication and cooperation that is required to manage the current information for adaptive management indicates that different stakeholders first of all need to maintain a commitment to the learning process (Williams, 2011).

The current problems in drinking water management requires, that improved groundwater management and protection needs to be multidisciplinary and strongly participatory (Foster et al, 2012). Besides, according the well known strategic principles (Dublin Principles,1992) „water development and management should be based on a participatory approach involving users, planners and policy makers at all levels". Therefore in a socio-institutional context adaptive capacity depends on individuals and institutions that could fasten learning process. In that sense Community based natural resource management (CBNRM) performance have been recognized as a principal driving force for adaptive capacity. In last years CBNRM performance model have been applied to management issues, which demonstrated the performance of communities or community based institutions in nature resource management sectors, including water management (Armitage, 2005; Gruber, 2010).

Abovementioned literature review confirms that although integrative water management have benefits, this approach have also some shortcomings. In these respects, the earlier – integrative water management regimes were not sufficiently adaptive. Therefore only relatively recently the adaptive management approach became a major player in water resources management (Pahl-Wostl et al, 2007; Stankey et al, 2005).

Last years most researchers concluded on the growing trend to combine integrated and adaptive approaches into single framework, as well as, that IWRM is fully compatible with adaptive management considering about the necessary preconditions for such framework (Engle et al, 2011).

Research methodology

The current research is based on literature studies and sociological research methods. Literature studies contained analysis of academic publications composing theoretical framework, publications regarding the best practices in water management, as well as, strategic and legal documents. Sociological research included deep interviews and questionnaires. 23 respondents had been involved in deep interviews represented principal target groups: state institutions (Ministry of Health, Ministry of Environment and regional development, Ministry of Agriculture, Health inspectorate of Latvia, Food and veterinary service of Latvia, The State Environmental Service), municipalities, water management enterprises and experts. The specialists from water management enterprises and municipalities (totally 102 persons) and inhabitants from town and rural municipalities (totally 471 persons) had been involved in questionnaires (Muceniece, 2011; Ozola, 2011).

Research results and discussion

Questionnaires involving the specialists from water management enterprises and municipalities (totally 102 persons) indicated the recognized drinking water management problems, which could be allocated in state and municipality levels; respectively in external and local scopes.

The main drinking water management problems at state level (external scope):
- insufficient state support for investments (227 grades in 3 grade system);
- insufficient public awareness on drinking water quality and pollution risks (215);
- insufficient research/ survey in water management in state level (204);
- insufficient feasibility studies for technical and economic substantiation (202);
- lack of strategic aims regarding water management in national level documents (200);
- overlarge centralization of supervision and control (198);
- ineffective and uncoordinated operation of state institutions regarding water quality supervision issues (195);
- insufficient attention to Water protection in another policies (186);
- shortcomings in policy of water service tarifs (180);
- shortcomings in single legal acts (179) (Muceniece, 2011; Ozola, 2011).

The main drinking water management problems at rural municipality level (local scope):
- out of date water supply technical equipment, mostly in rural municipalities (264);
- insufficient available finance resources for water management at municipality level (263);
- use of out of date technologies for water quality ensuring (220);
- lack of strategic approach in local planning (193);
- shortcomings in fixing of water service tarifs (188);
- lack of necessary competence in water supply enterprises (187);
- insufficient assessment of water resources in municipalities (169);
- insufficient water protection of water supply wells (166);
- insufficient information about water resource quality for population (163);
- shortcomings in administrative management (151) (Muceniece, 2011; Ozola, 2011).

Population from town and rural municipalities involved in questionnaires confirmed that 33% are satisfied with drinking water quality in tape, 44% – partly satisfied and 23% – did not satisfied. The most important reasons for disaffection were water taste (42%) and sediments (38%), as well as water color (10%) and odor (7%). The point is, that a large part of population (45%) is not informed about drinking

water supervision system issues in country; 37% of population are satisfied with current system, but 13% are not satisfied.

Deep interviews involving state institutions, municipalities, water management enterprises and eksperts confirmed that most popular drinking water quality problems cover the insufficient water quality according to legal requirements, insufficient corrective actions, noncompliance of protective zone requirements, lack of necessary prevention measures. Therefore a principal step for drinking water supervision development could be scheduled in future the implementation of Water safety plans, which includes risk assessment and planning of adequate monitoring actions. Questionnaires indicated about low awareness on planned implementation of water safety plans in country: only 18% from specialists in water management enterprises and municipalities had been informed about that. A minor part of them recognized water safety plans as a benefit for public health (43%), as a tool for better information for population (41%) and a tool for better water supply inspection (26%). It should be pointed that water management enterprises and municipalities awake their role in the planned implementation of water safety plans.

Drinking water quality management system comprises the following principal target grups:
a) institutions for water supply – water supply systems (WSS),
b) water users (food enterprises and population),
c) supervision institutions (inspectorates, services) and
d) coordinating institutions on national level (corresponding ministries).

There are more than 1300 water supply systems in Latvia comprising drinking water to population from small rural territories till cities. The practical activities of WSS in the area of technical provision and monitoring very depend of enterprise scale and capacity; the support of more powerful municipalities often ensure the successful preconditions for water enterprise development.

Supervision institutions ensure control for the whole water supply systems and food enterprises according sanitary inspection requirements. Health inspectorate of Latvia and Food and veterinary service of Latvia are two principal supervision institutions in country, which are responsible on regular controls and complaint reviews, are acting according elaborated specific monitoring programmes and are elaborating corresponding regular surveys/ reports about drinking water supervision issues.

The point is, that Health inspectorate of Latvia and Food and veterinary service of Latvia have different subordinations: for first supervisory authority is Ministry of Health, but for for second one – Ministry of Agriculture. Besides, different distribution of responsibilities take place on national level:

• Ministry of Agriculture is responsible on Food turnover (including prepacked drinking water issues) and on implementation of EU Drinking water Directive (due to responsibilieties on food issues),
• Ministry of Health is responsible on drinking water supply to consumer (on water abstraction source protection and on consumer tape, provision of drinking water harmlessness), but the
• Ministry of Environment and regional development is responsible on water resource abstraction, drinking water treatment according legal requirements, realization of drinking water technical supply to consumer. Besides, Ministry of Environment and regional development on policy level is responsible on overall Water resource management policy (Muceniece, 2011).

Respondents from principal target groups (state institutions, municipalities, water management enterprises and experts) involved in deep interviews confirmed that there is lack of regularity in drinking water quality supervision. A need for responsible body (institution) for coordination of water quality and safety issues in state level have been recognized. The major part of respondents (15 from 23) stated that the Ministry of Environment and regional development could be the main coordinator of drinking water quality supervision system in country, 5 respondents indicated Ministry of Health, but 3 respondents indicated both ministries.

Results of interviews gave evidence that there is a lack of effective collaboration and communication activities between supervision system institutions. Insufficient collaboration among different institutions had been recognized as one of main shortcomings in emergency situations; that lead to impermissible slow operations for identification of pollution spill source. State institutions in drinking water supervision system have no principal cooperation with science and research institutions. The contribution of scientific potential have not assessed yet (Muceniece, 2011; Ozola, 2011).

Sociological research using questionnaires confirmed a principal role of various environmental communication issues in drinking water quality management. Such environmental communication issues, as participation of public, enterprises and NGO, environmental awareness of consumers had been evaluated as unsaticfactory. It should be noted that the horizontal communication between supervision institutions should be more active ensuring the necessary water quality information flow (Muceniece, 2011; Ozola, 2011).

Proposals and recommendations

The drinking water quality management model have been proposed, based on sociological research and literature analysis. The model comprises:
   a) institutional structure including the principal institutions and their responsibilities,
   b) applied management approaches featuring the essence of management model and
   c) main actions – directions regarding to principal target groups.

Institutional structure

Drinking water quality supervision system is based on existing institutions, improving supervision system by following necessary functions and responsibilities *(Muceniece, 2011).*
- formation of one supervision coordination institution ensuring more effective and coherent action of all involved institutions and drinking water supervision from water abstraction till consumer, taking into account the existing political responsibility and public health strategic statements; here could be two options:
   a) Ministry of Environment and regional development could fullfil coordination functions, because institutes under the supervision of mentioned Ministry are directly responsible on various important executive operations at municipality level;
   b) both Ministries – Ministry of Environment and regional development and Ministry of Health are forming Coordinating Council, but this option requires very close collaboration between Ministries.
- implementation of Water safety plans, ensuring prevention oriented supervision, selfassessment, incl. risk assessment, planning of adequate monitoring actions;
- implementation of a new tool: drinking water data base, thus facilitating drinking water related information flow between various institutions (Health inspectorate of Latvia, Environment, Geology and Meteorology Centre, water enterprises and municipalities); such data base could ensure the direct input of corresponding drinking water information from information source/ institution, as well as, application of data for corresponding information user;
- strengthening of collaboration between supervising institutions, putting emphasis to horizontal communication.

Applied management approaches

The integrated water management approach should ensure the regularity of drinking water quality supervision system. The contribution of integrated approach leads to the management model with:
- integration of various aims, concerning water resource protection, water safety, public health, local planning issues, because drinking water quality and safety aspects should be integrated into territorial planning and building conditions documents;
- integration of drinking water information necessary for different institutions into drinking water data base; that should lead to better data availability to interested stakeholders (Muceniece, 2011; Ozola, 2011).

The implementation of adaptive management approach into drinking water quality supervision system leads to more operative and flexible decisions and solutions, more effective planning, efficient provision of water resource infrastructure, learning from shortcomings and indicating a need for overall environmental assessments and research, as well as, comprehensive environmental communication. The adaptive water management has an important role for water-based infrastructure systems development, especially in rural municipalities, where the current problems have a complex character and the role of operative and flexible decisions are important (Ozola, 2011).

Adaptive management requires a certain adaptive capacity of principal target groups. For supervision institutions, including Health inspectorate of Latvia, adaptive capacity includes ability to ensure drinking water supervision from water abstraction till consumer, provision of regular controls and complaint reviews, corresponding monitoring programms. For drinking water supplyers adaptive capacity includes first of all ability to ensure water quality selfcontrol within all water supply steps and strengthening of institutional capasity. Finally, potential for development of water supply technical equipment and corresponding investment attraction, realization of feasibility studies and public information about current water management issues also creates adaptive capacity for water supply enterprises.

A lot of depends from municipality capacity and that is a key issue in rural municipalities, where the current problems are related to low institutional capacity, out of date water supply infrastructure. Therefore adaptive capacity building in rural municipalities should develop necessary strategic planning, investment attraction, implementation of new technologies, maintenance of drinking water supply system (Muceniece, 2011; Ozola, 2011).

Main actions

The elaborated proposals for drinking water quality development comprise actions for various target groups: state institutions, municipalities, water supply enteprises, population. There is a need for necessary fundamental improvements in various drinking water quality management issues and proposed actions represent various environmental policy instruments. Part of these actions do not require a principal contributions/ investments, for example for service quality improvement, supervision of tarif treatment and actions. But there are another type of activities, which require a principal contributions/ investments, for example, drinking water quality control and monitoring, technology development (Muceniece, 2011; Ozola, 2011).

Actions for state institutions include:
- more specific definition of strategic aims regarding water management in state level documents (planning instruments);
- elaboration of guidelines for implementation of Water safety plans (planning instruments);
- formation of responsible body (ministry) for coordination of water quality and safety issues in state level ensuring the systemic and integrated vision (institutional instruments);

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- strengthening of survey and research for implementation of new technologies and water quality prevention measures (technological instruments);
- improvement of elaboration of water service tarifs (economic instruments);
- development of environmental awareness rasing campaigns about drinking water quality, strengthening of active participation of all stakeholders in drinking water quality development (communication instruments).

Actions for municipalities include:
- strengthening of strategic planning at municipality level (planning instruments);
- capacity development for municipality specialists (institutional instruments);
- survey and assessment of water wells at municipality teritory (control instruments);
- development for successful project proposals and investment attraction (finance instruments);
- strengthening of public information about current water management issues (communication instruments).

Actions for water supply enteprises include:
- implementation of Water safety plans (legal instruments);
- strengthening of institutional capacity, incl. consolidation forming larger enterprises (institutional instruments);
- strengthening of water quality selfcontrol (control instruments);
- development of feasibility studies in collaboration with water management experts (research instruments);
- improvement of water supply technical equipment (technological instruments);
- strengthening of public information about current water management issues (communication instruments).

Actions for population include:
- more active participation in decision making in water management area (communication instruments);
- higher environmental awareness, environmental sound behaviour (environmental education instruments);
- maintanance of private water wells and water supply equipments (environmental education instruments).

Conclusions

1. Formation of responsible body (ministry) for coordination of the whole drinking water quality management system at national level should ensure more effective and coherent actions of all involved institutions and could lead to more systemic and integrated vision.
2. The implementation of two new tools: Water safety plans and comprehensive drinking water data base should give a principal contribution to development of drinking water quality management system ensuring a water quality risk assessment, prevention oriented supervision and selfassessment, as well as, comprehensive drinking water related information flow and better data availability to all interested stakeholders.
3. Implementation of both: adaptive and integrative management approaches could provide a better flexibility and operativeness for drinking water quality management system at national level.

4. Adaptive capacity development issues for all principal target groups form the ability to ensure drinking water comprehensive supervision, regular control, development of institutional capacity and investment attraction.

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IMPACT OF CAPITAL STRUCTURE ON PROFITABILITY:
A STUDY OF LISTED COMPANIES IN THE BALTIC COUNTRIES

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Abstract. Capital structure is of particular importance in estimating the value of a company; an accurately estimated and selected equity and debt ratios can maximise company value and minimise the cost of capital; therefore, this issue is especially significant in the changing conditions of economic development. Profitability ratios show the ability of the company to generate profit and these ratios are used by the company, financial institutions, etc. to determine the performance of the company. Previous research on the relationship of capital structure with profitability has discovered that capital structure impacts profitability, but provided mixed results regarding the trend (positive/negative relationship).

The **aim of the research** is to evaluate the impact of capital structure on profitability and, based on empirical results, to make conclusions. In the research paper, the following qualitative and quantitative **methods of research** are applied: the monographic method, correlation analysis and multiple regression analysis. The correlation and regression analyses are used to estimate the functions relating to the impact of profitability on the measures of capital structure.

The results of research indicate a significantly negative relationship between profitability and capital structure. This implies than an increase in the debt ratios is associated with a decrease in profitability. During the economic downturn, an increase in the debt levels is related to an even deeper fall in profitability. The results also show that the profitability increases with size and sales growth.

Key words: *capital, debt, equity, profitability*
JEL code: G30, G32

Introduction

Capital structure is of particular importance in estimating the value of a company; an accurately estimated and selected equity and debt ratios can maximise company value and minimise the cost of capital; therefore, this issue is especially significant in the changing conditions of economic development. Profitability ratios show the ability of the company to generate profit and these ratios are used by the company, financial institutions, etc. to determine the performance of the company. Previous research on the relationship of capital structure with profitability has discovered that capital structure impacts profitability, but provided mixed results regarding the trend (positive/negative relationship). In addition, by investigating the correlation between capital structure and profitability, it is possible to state which

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optimal capital structure theory the Baltic listed companies are following. The pecking order theory states that companies prioritise their sources of financing (at first, they prefer to use internal funds, then to borrow and to issue equity as a last resort). The trade-off theory states that the company chooses debt and equity mix by balancing the benefits and costs of debts. The pecking order theory expects a negative relationship and the trade-off theory expects a positive relationship between profitability and leverage.

The **aim of the research** is to evaluate the impact of capital structure on profitability and, based on the empirical results, to make conclusions. The **tasks of the research** are as follows: 1) To overview the results of previous research made on the relationship of capital structure and profitability; 2) to evaluate the relationship between capital structure and profitability using correlation analysis; 3) to evaluate the impact of leverage on profitability ratios using multiple regression analysis; 4) to make conclusions.

Analysis is conducted on a sample of 75 listed companies (Baltic Stock Exchange) over the period from 2004 to 2011. The author analyses the relationship of capital structure with several profitability ratios – return on assets (ROA), return on sales (ROS), and return on equity (ROE). In the research paper, the following qualitative and quantitative **methods of research** are applied: the monographic method, correlation analysis and multiple regression analysis. The correlation and regression analyses are used to estimate the functions relating profitability with measures of capital structure. The research is based on published papers on capital structure and profitability, as well as information provided by Baltic Stock Exchange. Correlation and multiple regression analyses are done using Statistical Package for the Social Sciences (SPSS).

Research results and discussion

1. Literature Review

If the company increases its debt, the tax benefit of debt should increase, since interest payment on debt is tax deductible. Therefore it is expected that debt level and profitability have a positive relationship. Yet empirical results are inconsistent.

Results by Abor (2005) revealed a significant positive relationship between the ratio of short-term debt to total assets and ROE, a negative relationship between the ratio of long-term debt to total assets and ROE, a significantly positive association between the ratio of total debt to total assets and ROE. A study by Amjed (2007) found that a significant positive relationship exists between the short-term debt and profitability and statistically significant negative relationship between long-term debt and profitability. Salawu (2009) concluded that profitability presents a positive correlation with short-term debt and an inverse correlation with long-term debt. The results also show a negative correlation between the ratio of total debt to total assets and profitability. A study by Gill *et al.* (2011) stated a positive relationship between short-term debt and profitability and total debt and profitability in the service industry, however they found a positive relationship between short-term, long-term and total debt and profitability in the manufacturing industry. The results by Saeedi and Mahmoodi (2011) indicate negative relation between capital structure and ROA and no significant relationship between ROE and capital structure. Ramachandran and Candasamy (2011) proved that there is a strong one-to-one relationship between capital structure variables and profitability variables – ROA and ROCE (return on capital employed). Pratheepkanth (2011) found a negative relationship between total debt and ROA and ROI (return on investment). Abu-Rub (2011) results showed that firm's capital structure has a positive impact on the measures of firm performance, in both – the accounting and market measures. No statistically significant relationship was found between short-term and long-term debt and ROA/ROE, however, a positive relation between total debt and ROA/ROE was stated. Shubita and Alsawalhah (2012) found negative relationship between profitability and debt (total debt, short-term debt and long-term debt).

Table 1

Summary of recent publications on capital structure and profitability

Author, publication year	Country	Sample size	Period	Method	Findings
Abor (2005)	Ghana, Ghana Stock Exchange	22	1998-2002	Regression analysis.	STD:ROE "+" LTD:ROE "-" TD:ROE "+"
Amjed (2007)	Pakistan, Karachi Stock Exchange	100	1999-2004	Regression analysis.	STD:ROE "+" LTD:ROE "-" TD:ROE "N"
Salawu (2009)	Nigeria, Nigerian Stock Exchange	50	1990-2004	Pooled ordinary least squares (OLS), fixed effect model (FEM), random effect model (REM)	STD:ROA "+" LTD:ROA "-" TD:ROA "-"
Gill *et al.* (2011)	USA, New York Stock Exchange	272	2005-2007	Correlation analysis. Regression analysis.	Service industry: STD:ROA "+" LTD:ROA "N" TD:ROA "+" Manufacturing industry: STD:ROA "+" LTD:ROA "+" TD:ROA "+"
Saeedi, Mahmoodi (2011)	Iran, Tehran Stock Exchange	320	2002-2009	Pooled ordinary least squares (OLS), fixed effect model (FEM), random effect model (REM)	STD:ROE "N" LTD:ROE "N" TD:ROE "N" STD:ROA "-" LTD:ROA "-" TD:ROA "-"
Ramachandran, Candasamy (2011)	India, Bombay Stock Exchange	102	2000-2007	Correlation analysis. Regression analysis.	TD:ROA "-" TD:ROCE "-"
Pratheepkanth (2011)	Sri Lanka, Colombo Stock Exchange	N/A	2005-2009	Correlation analysis. Regression analysis.	TD:ROI "-" TD:ROA "-"
Abu-Rub (2011)	Palestine, Palestinian Stock Exchange	28	2007-2010	Correlation analysis. Regression analysis.	STD:ROE "N" LTD:ROE "N" TD:ROE "+" STD:ROA "N" LTD:ROA "N" TD:ROA "+"
Shubite, Alsawalhah (2012)	Jordan, Amman Stock Exchange	39	2004-2009	Correlation analysis. Regression analysis.	STD:ROE "-" LTD:ROE "-" TD:ROE "-"

Notes: "+" positive relationship, "-" negative relationship, "N" not stated significant relationship, STD – short-term debt, LTD – long-term debt, TD – total debt, ROE – return on equity, ROA – return on assets, ROI – return on investment, ROCE – return on capital employed.

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Table 1 summarized recent publications and their findings regarding relationship between profitability and capital structure. These studies cover different countries, sample sizes and periods. Correlation and regression analyses are the most common methods used. Overall, empirical results show mixed results on the relationship between profitability and capital structure.

Several studies have been done on capital structure of the Baltic listed companies. Norvaisiene and Stankeviciene (2007) analysed the capital structure of the Lithuanian, Latvian and Estonian listed companies and its change in the period from 2000 to 2005. This research stated the dependence between the capital structure and return on assets, tangibility, company size, growth prospects and free cash flows. Norvaisiene *et al.* (2008) found that a higher level of debt preconditions a lower corporate value and smaller growth opportunities. Avarmaa (2011) used a fixed effects regression model on company level data, covering the period from 2001 to 2008 and found that leverage has a positive impact on the growth of local companies, especially at low levels of leverage. Study by Bistrova *et al.* (2011) covered the time period of 4 years (2007-2010) and the sample data of 36 "blue-chip" companies listed on the Baltic Stock Exchange. The study found an inverse relationship between the level of debt and capital profitability.

2. Research methodology

Data consist of 75 companies listed on the Baltic Stock Exchange for the period 2004-2011. Annual data extracted from the financial statements of these companies were used for analysis. The study excluded the financial and real estate sector companies, since their balance sheet structure is significantly different from non-financial companies. All variables were calculated using book values. Period of 2004-2011 is divided into two equal subsamples of 2004-2007 and 2008-2011 due to the business cycle changes.

To be consistent with previous studies, the relationship between debt and profitability is estimated using the following regression models by Abor (2005):

$$ROA_{it} = \beta_0 + \beta_1 STD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{1}$$

$$ROA_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{2}$$

$$ROA_{it} = \beta_0 + \beta_1 TD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{3}$$

$$ROE_{it} = \beta_0 + \beta_1 STD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{4}$$

$$ROE_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{5}$$

$$ROE_{it} = \beta_0 + \beta_1 TD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{6}$$

$$ROS_{it} = \beta_0 + \beta_1 STD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{7}$$

$$ROS_{it} = \beta_0 + \beta_1 LTD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{8}$$

$$ROS_{it} = \beta_0 + \beta_1 TD_{it} + \beta_2 SIZE_{it} + \beta_3 SG_{it} + e_{it}, \tag{9}$$

where:
ROA_{it} is net profits divided by total assets for firm i in time t;
ROE_{it} is net profits divided by stockholders' equity for firm i in time t;
ROS_{it} is net profits divided by sales for firm i in time t;
STD_{it} is short-term debt divided by the total assets for firm i in time t;
LTD_{it} is long-term debt divided by the total assets for firm i in time t;
TD_{it} is total debt divided by the total assets for firm i in time t;
$SIZE_{it}$ is the log of sales for firm i in time t;
SG_{it} is sales growth for firm i in time t;
e_{it} is the error term.

These regression models have been previously used by Amjed (2007), Gill *et al.* (2011) and Shubite, Alsawalhah (2012), and the results were mixed and inconsistent.

In addition, the presence of autocorrelation is verified through the Durbin-Watson test and the Variance Inflation Factor is used to test multicolinearity.

3. Analysis and results

Correlation and regression analyses are used to investigate the relationship between the capital structure and profitability. The Pearson correlation measures the degree and direction of a linear relationship between two variables. Correlation coefficient of +1 corresponds to a perfect positive linear relationship, coefficient of -1 corresponds to a perfect negative linear relationship, and 0 indicates no linear relationship between variables. Regression analysis studies the dependence of one variable on other variables.

Table 2 provides the Pearson correlation matrix of the variables for period of 2004-2007. ROA is negatively correlated with the short-term debt, long-term debt and total debt. Correlation coefficients of other profitability ratios (ROE and ROS) and debt ratios are not significant at the 0.05 level.

Table 2

Correlation matrix of Baltic listed companies (2004-2007)

	ROA	ROE	ROS	STD	LTD	TD
ROA	1	0.688** (0.000)	0.665** (0.000)	-0.184** (0.004)	-0.171** (0.007)	-0.231** (0.000)
ROE	0.688*** (0.000)	1	0.504*** (0.000)	-0.079 (0.220)	0.040 (0.537)	-0.006 (0.930)
ROS	0.665*** (0.000)	0.504*** (0.000)	1	-0.121 (0.057)	0.037 (0.564)	-0.029 (0.654)
STD	-0.184** (0.004)	-0.079 (0.220)	-0.121 (0.057)	1	0.096 (0.134)	0.568** (0.000)
LTD	-0.171** (0.007)	0.040 (0.537)	0.037 (0.564)	0.096 (0.134)	1	0.874** (0.000)
TD	-0.231** (0.000)	-0.006 (0.930)	-0.029 (0.654)	-0.568** (0.000)	0.874** (0.000)	1

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed).
Source: author's calculations based on the annual reports of listed companies (Baltic Stock Exchange).

Table 3 below summarizes the Pearson correlation matrix for the period of 2008-2011. ROA and ROS are negatively correlated with the short-term debt, long-term debt and total debt, however, ROE is negatively correlated with the short-term debt and total debt (correlation coefficient of ROE and long-term debt is not significant at the 0.05 level).

To sum up, based on the correlation analysis, it can be stated that there is an inverse relationship between capital structure and profitability during a recession (all profitability ratios are negatively correlated with leverage), whereas there are mixed results during economic boom (only ROA is negatively correlated).

Regression results for ROA are presented in Table 4. The results from the regression models (1), (2) and (3) denote that the independent variables explain the variance in the degree of profitability at 12%, 11% and 14%, respectively, for the period of 2004-2007, and at 14%, 12% and 16%, respectively, for the period of 2008-2011. The F-statistics prove the validity of the estimated models. In models, there is no

autocorrelation problem (Durbin-Watson d statistics are within interval of 1.715 and 2.285) and no multicolinearity problem (VIF coefficients are around 1 and tolerance coefficients are greater than 0.5).

Table 3

Correlation matrix of Baltic listed companies (2008-2011)

	ROA	ROE	ROS	STD	LTD	TD
ROA	1	0.722** (0.000)	0.777*** (0.000)	-0.248*** (0.000)	-0.198*** (0.001)	-0.304** (0.000)
ROE	0.722** (0.000)	1	0.544** (0.000)	-0.226** (0.000)	-0.114 (0.059)	-0.222** (0.000)
ROS	0.777** (0.000)	0.544*** (0.000)	1	-0.172** (0.004)	-0.164** (0.006)	-0.233** (0.000)
STD	-0.248** (0.000)	-0.226** (0.000)	-0.172** (0.004)	1	-0.005 (0.928)	0.559** (0.000)
LTD	-0.198** (0.001)	-0.114 (0.059)	-0.164** (0.006)	-0.005 (0.928)	1	-0.826** (0.000)
TD	-0.304** (0.000)	-0.222** (0.000)	-0.233** (0.000)	0.559** (0.000)	0.826** (0.000)	1

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed).
Source: author's calculations based on the annual reports of listed companies (Baltic Stock Exchange).

Table 4

Regression model results for Baltic listed companies, 2004-2011 – ROA

Variable	ROA					
	2004-2007			2008-2011		
	1	2	3	1	2	3
STD	-0.154*** (0.001)			-0.262*** (0.000)		
LTD		-0.074*** (0.005)			-0.137*** (0.002)	
TD			-0.088*** (0.000)			-0.178*** (0.000)
SIZE	0.496** (0.012)	0.513*** (0.010)	0.556*** (0.005)	0.914*** (0.008)	0.689** (0.044)	0.834** (0.013)
SG	0.041*** (0.000)	0.036*** (0.000)	0.038*** (0.000)	0.067*** (0.000)	0.074*** (0.000)	0.067*** (0.000)
R^2	0.12	0.11	0.14	0.14	0.12	0.16
Prob. (F)	0.000	0.000	0.000	0.000	0.000	0.000
Durbin-Watson	1.761	1.760	1.750	1.935	1.878	1.893

*, ** and *** indicate significance at 10%, 5% and 1% level respectively. If Durbin-Watson d statistics is between 1.715 and 2.285, then there is no autocorrelation problem in the model.
Source: author's calculations based on the annual reports of listed companies (Baltic Stock Exchange).

A negative relationship between ROA and short-term debt, long-term debt and total debt was found in both periods (2004-2007 and 2008-2011). All coefficients are statistically significant at 1% level. There is also a significant positive relationship between both sales growth and ROA and company size and ROA.

In summary, 14% and 16% of the variance in the degree of ROA can be explained by the degree of TD, SIZE and SG for the period of 2004-2007 and 2008-2011, respectively. The results in regression indicate a significantly negative relationship between ROA and debt ratios. This implies than an increase in the debt ratios is associated with a decrease in profitability. The results also show that profitability increases with size and sales growth.

Table 5 provides regression results for ROE. The results from the regression models (4), (5) and (6) denote that the independent variables explain the variance in the degree of profitability at 12%, 10% and 11%, respectively, for the period of 2004-2007, and at 9%, 5% and 9%, respectively, for the period of 2008-2011. The F-statistics prove the validity of the estimated models. In models for the period of 2004-2007, an autocorrelation problem might be found (Durbin-Watson d statistics is slightly less than 1.715), however, there is no multicolinearity problem (VIF coefficients are around 1 and tolerance coefficients are greater than 0.5). In models for the period of 2008-2011, there are no autocorrelation or multicolinearity problems.

Table 5

Regression model results for Baltic listed companies, 2004-2011 – ROE

Variable	ROE					
	2004-2007			2008-2011		
	1	2	3	1	2	3
STD	-0.479* (0.065)			-1.077*** (0.000)		
LTD		0.046 (0.765)			-0.322* (0.075)	
TD			-0.084 (0.512)			-0.560*** (0.000)
SIZE	5.395*** (0.000)	5.190*** (0.000)	5.340*** (0.000)	4.513*** (0.001)	3.605** (0.012)	4.053*** (0.004)
SG	0.171*** (0.003)	0.164*** (0.005)	0.162*** (0.005)	0.099 (0.145)	0.134* (0.054)	0.106 (0.119)
R^2	0.12	0.10	0.11	0.09	0.05	0.09
Prob. (F)	0.000	0.000	0.000	0.000	0.004	0.000
Durbin-Watson	1.622	1.646	1.642	1.769	1.789	1.771

*, ** and *** indicate significance at 10%, 5% and 1% level respectively. If Durbin-Watson d statistics is between 1.715 and 2.285, then there is no autocorrelation problem in the model*
Source: author's calculations based on the annual reports of listed companies (Baltic Stock Exchange).

A negative relationship between ROE and short-term debt was found for the period of 2004-2007. Non-significant relationships between the ROE and long-term debt and total debt, for the period of 2004-2007, were found. For the period of 2008-2011, there are significant relationships between the ROE and the short-term debt, long-term debt and total debt.

In general, 12% of the variance in the ROE can be explained by the degree of STD, SIZE and SG for the period of 2004-2007. The results in regression indicate a significantly negative relationship between ROE and debt ratios in a recession, however provide mixed results regarding economic boom.

Table 6 represents regression results for ROS. The results from the regression models (7), (8) and (9) denote that the independent variables explain the variance in the profitability at 5%, 3% and 3%, respectively, for the period of 2004-2007, and at 9%, 9% and 11%, respectively, for the period of 2008-2011. The F-statistics prove the validity of the estimated models, except LTD and TD models for 2004-

2007, where F-statistics are 0.084 and 0.072, respectively. There is no autocorrelation problem (Durbin-Watson d statistics are within the interval of 1.715 and 2.285) and no multicolinearity problem (VIF coefficients are around 1 and tolerance coefficients are greater than 0.5 in models).

Table 6

Regression model results for Baltic listed companies, 2004-2011 – ROS

Variable	ROS					
	2004-2007			2008-2011		
	1	**2**	**3**	**1**	**2**	**3**
STD	-0.187** (0.028)			-0.333*** (0.007)		
LTD		0.021 (0.680)			-0.212*** (0.010)	
TD			-0.031 (0.464)			-0.252*** (0.000)
SIZE	0.900** (0.018)	0.817** (0.034)	0.876** (0.023)	1.521** (0.021)	1.233* (0.058)	1.439** (0.026)
SG	0.029 (0.125)	0.026 (0.166)	0.025 (0.179)	0.117*** (0.000)	0.125*** (0.000)	0.114*** (0.000)
R^2	0.046	0.027	0.028	0.09	0.09	0.11
Prob. (F)	0.010	0.084	0.072	0.000	0.000	0.000
Durbin-Watson	1.864	1.905	1.888	2.118	2.101	2.124

*, ** and *** indicate significance at 10%, 5% and 1% level respectively. If Durbin-Watson d statistics is between 1.715 and 2.285, then there is no autocorrelation problem in the model.
Source: author's calculations based on the annual reports of listed companies (Baltic Stock Exchange).

The regression data shows a negative relationship between ROS and short-term debt for the period of 2004-2007. A negative and significant relationship between ROS and short-term debt, long-term debt and total debt was found for the period of 2008-2011.

In summary, 11% of the variance in the degree of ROS can be explained by the degree of TD, SIZE and SG for the period of 2008-2011. The results in regression indicate a significantly negative relationship between ROS and debt ratios during a recession, but provide mixed results regarding economic boom.

Although debt creates tax shield and should increase profitability, for the Baltic listed companies this assertion is not applicable. The results indicate that profitability ratios are inversely correlated to debt; if company increases its debt, the profitability decreases. These findings are consistent with the study by Bistrova *et al.* (2011), where negative relationships between debt levels and profitability for the Baltic listed companies were proved.

2nd subsample (2008-2011) shows increased coefficients in both correlation and regression analysis for ROA. For example, regression results of ROA and debt levels indicate coefficients of -0.154 (STD), -0.074 (LTD) and -0.088 (TD) for the 1st subsample, however for the period of 2008-2011 they decreased significantly to -0.262 (STD), -0.137 (LTD) and -0.178 (TD). These results reveal that during the economic downturn, an increase in debt levels is associated with deeper fall in profitability (compared to economic boom).

Overall, these results show that profitable companies depend more on equity than debt financing. By analysing the relationship between the capital structure and profitability, it is possible to conclude that the

Baltic listed companies are following the pecking order theory of capital structure (pecking order theory expects a negative correlation between capital structure and profitability).

Based on these results the following recommendations are suggested:

- Further research should investigate the impact of other factors on profitability, not just the capital structure;
- Before capital raising in the form of debt, the company should evaluate the benefits and costs of this capital and estimate how it is going to impact profitability.

Conclusions and recommendations

The research examines the relationship between the capital structure and profitability. Analysis is conducted using correlation and multiple regression analyses. The study finds that:

1. For period of 2004-2007, ROA is negatively correlated with the short-term debt, long-term debt and total debt ratios. Correlation coefficients of other profitability ratios (ROE and ROS) and debt ratios are not significant at the 0.05 level. For period of 2008-2011, ROA and ROS are negatively correlated with the short-term debt, long-term debt and total debt, however ROE is negatively correlated with the short-term debt and total debt.
2. 14% and 16% of the variance in the degree of ROA can be explained by the degree of TD, SIZE and SG for the period of 2004-2007 and 2008-2011, respectively. The regression results indicate a significantly negative relationship between ROA and debt ratios.
3. 12% of the variance in the degree of ROE can be explained by the degree of STD, SIZE and SG for the period of 2004-2007. The results in regression indicate a significantly negative relationship between ROE and debt ratios.
4. 11% of the variance in the degree of ROS can be explained by the degree of TD, SIZE and SG for the period of 2008-2011. The results in regression indicate a significantly negative relationship between ROS and debt ratios.
5. 2nd subsample (2008-2011) shows increased coefficients in both correlation and regression analysis. These results reveal that, during the economic downturn, an increase in debt levels is associated with a deeper fall in profitability (compared to economic boom).
6. The results imply than an increase in the debt ratios is associated with a decrease in profitability, albeit profitability increases with size and sales growth. Profitable companies depend more on equity than debt financing. By analysing the relationship between the capital structure and profitability, it is possible to conclude that the Baltic listed companies are following the pecking order theory of capital structure.
7. Based on these results the following recommendations are suggested:
   - Further research should investigate the impact of other factors on profitability, not just the capital structure;
   - Before capital raising in the form of debt, the company should evaluate the benefits and costs of this capital and estimate how it is going to impact profitability.

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COMPANY COMPETENCIES AND INDIVIDUAL COMPETENCIES
IN THE PRISM OF SOCIAL CAPITAL

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Abstract. In today's business practice, but also in academic research the aspect of competencies has gained remarkable importance. Competencies are not only a central part of the strategy process of a company. Corporate Strategy literature states that that human asset in particular can fulfil the criterion 'of a sustainable competitive advantage' (Storey, 2007). The utilization of competencies is a key target of companies, as it is important in realizing a full return on investment. The paper analyses the state-of-the-art of competence theories with a specific recognition to the aspect of social capital. The author argues that the management of company competencies is a contributor to the utilization of competencies and links these aspects to social capital. In order to achieve the main goal of the underlying work the paper is structured as follows: first, the presentation of the state of the art in the area of competencies and social capital based on literature review; afterwards, the discussion is made in order to prove the main hypothesis. As a result the author concludes with a model showing the key bond between company competencies, individual competencies and social capital. With this, the paper contributes to a deeper understanding of the phenomenon of competencies for business managers and scientist. The findings are valuable to contribute to the utilization of individual competencies especially in the prism of social capital which will pay off for industrial companies and employees in long term. This is especially valid in an environment of skilled worker shortage.

Keywords: *organizational and individual competencies, social capital, utilization of competencies, competence management, commitment and retention*

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Introduction

Competencies are a central part of a company's strategic management. They are differentiated in individual and organizational competencies and linked to cognitive and social sciences as well as to organizational sciences. Furthermore the discussion and research has been developed from stability oriented approaches to a dynamic capabilities approach (Schreyögg & Kliesch, 2003). As competencies are seen to be a decisive contributor, to a company's competitive advantage, the utilization of competencies in a company is of major interest. There are a number of approaches to integrate organizational and individual competencies or macro and micro levels of competencies by an effective competence management. The idea is to mobilize new or exploit existing competencies or even motivate

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employees to go beyond the boundaries of their jobs (Lindgren & Paulson, 2008). At this point management and leadership play an important role. This research paper raises the question how social capital in the frame of company competencies is linked to competence utilization in a company. Based on existing competence models the author links competencies and social capital to each other. The discussion is intended to show that the management of competencies can create circumstances in which social capital develops, which impacts the utilization of competencies on individual and organizational level. This is especially important in times of fast changing environments, insecurity and continuously changing requirements, as social capital is based on a culture of trust, giving a behavioural frame to people in companies that overcome insecurity and the barrier to utilized competencies also in new and creative fields of business. People that work within a meaningful work environment tend to be motivated, committed and stay longer in the company. This shows that human capital provides an important basis for sustainable competitive advantage (Boyd, 2001). Socially complex resources, like people, are considered more durable and less susceptible to imitation than other types of assets (Barney, 1991). Especially in times of a skilled worker shortage, these aspects illustrate the topicality of this paper, whereas the novelty is accrued through the model linking competence utilization and social capital. The paper is based on a literature review. This theoretical approach has to be deepened in terms of the development of an adequate structural relation model and proven by empirical research in a further step. The context is limited to employees that are already members of the company. It further implies that the thinkable risk of disadvantages through a constant workforce is not taken into account as it is seen to be of minor influence and furthermore as retention is regarded to be positive if it is linked with value and goal congruence being affective commitment (Moynihan & Pandey, 2007).

Research results and discussion

1. Competencies

With the purpose of strategic action to sustain competitive advantage and achieve added value a key aspect of each company must be to secure the future of the company. The scope of action of each company becomes visible in the balance between actual resources and requirements of the market combined with the defined company goals. The consideration of company resources is initially oriented towards the question if the actual resources are adequate to reach the defined goals. It is therefore essential to realize the existing resources in the best possible way and in equal measure to adapt, develop and recreate these resources. As Eberl says:' it is no surprise that the idea of organizational competencies has a central meaning in the frame of strategic questions' (Eberl, 2009). The strategic argument begins with the individual and strives to find a system as the aggregated outcome of individual acts. Subjectively meaningful individual action is treated as a central force of organizational behaviour. (Astley, 1983) This is especially of importance as: 'All people look for enjoyment and seek to reach goals that actualize talents, skills and interests' (Holland, 1997).

Competence Management is influenced by various scientific perspectives. With a view on the historical development of the competence definition the discussion has moved from a purely individual perspective to social systems (Schreyögg & Kliesch, 2003). Furthermore for both levels of competence research has moved from a more stability oriented view to a dynamic view (Eberl, 2009). The individual perspective focusses on distinctive competencies (Selznik, 1957) and management competencies looking at the general ability to plan, organize and lead, linked with creativity and phantasy (Penrose, 1959). It furthermore differentiates between technical, human and conceptual competence (Katz, 1955. White's competence definition is based on motivation psychology focusses on the individual ability to interact effectively with its environment. In this connection he emphasizes the performance of the own activity

(White, 1959) (Eberl, 2009). Eberl emphasizes in her research three basic bonding elements: the emphasis on action relation, the self-organization-disposition thought and the relevance of learning (Eberl, 2009). Comparable to the description of competencies by Erpenbeck and Rosenstiel this definition provides essential references also to organizational competencies. Their understanding of competencies is based on meaningful and fruitful action in open, complex, even chaotic situations that allow self-organization under theoretical and actual insecurity through self-accounting rules, norms and values (Erpenbeck & von Rosenstiel, 2007). Organizational competencies emphasize the collective character and are based on a more complex and discrete context (Eberl, 2009). The success of organizations is therefore 'the product of competent individuals enhanced by the ability to use tangible and intangible resources in a way that they meet the requirements of the internal and external environment' (Eberl, 2009). Especially the research about organizational competencies opened the view on strategic questions and economic science and gives value to another way of clustering different scientific views. Reinhard and North divide the publications on competencies in so called cognitive sciences and organizational sciences. Cognitive science views competencies from the psychological and sociological perspective. (Gruber and Renkl 1997; Hänggi 1998; Erpenbeck and Heyse 1999a; Erpenbeck and Heyse 1999b) (Reinhard & North, 2003). The psychological approach analysis the individual cognitive abilities and competencies. Psychometric models understand competence as condition for goal oriented action successful learning and efficient interaction with the environment. Knowledge and Skills are acquired through information processes (Schreyögg & Kliesch, 2003). Different to the psychological perspective the sociological approach is context related and stronger focused on performance. Educational sciences or pedagogics consider the potential for action and their conditions to be the central aspect. They therefore see individual and organizational competencies depended on a specific context. (Fischer, K.W. et al. 1993, p 113; Radke, R.O. 1996, p. 63) (Schreyögg & Kliesch, 2003). On the other hand, organizational science views competencies from a strategic and process perspective (Prahalad and Hamel 1994; Freimuth 1997; Probst et al. 2000; Freiling 2001; Argyris and Schön 1996; Bellmann et al. 2002; Milberg and Schuh 2002; Reinhart et al. 2002) (Reinhard & North, 2003). A central element in strategy is the resourced based approach especially with the field of core competencies (Eberl, 2009). The founders of the core competence debate are Prahalat, C.K. and Hamel, G. They define core competencies as 'the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies.'(Prahalat & Hamel, 1990). Also Stalk refers to core competencies as a 'set of business processes strategically understood' (Stalk, Evans & Shulman, 1992. Organizational competence becomes dynamic if the bundle of business processes follows a continuous improvement process through the ability to learn. Although core competencies refer already to learning and integration processes only dynamic organizational competencies are able to match the requirements of a changing dynamic environment (Eberl, 2009). In the consequence not only the level of competencies has moved from an individual to a collective perspective, also the view on competencies has shifted from static to dynamic competencies. This movement entails a shift in perspective from the resourced based view to collective routines. As to Barney the resourced based approach defines competencies as material and immaterial resource bundles, arising from a complex social interaction, not being easily imitable (Barney, 1991). Organizational competencies based on the evolutionary economy focus on routines which are applied to handle insecurity and complexity in the process of decision making. Eberl summarizes collective routines as unconscious, not verbalize able and quasi automatically running ability to solve problems reliable and effective (Eberl, 2009). Teece defines dynamic capabilities as: ‚a firm's ability of integrate, build and reconfigure internal and external resources and competencies to address rapidly changing environments' (Teece, Pisano & Shuen, 1997). Also in this definition the ability to recombine resources along with the ability to learn and change is accentuated. This is of special importance as the environment is affected by lack of knowledge, complex contexts and uncertainty.

There are a number of approaches to integrate organizational and individual competencies. This is of importance as all perspectives of organizational theory and the strategy theory agree that if an

organization is to survive it must induce a variety of participants to contribute their time and energy to it (Scott & Davis, 2007). The commitment of employees to the company's values and goals is essential for sustainable success. Although workforce is not the only basis of success it is evaluated as a very important dimension of determining corporate performance. As Pfeffer states the common sustained advantage is based on how the companies manage their workforce. It is the organization, its employees, and how they work that is the crucial differentiating factor. So competitive advantage based on productive, motivated workforce is hard to be imitated (Pfeffer, 2005). The models of North and Rheinhard, Lindgren based on Orlikowski, Boyatzis and Erpenbeck and Rosenstiel are summarized below in table 1.

Table 1

Different models of competence utilization

North and Reinhardt (2003)	Model of integrative competence management
Lingren et.al.(2004) / Orlikowski (1992)	Model of competence in organizations on macro and micro level
Boyatzis, R.E. Goleman, D., Rhee, K. (1999)	Contingency model of management effectiveness
Erpenbeck and Rosenstiel v. (2007)	Model of competent action

Source: author's collection

Although all perspectives have different approaches, the general idea is to utilize existing competencies, to mobilize new competencies or even motivate employees to go beyond the boundaries of their jobs. The target is to 'constitute the foundation for a synchronization of individual and organizational competencies (Reinhard & North, 2003), 'the smooth interaction between competences at the macro and micro level of an organization and therefore the alignment of organizational core competence and individual level job competence as well as between company needs and employee interests (Lindgren & Paulson, 2008), and to establish a possibly high 'degree of overlap between the individual and the organizational environment (Boyatzis, Goleman & Kenneth S. Rhee, 1999). Furthermore they all strengthen the importance of competence management to establish the opportunity for competent action (Erpenbeck & von Rosenstiel, 2007). Consequently all refer that at this point management and leadership play an important role with the intention to 'provides a way of connecting the various individual practices into a coherent whole and also to enable people in the organization to persist and experiment when things don't work out immediately'. An overall management philosophy is essential to communicate the company goals in a way that a deeper understanding in the importance and meaningfulness is aroused (Pfeffer, 2005).

2. Social capital

There is a basic consensus that social capital derives from relationships (Adler & Kwon, 2002). The understanding and definition of social capital has been developed over the last years from a sociology perspective to a social and economic perspective followed by a geographic and nation's perspective (Sumilo & Baumane, 2007). The term social capital has also been conceptualized at individual, group, organization, community, and even national levels of analyzes (Steinfield, DiMicco & Ellison, 2009). Table 2 shows a summarized view on some basic approaches and definitions.

Table 2

Basic approaches on social capital

Jacobs (1961)	Sociological analysis of cities
Coleman (1989)	Puts social capital in a wider theoretical frame, refers to Loury (1977), Resources approach and collective goods aspect of social capital
Bourdieu (1972)	Individual resource integrated in a capital theory, prospect diversity of people is reduce- able through network memberships
Putnam (1993)	Refers to Jacobs (1961) and Coleman, Social capital in the frame of political culture, society, related to political values and participative behaviour
Lin (1999)	Reciprocity as a key mechanism for explaining how social capital functions among individuals
Burt, Flap, Lin, Faist, Portes	Social capital as individual resource, related to its position in social networks

Source: author's summary based on Haug (1997)

Like competence, social capital can be described in different dimensions, perspectives and disciplines. Fig. 1 refers to an overview given by Sumilo/Baumane (2007), including the different aspects of the main contributors to social capital.
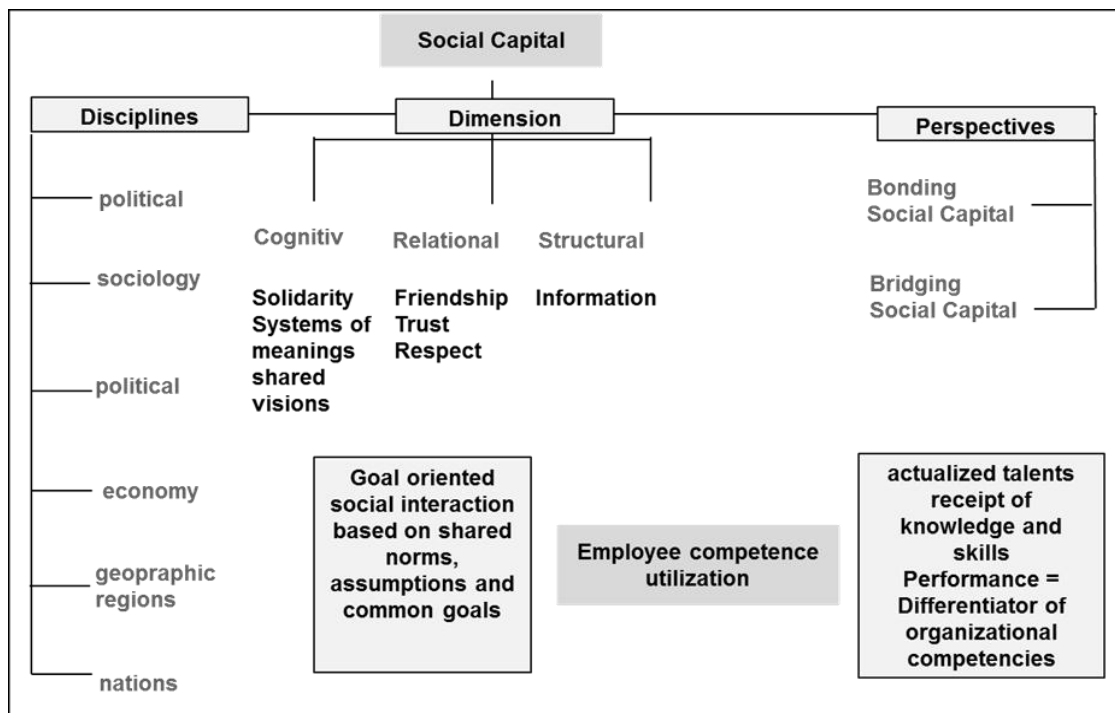
Source: author's construction based on (Sumilo & Baumane, 2007)

Fig. 1. **Overview on social capital**

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Theorists debate whether social capital is a private good or a public good. Referring to Sumilo/Baumane the most appropriate definition is the integration of all three perspectives: 'Social capital as determined investments in social relations that give actors an opportunity to use and activate resources otherwise not available or available at greater cost and may positively or negatively affect the wellbeing of society' (Sumilo & Baumane, 2007).

As to Putnam 'Social capital refers to our relationship with one another' (Putnam, 1995b: 665). People that know each other directly build a two-way or reciprocal relations based on commitment. A cooperation based on reciprocal relations reinforces trust. Social capital is therefore strongly linked to networks, trust and reciprocity (Hellmann, 2008). The network notion is also pictured in the discussion about bonding and bridging social capital. Bonding social capital is positioned on the micro level based on the interrelation of individuals within a group strongly driven by trust and reciprocity. Bridging social capital is defined as the crosslinking between networks which opens the view to the macro perspective (Hellmann, 2008). The constructs of bonding and bridging are both relevant in organizations. Bonding social capital in an organization implies that there is trust and sense of obligation that encourages reciprocity, while bridging social capital is associated with the kind of weak ties that facilitate access to non-redundant or innovative information (Steinfield, DiMicco & Ellison, 2009).

Having considered the different density and configuration of networks also different dimension of social capital have to be mentioned in its implications on individual and organizational behavior and performance. The pattern of connections between people being pictured by network ties and configurations are positioned as structural social capital. These network ties help individuals within a group to acquire information which at the same time supports innovation. The focus on personal attitudes towards friendship, respect, trust, norms and sanctions describes the relational dimension. Relational social capital is important to create knowledge, especially in ambiguous and uncertain situations. The cognitive dimension refers to shared visions, representations, interpretations and systems of meaning. It is closely interrelated with the relational dimension through a reciprocal to shared values. Cognitive social capital promotes solidarity (Sumilo & Baumane, 2007).

3. Competencies in the prism of social capital

This research paper raises the question how social capital in the frame of company competencies is linked to competence utilization in a company. The discussion on this question is based on analysis of literature and existing models. It also is intended to filter out common factors of influence for both competencies and social capital and their impact on the utilization of competencies.

Organizational competencies and social capital are seen as decisive elements or contributors to the competitive advantage of a firm. As Modaschl states; '…efficiency and competitive advantage have gained importance also in the social capital debate. 'The utilization of unused potential counts' (Moldaschl, 2008). Underlining the importance of social capital in the competence debate Stark states: 'The collective actions of employees as human capital may well be continually underutilized until all understand the linkage between human capital to firm performance is predicted to adequate levels of social capital.' (Stark & Jeffries, 2011). In both statements social capital is seen as a contributor for the utilization of competencies in terms of successful performed action. It furthermore shows that human commitment and capability is what sets successful organizations apart. (Walton, 1985). Referring to Armin Falk, social capital is an 'asset of mutual trust' and plays an important role in the company competence field. If the 'homo reciprocans' feels to be treated fair his own willingness to cooperate increases (Falk, 2002).

The discussion of the prior models shows that theories of individual and organizational level of competencies and social capital have a notable overlap or interaction field. Not only that both fields have its justification in their definitions especially in times of high change and insecurity, they both seem to be

an essential source of sustained competitive advantage. To summarize on competence, competent actions needs execution of action, self-organization and the relevance of learning. On organizational level the aspects of collective action and complexity are accrued. Competencies are understood as bundles of resources arising from complex social interaction (Eberl, 2009). To summarize on social capital, it is the ability that needs to be provided, used and activated based on a framework that promotes a social network, an atmosphere of mutual trust based on reciprocity, and the motivation to cooperate and be involved in beneficial exchanges. This all is based on shared norms and goals leading to committed and meaningful action (Sumilo & Baumane, 2007). Based on this description and the reflected synergies and overlaps of the existing models a combined model is proposed by the author. Fig. 2 is based on the structural basic logic and the contextual basic logic Eberl suggests in her model of drivers for organizational competencies (Eberl, 2009) and combines it with the parameters and dimensions of social capital described by Sumilo & Baumane, 2007).
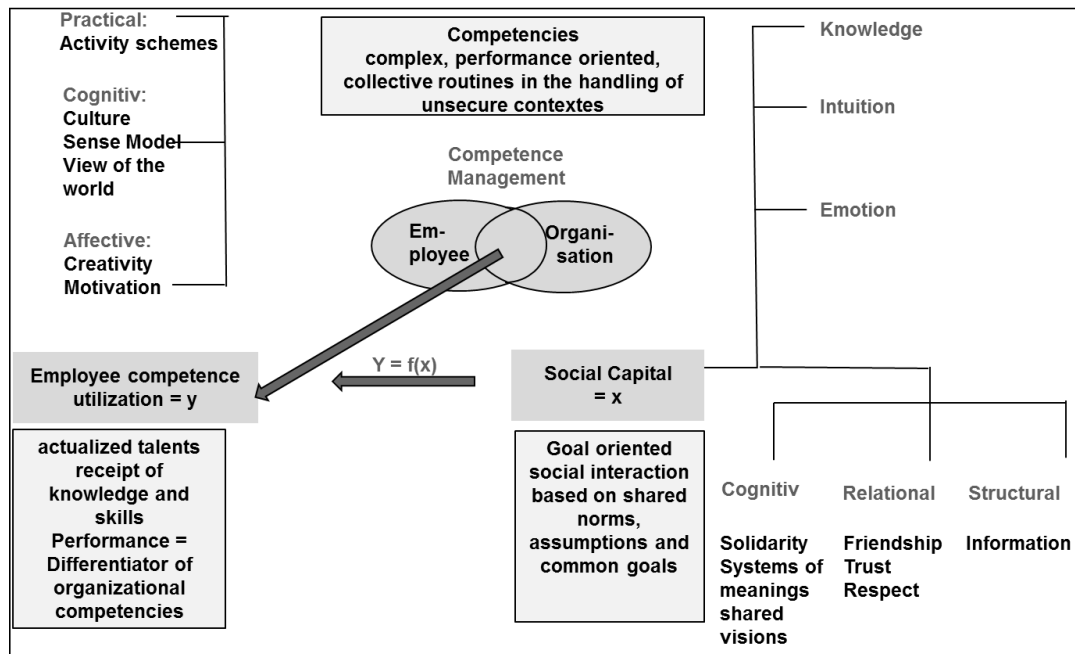
Source: author's construction based on Eberl (2009) and Sumilo/Baumane (2003)

Fig. 2. **A combination of competencies and social capital**

Eberl specifies organizational competencies based on three dimensions: cognitive, practical and affective (Eberl, 2009). The cognitive dimension refers to so called 'sense models'. This dimension implies the 'world view' or in other words the culture of the organization. The practical dimension refers to 'action relation' and is defined by collective, complex schemes of action. The affective dimension refers to creativity and motivation in unsecure environments (Eberl, 2009). Following Eberl there are four dominant factors relevant for the contextual aspect of competencies. These are: social relationships, knowledge, intuition, emotion. Social relationships are also named social capital. The knowledge factor refers to the ability to recombine resources. The intuition aspect describes the internal logic on the basis of experience and sub-consciousness. The emotional aspect is behaviour orientated, based on value judgment and affective processes (Eberl, 2009). Especially the cognitive dimension of both competencies

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and social capital refers to culture and therefore to shared visions and systems of meaning. It is closely interrelated with the relational dimension through a reciprocal to shared values. Cognitive social capital promotes solidarity. The cognitive dimension is also closely related to knowledge though a reciprocal to shared values. This is important as the creation of knowledge is a major criterion for the recombination of competencies and is at the same time triggered by relational social capital. This counts especially in ambiguous and uncertain situations.

Based on the insight that especially the cognitive dimension of both systems is linked to each other and is promoted by social relations the crucial role of leaders becomes obvious. This is because leads teach culture and put values mores and laws into action. Strong cultures are reinforced by top management's strong commitment to the cultural values (Ford & Heaton, 2001). In other words: Managing competencies under circumstances that build out social capital seems to fulfill a huge range of conditions for the utilization of employee competencies (Steinfield, DiMicco & Ellison, 2009).

With emphasis on the role of competence management in building out social capital and its impact on competence utilization the author developed another model focused on the performance aspect of competencies.
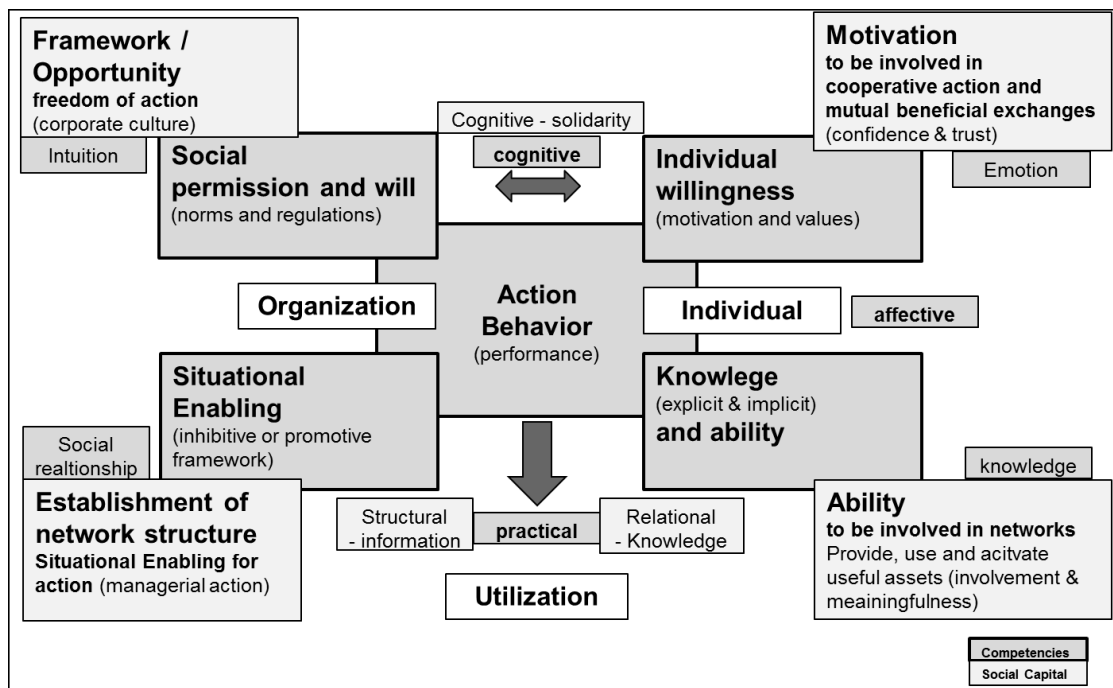
Source: author's construction based on Erpenbeck & Rosenstiel (2007) and Sumilo/Baumane (2003)

Fig. 2. **Competencies in the prism of social capital**

The model shows that management of competencies requires a framework that allows freedom for action. This is promoted by a strong culture based on shared norms and values and builds the basis for social permission and will. To transfer the opportunity for action into successful practice, management of competencies should allow the establishments of network structures, which build a framework and enables action. Both management approaches lead to employee empowerment. As Moldaschl says: The social integration and network participation builds the action frame and the possibility to use the

human capital resources (Moldaschl, 2008). This is underlined by the argument of Eberl saying that all three dimensions of organizational competence are based on the imagination of social connections and are in so far influenced by the peculiarity of organizational social relations (Eberl, 2009). On the individual side solidarity as well as trust and shared norms and goals are a crucial motivator for engagement in cooperative actions. Based on a strong culture that allows social interaction to build out network structures the motivation to be involved in mutually beneficial exchanges and the ability to provide resources or competences needed by other actors is promoted. In such an environment individuals feel not only as a part of the whole, they are also willing to yield their own competencies (Sumilo & Baumane, 2007).

At this point competencies will be utilized. This is especially of importance as actions will not be competent before resources are used. Competencies as well as social capital, both being viewed as a major resource of a company can only be effective if they are in use. They even can be increased by using them (Moldaschl, 2008). Based on these statements and referring to the research question of this paper social capital should therefore be a promoter of competent action in which the utilization of competence becomes visible.

It is of importance that social capital promotes not only the individual competence utilization. Also the collective application of individual competencies within the organization generates sustainable success for the company. (Pfeiffer, 1994, p. 14 f.) (Eberl, 2009). Also Sumilo states that the relational and cognitive dimension of social capital creates knowledge on a collective level (Nelson & Winter, 1982, Brown & Durguid, 1991, Weick and Roberts, 1993) leading to organizational knowledge (Sumilo & Baumane, 2007). She says:' it is more than just an aggregation of individual skills and intellectual capabilities. If social interaction resides in all directions it gears the formation of synergy leading to creation of organizational competencies' (Sumilo & Baumane, 2007). This is in line with the statement of Eberl saying that organizational competence is more than just the sum of individual competencies. Organizational competence depends on more complex and abstract correlations being exclusively an attribute on the organizational level (Eberl, 2009). Stark underlines this in saying: 'The pool or stock of human capabilities does not create value alone, but human resource management practices, facilitative organizational systems and a supportive culture must be in place to leverage the potential of individuals.' This is the reason that Stark et al, have asserted that social capital emerges from high quality LMX and may therefore be one lubricant on the track to realizing human capital. (Stark & Jeffries, 2011). In order to value the importance of human capital the management's role is seen as catalyzer for helping people to contribute meaningfully in their work roles. This is based on the understanding that people, which develop in a way that they are part of the face and living strategy of the company contribute to release synergies in a most efficient way and bind to a company on a long run.

Conclusions, proposals, recommendations

To summarize the findings and to refer to the research question, the answer is: yes, social capital is a strong promoter of competent action and is therefore important in utilizing competencies. This conclusion is especially based on the close linkage of the cognitive dimension of both competence and social capital. The cognitive dimension itself is closely intermingled with the relational dimension being a core of social capital and the knowledge factor being a major criterion for the recombination of resources. Based on shared norms and values and an environment of mutual trust both relational social capital and cognitive social capital promote the ability to create and recreate bundles of resources, which counts especially in ambiguous and uncertain situations.

To achieve this effect, competence management and leadership play an important role. An essential contributor to the utilization of competencies both on individual and organizational view is leadership

accomplishing an environment that promotes social capital and is therefore a trigger for engagement in cooperative action.

In conclusion the management of competences should:
1. Clearly articulate organizational strategy & goals;
2. Establish a culture of trust based on shared norms and values;
3. Build clear structure and processes;
4. Provide the opportunity and freedom of action;
5. Offer a framework to establish network structures.

This should lead to:
1. Engagement of empowered individuals in cooperative and meaningful action;
2. Motivation and commitment to work on common goals;
3. Allocation, creation and utilization of useful assets;
4. Formation of organizational competencies on a collective level.

In the consequence it leads to a situation-adequate action, based on knowledge and experience that solves and reflects complex tasks under the usage of freedom of action which is provided by its environment. Accordingly, the appropriate management of competencies should build an environment that promotes social capital which for his part should lead to dynamic bundles of processes and routines that can be built and reconfigured related to a dynamic environment. These kinds of routines are based on complex social interactions and allow a process of decision making also in unsecure and fast changing environments. Company members that are empowered to work under these conditions feel motivated and committed and are expected not only to utilize but also to create new competencies on individual and collective level.

Nevertheless strategic management is based on different aspects. Besides culture also the structural level of company competencies is of importance, as structure and process also impact successful competent action. Therefore, referring to the need of a clear articulated strategy it is of importance that network features, promoting social capital, are in line with the organizational objectives. Still the climate of trust and social capital itself is evaluated as a basic requirement to effectively utilize the entity of available and inducible competencies in a successful way.

The findings of this paper are seen to be valuable to contribute to the utilization of individual competencies especially in an environment creating social capital which will pay off for industrial companies in long term. The utilization of competencies is not only valid for the company's sustainable competitive advantage; it is especially valid in an environment of skilled worker shortage in which retention time of company members matters, in terms of costs, efficiency, synergy, valuable resources and committed workforce. In this respect the value of diversity and regeneration of human capital might also be an important aspect to be considered.

This theoretical approach described in this paper will be further deepened in terms of:
1. The development of an adequate structural relation model and
2. The consecutively proof by empirical research in a further step.

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OVERCOMING COMPARISON PROBLEMS AFTER ADMINISTRATIVE TERRITORIAL REFORM IN LATVIA: MUNICIPALITY BUDGET ANALYSIS

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Abstract. This research focuses on period from 2001 to 2011. During this time in 2009 Latvia experienced administrative territorial reform. Before that there were more than 500 first level municipalities (*pagasts* and towns), later – 119 county municipalities (*novads*). This reform creates difficulties in analysing long term regional data as before and after reform territorial borders differ. The goal of this paper is to offer methodology how to compare data about rural territories before administrative territorial reform in Latvia and later formed municipalities.

To test the accuracy of this method of comparison, data about budgets are used to evaluate which factors influence municipality budget expenditures in different years. As influencing factors are tested expenditures in previous years, budget revenue, municipality and parliament elections and others. While assessing data comparison possibilities, calculations are made for full period as well as those periods before and after the reform in such a way analysing variable influence changes and evaluating their strength and stability.

Main novelty of this research is elaborated simple, easy to use system for territory comparison in Latvia before and after administrative territorial reform. It includes summary of main principles for comparison of territories before and after territorial reform that could be used also for other countries. This method is applied to enable budget expenditure comparison by using panel data fixed effects models.

Key words: *administrative territorial reform, local budgets, fixed effects models, panel data*

JEL code: H61, C23

Introduction

In 2009 Latvia finished administrative territorial reform and as a result new regional split was created. Most statistics about municipalities after the reform now is available for three years (2009-2011), some for four years (till 2012), but that is too little for long term analysis. Furthermore, if one wants to compare situation before and after the reform, that is inconvenient as the territorial units has changed.

The aim of this research is to offer methods for comparing data about first level municipalities (*pagasts* and towns) before the reform and the county municipalities after the administrative territorial reform in Latvia. An example of municipalities budgets and information about municipalities' leading parties' connections to parties represented in Saeima and in government is used to illustrate offered methodology.

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To test the validity of the methods offered, data with modified municipality structure are used in a model describing relations of budget expenditures, budget revenue and data from municipality and parliament elections. This example demonstrates of long term panel data usefulness.

Firstly, based on literature review and specific conditions of Latvian data, principles of data modification are chosen and applied for local municipality data before and after the reform. Secondly, modified database is used in panel data fixed effect model analysis for municipalities' budgets.

The main novelty of this research is elaborated simple system for territory data comparison in Latvia before and after administrative territorial reform. Still, when analysing results, caution should be kept as there are many exceptions that applied for particular municipalities. For example, some of them carried out the municipality unification before the set date in 2009 and there were some minor changes in territory pattern also after the reform.

Research results and discussion

To apprehend the topicality of this question, situation with municipality data in Latvia will be described, explaining the need for long term comparison possibilities. Other researches are used in literature analysis to note previous studies and to choose the most appropriate principles that could be applied also for the case of Latvia.

1. Problem description

According to the Law on Local Governments, municipality in Latvia is defined as local administration, which through the citizen elected representation and its established institutions and establishments provides execution of the functions granted to them and those undertaken voluntary. In this paper by the name "municipality" it will be referred to first level municipalities (*pagasts* and towns) before administrative territorial reform and later – after the reform to county municipalities (*novads*) as well as republic cities, i.e. all will be called in the same name as municipalities. Competencies of municipalities and principles for making their budgets are described in Law on Local Governments and in Law on Budget and Financial Management, and in particularly in the Law on Budgets of Municipalities.

Before the territorial reform in Latvia competences of counties, district cities and municipalities didn't differ and all of them were called municipalities. Districts (*rajons*) had regional self-government status (or regional level local government) status, but republic cities in the same time had both competences. As districts after the reform covers territories of several municipalities, they are excluded from the analysis.

Before the administrative territorial reform territorial division in Latvia was fragmentized and it had quite many municipality types. That was one of the reasons for the administrative territorial reform in Latvia. More about the situation in Latvia is discussed in Vanags & Vilka (2005), Vanags et al. (2005) and Pukis (2010). Also taking into account that the number of municipalities was quite large (more than 500), local governance was quite expensive. Pukis (2009) notes that the objectives of the reform in Latvia were to create local and regional governments capable of development, as this idea was supported by the belief in scale economy; another thought that was mentioned was comparison to other EU countries, but the author notes that these benefits can be doubted.

Administrative territorial reform in Latvia was a long term project that finished in 2009 as the fully changed municipality structure was formed in July 2009 and newly elected local governments started their work. Minor reforms with some municipality separation and merging continued, but the base was formed with 118 (later 119) municipalities (including 9 republic cities).

This reform limits the possibility for long term municipality data analysis as the structure of municipalities changed. Most data before the reform is available at municipality (*pagasts*) levels, but after – in county level (*novads*).

Small municipalities allowed their governance to be close to voters and better understood their preferences. Though there might be positive aspects of small municipalities, therefore for them it was harder to find finance for fulfilling their functions.

Budgets are the best indicator of the decisions made by politicians. As in the municipality level information is available both about revenue and expenditure and expenditure positions that gives opportunities to make in depth analysis looking both at overall tendencies, as well as testing results for particular budget positions, for example, social expenditure.

This analysis uses data on municipality basic budgets published by the Treasury of Latvia and in the reports of State Regional Development Agency of Latvia. Data are available for the period 2001-2011. As the number of observation (municipalities) is larger than the time period, short data panel is formed.

During the analysed time frame there have been three local government elections (in years 2001, 2005 and 2009) and four Saeima (parliament) elections (in 2002, 2006, 2010 and 2011). Local government elections in Latvia usually take place in spring, but Saeima elections in autumn, though there might be exceptions. As the 11th Saeima elections in 2011 was held on the ground of the results of the National Referendum on dissolution of previous parliament and was not from the usual Saeima election cycle, it will be tested separately. In the models there will be included proxies indicating the years of local government elections and Saeima elections.

Data about the results of local government elections and Saeima elections are from the Central Election Commission of Latvia; information about the structure of government is from The Cabinet of Ministers of the Republic of Latvia information about the history of government structure. As there is no information exactly which parties formed coalitions in each local government in each period, it is assumed that the leading party in municipality is the same that received the most seats during the local elections.

In local government elections often winning party is some small regional or local party that does not participate in Saeima elections. After the administrative reform situation changes a bit and more of the parties that win in local elections are also those that are represented in parliament.

There is made separate proxy variable also indicating if the leading party in local government also has position in central government assuming that this could increase their ability to influence decision making, therefore this influence will be tested. As the share of municipalities with leading parties also in Saeima or government is low, influence of particular party statistically cannot be tested.

After the reform several municipalities are combined in a single county municipality. Not to lose information about the party connections with Saeima and government, in case if the leading party of any of the previous local municipalities is represented in Saeima or government, this combined observation will indicate connection.

After combination of data on average 41.0% of combined municipalities has at least partial connection to Saeima parties and 33.8% – some connection to government parties. The share of both of these indicators are increasing with time, for example, in 2001 only 9.2% of combined municipalities had connections in Saeima, but after 2011 elections, the share was already 59.7%.

To exclude the influence of inflation, all budget data are deflated (according to Consumer Price Index provided by the Central Statistical Bureau) so they are in the same year prices, also logarithms for revenue and expenditure data are used.

2. Experience in other countries and offered solution

The structure of new administrative territories is described in the Law on Administrative Territories and Populated Areas. It shows which previous municipalities form new county municipalities.

There have been researches looking for best principles in data modification in case of the changes and in case some data are missing or are assumed to be faulty. Blum (2006) suggests several rules for selecting the best value:

1) the majority rule – the selection of the value that most files carry independently;
2) the qualitative file rule – testing file and choosing the variable value from the file that is the most reliable;
3) the corroborated variable rule – selection of values of variables that on empirical tests are confirmed to be true.

Blum (2006) argues that administrative files support data editing and imputation processes. Author notes that detecting possible errors in data file requires the implementation of logical rules within or between data sets. Also other authors (Barcaroli & D'Aurizio, 1997; Di Zio et al, 2002) note that administrative information can be used to edit data so after this process files are comparable.

There are elaborated three main mechanisms in administrative record editing and imputation (Blum, 2006):

1) Enrichment of the relevant information (Roos and Roos, 2001),
2) Expansion of the ability to create a relatively accurate reference file,
3) Continuous quality assurance performed throughout the statistical production process.

It is noted that all these editing and imputation processes should be done carefully (Holt and Jones, 1998) and data can be linked with information from other sources if available and if they share common characters and involve the same units (Poulsen 1997). Taking into account these guidelines for data editing, few basic rules are offered for Latvian municipality data modification, so that they would be comparable for the longer period of time.

2.1. First principle: previous data summarizing

According to the manual for creating county municipalities (RAPLM, 2009), budgets of the new municipalities is made by summing up budgets of previous municipalities in their territory. Based on the structure how municipalities were combined in new territorial units (available in the Law on Administrative Territories and Populated Areas), local municipality data for the period before the administrative territorial reform is combined. According to this rule author of this paper offers to sum up also previous' years budgets therefore receiving longer term data series that could be used for further analysis.

For example, Jaunpils county (*Jaunpils novads*) was formed from Jaunpils local municipality (*Jaunpils pagasts*) and Viesatu local municipality (*Viesatu pagasts*). From years starting from 2009 there is information about budgets at the level of county municipality. For the years till the administrative territorial reform budgets of Jaunpils and Viesatu local municipalities are combined and analysed together. This data combination extends time period available for analysis to 11 years (not just 3 years of data that are after the reform). Similar modifications are made for budget revenue and expenditures also for other municipalities.

2.2. Second principle: proxy variable combination

There are some variables that cannot be simply summarized as offered in the first point. First of all, those are not-numeric variables. In the case of the example mentioned in this paper these variables are proxies indicating if the leading party of municipality is one of those represented also in Saeima or in government. So this variable can take two values ("Yes" and "No"), that cannot simply be combined by summing them up.

There could be several choices how to combine multiple municipality information in one proxy variable. In this case it is chosen to indicate connection to parties in Saeima or in government if this connection was at least in one of the municipalities that formed county municipality. That could make connection variables less pronounced but at least no information would be lost.

An example of this proxy information summarization is shown in Table 1. It shows example of municipalities that after the reform form single county (*Kocēnu novads*). There are shown parties that had the maximum seats in these municipalities on a set date (year 2008) and if the same parties were represented in parliament and government. In this case only in one of these municipalities (in *Dikļu pagasts*) winning party is represented also both in parliament and government. In other municipalities winning parties are small regional parties. According to the abovementioned rule, if any of these municipalities has "connections" to parliament or government parties, then also for the combined municipality (*Kocēnu novads*) for year 2008 it is indicated that it has party that is represented in parliament and similarly also in government.

Table 1

Proxy variable combination example. Results for later Koceni county (*Kocēnu novads)* in year 2008

Municipality (*pagasts*)	Winning party in local government elections	Party represented in parliament	Party represented in government
Bērzaines	*"Par saimniecisko rosību"*	no	no
Dikļu	*Apvienība "Tēvzemei un Brīvībai/LNNK"*	yes	yes
Kocēnu	*"Kocēni"*	no	no
Vaidavas	*"Jumis"*	no	no
Zilākalna	*"Savam pagastam"*	no	no
Combination results:			
Kocēnu novads	–	yes	yes

Source: author's calculations based on data on results of local government elections (in 2005), government elections (in 2006) from Central Election Commission of Latvia and Cabinet of Ministers of the Republic of Latvia history information.

This illustrative example of specific municipality approves also that as for small municipalities before administrative territorial reform only small share had connections to Saeima or government, alternative principles of showing the connections if all municipalities that form county municipality have these connections, is not reasonable at least for the case of Latvia.

3. Method application in municipality budget analysis

As after modification data covers already 11 periods, that gives a longer time for analysing changes in local municipalities' budgets in Latvia. To show the usefulness of this methodology of combining municipality data into new county level data, panel data fixed effect model describing changes in social expenditures is created. In this article focus is on panel data models described by Greene (2008) and Wooldridge (2010). Methodology of political business cycle theory application in case of Latvia was previously described in Brauksa (2012).

Data about municipality budgets are from reports of Treasury of Latvia. Data are deflated based on consumer price indexes provided by Central Statistical Bureau of Latvia, so to exclude the effect of inflation. For budget revenue and expenditure logarithms are taken. Results of the calculations are shown in Table 2.

Both models include also constant and fixed effect coefficients for each municipality (they are not shown in the table as there are more than 100 municipalities). Model 2 includes also variables showing if leading party in municipality is represented in parliament or in government, though these coefficients are not statistically significant. There are also time fixed coefficients for each year (compared to year 2001 which is taken as a base). As the coefficient for the year dummy is larger, the larger are social expenditure in particular year.

Table 2

Panel data fixed effect model results, impact on budget expenditure

Description	Variable	Model 1 coefficients	Model 2 coefficients
Budget revenue	ln(revenue)	0.511***	0.511***
Dummy variables for years compared to expenditures in year 2001	year 2002	0.006	0.010
	year 2003	0.002	0.006
	year 2004	0.142***	0.145***
	year 2005	0.155***	0.157***
	year 2006	0.208**	0.211**
	year 2007	0.113	0.116
	year 2008	0.043	0.046
	year 2009	0.525***	0.532***
	year 2010	0.818***	0.822***
	year 2011	0.843***	0.855***
Local municipality effects (coefficient for each municipality)		(included)	(included)
Party represented in parliament		(not included)	-0.044
Party represented in government		(not included)	0.035
Constant	const	4.106**	4.103**
Number of observations		1307	1307
R square		0.81	0.80

Source: author's calculations based on data on municipality budgets and elections. Model coefficients statistically significant with (*) 90%, (**) 95% and (***) 99% probability.

According to GDP growth rates (from Central Statistical Bureau of Latvia), negative year-over-year growth (as the signal of crisis) hit Latvia on 3rd quarter of 2008 and these rates remained negative till 2nd quarter of 2010. Unemployment rate increased rapidly (from around 10% before the boom period, 7% in boom years to almost 19% during the crisis. That is reflected also in the results of social expenditure analysis. As the number of unemployed rose, also the need for social expenditure increased and during years 2009-2011 they formed much larger share from total municipality expenditures.

Results confirm political business cycles in Latvia as before local municipality elections (which in Latvia took place in years 2001, 2005 and 2009) and parliament elections (in years 2002, 2006, 2010, 2011) social expenditures increase relatively more than in other years. These results are in line with previous findings of similar models (like in Brauksa, 2012) which were calculated based on unmodified data for the period before the administrative territorial reform. Therefore we can conclude that summing up municipalities' budgets in order to create equivalent of those municipalities that were created after the reform is possible and gives opportunities for longer term analysis.

Conclusions

The two main principles offered for Latvian municipality data comparison before and after administrative territorial reform are (1) previous data summarizing and (2) proxy variable combination. Previous data summarizing are made for budget revenue and expenditure data as similar principle was

used in changing region and budget structure. As there are also some variables that cannot be summed (like for example, if the variables are not numeric, but logical), principle of proxy variable combination is offered. Avoiding majority rule that could cause the loss of valuable information, this paper offers proxy variable creation if even one of the previous territorial units have particular characteristic.

Results are tested by applying panel data fixed effect models that estimates changes in social expenditures in municipalities depending on budget revenues, year of the expenditure and local municipality effects. Also the effects of local municipalities leading party representation in the parliament and in the government are tested.

Models confirms that expenditures for social aims were higher not just during the crisis years (when the need for these expenditures increased as the number of unemployed and people requiring social help increased), but also during the years before municipality and government elections. That suggests that in Latvia these municipality budget expenditure are influenced not just because overall business cycles, but also so called political business cycles.

Results are in line with previous findings of similar models that were made on raw, unmodified data for shorter time period (before the reform). That allows concluding that offered data modifications allows increasing analysis period and do not cause result distraction. Similar principles as are offered in this paper could be applied also in other countries when analysing data before and after regional reforms.

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COMPANY VALUE AND EMPLOYEE SATISFACTION: PRIMARY DATA ANALYSIS FOR TESTING THE BASIC HYPOTHESIS "EMPLOYEE SATISFACTION HAS AN IMPACT ON THE LEVEL OF COMPANY VALUE"

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Abstract. Numerous studies and authors support the idea that there is a link between employee satisfaction and customer satisfaction, leadership, productivity, and financial results. The main hypothesis of the underlying research paper is that "Employee Satisfaction has an Impact on the Level of Company Value". Based on a deep theoretical research, a secondary data analysis from the United States and a primary data analysis from Germany, the author showed in several publications that there is a dependency between employee satisfaction and financial results, respectively company value. The company value or the value of a company can be measured by the "Equity Value". In this primary data analysis the author compared 11 companies which took part in the Great Place Contest" 2007 and 2009 or only in 2009 regarding their "Equity Values" and "Great Place to Work Scores". The figures of these companies were provided to the author in an anonymous form. The author had no influence on the number of companies the "Great Place to Work Institute" provided to him. The "Great Place to Work Institute" tried to find companies, which attended both contests and also show their financial data in the "ElektronischenBundesanzeiger". Thus, the following paper aims to foster these results with some additional primary statistical analysis for testing this hypothesis. For this investigation the author did various types of statistical analyses which seem to confirm the underlying proposition. With different types of correlation analyses the relationship between Δ Equity Value and Δ "Great Place to Work" score was elaborated. A correlation analysis has been conducted on the basis of available data. By regarding the absolute average EBIT and Equity Value of the eleven out of "100 Best Companies" some differences can be pointed out, set in comparison with 30 randomly selected companies and at the end these hypotheses can be tested with a "t-test" or a "Mann-Whitney Test".

Keywords: *employee satisfaction, equity value, correlation analysis, Mann-Whitney, t-test*

JEL code: L20

Introduction

Numerous studies and authors support the idea that there is a link between employee satisfaction and customer satisfaction, leadership, productivity, and financial results (Heskett, J.L., Jones, T.O., Loveman,

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G.W., Sasser, W.E. Jr and Schlesinger 1994, Hurley Robert F. and Estelami Hooman, 2007). Based on a deep theoretical research, a secondary data analysis from the United States and a primary data analysis from Germany, the author showed in several publications that there is a dependency between employee satisfaction and financial results, respectively company value (Brenninger H.-J. 2011; Brenninger H.-J. 2012). Employee satisfaction can be managed (Von Rosenstiel L.2003, Malik F. 2006) and therefore also the positive effect on financial results. The secondary data analysis based on the studies from the USA especially from Ingrid Smithey Fulmer, Barry Gerhard, Kimberly S. Scott (Smithey Fulmer I., Gerhard B., Scott K. S., 2003) and Eric J. Romero, University of Texas-Pan American (Romero E. J., 2004) showed high evidence that there is a correlation between employee satisfaction and company value.

In a primary data analysis the author compared 11 companies which took part in the Great Place Contest" 2007 and 2009 or only in 2009 regarding their "Equity Values" and "Great Place to Work Scores". The figures of these companies were provided to the author in an anonymous form. The author had no influence on the number of companies the "Great Place to Work Institute" provided to him. The "Great Place to Work Institute" tried to find companies, which attended both contests and also show their financial data in the "ElektronischenBundesanzeiger". These eleven companies employ more than 1000 employees and show in sum a turnover of some 100 Mio €, meaning that the result out of these were taken out of more than 1000 questionnaires.

Summing up, it can be assessed that after comparing the results of the "Great Place to Work" contest 2007 and 2009 and after analysing the financial data of these companies, the research shows high evidence about the correlation of the level of employee satisfaction and the impact on company value.

With the additional statistical analysis the results could be fostered and the hypothesis "High degree of employee satisfaction has a high impact on the level of company value" can be confirmed.

Primary Data Analysis for Testing the Basic Hypothesis

In a first step the "Great Place to Work Scores" were collected and shown in a table.

The table below gives an overview regarding the scores of the attending eleven companies with the average score.

Table 1

Scores of attending 11 companies with average score

Company	2007	2009
1	135.48	130.68
2	133.07	152.80
3	–	129.27
4	165.92	159.38
5	130.65	150.48
6	152.35	132.08
7	112.11	152.80
8	–	134.74
9	–	138.81
10	–	122.17
11	–	126.74
Average Score	**138.26**	**139.09**

Source: Great Place to Work Contest 2007, 2009 designed by author

After the analysis one by one of these eleven companies attending the "Great Place to Work Contest" the most interesting findings can be pointed out:

- All these eleven companies have a very high employee satisfaction.
- The six companies which took part two times in this contest and reached a place under the "100 Best" are outstanding regarding their employee satisfaction.
- The average score in 2009 is higher than the average score in 2007, meaning that these eleven outstanding companies could raise their average score regarding the respective period.

In a next step, the equity value of the attending companies will be computed.

All the figures and numbers of the companies are out of the "ElektronischenBundesanzeiger". The author received the data directly from the "Great Place to Work Institute" in an unattributed form. Because of confidentiality GPTW eliminated the names of the companies. Another issue may be that only seven of the investigated companies showed their complete financial data in the "Elektronischen-Bundesanzeiger". Only large incorporated companies with more than 50 Mio € turnover are obliged to show their complete financial data, smaller companies have lower or no standards for disclosure.

The table below shows the EBIT's and Equity Values of the companies, which attended the "Great Place to Work Contest".

Table 2

Computing average EBIT and average Equity Value of the "Great Place" to Work Companies

Company	EBIT in T €		Equity Value in T €	
	2006	2008	2006	2008
1	1,436	2,140	11,091	15,507
2	–	–	–	–
3	–	–	–	–
4	1,024	1,091	7,395	7,080
5	943	1,091	6,173	6,438
6	2,422	2,178	18,615	17,036
7	14,801	15,611	79,512	92,896
8	7,926	14,242	33,079	71,204
9	3,374	3,944	22,848	25,262
10	1,866	2,415	24,199	29,103
11	–	–	–	–
Average	**3,072**	**3,883**	**18,447**	**24,048**

Source: "ElektronischerBundesanzeiger" calculated and designed by author

Some findings can be stated:

- Seven of eight Companies could raise their EBIT during the regarded period.
- Six out of eight companies could raise their equity value, as well.
- Both average EBIT (26.4%) and Equity Value (30.45%) grew during the regarded period.

In the following research "Additional Primary Statistical Analysis for Testing the Basic Hypothesis" some statistical methods are used to prove the hypotheses in an exemplary way. The results regarding employee satisfaction of the companies which took part in the contest in 2007 or in 2009 and 30 randomly selected companies are compared regarding their average EBIT and Equity Value.

Correlation Analysis for the Relationship between Equity Value and Employee Satisfaction

With different types of correlation analysis the relationship between Δ Equity Value and Δ "Great Place to Work" score was elaborated. A correlation analysis has been conducted on the basis of available data. If raising or declining equity values as the dependent variable are in line with rising or declining of the "Great Place to Work" scores (independent variable), representing employee satisfaction, the basic hypotheses would be substantiated.

Comparing the results of the years 2007 and 2009.

Table 3

Equity Value and Δ "Great Place to Work Score"

Correlation Analysis		
Company	**Δ Equity**	**Δ Great value to work score**
1	+4,416	-4.8
4	-315	-6.54
5	+265	+19.83
6	-1,579	-20.27
7	13384	+40.69

Source: Great Place to Work Contest 2007, 2009 and "ElektronischerBundesanzeiger", designed by author

Only five out of the eleven companies participated in both years and also show their figures in the "ElektronischenBundesanzeiger". Therefore, only for these companies an exemplary correlation analysis can be carried out.

The analysis based on the Pearson correlation Coefficient shows the following findings:

- The correlation analysis shows significant correlation at a high significance level of $p = 0.055$ representing $1 – p = 0.945$ expected probability;
- The analysis shows a strong positive correlation of 0.792;
- The coefficient of determination r^2 shows the relative impact of the independent variable on the variation on the dependent variable;
- In our case $r^2 = 0.792^2 = 0.627$ meaning that varying levels of company value are nearly to an impact of 63% "caused" by the independent variable employee satisfaction, measured by the "Great Place to Work" score;
- Conclusion: There is a positive relationship between the variations of company value in dependence of varying employee satisfaction.

The analysis based on "Kendall Tau" and "Spearman's Rho" correlation coefficient shows the following findings:

Both "Kendall Tau" and "Spearman's Rho" show a very strong relationship between the "Equity Value" as the dependent variable and the "Great Place to Work" score as the independent variable, representing employee satisfaction (0.8 "Kendall's Tau" and 0.9 "Spearman's Rho").

Interestingly, both significance levels are very high (0.025 and 0.019), which further confirms our basic hypothesis.

However, we have to concede that the available data only allowed for a very small sample, which may limit our findings.

Nevertheless, also our first primary analysis is in line with our conjecture that equity value maybe significanctly influenced by employee satisfaction.

Testing statistics for average EBIT and average Equity Value comparing "GPTW-Companies" and "Randomly selected Companies"

In this chapter the average EBIT and Equity values of the eleven analysed companies which attended the "Great Place to Work Contest" in 2007 or 2009 are computed. As mentioned before, the "Great Place to Work Institute" tried to find some companies which attended the "Great Place to Work Contest" in 2007 and 2009 and also show the relevant data in the "ElektronischenBundesanzeiger". Only eight of the eleven companies which attended the contest in 2007 and 2009 showed sufficient data for the analyses of EBIT and "Equity Value". The data were given to the author in an anonymous form because of data security.

Out of this data set, a comparison can be done between these eight out of the "100 Best companies" and other randomly selected companies. By regarding the absolute average EBIT and Equity Value of the eleven out of the "100 Best Companies" some differences can be pointed out, set in comparison with 30 randomly selected companies and at the end these hypotheses can be tested with a "t-test" or a "Mann-Whitney Test".

To test if there is any remarkable difference regarding EBIT and company value between the "100 Best Companies" and "Normal Companies" an additional test can be done. 30 companies which were not under the "100 Best" or did not participate in the contest were selected randomly out of the "ElektronischenBundesanzeiger".

Based on a random procedure we chose a sample of 30 companies out of the total population representing the statistical minimum sample size for statistical analysis. (Rasch D., Verdooren L.R., Growers J.I., 1999).

The author's intention is the following:

If the average EBIT and "Equity Value" of the eight "Great Place to Work Companies" should be significantly higher than the average EBIT and "Equity Value" of the remaining German Companies (represented by the randomly selected sample of 30 companies), we can postulate that this result may have been caused at least to a certain extend by higher employee satisfaction. This is the fact because the selected eleven "Great Place to Work Companies" are definitely among the best "Great Place to Work Scores (representing employee satisfaction) within a sample of some hundred companies participating in the "Great Place to Work Contest". It can be assumed that generally only these companies decided to participate in the "Great Place to Work Contest" which presumably show a higher level of employee satisfaction anyway. (Dr.Schulte-Deußen K., 2012).

Comparing average EBIT and average Equity Value

Out of the empirical investigation some results and findings have already been generated.

Table 2above shows the EBIT's and Equity Values of the companies which attended the "Great Place to Work Contest".

Now the average EBIT and Equity Value of these 30 randomly selected companies can be computed.

The table 4 shows the EBITs and Equity Values of the 30 randomly selected companies representing the whole population of German companies.

Findings:

Only slightly more than half of the 30 randomly selected companies (16) could raise their equity value during the regarded period.

There are some companies out of the randomly selected ones which show negative equity values. Theoretically that would mean that the owner of the company has to give the buyer of the company some money to get rid of it. In practice or in the Mergers & Acquisition business this would never happen. Therefore, for a realistic point of view computing average company value should be corrected while neglecting negative Equity Values.

Table 4

Average EBIT and Equity Value of 30 randomly selected companies in Germany

Company	EBIT in T €		Equity Value in T €	
	2006	2008	2006	2008
1	508	466	-16	-1,676
2	407	520	129	-1,398
3	303	126	1,968	661
4	858	338	4,423	15
5	195	61	-2,154	-4,073
6	6,046	3,310	44,628	23,322
7	-272	1,223	-3,618	5,587
8	-396	130	-2,346	-222
9	4,928	6,611	34,992	45,974
10	-15,495	-3,016	-107,686	-16,435
11	511	691	3,305	4,414
12	6,965	9,917	56,074	70,180
13	623	639	5,327	5,438
14	2,415	7,930	25,208	62,146
15	3,452	2,183	24,101	15,189
16	7,902	10,066	42,353	53,810
17	737	410	1,675	-2,170
18	4,138	3,895	25,013	28,292
19	3,803	3,694	20,289	8,784
20	885	1,145	-1,698	-1,017
21	3,678	6,340	27,180	43,299
22	614	450	2,729	2,433
23	2,090	1,068	18,130	12,182
24	624	639	5,334	5,438
25	1,382	1,220	8,260	5,501
26	823	1,058	1,103	5,370
27	4,434	1,851	41,510	27,391
28	791	1,306	3,704	5,901
29	293	347	-617	1,099
30	1,912	2,212	11,622	11,425
	1,505	2,228	9,697	13,895

Source: "ElektronischerBundesanzeiger" calculated and designed by author

Table 5

**Comparison of "Great Place to Work "– and 30 Randomly Selected Companies
with Correction of Negative Equity Values**

	Ø EBIT in T€			Ø Equity Value in T€		
	2006		2008	2006		2008
GPTW Companies	3072	26.4%	3883	18447	30.36%	24048
30 randomly Selected	1505	48%	2228	13635	8.5%	14795
Δ	1567		1655	4812		9253

Source: "ElektronischerBundesanzeiger" calculated and designed by author

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Comparing the results of the "Great Place to Work Companies" with the results of the 30 randomly selected ones, it is evident that there is a high difference, not only in the absolute amounts of average EBIT and average Equity Value , but also in the percentage of the equity value raise.

Testing Statistics for comparing different average EBIT and Equity Values with the Mann-Whitney-Test

Out of a generated data set which was processed out of these absolute figures and arranged with rank numbers a statistical Mann-Whitney- Test can be run with SPSS.

The analysis based on the Mann-Whitney-Test of the EBIT 2006 comparing the eight "Great Place to Work Companies" with the 30 randomly selected companies show the following results:

For the 2006 results there is obviously no statistical difference between the eight "Great Place to Work Companies" and the 30 randomly selected companies shown by the value for the "Asymptotic Significance" and the "Exact Significance" of 0.616 and 0.686.

From these results alone it could not be stated that "Great Place to Work Companies" are better than the randomly selected 30 companies representing the whole population.

The same procedure for 2008 shows an "improved" result in terms of "Asymptotic and Exact Significance" values of 0.122 respective 0.221.

But it still means that it cannot be stated superiority in EBIT 2008 of the eight "Great Place to Work Companies" against the randomly 30 selected companies representing the whole population.

The analysis based on the Mann-Whitney-Test "EQUITY VALUE" 2006 shows the following results:

The Mann-Whitney test procedure for the Equity Value 2006 also shows "Asymptotic Significance and Exact Significance" of 0.200 and 0.219. That means that we cannot state statistical difference even though the data set indicates an "Equity Value" advantage of the eight "Great Place to Work Companies"

The Mann-Whitney "Equity Value" test for 2008 becomes statistically much more interesting, because the "Asymptotic Significance and Exact Significance" values "improve" drastically to 0.066 respective 0.074. This means that on a p-level of about 0.07 it can be stated that there is an obvious superiority in the 2008 "Equity Value" of the eight "Great Place to Work Companies against the representative remaining 30 randomly selected companies.

Testing Statistics for comparing different average EBIT and Equity Values with the "t-test"

In the first place we conducted the Mann-Whitney-test because as a non-parametric test it does not require specific formats of statistical and empirical distributions. Even though we cannot be sure that our sample data for the eight "Great Place to Work Companies" and the sample of the 30 randomly selected companies are subject to a normal distribution.

There are some strong hints this maybe the case:

First, "Great Place to Work Company Scores" generally follow a normal distribution (www.greatplace towork.com, 2009) and secondly there is no indication that scores and values of the population of German companies do not follow a normal distribution. (www.elektronischerbundesanzeiger.de, 2011)

Therefore, we also conducted a t-test to find out whether the EBIT and "EQUITY VALUE" of the "Great Place to Work Companies" of 2006 and 2008 are higher than the EBIT and "EQUITY VALUE" of the representative sample of the 30 randomly selected companies.

Based on these assumptions the t-test shows the following findings:

- The EBIT of 2006 of the "Great Place to Work Companies" and the other 30 randomly selected companies, which represent the whole population of German companies does not show a statistical difference, meaning the 0-hypotheses of equal EBIT's cannot be rejected in this case.

The analysis based on the "t-Test" EBIT 2008 shows the following findings:

- Interestingly, for EBIT 2008 there is a significant difference between the eight "Great Place to Work Companies" and the 30 randomly selected companies on a highly significant level of 0.027. Therefore, it can be stated that the average EBIT 2008 of the eight "Great Place to Work Companies" is higher than the EBIT 2008 of the representative group of the 30 randomly selected companies.

The next step is to do the statistic calculation for the Equity Value of these two groups of companies. The analysis based on the "t-Test" Equity Value 2006 shows the following findings:

- The Equity Value 2006 of the "Great Place to Work Companies" and the other 30 randomly selected companies, which represent the whole population of German companies does not show a statistical difference, meaning the 0-hypotheses of equal Equity Value's cannot be rejected.

Finally, the analysis based on the "t-Test" Equity Value 2008 shows the following findings:

- Our test procedure indicated, based on the t-value, that the 0-hypotheses (equal Equity Values) should be rejected that there is an obvious difference between the Equity Value of the eight "Great Place to Work Companies" and the 30 randomly selected companies (representing the whole population of German companies).
  However, the level of significance is relatively non-sufficient.

Comparing Average Great Place to Work Scores

Last but not least the average score of our 11 attending companies will be compared with the average score of the "100 Best" and with the average score of all attending companies, to see if there also can be some remarkable findings.

For the year 2007 the average total score of all attending companies was 115.9 and for the "100 Best" 132.7.

For the year 2009 the average total score of all attending companies was 107.2 and for the "100 Best" 128.9.

The diversification of these two years is caused by two effects. First, the Great place to Work Institute made a new calibration of their validation for the year 2009, which leads to a stricter validation. Second, there is a tendency that more companies take place in the contest knowing that they don't really have a chance. (Dr. Schulte-Deußen K., 2012)

Table 6

Comparison of average total scores and randomly selected companies

Average Score	2007	2009
11 randomly selected companies	138.26	139.09
Best 100	132.7	128.9
All attending companies	115.9	107.2
Δ Best 100	5.56	10.19
Δ 11 selected to all	22.36	31.89

Source: "Great Place to Work Institute", Dr. Schulte-Deußen K., 2012, designed by author

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The table 6 shows that the eleven randomly selected companies are significantly above the average "BEST 100" scores. This is clear and evident, but very interesting is the fact that the average score of "All attending companies" and of the "Best 100 companies" declined during the regarded period, while the average "Great Place to Work–Score" of the "eleven randomly selected companies" rose during the regarded period. That may lead to the assumption that these eleven companies which are among the top 50 out of the "100 Best" could raise their employee satisfaction more than the rest and that they belong to the top rated German companies in terms of employee satisfaction.

Conclusions and Recommendations

Our primary statistical analyses have produced various complementary findings which can be pointed out as follows:

- There is a strong impact of employee satisfaction on the Equity Value in a positive way (as shown in the correlation analysis). Our sample of the eleven GPTW companies indicates that their overall employee satisfaction is higher than the average employee satisfaction within the population of German companies.
- Even though the conducted Mann-Whitney-Test and t-test procedures for EBIT and Equity Value deliver mixed results, there are some indications that the average EBIT and Equity Value of the eight (only eight out of the eleven showed sufficient financial data in the "Elektronischen-Bundesanzeiger") regarded "Great Place to Work Companies" may be significantly higher than the EBIT and Equity Value of the other 30 randomly selected companies (representing the whole population of German Companies).
- Since it can be presumed that the level of employee satisfaction within the eleven "Great Place to Work Companies" is generally higher than the level of employee satisfaction of the representative other 30 randomly selected companies we may – cum granosalis – postulate: "Increasing employee satisfaction has a positive impact on the EBIT and therefore on Equity Value"! Eventually, we have to consider that our primary analysis data set is restricted in terms of volume and sample size, which may limit our research statements and would definitely require more research based on a more voluminous data set and sample size.

The theoretical research, the secondary data analysis from the USA and the primary data analysis with the testing statistics confirm the hypothesis that "Employee Satisfaction has an Impact on the Level of Company Value". Based on this research it is recommended for managers to improve their employee satisfaction to get better results and therefore a higher equity value.

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LATVIAN HOUSEHOLDS' DEMAND ELASTICITY
FOR THE MAIN FOOD GROUPS

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Abstract. Although the Latvian economy has returned to positive growth path since 2010, in society the problems remain: high long-term unemployment rate and relatively low average level of income. Government's reluctance to reduce VAT for certain food groups can be understood – although this may improve the level of welfare in low-income households, simultaneously it could reduce the social security benefits for the same households. However, as has been shown in other studies, the level of income affects the healthy food consumption and thus also public health, and via this the economic long-run growth, too.

Therefore, the aim of this study is to assess which food group consumption is more sensitive to the level of income and price changes. The study is based on „ Household Budget Survey 2010" by CSB which contains 3798 Latvia's household survey data. It was calculated three indicators: (1) the households' available income for consumption per equivalent consumers, (2) the average price of product or product groups, (3) real consumption of product or product group by equivalent consumer. For each of the product are evaluated two models. The first model is used to estimate elasticity of demand for product dependent on households' available income for consumption. The second, to estimate elasticity of demand dependent on product average prices.

Results show that if the introduction of the reduced VAT rate for certain food groups is politically supported, then they could be: bread, fruit and vegetables, fish and fish products.

Key words: *consumption expenditures, food demand elasticity, regression analysis, household survey*

JEL code: D12, H31, Q11

Introduction

Despite the fact that since the year 2010 Latvia's economy has resumed a positive growth, from year to year there increases the number of households with material deprivation. In the EU-SILC survey, material deprivation is defined as a set of reasons for a household denying access to material comforts. In the period from 2008 to 2011, in all cost groups there has increased the proportion of such households that cannot afford to pay for them. Including, by over 5 percentage points there has

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increased the proportion of such households that can afford to eat meat, poultry or fish every second day (see, Table 1). Therefore, although not without any interest to support local producers, farmers and food manufacturers' representative organizations call upon the Latvian Government to fix a reduced rate of VAT to food. They include Farmer Organizations' Cooperation Council and Latvian Federation of Food Enterprises. (Dieziņa, 2012).

Table 1

**The rate of households, which could not afford to cover certain expenses
due to the lack of money (%)**

	2008	**2009**	**2010**	**2011**
To pay arrears on mortgage or rent, utility bills or hire purchase instalments	13.0	20.0	23.8	24.0
To keep home adequately warm	19.1	17.9	21.4	24.0
To face unexpected financial expenses	61.0	73.4	79.0	81.4
To spend one week annual holiday away from home	56.7	59.8	61.8	63.3
To have a meal with meat, chicken, fish every second day	27.4	25.2	28.5	32.9

Source: Central Statistical Bureau of Latvia

The Government's dismissive attitude toward the possibility of introducing a reduced VAT rate for food is understandably related to the financial deficiency in the public finances, which can be caused by the tax reduction. Although, due to the economic growth, the total unemployment rate relatively rapidly decreases, a significant reduction in the number of long-term unemployed persons is not observed (see, Table 2). The Latvian economy highlights structural problems – the labour market demand does not comply with the offer which contributes to the society's further stratification by income levels. For the Government, placed in the situation when there remains a high demand for social assistance – to ensure citizens in at least the minimum level of income or provide them with support, for example, through education and return them as soon as possible in the labour market, it is necessary to ensure a large enough tax revenue.

Table 2

Number of registered unemployed persons at the end of year

	Unemployed persons	**Growth rate of the number of unemployed persons (y-to-y)**	**Long-term unemployed (over 1 year)**	**Growth rate of the number of long-term unemployed persons (y-to-y)**
2007	52321	–	9393	–
2008	76435	46%	8466	-10%
2009	179235	134%	24172	186%
2010	162463	-9%	61331	154%
2011	130296	-20%	56934	-7%

Source: Unemployed persons and Long-term unemployed – Central Statistical Bureau of Latvia; Growth rates – author's calculations based on respective data

However, it should be noted that material deprivation can also change the food group consumption demand (Zheng & Henneberry, 2012) which may affect the health of the population and that, in turn, through the quality of life of the population changes may be reflected in the sustainable development of the economy. Therefore, the aim of this study is to assess which food group consumption is more sensitive to the level of income and price changes, so that if the Government will consider the opportunity for individual food groups to introduce a reduced VAT, there could be made a reasoned argument which health food group consumption it could affect positively.

In the study there are used data presented in "Household Budget Survey 2010" conducted by Central Statistical Bureau of Latvia and assessed a food product or group of products' consumer elasticity depending on income per an equivalent household member or depending on the price changes.

The study structure is as follows:
1) A healthy and functional food definition is examined;
2) The data used in the study and methodology are described;
3) Regression analysis results;
4) Discussions and conclusions.

1. Healthy and functional food definitions

Certain food products can be described as good or bad and healthy or unhealthy. With such category as "good" is meant food that is desired, in turn, "unhealthy" – food that should be avoided. In the preferred foods there are usually mentioned fresh fruit, berries, vegetables, rye and oats.

Healthy food is described by such words as "natural", "pure", "main dish", "home-made food", "raw". The underlying assumption is that the food, enriched with healthy additives, even if the supplements are derived from the plant kingdom, cannot provide the balance of such substances that gives raw food (Niva, 2007), i.e., by eating fresh fruit we consume the required amount of vitamins but using food rich in with vitamins, we can get hypervitaminosis.

Healthy food is not synonymous with functional food, which often refers to food that is not detrimental to health. However, this definition does not clearly distinguish between the concept of functional and healthy food. Unity is only a belief that healthy food is also functional but not all functional food is healthy. A distinction should be made between real and possible functional food products but it is not a straightforward thing to do. Healthy food is the food, the positive impact of which on health is confirmed by studies or previous experience. In general, enriching the food with vitamins and minerals, you can get food moving into the functional food category but it may also be only apparent functionality. The frequently mentioned example – rich in vitamins juices: despite healthy ingredients, their functionality is just at the marketing level but no evidence of true health improvement.

In order to most visibly and simply present the basics of healthy nutrition, nutrition specialists have developed the so-called nutritional pyramid. The pyramid shows the man's everyday diet proportions: what products are needed to consume in large/small quantities. The pyramid at level 1 (basic) includes products where the main nutrients are carbohydrates, protein, fibre, iron, calcium, B – group vitamins. They are dietary basic products to consume in large quantities, richly. This level contains flour, semolina, bread and other cereal products, rice, corn and potatoes. So, they are all porridges, oatmeal, pasta, quick breakfast made from grain.

The pyramid at level 2 includes fruits, berries and vegetables as well as green peas and beans in pods. Those products, particularly fresh, are rich in vitamin C, carotene, fibre, carbohydrates. They should be often used and richly, it is desirable to choose a variety of vegetables and fruits.

The pyramid at level 3 includes milk, milk products, meat, fish, and eggs. All of these products are a valuable protein and different fat source. No matter how this group is good, it cannot replace the pyramid's first and second levels; therefore, dairy products should be eaten regularly but in moderate amounts. Lean meat is a source of a good protein, vitamins of group B, especially B12, as well as an iron

source but you have to avoid fatty meats, sausages, fatty products. Fish is a very valuable source of protein, vitamin D, vitamin B group, it supplies the human body with essential fatty acids (Omega 3), the sea products give the body iodine but this level of products should also be consumed in moderate volumes.

The pyramid at level 4 includes fats, sweets and alcohol. These products may not be used at all, but, if used, preferably a little.

So, if you consider the decision to cut VAT on certain food groups, then more attention should be paid to the first three levels of the pyramid food demand elasticity.

2. A description of the data and methodology

The research is based on "Household budget survey 2010" database conducted by the Central Statistical Bureau of Latvia. The database contains 3798 Latvian households' survey data. Based on the available data, there were calculated three indices: (1) the funds held by households for consumption per the equivalent consumer; (2) the average price of the products for groups or products; (3) the product group or product real consumption per the equivalent consumer.

The indices to the equivalent consumer are obtained by dividing the specific indices with household size which is formed by using the modified OECD scale – for the first adult there is an equalized weight of 1.0, for any next member of the household aged 14 years and older – 0.5 but for each member aged 14 years and older – 0.5 and for any child younger than 14 years – 0.3. The derived indices are obtained as follows:

(a) Household resources available for consumption per the equivalent consumer – the index is created by dividing two database parameters: the total consumption expenditure in cash (Ls per year) with the household modified size;

(b) For the average price product groups or products – using a product group or product code table, from the database for each household there are pulled out and summed up the expenditure corresponding to them in cash (Ls per year); analogues from the database are pulled out according to the code table on the consumption expenditure in cash; if the units of the products are the same, then the average price is calculated by dividing the total expenditure with the total volume; if the units are different (part of the products is listed in kilograms, others in litres or pieces), then, first of all, the average prices are fixed for products with the same units of measurement, secondly, the average price of the group is calculated as the weighted average of the prices of products with different units of measurement where as the weights serve the proportion of expenditure for products with different units of measurement;

(c) The product group or product real consumption per the equivalent consumer – the indicator is obtained at the total expenditure household level by dividing with the average price. The real consumption characterizes how many of which product group or product units per year are consumed by the equivalent consumer of a household.

Food products, depending on the aspect of production, are divided into the following groups:
(a) Large product groups – Bread and cereal products; Meat and meat products; Fish and fish products; Dairy products, except butter; Oils, fats, butter; Fruits and vegetables; Other food.
(b) A separate food product groups – Bread; Unprocessed meat; Unprocessed fish; Milk; Eggs; Fresh fruit; Fresh vegetables.

In order to assess the elasticity, there are used the log-log models where a parameter to the explanatory variable interpretation corresponds to the definition of elasticity: on what percentage the dependent variable will change if the explanatory variable value changes by one per cent. The analytical model is as follows:

$$\ln y_i = b_0 + b_1 \ln x_i \ , \tag{1}$$

where b_0, b_1 – parameters to estimate and b_1 is interpreted as elasticity of y depending on x.

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In each of the product groups, two models are evaluated. The first model evaluates the real consumption elasticity of product groups depending on resources at the disposal of the household. The second model: elasticity depending on the average price of the product group. By analysing the results, a particular attention is paid to the demand elasticity depending on the price changes as it has a direct effect in connection with VAT. The elasticity after income suggests the household preference changes when there are changes in the level of income.

3. The results of the regression analysis

The model evaluation is based on the statistics and econometrics software package SPSS17.

If in the tables it is not marked otherwise, the models in general (concluded according to F-statistics) or elasticity coefficients (concluded according to – t statistics) are statistically significant at all the standard confidence levels: 10%, 5%, or 1% (see, Appendix). The econometric estimates of the elasticity parameters of the major food product groups for all the households are presented together in Table 3.

Table 3

The elasticity parameters of the major food product groups for all the households

	Demand elasticity depending on household income changes	**Demand elasticity depending on price changes**
Bread and cereal products	0.071	-0.464
Meat and meat products	0.251	-0.431
Fish and fish products	0.169	-0.641
Dairy products, except butter	0.499	-0.520
Oils, fats, butter	-0.096	-0.688
Fruits and vegetables	0.732	-0.571
Other food	0.481	-0.825

Source: author's calculations based on "Household budget survey 2010" database

The results of the estimates indicate that the demand elasticity depending on price changes in 2010 for all the households ranged from -0.431 to -0.825 that fully comply with the theory of elasticity for food products. The smallest demand elasticity parameters depending on the price changes were with the group of goods "meat and meat products, eggs" but the indices of this group were lowered by the pronounced low demand elasticity of the egg product group depending on price. The next product group with the lowest elasticity is "bread and cereal products" (0.464). For the product group "dairy products except butter", the demand elasticity depending on changes in price formed -0.520; for the group of goods "fruits and vegetables" -0.571; for the group of goods "fish and fish products" -0.641; for the group of goods "oils, fats, butter" -0.688. The highest elasticity indices are for the food group "other food' and they form -0.825.

It should be noted that in accordance with other studies (Muhammad, et al., 2011), the lowest elasticity as concerns price is inherent to bread and cereals, as well as fat. Such differences can be partly explained by different definitions of product groups. However, the Latvian household data analysis indicates that they are exactly the groups of goods "bread and cereal products" and "oils, fats, butter" that are characterized by a very low demand elasticity depending on income changes (significantly lower than

the corresponding indices of the other product groups). In addition, for the product group "oils, fats, butter" the demand elasticity depending on income is even with a minus sign and this means that with the increase in personal income, consumption of these products decreases. The greatest demand for elasticity depending on the income is created from fruits and vegetables as well as dairy products (except butter).

The econometrically calculated elasticity indicators for individual product groups to all the households together in Latvia are presented in Table 4. It should be noted that two of the 14 indices calculated are not statistically significant at all the standard confidence levels – they are the demand elasticity depending on the income changes of "unprocessed fish" and the demand elasticity depending on changes in the price of "eggs".

Table 4

The elasticity parameters of individual product groups for all the households

	Demand elasticity depending on household income changes	Demand elasticity depending on price changes
Bread	-0.052	-0.733
Unprocessed meat	0.258	-0.378
Unprocessed fish	-0.015*	-0.518
Milk	0.362	-0.687
Eggs	0.084	-0.083*
Fresh fruit	0.189	-0.651
Fresh vegetables	0.283	-0.607

* not significant at 10%, 5% and 1% level
Source: author's calculations based on "Household budget survey 2010" database

As regards the demand elasticity indices depending on price changes without eggs (where the index is not statistically significant, thus, it cannot be statistically stated that they are different from zero) the lowest index value is for unprocessed meat and unprocessed fish – respectively -0.378 and -0.518. The highest indices are for bread (-0.733), followed by milk (-0.687), for specific in Latvia fresh fruits (-0.651) and vegetables (-0.607).

Bread is classically considered to be a low elasticity good from the demand side both depending on the price and income changes. However, the data analysis of households in Latvia simultaneously reveals both relatively high demand elasticity depending on price changes and negative demand elasticity depending on income changes (this means that the household demand for bread in the case of income growth decreases). Very low demand elasticity depending on income is typical of the eggs (0.084). For other product groups, the demand elasticity indices depending on the income are in the range of 0.189 (fresh fruit) and 0.362 (milk).

Discussion and conclusions

At the basis of the food pyramid, level 1 large group's "bread and grain products" and just "bread" demand is characterized by low elasticity depending on the household income level which could be explained by the relatively high importance of the large products in the daily diet. However, if the large group's of "bread and grain products" elasticity in pricing is relatively lower than the other big group

products, then the individual product's "bread" demand elasticity in pricing is one of the highest. That means that

1. by fixing a reduced VAT rate, the reduction of prices could contribute to the demand increase for "bread".

The demand for the pyramid level 2 products-fruit, berries and vegetables, its large group "fruits and vegetables" is relatively elastic depending on the household budget revenue. This can be explained by in the group included not typical to Latvia products, such as citrus fruit. In contrast, the elasticity demand for typical to Latvia "fresh fruit" and "fresh vegetables" depending on the household income is relatively low which points to this product as the basic product of healthy food products in households. However, the demand for "fruit and vegetables", also "fresh fruit" and "fresh vegetables" is relatively flexible in relation to prices. Therefore,

2. given that it is recommended to use in the diet not only more fresh fruits and vegetables but also to diversify them so that through the price effect to promote their consumption, it might be possible to apply the reduced VAT rate to the large product group "fruits and vegetables".

Analysing the level 3 products, there was confirmed the basic finding in economics that the growth of meat and dairy product consumption over other products is contributed by an increase in household welfare. The difference is that the demand for "meat and meat products", relatively less than other food groups, is affected by price changes, while for "dairy products" the demand is very sensitive to price changes. Consequently, in the conditions when there increases the number of such households confronted with scarcity of funds, for these two groups of products, by the VAT changes only, the demand changes may not be achieved. However, from this level of the pyramid products, it would be advisable to consider the reduced VAT rate fixing for "fish and fish products", and especially for "unprocessed fish". The study shows that in Latvian households, with the changes in income level, the consumption of these products does not significantly change. At the same time, the demand elasticity in prices is relatively high. Therefore,

3. in order to contribute to the consumption of "fish and fish products" in households, thus supplying the human body with essential fatty acids, as well as to giving the body iodine, it is recommended for this product group to fix a reduced VAT rate.

In general, VAT rate reduction will have positive impact on consumption of "healthy" grocery products, such as bread, fruit and vegetables, fish and fish products.

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Appendix

Bread and cereal products (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	3792	19.535	2.043	**0.071**	4.420
average prices		324.201	2.035	**-0.464**	-18.006

Meat and meat products (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	3727	153.753	1.983	**0.251**	12.400
average prices		330.957	1.970	**-0.431**	-18.192

Fish and fish products (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	2686	31.241	2.036	**0.169**	5.589
average prices		407.211	2.036	**-0.641**	-20.179

Dairy products, except butter (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	3630	594.248	2.028	**0.499**	24.377
average prices		445.895	2.029	**-0.520**	-21.116

Oils, fats, butter (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	3099	17.274	1.999	**-0.096**	-4.156
average prices		712.745	2.013	**-0.688**	-26.697

Fruits and vegetables (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	3439	731.570	1.962	**0.732**	27.048
average prices		242.116	1.983	**-0.571**	-15.588

Other food (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	b_1	*t*-statistics
household income for consumption on equivalent consumer	3579	289.337	2.037	**0.481**	17.010
average prices		2381.993	2.041	**-0.825**	-48.806

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Bread (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	3761	9.094	2.072	**-0.052**	-3.016
average prices		312.116	2.062	**-0.733**	-17.667

Unprocessed meat (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	2958	87.841	1.990	**0.258**	9.372
average prices		76.504	1.979	**-0.378**	-8.747

Unprocessed fish (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	1019	0.115[*]	2.014	**-0.015**[**]	-0.339
average prices		205.628	1.959	**-0.518**	-14.340

* model is not significant at 10%, 5% and 1% level
** coefficient is not significant at 10%, 5% and 1% level

Milk (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	3592	254.452	2.024	**0.362**	15.952
average prices		626.192	2.024	**-0.687**	-25.024

Eggs (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	2623	20.328	1.974	**0.084**	4.509
average prices		1.730[*]	1.978	**-0.083**[**]	-1.315

* model is not significant at 10%, 5% and 1% level
** coefficient is not significant at 10%, 5% and 1% level

Fresh fruit (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	1648	13.481	2.035	**0.189**	3.672
average prices		236.647	2.032	**-0.651**	-15.383

Fresh vegetables (*y*) real demand elasticity depending on:

x	*n*	*F*	D-W	*b*$_1$	*t*-statistics
household income for consumption on equivalent consumer	2854	132.645	1.966	**0.385**	11.517
average prices		414.104	1.961	**-0.607**	-20.350

THE IMPACT OF EMPLOYER BRANDING
ON EMPLOYEE PERFORMANCE

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Abstract. Currently, the focus of Employer Branding research is mainly targeted towards recruiting. However, Employer Branding also entails branding activities to existing employees and former employees.

Purpose. Purpose of the research is to assess the current state of organizations according to the six principles for internal branding suggested by Scott Davis (Davis S., 2005) and evaluate their impact on the motivation of their employees.

Findings. As findings, a causal model is provided to assess and measure the full impact of employer branding on employee performance and to provide a structure to scientifically assess the value of employee marketing initiatives.

Research limitations. The limitation of the paper that it is still conceptual and will be empirically tested after the publication.

Value. The research is providing a structure to a part of Employer Branding which has not been paid much attention to yet: the value of Employer Branding to existing employer-employee relationships.

Keywords: *employer branding, marketing-channels, marketing-performance*

JEL code: M12

1. Introduction

"People and brands instead of machines." This statement is the result of a panel discussion at the World Economic Forum in Davos on the success factors of the 21st century (Esch F., 2010) which perfectly highlights the two big challenges for businesses in the upcoming decades: The need to create, communicate and maintain a brand in order to differentiate from competitors and to attract, develop and maintain talented and motivated employees are both crucial factors for success.

With products and services becoming more and more homogenous and Know-How being easier to copy, brands become an important differentiator for customers' buying decisions. "Brands are not only growing in value, but a consistent focus on the brand increases the financial success of a corporation." (Schmidt H., 2008).

The organizational importance for "Talent" has been growing significantly in the last decades. "Human resources are strategically the most important company resource, even though it cannot be expressed in numbers form a financial point of view." (Myskova R., 2011) Not only in the service industry, is it becoming more and more important for employees to identify with the brand. Internal branding is essential for creating a brand equity management system that will maximize long-term brand

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equity. A strong brand needs a brand-driven organization, which can assimilate the brand into employees (Keller K. et al. 2008).

Besides creating a competitive advantage with the customer, a strong brand can also contribute to generating and keeping a strong workforce: Employer branding, a new discipline coming up in the last decades, is the approach to develop a brand especially designed to promote the benefits of it as an employer to existing and potential employees (Backhaus K. & Tikoo S., 2004).

The new "War for Talent" creates a tendency to underestimate the abilities of the employees already working in the company and to glorify outside talent. (Pfeiffer J., 2001) However, an organization should also focus on both, the recruitment of qualified and culturally fitting employees and the satisfaction and motivation of existing employees. A positive attitude towards the company can result in higher creativity of employees, more innovation, more participation in workshops and discussions, decline in sick leave times and higher loyalty (Schüller A., 2010).

The purpose of the proposed research will be to analyse the effect of External Employer Branding and HR Marketing on existing employees. The aim is to scientifically prove a relationship between Employer Branding, the understanding of the corporate brand, employer preference, employee motivation and organizational performance.

The expected relation is a positive impact of employer branding on the understanding of the brand of the organization as well as employee motivation and organizational performance.

2. Research Purpose

2.1. Employer Branding

For companies, brands fulfil multiple functions. They help the company differentiate their products, they create a higher brand-loyalty, they profit from Halo-effects, they provide a platform for new products and they protect their own products and services from crisis and competition. (Esch F., 2010) "Branding includes all the practical measures to build a brand that are suitable to make an offer stand out from offers with similar quality and to enable an accurate allocation of an offer to a particular brand." (Esch F., 2010) is best reflecting the current state of definition on branding.

Employer branding is a "targeted, long-term strategy to manage the awareness and perceptions of employees, potential employees, and related stakeholders with regards to a particular firm. The strategy can be tuned to drive recruitment, retention, and productivity management efforts." (Sullivan J., 2004) It "can be understood as a bundle of benefits with specific, at the same time long term differentiating characteristics (following the theory of Keller 2003), in a way that the substance of an organization as employer is central to the presentation. It is meant to significantly enhance the publicity of the organization as employer, to ensure that employees include the employer in their relevant set. Moreover, the perceived advantages (Brand value) should immediately reflect in the preference-decisions of the target audience and at the same time enable a sustainable differentiation to competing offers of competitors." (Beck C., 2008)

A strong Corporate Brand Umbrella, hosting the Employer Brand as well as the Customer Brand is beneficial to the organization. (Barrow S. & Moseley E., 2005) To create a unified as well as truthful brand image, this brand needs to represent the current company culture.

"While the customer brand and employer brand compete in two different markets – one for products and services; the other for talent and commitment – they are closely interrelated. The employer brand, in attracting the right employees and maintaining their commitment to high performance, plays a critical role in building and supporting the customer brand. Likewise, the strength of the customer brand plays an important role in attracting the right people to come and work for the company. Once employed, the pride

they share in the company's external reputation helps in maintaining their loyalty and commitment to delivering on the company's brand promises to its customers." (Barrow S. &Moseley E., 2005). A successful Employer Brand needs to be closely integrated with the Corporate Brand. Core Proposition, Brand Values and Brand Personality need to reflect the organizational culture and ensure that the derived external and internal customer- and employee-propositions are homogenous.

Fig. 1. **Integrating the Employer Brand with the Corporate Brand (Mosley E., 2007)**

Hence, Employer branding is essential for creating a brand equity management system that will maximize long-term brand equity. A strong brand needs a brand-driven organization, which can assimilate the brand into employees. (Keller K. et al., 2008).

2.2. Influence of employer branding and brand-oriented behaviour

Successful employer branding needs to be integrated throughout the organization. Brand-oriented behaviour does incorporate all elements of the organization including organizational structures, leadership behaviour, personnel management as well as communication with in the organization. (Schmidt H., 2008).

Looking at organizational structures, incentives, planning, budgeting and controlling-systems as well as the organizational structure represent the culture of an organization. Leadership styles, management culture as well as management principles and symbolic management stand for the organizational values and orientation. Recruitment, promotion criteria, institutionalized socialization, education and training as well as internal communication and inwardly directed external communication represent the concrete employer branding. All of these elements represent brand-oriented behaviour.

A consistent management of these factors will result in a better understanding of the Employer Brand, which will again lead to an increase in loyalty to the employer, a preference for the organization and the employer as a brand. Furthermore, the better understanding will lead to more brand-consistent behaviour and communication and will transform employees into brand advocates. In this process, the support of senior management is crucial. "Organizations that intend to fully reap the benefits of becoming brand-driven need to work to create the internal culture that encourages and supports on-brand behaviours. Like any form of organizational change, affecting it begins at the top and filters down from there." (Davis S., 2005).

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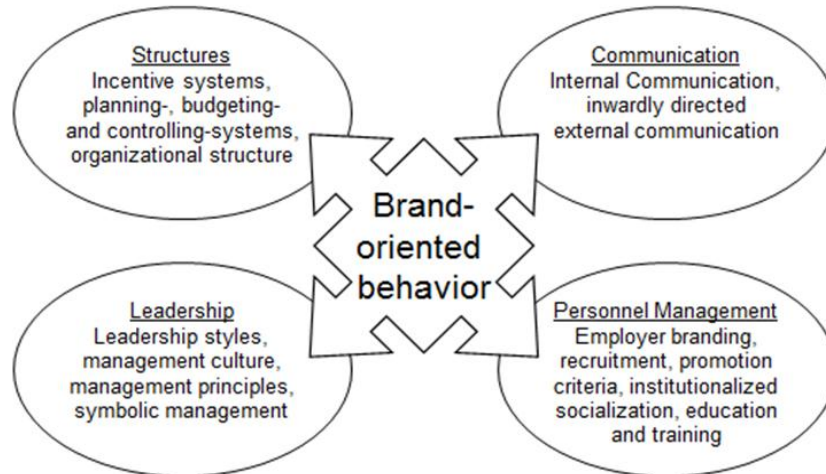
Fig. 2. **Elements of Brand-oriented Behaviour (Schmidt H., 2008)**

2.3. Touchpoints of employer branding

There are various interactions in which a potential employee, a future employee, an existing employee or a past employee are in touch with Employer Branding communication. According to Beck (Beck C., 2008), these can be structured in five phases.

The association-phase, the orientation-phase and the matching-phase are mainly connected to recruiting. In the association-phase, the organization needs to generate the first awareness as company and brand. In the orientation-phase potential candidates start to associate themselves with the company and in the matching-phase information- and communication tools are used to support potential employees to realize whether they are a potential match with the organization and a role within the organization. In the ex-post-phase the network with employees who have left the organization is maintained.

For the analysis of the brand communication to existing employees, the focus needs to be mainly set on the bonding-phase, where the individual is connecting to the employer. It is most relevant for employee retention and productivity of existing employees and connecting them to the organization they work for. (Beck C., 2008).

However, since the employee might be looking at other employment options and will be lured by competing employers, the other phases should not be neglected, as they might have an impact when comparing the communication of brand benefits to the touchpoints of other employers.

A very important concept in Branding is the building of preferences. In case of Employer Branding, the Organization aims at becoming an "Employer of Choice". The notion "Employer of Choice" stands for the positive selection of an employer in the course of a complex selection- and decision-process of an employee looking for an employer, also for a differentiation towards competition as well as an emotionalization of the Brand, which will lead to a higher loyalty towards the Employer Brand and hence the employer. (Petkovic M., 2008).

2.4. Employee Satisfaction as indicator for organizational performance

Employee satisfaction is indicating how content an employee is with his/ her current position. Research on Employee Satisfaction comes from Organizational Psychology. The term is based on various sociological

terms and is often connected towards motivational theory. Classic Theories like the Maslow-pyramid (1954), the Motivation-Hygiene model of Hertzberg (1959) or the ERG-Theory (Existence-Relatedness-Growth-Theory) of Alderfer (1972) are the underlying theories for employee satisfaction. They vary from basic, operational definitions to very complex models, based on individual values, considering affective and cognitive aspects. Same as Employer Branding, employee satisfaction is closely connected to leadership behaviour, organizational communication, organizational structures and how employees are incentivized.

There are various scientific definitions of the term "employee satisfaction". The probably simplest definition of employee satisfaction is defined by Professor Weiss (2002) as "a positive (or negative) evaluative judgment one makes about one's job or job situation". (Brief A. & Weiss H., 2002). This definition does not consider the reasons why an employee makes an indication whether he/she is or is not satisfied with their current job situation. Also, it does not take into consideration whether the judgment of the employee is only temporary or long-term. However, for the creation of a satisfaction-indicator, these factors are only of preliminary relevance, since this inaccuracy will affect the variance of the indicator in the same way across time.

Based on different methodology, a large number of measuring instruments for job satisfaction were developed. The reasons for this diversity in measuring instruments are subject to the different objectives in drawing up the criteria and the measures of job satisfaction. A further difficulty is that there are different operational definitions, the respective designs of the instruments have been based on." (Mertel B., 2008).

Organizations collect information either through 360-degree feedback or employee surveys in written and oral form. These surveys vary by organization and by goal of the measurement. Through 360-degree feedbacks, employee opinions and employee satisfaction can be assessed from different perspectives such as the view of the organization, supervisors, colleagues or team members; this research it is not directly focused on employee satisfaction, but also on performance assessment.

As alternative method, focused employee satisfaction surveys can be designed. Oral interviews can provide more flexibility and opportunity to get individual feedback. However, this flexibility leads to limitations in comparability; it is more expensive and planning-intensive than standardized, written questionnaires. (Kotler P. & Bliemel F., 1999).

Therefore, written questionnaires which are anonymously evaluated are mainly used to generate benchmark values for the motivation of the workforce. They also enable a comparison with past results or between departments. This enables the decision makers in the organization to get clear benchmarks on employee satisfaction, which is an important indirect indicator for organizational performance besides other HR-indicators such as staff turnover, churn rates, sick leave, absenteeism and error rate.

Previous research has proven that employee satisfaction does have a positive influence on employee involvement (van van Wegge J. et al., 2007), performance of employees (Wright T., 2007), the employees' customer satisfaction (Stock 2009) and many other factors. A positive attitude towards the company can result in higher creativity of employees, more innovation, more participation in workshops and discussions, decline in sick leave times and higher loyalty. (Schüller A., 2010).

3. Research Findings

3.1. Suggested research framework

Combining the literature input mentioned above, a basic framework to connect the factors employer branding, brand awareness and employee performance can be combined and indicators for measurement of the effectiveness of Employer Branding activities can be derived. The theory of the research is to prove a positive casual relation between Employer Branding and Employee Satisfaction.
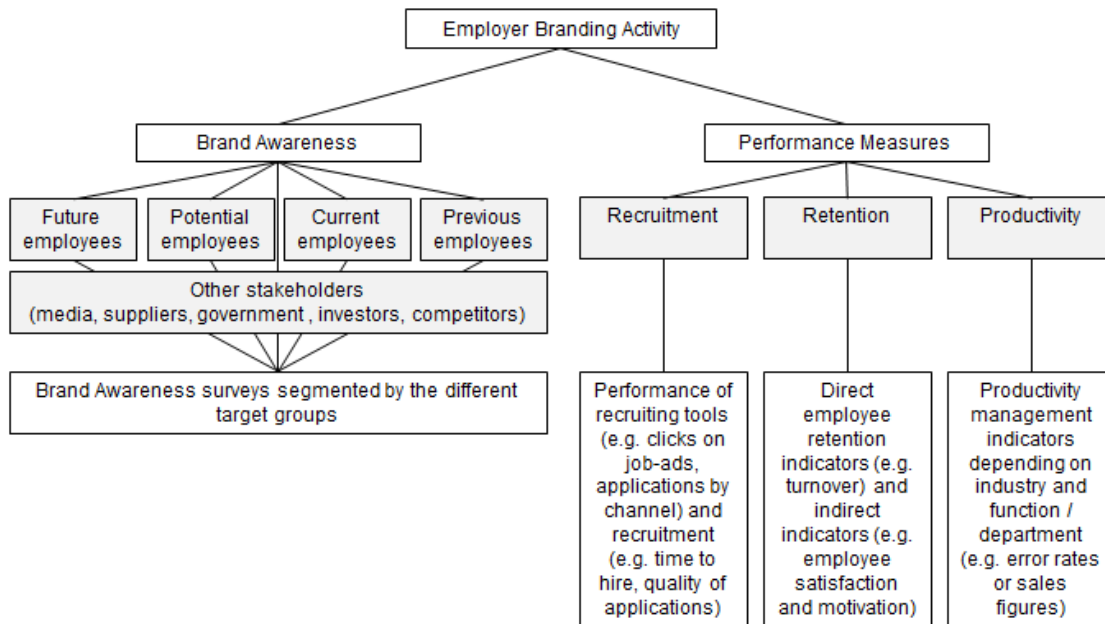
Fig. 3. **Measurement Tools for Employer Branding Activities**

To better understand the causal relations between the various factors of the model and to create a proper scientific research model and hypotheses to verify and falsify the suggested approach is to conduct in a first step, qualitative expert-interviews to better understand the current goals and impact of Employer Branding on organizational performance with a specific focus on recruiting.

3.2. Suggested research design

Having adopted a positivist paradigm, qualitative research is used in this project, to ensure that all aspects of Employer Branding have been considered. Therefore, the current adoption, purpose and success of Employer Branding in selected businesses should be analysed through an exploratory case study with qualitative, unstructured interviews. They are suggested by Easterby-Smith, Thorpe and Lowe (1991) as appropriate method when they are used to get some general input on a subject, to develop a general understanding of respondents' opinions and beliefs, if the subject is confidential or personal and to get clarity on a process. (Collis J. & Hussey R., 2009) The interviews should be conducted as qualitative in-depth interviews with a selected group by judgmental sampling. The interviews will be done via phone with decision makers in Recruiting and HR-Marketing from companies of various industries. In terms of status of their Employer Branding initiatives, these companies should have already gathered first experiences in the use of Employer Branding in Recruitment and HR-Marketing, they should have a defined Corporate Brand and they should have recruitment tracking in place. Only if these facts are given, the required information and learning can be derived in the interviews. Regarding the sample size, 15-20 interviews should be a scientifically valid number of respondents. (Mason M., 2010).

The main body of the first unstructured interviews will be based on the six principles for internal branding by Scott Davis:
1. Make the brand relevant.
2. Make the brand accessible.
3. Reinforce the brand continuously.
4. Make brand education an ongoing program.
5. Reward on-brand behaviours.
6. Align hiring practices. (Davis S., 2005).

In addition, the touchpoints used for Employer Branding (as seen above in the definition) and the success indicators chosen to measure the success for internal Employer Branding will be questioned.

4. Limitations of the study

Employer branding is a very complex concept. An Employer Brand is the expression of corporate culture and the corporate brand. Therefore, it will be a challenge to clearly isolate the factors of communication from other factors such as leadership, organizational structures and other communication as well as personnel management.

Moreover, there also differences between organizational departments and functions as well as the management or experience levels of the employee are influential to the relevance of the brand to the employee.

Depending on the organizational structure, there might me different cultures within an organization. The size and organizational influence of each department, will then also play a role hard to separate. A big question is also where Employer Branding is driven in the organization and how it is supported by top management.

Also, the brand is communicated through various channels. Also the brand itself needs to be relevant, understandable and represent the organizational culture. It will be very difficult to find out whether these factors are fulfilled. Depending on the organizations analysed, the communication as well as the channels will definitely vary.

Since labour markets around the world vary, there will be a geographical limitation to the study, which will focus on the German-speaking labour market. Even though it might in some ways be similar to the European and Western American markets, there are still many differences which might lead to different results of research.

Not only the labour market, also the different cultural backgrounds of the interviewed do have an influence on the efficacy of employer branding measures. Therefore a structural equitation model might have to be constructed before the first analysis might be done.

The information provided on the changes of performance measures will be provided by the interviewees. This means that we have to rely on the accuracy and validity of the statements on performance numbers. For confidentiality-reasons, most organizations will not provide the original data on hiring performance. The number of interviewed will be quite small and there will be only first indicators for the questions derived from the six principles by Davis.

In addition to these limitations, the research might not be fully quantifiable in a second step.

5. Expected outcome

Expected outcome of the study is a clear understanding of the importance of the employer brand on the organization. Also, there should be first indications of the status of employer branding concepts and the clarity regarding goal, purpose and scope of the employer branding measures.

Also, a clear perception on the effect of employer branding, on existing employees should be derived to learn more about the impact of brand communication of the employer brand on the understanding of the employer- and the overall corporate brand on employees.

Even though, the general principles underlying this research propose various concepts in their regarding fields, a study aimed at identifying a correlation between internal branding and employee satisfaction has not been conducted yet.

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THE ROLE OF HUMAN RESOURCES IN THE CORPORATE TRANSFORMATION PROCESS

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Abstract. It is necessary to create a new organizational corporate design where human resource will play an essential role. The new design that must be undertaken is a reduction in the traditional institutional functionalism to enter greater institutional synergies where each manager must provide leadership and guidance for the entire company or specific project. This means that we will need a new human resources policy. According to D. H. Pink (Pink, 2010) it is necessary to develop intrinsic motivation, economic incentives are no longer valid in changing environments where it is necessary to develop innovation and creativity. It is also necessary that companies that succeed give more value to social interaction among workers, invest more in training and encourage communication and cooperation.

Taking this in account we have undertaken an empirical analyse in order to know the level of integration and satisfaction in the company and predisposition for undertaken a change process. A survey was conducted. The survey was structured in six dimensions and included 370 variables. It is also important to mention that this paper's analysis was based on each individual's perspective and appreciation, not based on third party perspectives.

Some of the previous result is that individual's identification with the company is not as high as individual's identification with the job itself. Excellent human relations with minimal co-ordination costs are the result of achieving a dynamic corporate culture within a flat organization. In order to determine the causal relationships of many of these phenomenon's it is necessary to use the multivariate analysis (factorial analysis, cluster analysis, structural analysis, etc.), which will determine the necessary indexes and profiles.

Key words: *humans resources, transformation process, institution*

JEL code: M12, M14

Introduction

The increase in globalization, an open economy and consequently the increase in competitiveness have without a doubt wreaked havoc on corporate organizational designs (del Val, 1995). After 130 years of

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corporate and industrial history the time has come to create new organizational corporate designs, as well as shift behaviour of all individuals involved in the economic and social corporate process (Thom, 2000).

This is perhaps one of the deepest changes, although the need to change designs and especially the need to manage human resources is not yet fully appreciated. We find ourselves in the presence of a total rupture of our definition of the division of labour and the way it is distributed among companies throughout the market. Both the functional design and the analytical optimization of thought processes are weakened, as we enter into a more globally oriented design with a more coherent response to current economic and social dynamics and where the immaterial compensation are important. Hence we must take into account the following aspects:

- The *speed of change* is modified and *time* becomes the most significant strategic factor (Albach, 1993). The speed of processes is a key factor and the Olympic motto of "higher, quicker, further" (Thom, Zaugg, 2001) should be applied to the transformation process.
- The need to manage a company by *integrating external factors* with factors and function within the company. Therefore, Power Competencies (Thom, Zaugg, 2001) should be applied.

It can be said that there is a reduction in the traditional institutional functionalism in delimited, closed spaces, to enter greater institutional synergies where each manager and personal must provide leadership and guidance for the entire company or specific project. Globalization and the opening of the economy drive a greater dynamic in the corporate context, which is different from the traditional way national and international economies operate. Therefore, according to Pink (Pink 2010), we believe that by rewarding workers with economic incentives; such as bonuses, prizes or commissions, we are able to improve their results. Science however, refutes this: when we reward a task that requires a high amount of creativity what we get is exactly the opposite: the subject is blinded by the reward and unconsciously blocks out any kind of creativity. In his opinion, what really makes us achieve extraordinary results comes from intrinsic motivation, based on our natural desire to control our own destiny, to improve in our profession and to help build things that go beyond our own personal achievement. The executives, the personnel of the XXI century – from whom we do not seek obedience but rather commitment-, is motivated if they are allowed to work autonomously (Autonomy), if they are allowed to improve in their specialty (Expertise) and if they are certain that their job is worth something, that is to say, that their work in the company allows the company to offer a really significant product or service (Purpose).

Along the same line, a company that investigates tendencies, Trendbüro of Hamburg, has published a study (Trendbüro of Hamburg, 2012) hat claims to be a road map of the possibilities and challenges of the transition to a new work culture. A fundamental question takes the forefront: what differentiates successful companies from less successful companies? – We can see from the results of this study that companies, with higher than average profits, give more value to the social interaction among workers, invest more in continued education and encourage communication and cooperation, both internally and externally.

Analysis of the Problem

All issues related to human resources that are within the framework of the company's logic cannot be analysed exclusively using economic analysis. One must also consider:

- Developing the capacity to detect changes in the company's environment as well as the evaluation of competitive situations.
- Knowledge of how transformation processes occur.
- Knowledge and awareness of behavioural changes as well as the integration process of individuals in the company.
- An analysis of the role of organizational development and the dynamics of smart companies (Baumgartner, 2001) with respect to human resources and their behaviour.

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- An analysis of how organizational development can influence human resources, so this development insures a transformation process that in turn allows the company to respond effectively to changes in the company's environment.

As shown in Figure 1, human resources policy and development is defined by four main elements:
- By the *dynamics of the surrounding*, which is the intensity of competition.
- By the corporate design, which is the value system reflected in the corporate philosophy and carried out by the corporate culture being practiced.
- By the *corporate design* and the *management of processes*, basic pieces in operative management. The demands on personnel are not the same in a functional-hierarchical organization as in a process-oriented organization, which is the style that companies should follow.
- By the *management style* which is a key factor in defining the leadership profile that will have a significant impact on human resource management.

Source: M.T. del Val

Fig. 1. **Analysis Model of Human Resources Behaviour and their development
in the Spanish Company**

Therefore, the personnel's ability to adapt depends on the company, the organisational design and the manner in which the company is managed, always acknowledging the company's surrounding environment.

Proposals for the empirical analysis of change processes in human resources

Therefore, according to the described model and keeping in mind that it is not possible to analyse human resources and success factors without knowing their internal and external context, their "habitat". This habitat exhorts great influence causing us to analyse the following:
- How the *institution* is and how it should be. We must analyse:
  − The *company's value system*, hence, its corporate culture and specifically how the culture should be.
  − *Values shared by the personnel and the company*, making personnel feel identified with the company, as well as those values which personnel wishes to be identified by.

Taking this approach one can determine the level of corporate integration or the existing predisposition to integrate or not. It would be a useful way to gauge the company's human potential that is willing and able to assume new challenges.

- *The company's competitive edge*. This is based mainly on a qualitative analysis, since it is the perception of what is viewed as a strong point and what isn't, that is analysed from within. Obstacles and barriers to the transformation process must be analysed to determine if there are "hard" or "soft" barriers.

- A third aspect to analyse is the *company organization*, meaning whether the company at hand has a pyramidal structure, oriented by functions, or a company with a flat organization process-oriented. The coherence between competitive perception, corporate value system and leadership style are also analysed.

- In regard to *management styles* they must and will be analysed from top to bottom, from bottom to top and interdepartmentally. The company's leadership style will also be included in this analysis. This will reveal the levels of coordination within the company as well as its management capacity.

- A fifth aspect to analyse is *how human resources are evaluated* to assess attitudes and aptitudes and whether or not they should be different. We must also analyse whether the current human resource policy contributes to such attitudes and aptitudes and whether or not the new human resources policy supports the transformation process.

- Finally, this paper also analyses *the integrations and identification that each individual has with his / her job*, meaning, by this, each individual's professional expectations, how superiors are valued, how peers and subordinates value the individual, evaluate the level of participation in carrying out the assigned job. In a certain way it can be interpreted as an approximation to understanding the "corporate climate" which aids us in assessing the inclination for change in addition to the increase or decrease or newly generated co-ordination costs originated by the transformation process itself.
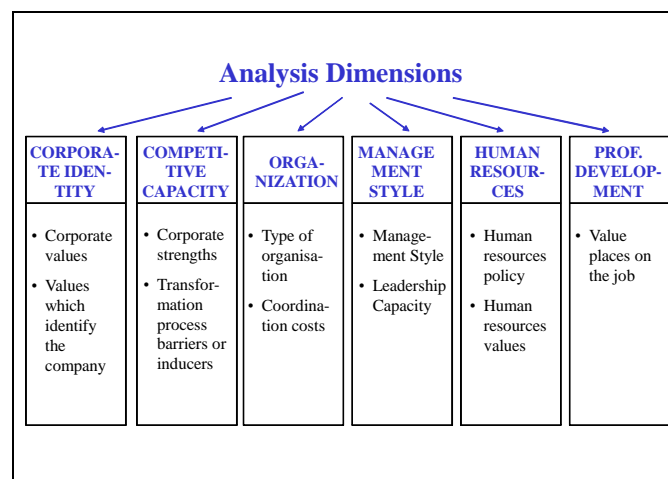
Source: M.T. del Val, R. Castaño, L. García

Fig. 2. **Analysis Dimensions**

Every part of this analysis is relevant because it allows us to evaluate the predisposition for change and especially upon which factors change should pivot to enhance its chances of success, in the least

amount of time and with the least amount of cost possible. Also, it should give us information about what the Human Resource policies should be and what incentive systems should be used.

In seeking answers to the questions raised, a survey was conducted[2]. The survey was structured in six dimensions and included 370 variables[3].

It is also important to mention that this paper's analysis was based on each individual's perspective and appreciation, not based on third party perspectives.

The analysis process, which begin with a global valuation (descriptive analysis), lead to a singular analysis (multivariate analysis) and identified success factors by studying cause-effect relationships.

The global analysis will not be addressed in this paper, however it can be said that both good work environment and employee identification with the job exist. However, individual's identification with the company is not as high as individual's identification with the job itself. Clearly, excellent human relations with minimal co-ordination costs are the result of achieving a dynamic corporate culture within a flat organization. There is a detailed vision of the enormous change processes the company's personnel must make to ensure its future in the company.

To determine the causal relationships of many of these phenomenon it is necessary to use the multivariate analysis (factorial analysis, cluster analysis, structural analysis, etc.), which will determine the necessary indexes and profiles. The statistical techniques applied in this paper are result-oriented and are strictly based on research. This research identifies the factors, which set the predominant corporate culture, as well as the factors upon which the corporate transformation process should be based.

Factorial Analysis

Factorial analysis[4] was the first technique applied to determine success factors in the transformation process. Prior to the realization of this analysis the following calculations were made to verify its applicability:

- The correlation matrix, which based on our data, was calculated at a value of 1.209E-18.
- Barlett's sphericity test, which had a high value of 11022.513 and a low significant value of 0.000.
- The Keiser-Meyer-Olkin (KMO) index, which compares simple correlation and partial correlation coefficients. The KMO index value was calculated at 0.863, a value with considerable weight.

The positive result of these calculations confirms the need to apply factorial analysis. Once the validity was proven, applicable factors were extracted by using the principal axis factorization method.

A total of 16 factors were extracted and they account for the 56.9% global variability rate. The factors[5] are listed below:

Factor	Description
Factor 1	Management style: focus on the individual
Factor 2	Current human resources policy
Factor 3	Compensation satisfaction level
Factor 4	Company's future identity
Factor 5	Human resources competencies

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[2] The chosen sample consisted of 565 people. 345 or 61% of the surveys were received. With this index, we can consider the sample to be valid and representative of all company levels.

[3] No technical or quantitative data was requested in any instance, since the goals was to generate a reflexive qualitative document. Variables were qualitative and were valued from 1 (not relevant) to 5 (very important).

[4] *Factorial analysis* was used to discover if all the surveyed individuals presented the same profile, or if it was possible to identify different behavior patterns.

[5] Factor relevance decreases from 1 to 16.

Factor	Description
Factor 6	Values that tie personnel to the company
Factor 7	Competencies used in the job
Factor 8	Communication in the future
Factor 9	Change barriers
Factor 10	Organization dynamics (future)
Factor 11	Horizontal management style
Factor 12	Interfunctional coordination
Factor 13	Vertical management style
Factor 14	Human relations in work development
Factor 15	Current service capacity
Factor 16	Future integration values

The use of factorial analysis not only reduces the number of variables but also serves as a prior step to other analysis in which the original variables are replaced by these defined factors. Therefore it was necessary to calculate values for each variable to be able to use them in *cluster analysis, index integration analysis* and the *causal* or *structural analysis*.

Cluster Analysis

Cluster analysis is based on values obtained through factorial analysis and is used to determine the existence of different groups. The analysis was done using a non-hierarchical cluster-k-means in which 4 groups were determined. The four groups show internal homogeneity an external heterogeneity.

The cluster grouping is not generated by artificial causes as is demonstrated in discriminating functions and in the canonical correlation. In this paper it is three axes which provide the contrast:

$$V_0 = \left\{ n - 1 - \frac{K+G}{2} \right\} \left\{ \sum \ln(1 + \lambda_i) \right\} = 661{,}290$$

Once the value is calculated, the significance of the others is then evaluated:

$$V_1 = \left\{ n - 1 - \frac{K+G}{2} \right\} \ln(1 + \lambda_2) = 372{,}017$$

With (K-1)(G-1-1) the second axis is significantly different from zero (0). For the third axis:

$$V_2 = \left\{ n - 1 - \frac{K+G}{2} \right\} \ln(1 + \lambda_3) = 162{,}460$$

The canonical correlation would be:

ηi	Value
η_1	0.762
η_2	0.725
η_3	0.662

It can be concluded then, that there are four clearly differentiated groups.

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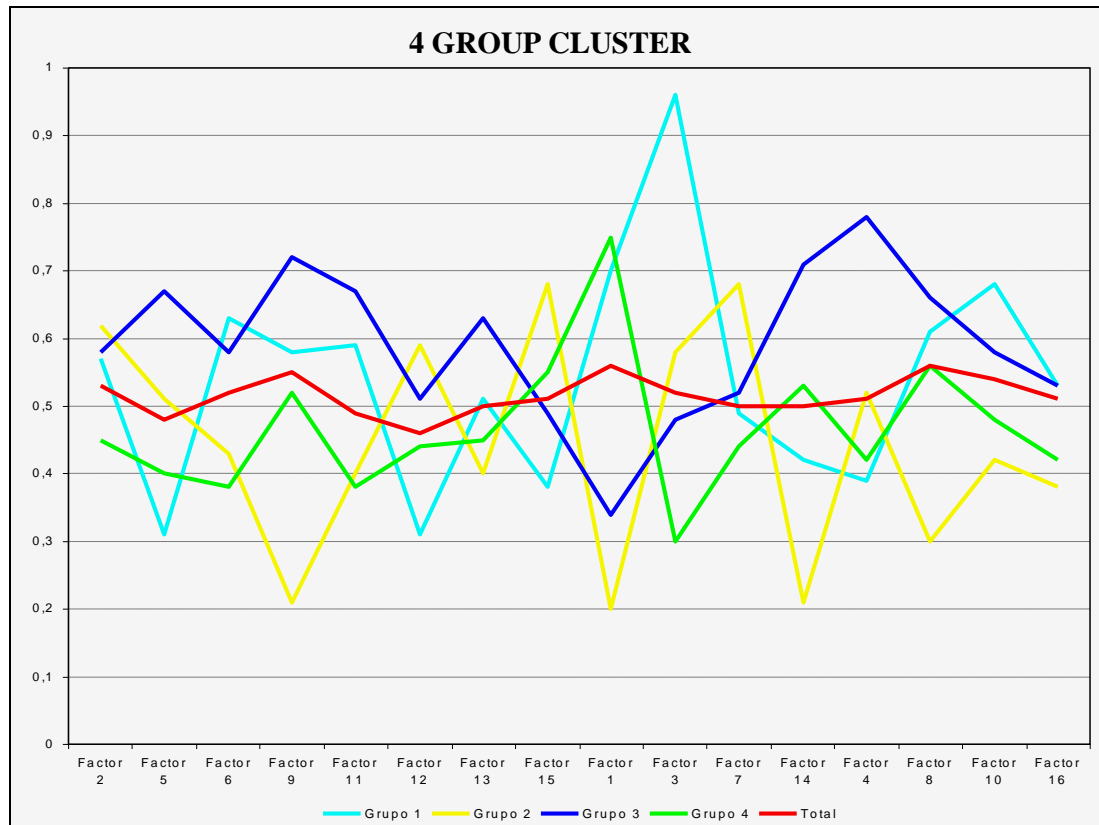
Source: M.T. del Val; R. Castaño, L. García

Fig. 3. **Cluster Analyse – 4 groups**

Group 1 best identifies itself with the corporate culture and the organizational structure. Together with Group 3 it is also the group with the greatest predisposition for transformation. Therefore the transformation implementation process should begin with Groups 1 & 3 beginning at each job position. On the contrary, Groups 2 & 4 are the more resistant groups to transformation and must somehow be bought in prior to beginning the transformation process.

Integration indexes

While the information gathered so far is relevant, we must go a step further and analyse the possibility of grouping variables at a higher dimension to better determine success factors.
For this purpose, three dimensions were identified:
- *Corporate orientation*: satisfaction level/integration in the company;
- *Behaviour in the area of activity*: satisfaction level/integration in the activity and in the job position itself;
- *Change process behaviour*: the degree of acceptance of future corporate values so that a clear transformation process orientation is available.
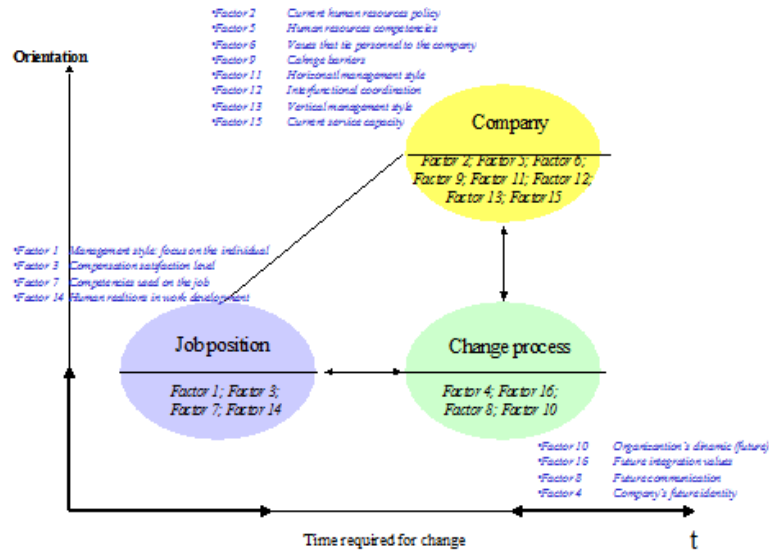
Source: M.T. del Val; R. Castaño, L. García

Fig. 4. **Grouping model**

This method facilitates the analysis of personnel values, attitudes and behaviour, as well as the causes for such behaviour. Change processes can be managed using this information.

Once the dimensions are defined, the focus is shifted to *identifying behaviour indexes* in order to understand integration levels and change predisposition.

These behaviour indexes[6] combine the concepts of an individual's cohesion to the human collective he/she belongs to, and the feeling of belonging to the company.

Each factor's index is measured using its internal constancy, which is, then measured using α, Cronbach's coefficient:

$$\alpha = \frac{N}{N-1}\left[1 - \frac{\sum \tau^2(y_i)}{\tau^2 x}\right]$$

where:
N   – number of variables;
$\tau^2(y_i)$ – sum of variables variations;
$\tau^2 x$ – Groups variation,

The global index and that of the three dimensions, company, job position and change process, are calculated using a weighted arithmetic mean using the coefficient not rotated.

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[6] The metric used to calculate these indexes is based on a *constructo* definition that rests in the proposed model. Since the *index of integration* is not a variable that can be observed directly, it must be depured so that it is a more reliable index. An index can be considered reliable whenever measurements generate consistent results. The reliability is directly related to the aleatory error, since the systematic error had no influence because it is always the same.

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In accordance with other studies, and based on personal experience a scale is established for integration and satisfaction indexes:

Measurement	Index of integration and satisfaction
5.00 – 3.67	High
3.66 – 2.78	Middle
2.77 – 1.00	Low

In our analysis the integration index is calculated:
- Global;
- For each group.

Analysis of the integration and satisfaction indexes at a global level

First, the integration index was calculated and then it was analyse its composition. The index of integration for each factor was calculated. The value of each dimension was also taken into consideration.

The index of global integration and satisfaction is: 3.35

Therefore we conclude that there is in a middle-high integration.
Then, the integration and satisfaction index was evaluated for each one of the factors:
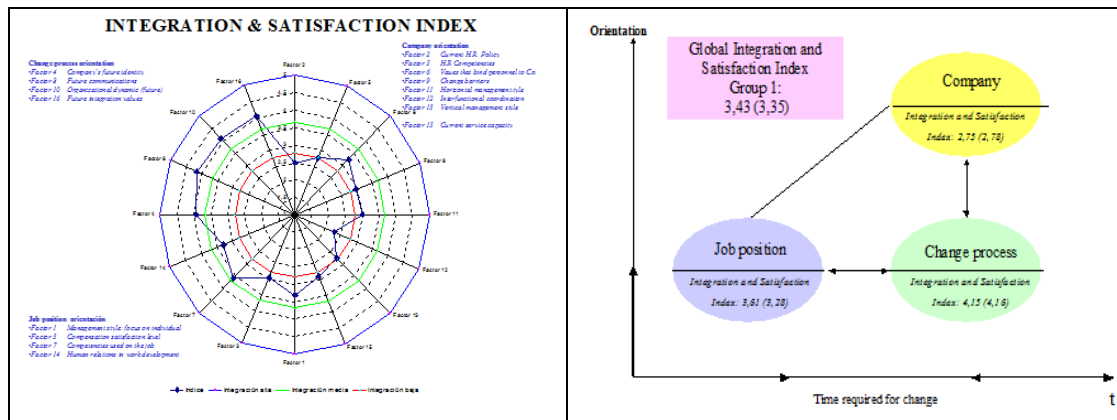
Source: M.T. del Val; R. Castaño, L. García

Fig. 5. **Integration and satisfaction indexes at a global level**

The integration in the company is in the *middle-low range (2.78)*. Also, integration indexes relating to individuals' integration and company values are in the *middle-high* range. Where index values are the lowest is in the *utilization of resources and instruments,* which represents "how" it is done: vertical and interfunctional management styles as well as the current human resources policy. In addition, the *integration index for the job position* is in the *middle-high range (3.28)*, while the integration index for the *change process* is high *(4.06)*.

In conclusion, it can generally be said that the integration and satisfaction index values are positive, particularly with respect to predisposition for change.

Analysis of the integration and satisfaction indexes for each groups

The next step is an integration index analysis for the groups obtained through the cluster:

	Group 1	Group 2	Group 3	Group 4
Global index	**3.43**	**3.22**	**3.45**	**3.30**
Company orientation	**2.75**	**2.86**	**2.87**	**2.80**
Factor 2: Current human resources policy	2.52	2.49	2.75	2.32
Factor 5: Human resources competencies	2.52	2.73	2.19	2.58
Factor 6: Values that bind with Co.	3.32	3.52	3.33	3.16
Factor 9: Change barriers	2.77	3.58	2.40	2.92
Factor 11: Horizontal management style	3.26	2.70	3.56	2.72
Factor 12: Interfunctional coordination	2.12	2.18	2.56	2.21
Factor 13: Vertical management style	2.83	2.49	3.19	2.59
Factor 15: Current service capacity	2.63	3.19	3.02	2.88
Job position orientation	**3.61**	**2.81**	**3.33**	**3.25**
Factor 1: Management style: focus on individuals	3.63	2.49	3.11	3.53
Factor 3: Compensation satisfaction level	3.82	2.92	2.80	3.58
Factor 7: Competencies used on the job	3.68	3.10	3.83	3.57
Factor 14: Human relations in work development	3.31	2.75	3.59	3.33
Change process orientation	**4.15**	**3.84**	**4.26**	**3.87**
Factor 4: Future corporate identity	3.83	2.98	4.25	3.79
Factor 8: Future communications	4.34	4.29	4.24	3.90
Factor 10: Organizational dynamics (future)	4.36	3.95	4.35	3.97
Factor 16: Future integration values	4.19	4.13	4.21	3.82

Therefore it can be said:
- The degree of integration and satisfaction is in the middle-high range. There is a great predisposition for change. There is also integration and satisfaction in each individual's job position as well as with corporate values. On the other hand, there is not a strong identification with current *personnel instruments and policies* within the company.
- There are two groups (Groups 1 & 3) with higher integration and satisfaction index values. These two groups should lead the driving thrust for change. In addition these groups' high predisposition for change should also be mentioned.
- Group 4, has an integration and satisfaction index similar to the mean value. This group identifies itself with the organization as a corporation, but it needs a stronger predisposition for change. Groups 1 & 3 should be used to influence and lead Group 4 into change.
- Group 2, has an integration and satisfaction index value below the mean. Neither its identification with the organization nor its predisposition for change are high. This group represents the largest resistance to the change process in the company.

Structural Analysis

The information was also analysed from a causal perspective to have a more thorough understanding of the relationship between factors and variables, therefore identifying the variables upon which change should be based. Identifying these variables will also help understand or predict possible effects produced

by change. A *Structural analysis of covariance*[7] was used for this purpose because it allows the use of factorial and latent variables. Factorial and latent variables are explained variables (saturated) by observable variables.

Based on the hypothesis presented and taking into consideration different models[8], the best fit and the model used in this paper is the *causal non-recursive model.* Using the causal non-recursive model the following model is obtained:
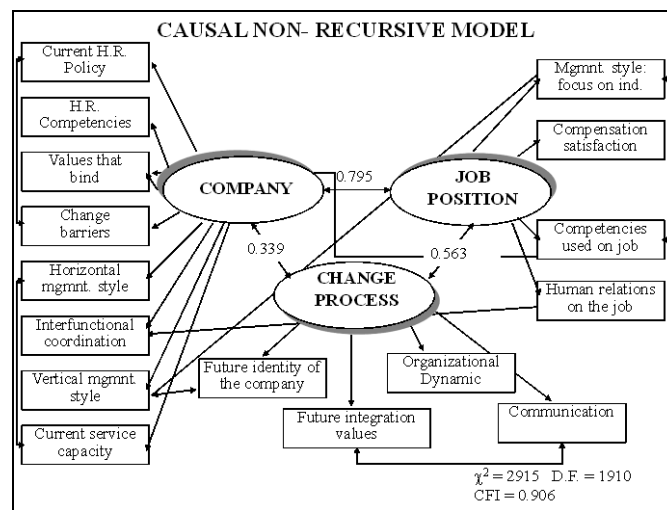
Source: M.T. del Val; R. Castaño, L. García

Fig. 6. **Structural Analyse**

As can be observed in this causal diagram, it only includes non-observable variables based on the standardized solution. Adjustment coefficients are interpreted as correlation coefficients. There is a mutual relationship between all three dimensions:

- Company;
- Job Position;
- Change process.

These three dimensions present positive correlations and furthermore such correlations can be considered statistically significant.

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[7] The analysis of structural covariance was used to learn about the direct and indirect influences of some variables on others. The principal estimators for this analysis are the regression coefficients c_{ij} (where i – effect, j – cause). These coefficients are identical in the regression and they measure direct effect while indirect effects are measured by the correlations.

It can be said that we are dealing with a global contrast model sine it allows the use of simultaneous equations. Such is not the case when using multiple regressions.

[8] Feasible models to consider are:

- Exploratory factor analysis;
- Confirmatory factor analysis;
- Confirmatory factor analysis, 2nd level;
- Causal analysis and
- Causal non-recursive model.

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The relationship between *change process* and *job position* is stronger (0.563) than the relationship between *change process* and the *company* (0.339), which again reflects the need to begin the change process of the company through the job position. This will aid in the transformation process because a strong relationship exists between the *company* and *job position* dimensions (0.795). Hence, confirming that employees identify the job position with the company and therefore makes changes within the company is difficult if they create "job insecurity" in the workplace.

The relationship between the different dimensions comes from the interrelations between one factor and another, or between all factors.

Conclusions

- Corporate culture, management styles, leadership, human resources policy, organizational forms do not favour individuals' identifying with the company and the corporate project.
- On the contrary, there is generally a clear *vision* of the corporate culture, management styles, the organization, human resources policy and that the company can reach high levels of competitiveness and be able to face the challenges that are globalization and the new economy. There is a preference for a corporate culture that favours clients, personnel and stakeholders; *a corporate culture that seeks both economic and social efficiency*.
- Great importance is given to *communication and information* to carry out the transformation process.
- The *personnel* have great potential but it must be motivated and given more responsibility.
- The analysis has taken into consideration 16 factors that define three dimensions to analyse:
    − Company
    − Job position
    − Change process
- The global degree of integration and satisfaction in the company is 3.25[9], which is a middle-high range integration level, with the factors that define the process exhorting great influence over this index. The company dimension *integration and satisfaction index* is in the middle-low range at 2.78. Therefore the company must assume the development of *new action plans*.
- A single corporate culture within the company doesn't exist, since we have observed the existence of 4 large groups that may not differentiate themselves so much when it comes to orientation, but they do have significant differences in intensity.
- In regard to the *integration and satisfaction indexes* of the four groups, 50% of the personnel have a middle-high to high integration rate, whereas 38% take a more reactive position and the remaining 15% simply take a position of rejection.
- Therefore an important critical mass exists upon which the transformation process must focus in order to be successful. Hence, the company should waste no time in starting the change processes since personnel are aware and sensible to the possible changes.
- Personnel *identify with job position* more than with the company itself. So the existing relationship with superiors as well as the available information plays key roles.
- One of the problems faced by the organization is that each individual identifies the job position with the company, making them one and the same. This can potentially create problems. This identification of "*job position-company*" is due to the lack of a *global vision* as well global informational available. This is a direct consequence of having a functional division of labour that seeks personnel specialization, typical in the 70's and in closed environments. On the other hand

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[9] 1 being the minimum value and 5 being the maximum value

this strong identification with the job helps to foster and nurture corporate values and therefore the ability to identify with the corporate project.

- Although the company has a great challenge ahead of it, it can also be said that it has a solid positive base to start from. Therefore, it must not delay in beginning the transformation process.

- The personnel is a resource with the potential to become a capacity, in the context of the theory of resources and capacities. Hence, the company should allocate resources to ensure the development of those potential capacities, which will give it a competitive advantage in the long run.

- As Daniel Goleman (Goleman, 1995/2008) stated in their models of emotional intelligence where the individual in addition to having not only self-awareness and self- motivation, needs to develop his empathetic social skills and establish his interpersonal relationships.

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EDUCATIONAL CREDITING IN MODERN-DAY RUSSIA: CONCEPT AND PROBLEMS

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Abstract. Educational loan as a form of educational costs offset is widely known in the world practice. However the practice of application for educational loan is still very limited in Russia at the present time. The article reviews the distinctive features of educational crediting in modern-day Russia and gives special attention to the description and analisys of the two specific educational loan programs – the Credo program and the favourable loan experiment, started by the Russian Government.

Key words: *educational loan, educational loan pattern, Credo, favorable educational loan experiment, Russian government program on educational crediting*

JEL code: I22, H52, H81

Introduction

Educational credit is widespread in world practice. It became customary area of financing higher education, but for Russian Federation it is still new.

Social significance of such loans and considerable costs for higher education cause necessity of its adoption and support from the Russian Government. The favorable educational loan experiment was started to be carried out out exactly because of these reasons.

The present situation in Russian higher school implies evaluation of needs for educational loan and examination of current programs. The research on experiment framework includes assessment of currency and description of its theoretical propositions.

Demand for educational loan

Financing of paid higher education in Russia is still not as developed as it has to be in current economic circumstances. According to the data presented in the report of State Committee of Statistics, at the beginning of year 2009 in Russian Federation 6 214.8 thousand students were studying at state universities and 1 298.3 thousand – at private universities. More than 62% of all the students in Russia are paying for their education (Russian yearbook on statistics, 2009) [1]. It means that approximately 4 600 thousand students have to put up money for their education by themselves. According to the survey, carried out by the High School of Economics (Moscow), in 2010 tuition fees for the first-year students in the state universities varied from 22 to 330 thousand rubles per annum [2].

Educational loan is one of the three main sources of financing education. Other sources are employer's funds (more typical for second higher education) and household means. Therefore the proposals of Russian credit market for educational financing should be examined carefully.

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In whole, current patterns of educational crediting do not meet the demand because the suggested conditions (high interest rate and additional constraints) are not corresponding with credit market circumstances, or with higher education system in Russia, or with financial resources of prospective borrower. So we are going to summarize the conditions of main credit proposals, and then the "Credo" program will be examined separately because it is different from other programs.

Credit proposals for higher education[2]

First, we should draw attention to the fact that all credit proposals of Russian banks are rather expensive. A university entrant who wants to get an educational credit should expect an interest rate from 10 to 19% per year. There is no doubt that such a rate is exceptionally high. With due account taken of the other conditions, the interest rate could be the main argument against taking an educational loan.

In theory, every student can receive an educational loan. But in practice the bank can form a list of privileged specialties and limit the number of possible universities. For banks, privileged specialties are so-called "prospective", and priority is given to the chief Russian universities because getting a diploma in such a university enables a student to get a sufficient level of remuneration quickly and, as a result, to call in a credit. There is no doubt that leading universities and specialties imply high tuition fee; and this is one more factor which can have an influence on the number of credits given.

Analysis shows that the important features of the main credit proposals for educational financing are the following.

As a rule, if a student does not have a permanent source of income, the loan is not issued in his name. The warrantor is obligatory for credit security. Some banks (for example, Sberbank – the state savings bank of Russia) can also set up a claim for the chattel mortgage.

Concerning the differences of the banks' conditions it can be said that they are connected with the period of crediting, currency and the method of issuance. Some banks provide loans only for 5 or 6 years; as a result, its importance for creditors reduces significantly, especially for those who want to become a full-time student and to pay for education by themselves. The method of issuance is rather important, too: the sum total (enough for the whole period of studying) or opened line of credit. When a line of credit is opened, a sum of money is given through regular payments which are necessary to pay the tuition fees. With such pattern of crediting a student can save a significant amount of money, because the interest is only posted on the means used in reality, and not on the whole sum.

In fact, with all the conditions and the amount of overpayment taken into account, an educational loan could be a real option only for well-off students. Only such students could afford a high cost of credit like that and extremely inconvenient conditions of issuance.

The program Credo

The program "Credo", opened in Souz bank, should be examined separately, on the strength of its specific character.[3] The overwhelming majority of educational loans are issued under this program. It is connected with advantageous conditions. The program contains some fundamental differences. First, only the student is responsible for the payment of credit and interest. The loan is issued in the student's name and only in USD. Neither the credit nor interest is called in during the period of education. However, the list of the universities is limited (only 21 institutes of higher education). The program is remarkable due to its interest rate – 10%

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[2] Detailed information about educational loan types existing in Russia in the article [3].

[3] The website of the Credo programo [4].

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(minimum amongst educational credit proposals in Russia) and the conditions of the credit can be adjusted to a particular student. Thus, the student can regulate the sum total and the pattern of cancelling by himself. In August 2009 the issuance of new tranches was suspended; the bank only serves the present clients at the moment. This is accounted for the fact that a new educational loan program was launched – the Government's new favorable educational loan experiment. According to student's choice, the present clients of Souz bank and the program "Credo" can restructure their credit pattern and become the members of the government program.

It should be observed that educational loans are extremely risky for banks – besides the possibility of irrevocability such credits should be served a long time and there is no way to set a corresponding high interest rate.

The favorable educational loan experiment

It is obvious that Russian credit market in 2009 could not meet the bullish demand for financing higher education. Therefore it was the cause for carrying out the Government's new favorable educational loan experiment. This experiment should help to get the exact information about the potential demand for educational loans. The program should also be effective enough to evaluate the possibilities of arrangement the getting and calling in procedures. Moreover, the efficient and needed credits program should be elaborated during the experiment in order to meet the demand.

The favorable educational loan experiment will last from April 2010 till 31.12.2013 (until this date new students can address their requests to the banks).

Regulatory basis of the favorable educational loan experiment

Regulatory basis of the educational loan experiment includes a sufficient list of regulatory acts. Particularly, the key act is the Government's enactment from 28.08.2009, No. 699 "Changing the conditions of the government educational loan experiment". This enactment establishes the period of the experiment, fixes its members, and discloses main conditions of carrying out. Moreover, the rules of issuance of federal budget subsidies to the banks are defined. These subsidies are issued for reimbursement of the credit costs and compensation for interest. The Board of Education order from 28.09.2009, No. 352 "Realization of the Government's enactment from August 28, 2009, No. 699" presents different aspects of the program's implementation. For instance, it defines the order and selection criterion for higher schools, students' progress criteria.

The main conditions of the program are the following. The interest rate is set as the j-rate (one forth of refinancing rate) plus 3 per cent; at the moment this index is 4.94%. The limit of the extension on credit repayment is the whole period of studying plus 3 months (the interest is paid since the beginning of studying, and the first two years are on favorable basis – the credit conditions do not imply any postponements on interest payments, but during the first two years students pay only 40% and 60% of the paid interest; no warranty or guarantee required; due date – 10 years since graduation). Moreover, the credit is issued in rubles, by tranches (a credit line is opened).

The Board of Education and Science marks out the fundamental advantages of this program: maximum accessibility, minimum interest, strong incentive, absence of security in a usual sense (the state itself is a warrantor). In the present situation such a program can improve financial conditions of the students who are willing to take the educational loan.

The proposed interest is the lowest at the Russian educational credit market indeed. At the 7.75% refinancing rate and extra 3% bank will get a 10.75% interest rate. The student would pay 4.94%, and the state support would amount to 5.81% (10.75% – 4.94%).

The part discharge of the interest during the first two years makes it easier for students to put up money for education.

Let's compare the conditions of the favorable educational loan experiment with the conditions of "Credo", the best of former programs. As the accounts show us, the new educational loan offered by Russian Government implies perceptibly lower credit payments in comparison with other proposals – the cost of education will amount to 1 269 765 rubles (900 000 rubles for education + 369 765 rubles interest paid). The cost of education in the framework of "Credo" program would be formed in the following way: with 90 000 rubles per semester sum total will be 900 000 rubles, but the paid interest will amount to 733 500 rubles; so the grand total would be 1 635 500 rubles (900 000 rubles + 733 500 rubles). It means that paid interest in "Credo" program is nearly two times bigger than the interest in the framework of the new educational loan (733 500 / 369 765 = 1.98).

The real data should be also taken into account, because it can cause bigger divergences in the cost of education by these two programs, considering all possible tranche suspense, advanced repayments and the interest rate growth. The "Credo" program is issued in USD, so the student can suffer additional losses due to fluctuation in exchange.

One more thing that should be observed is the fact that the interest rate of favorable educational loan directly depends on the refinancing rate. If the refinancing rate grows, the interest rate will grow too.

In whole, mentioned regulatory acts describe the pattern of the experiment in details, but some aspects are still not obvious.

The favorable educational loan experiment implementation: problems and difficulties

Selection of banks-members of the experiment

Regulatory acts do not comment on selection of banks. The enactment states that a bank which is ready to issue the credits under the established conditions can be named the member of the program. Nevertheless, it is still not clear how the cooperation with banks happen and which banks got an offer to take part in the program. Does it mean that any bank operating in Russia could express its willing to cooperate with the experiment? But how and when, which are the rules? So we can only suppose that a limited list of banks exists.

Vladimir Miklushevsky, the deputy minister of the Board of Education, claimed at the press conference before the beginning of the experiment, that two banks are willing to take part in the experiment – "Souz" and "Sberbank". In the end of June 2010 the banks' official sites posted information about the experiment and the part the banks took in it, in the section "For clients / crediting / educational loan / the Government's credit program".

Selection of higher schools-members of the experiment

The regulatory acts do not fully define the selection procedure for higher schools which are willing to take part in the experiment. Some limits should exist for this case because it is necessary for quantitative and qualitative adjustment. But the indicated criteria are often ambiguous and indefinite.

In compliance with the regulatory requirements, higher schools willing to take part in the experiment should meet at least one of the three criteria[4].

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[4] Spesified selection criteria for the universities partisipating in the favorable educational loan program are indicated in the Annex 1 (from 26.09.2009, registration number 352) to the Order of Board of Education "On the Implementation of the Russian Government Decree From 28.08.2009 (Registration Number 699)". However, there is not any statement about the selection criteria for participating banks in the governmental regulatory documents.

Firstly, the higher school should select the claimants upon the educational loan in accordance with the good results of the entrance examination. In the mentioned Board of Education order, person having good results in the chief subject is the one who "gained at least 80 points at the Unified State Exam and the entrance examination at the chief subject, which corresponds with the specialty" (it concerns only paid education). Though this criterion is reasonable, it is hard enough to implement it. According to the official data portal, the average mark at the mathematics Unified State Exam in Saint Petersburg is only 43 points and only 8% of students got more than 80 points. Average mark at the Russian language Unified State Exam is 58.5 points; less than 12% of students got more than 80 points. It should be noted that the students with high marks for Unified State Exam are striving for state-financed positions. Therefore the compliance with this criterion is also doubtable.

The next criterion is holding extra entrance examinations by higher schools. Nowadays there are 24 such universities existing in Russia, and all of them could apply for participation in the program [5].

The presence of the asked-for specialties in the university is the third criterion. The list of 289 specialties is published in the order. But no specific information is given about the fact whether one specialty is enough to take part in the experiment or a certain amount is needed, how and who worked out the list of specialties in demand.

One more requirement for university is a timely application. For 2010 intake of students the deadline was 12.01.2010, but then it was postponed until 10.02.2010.

The total amount of universities selected in 2010/11 and 2011/12 academic year is 55. 19 higher schools are situated in Central federal district, 2 – in South, 5 – in North-West, 1 – in Far Eastern, 1 – in Siberian, 6 – in Ural, 15 – in Volga federal district and 3 – in North Caucasus. 3 of these higher schools are private. In fact, selected universities cover the whole country.

As concerns the selection procedure, it is not clear whether timely application and meeting one of the mentioned criteria is enough for an affirmative answer. No official data is reported about the number of universities which applied for the program.

Restrictions for the university entrants and students

Concerning the limitations for students two flows can be defined: students who applied for the state-financed education but failed to gain the needed pass mark, and students who initially applied for paid education. In the first case the educational loan can be get by the students who failed to gain only 20% of the difference between the pass mark and the minimum mark; that is, the students who showed really good results. This requirement for students applying for the state-financed education considerably reduces the number of people interested in such a loan – because for advanced students it is logical to apply for state-financed positions, even at less prestigious universities.

The main group interested in getting the credit must be the students who initially apply for a paid form of education. But for such students a special criterion exists: the deviation from the maximum mark gained by the entrants should be no more than 20% of the difference between maximum and the minimum mark which is set by the university according to the results of the Unified State Exam and confirming the successful passing of entrance examination for the chief subject. This means that only best paid students can expect to get an educational loan.

The restrictions for students are also established in the order of the Board of Education. Such restrictions are necessary because, as the Board claims, the paying capacity of the student in the future is directly linked with his progress in studies and the chosen specialty. The student should get only A, B, C marks during the examinations in order to get the credit. D and E are possible, but not in succession. The supervision is exercised through a special reference. The progress performance is subjective enough. The complication of education varies from one university to another. It also depends on the requirements of the university, the course of studies, the criteria of marks. The marks for the subject got in one university

are not equivalent to the marks for the same subject in the other university. Nevertheless, the examination marks are, in fact, the only criteria at the moment which can be compared to each other.

The paid students also have a tendency to a less responsible attitude to their education. It is hard to calculate the percentage of paid students whose right of getting the credit would remain during the whole period of studying. But even the orderly students on state-financed positions rarely get the studentship (the conditions of gaining a studentship are similar to the conditions of getting the credit). With this fact taken into account, the number of students who can count on educational loan is quite small. Besides, it is possible that conducting such an experiment will motivate the students, making them more earnest in their studying process. It should be noted that students who are taking part in "Credo" program do not have to keep good progress in studies. However, if the student does not meet the conditions of the government experiment, he is not allowed to get a new tranche until he establishes good progress again. Nevertheless the rules of cancellation of credit remain even if the student is sent down (he can pay the money during the next 10 years). This condition is moderate enough for the government program. For example, if the student is sent down while taking part in the "Credo" program, he has to pay the sum total during the next five years.

Relations between the state and the banks

These relations are described in details. The possible subsidies for banks are determined; the getting of interest rate by the banks is also regulated. Bank should get an interest rate as a sum of rates paid by the student and paid by state subsidy. Bank will also get a guarantee from the state in case the student would not pay the sum total or a part of interest. It should be noted that the state does not take responsibility for whole compensation – no more than 20% of the sum will be returned.

Relations between the state and the university

These relations are established at the very first step of selection procedure. The university should also give information about the results of the experiment. October 15 of each year is a deadline for the university to give all the statics about the students who took the educational credit.

The advantages of the favorable educational loan experiment. So what are the main advantages of this program?

First, the students are permitted to get a cheap educational loan – the interest rate is the lowest at Russian credit market. The conditions are rather moderate concerning the cancellation of the credit and the interest as well as the execution procedure. It means that a lot of talented students can count on getting the higher education. However, many requirements exist so not all of the students would get the credit.

The favorable educational loan experiment allows the universities to recruit the motivated, orderly students (because strong restrictions exist concerning the student's progress).

The banks can compensate the low interest rate by the state subsidies; attract a considerable number of the borrowers; promote its services at the market; form a stable client base, able to take up other products. The banks did not favor educational loans before now – it was connected with the high risks. Potential clients (students aged 17-20) did not have any credit history (they were unemployed, as a rule), so the bank had considerable difficulties, deciding whether to issue the credit or not. In the framework of government experiment the students got a real opportunity to take an educational loan.

The experts esteem the conditions of the government experiment as favorable and advantageous: the terms of the program are worked out in accordance with all the distinctive features of the client sector and are attractive enough in the present situation. However, the state support mechanism should be regulated as well. The issuance of 15-16 year credits is rather difficult for Russian credit market because it requires

a really stable banking system. In accordance with the conditions of the program, the banks should give the long-term credits at a considerably low interest rate, even with state subsidies taken into account. The issuance of the credits is still risky due to the fact that the total sum of expendable credits may exceed the 20% guaranteed by the state. Some extra procedures may be necessary for the sound status of the educational loan system.

The securitization is one of the additional mechanisms. It implies the whole or partial "selling" of the credits by the bank through writing them off before the due date. The right of claiming of the debt is passed to a new creditor, not obligatory to the bank. Russian banking system virtually does not use such a mechanism, but its implementation could reduce the risk of the credits' issuance.

One more mechanism of support is the structure which is similar to the Agency of mortgage lending (AML) in Russia. This agency implements the state mortgage programs on the affordable accommodation and on the improvement of housing conditions. The Agency's activities include the refinancing of mortgage credits, the mobilization of funds from non-budget sources in order to finance the mortgage credits, the creation of secondary market for mortgage securities. Such methods could be as well implemented in educational loan system. Some experts claim that the educational loans could not be widely issued without such a mechanism.

The additional mechanisms would support and regulate the educational loan system, and would also allow reducing the level of the requirements for students, so that the government program would become affordable. In whole, the implementation of the favorable educational loan experiment is a decisive step to the perfection of present Russian higher education system.

Conclusion

The favorable educational loan experiment carrying out in the framework of the government program can have a positive influence upon the present situation in Russian higher education market. The overpayment for the education would be half the price of the most favorable of former programs and it is the main advantage of the program. But a hard work should be carried out if Russian educational loan experiment is supposed to correspond with the foreign credit market proposals. No interest rate exists in many developed countries; the student should cover only the inflation rate, the rest of the debt is paid by the state; the considerable tax concessions exist for students who are getting the educational loan; most of the associated costs are compensated.

The main positive outcome of the experiment is getting data about the existing demand for educational credits. This would help to establish the basis for future reforms.

Educational loans would hopefully become popular and affordable in Russia, for such loans are a real opportunity for students to get the prestigious education with lower costs.

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THE PUBLIC FINANCIAL AIDS FOR THE CREATION OF COMPANIES: THE CHALLENGE OF COMPANIES AND FINANCIAL ENTITIES IN THE CRISIS CONTEXT

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Abstract. Public financial aids for entrepreneurs often respond to their inability to access bank financing. The financial institutions limit the loans granted due to the lack of guaranties. The research aims to analyse the way in which granting public financial aids for the start-ups, helps to improve the efficiency of these institutions by strengthening their competitiveness and their ability to survive in environments of economic slowing down.

The research conducted an empirical analysis on a sample of companies with less than three years of age that have accessed to Mutual Guarantee Companies (MGC's) (2.218) and others that have accessed to the Spanish Official Credit Institute – Small and Medium Enterprises (SME's) ICO Line – (10,018). Meanwhile, a representing group of companies who have obtained financial aids has been extracted from the Sistema de Análisis de Balances Ibéricos (SABI) database. The definition of these groups allows the application of a counterfactual methodology, which aims to detect the possible causal relationship between public aids and business performance by verifying the existence of significant differences in the efficiency variables.

Considering the efficiency variables (profitability), the companies that have received public financial aids optimized it by maintaining a higher outperform than the obtained by the rest. However, the evolution of the companies backed by Mutual Loan-Guarantee Societies is effective during the period that they receive the aid, but once the funds are repaid the companies are positioned below the market levels. These results confirm that the aids granted by a MLGS get to overcome the barriers of accessing financing, while the ICO aids, due to the optimal results obtained, do not seem to fulfil this purpose.

Key words: *public financial aids, start-ups, financial guarantees, business competitiveness*
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Introduction

Access to financial resources remains one of the main aspects that public institutions pay more attention to, in the effort to overcome the inequalities of access and the cost for SMEs through EU and national economic policies (Stiglitz and Weiss, 1981; Van Praag, 2002). These aids are essential to promote economic growth, especially in times of recession. Financial difficulties are higher in the initial or in the post-constitution phase or if intangible assets are require due the limitations of the internal and external funding. Internally, the company capitalization is reduced to the contributions made by the businessman, the partners or other informal funders including family, friends or "fools" (three "f" in internal financing: family, friends & fools) (Mullins, 2003) or the so-called "Business angels" (Hall and Woodward, 2007), and to the accumulation of funds from self-financing. Similarly, Berger and Udell (1998) determined that there is an optimal financing structure for the better use of resources, depending on the age of the company, reached firm size, sector of activity and the quality of information that the company is capable of transmitting to its environment. Thus, in the early years of the company, it has neither guarantees nor information, therefore, in order to meet its funding needs it only has at its disposal the initial contributions of the promoter or entrepreneur and the credit generated in commercial operations by negotiating the collection and payment periods with customers and suppliers. These limitations push those responsible for the new business initiatives to seek outside financing. However, the size, the lack of business experience, the lack of viability of the business plan, the lack of necessary guarantees and the limited bargaining power are major restrictions encountered by entrepreneurs trying to access external financing for long term and in the right conditions. This situation justifies the appearance of public aids for financing??? (Caminal, 1995; Crecente, 2011).

Public financial aids to start-ups are vital to allow the entering and survival of new entrepreneurs, due to the lack of credit access, motivated by persistent information asymmetries in markets due to the adverse selection problem. To reduce the access barrier public institutions have developed an extensive variety of public aids: incentives for training, setting quality standards, legal advice and, in particular, financial aids programs? (Audretsch et al, 2002). The existence of restrictions and imperfections in markets requires the governments to design systems of public financial aids to facilitate companies' access to credit, at least home banking, especially for younger firms and certain sectors (Beck and Demirguc, 2006). In the Spanish case there are remarkable remedies provided by the Official Credit Institute SME's Line (ICO), with specific funding to entrepreneurs in order to facilitate the infrastructure acquisition and the principal repayment with more favourable conditions than in the market. It also highlights the access to Mutual Guarantee Companies granting guarantees to its partners helping to limit the financial cost to business financing and have the support of a public institution, the Compañía Española de Reafianzamiento (CERSA).

This research analyses the efficiency of Spanish public financial aids received by a sample of start-ups, through a counterfactual methodology, which compares the performance of firms that receive public aids to those who have not received them. After this introduction, the paper is divided into three main sections: the first covers the goals to achieve, methodology and studied variables, the second stresses the efficiency main results of analysed companies and the last one presents the study conclusions and the challenges for financial institutions that mediate public financing aids.

Research objectives and hypotheses to be tested

This paper focuses on the financial aids provided by the ICO and the MGC's to startups. We analyse the efficiency of these public financial aids available to these businesses. The main objective is to study the problem of financing new business and solutions provided by public institutions. Solutions that pass

through the replacement of non-repayable capital grants for financial instruments that have to be repaid, with advantages in terms of lower interest rates or lengthy payback period. Such instruments are more effective for all SMEs that mere grant (Becker, 1996; Bergstön, 2000). Therefore, we try to test whether the business performance of companies benefiting from public aids, different from capital grants, grow throughout their life cycle, or if instead the empirical evidence shows that in newly established companies such approaches should be reviewed.

Therefore, it is deepening the economic performance of the newly established companies receiving public financial aids, compared to the other companies who have not obtained any public aids, not need or can not access it. This hypothesis verification is performed through the analysis of an economic-financial ratios set indicative of the company operational management, its profitability and its ability to generate effective liquids means. This analysis aims to verify if the economic and financial exploitation of the beneficiaries of such aids has been greater than that of the companies that have not used them, or if, on the contrary, these aids have not had the desired effect or only have improved in certain quantities. To establish that the public aidsare efficient it is necessary to ask the following question: how can be measured, in terms of efficiency, public aids to start-ups? The research interest rests with business and how to leverage the financial aids, so that the main criterion for measuring the efficiency is profitability. The choice of this indicator is not casual. Obviously, achieving a positive return is an arduous task in the initial stages of any business by inexperience in the management of resources, high starting payments (setting up expenses, assets acquisition), ignorance of the market and the consumer business, the low level of benefits and the high cost of funds (interest, fees, etc.) in case of having access to them.

Once set the indicators to measure efficiency, if companies show that they are efficient, we have to consider the results heterogeneity, specifically to address whether: Are beneficiary companies' results different by type of assistance received? This research considers two different ways of public aids, one from the ICO, which may take the form direct lending or leasing and assistance provided by the SGR that is indirect by providing guarantees. Demands that the employer must assume are different in both cases, especially in terms of cost, which can result in different business performance. The form taken by these different financial aids make necessary to discern whether there are differences depending on the nature of the aid or not.

Information sources and databases

This section details databases used, data treatment and subsequent operation to obtain statistical results on different behaviours of identified groups and their evolution over time. There are three databases to perform the analysis, specifically are:

- The base compiled by the Official Credit Institute (ICO), which refers to the SME's ICO. Composed all lending transactions arranged by the institute until 2007.
- Database developed by Compañía Española de Reafianzamiento, Sociedad Anónima (**CERSA**), which provides guaranteed transaction records performed by Spanish mutual guarantee companies with societies possessing legal entity until 2007.
- Análisis de Balances Ibéricos (SABI). This private database provides information about financial statements deposited in Spanish and Portuguese Registry of Commerce. The number of companies contained in the base amounts to 1,266,305 companies with legal personality (version November 30, 2012).

The first two databases have been used to identify Spanish-up companies that have come to public financial aids systems as opposed to those that do not have such aids. From the third database are extracted key accounting ratios of companies with legal personality included in the database. In total we have obtained four groups of SMEs according to the way in which are financed in their first years of life

("starts-up" and "new firms"). To have a series with sufficient data to analyse behaviours that both long and short term, are considered as newly created entities that were formed between 2000-2002. Although there is no consensus on the definition of "start-up" and "new firms", we mean that a company is in this stage among the first three to four years (42 months) of activity (GEM, 2008). Some authors materialize further specifying that a business is under "start-up" or fundraising and business development during the first three months of wages and other costs payment, being from the time when the company is considered newly created during the 39 months. After 42 months it is considered that the company is established in the market (Reynolds, 2007; Parker, 2008). For research, the different populations and samples to be used in case it is required that you attend a public assistance funding to do so within the first three years after its date of incorporation. Having defined the databases and the companies under study, groups identification is as follows:

- Companies formed between 2000 and 2002 who have come to the aid of the ICO SME line within the first three years of its activity: 10,018 companies.
- Companies established between 2000-2002 who have come to a mutual guarantee company (SGR) for an endorsement during the first three years since the company was founded: 2218 company.
- Companies established between the years 2000-2002 that have benefited simultaneously an endorsement and financial aids of the ICO SME Line: 270 companies with legal personality.
- Companies using borrowed funds to long and short term, but not resort to any of the public aids and are not described in the above groups: 7516 companies. The latter group of companies was obtained from the SABI database at random stratified sample, by firm size and sector of activity, according to the percentage distribution of total spathe incorporated companies between 2000 and 2002. This distribution has been obtained from the Central Business Directory, prepared by the National Statistics Institute of Spain (INE).

Methodology and variables used

Quantitative analysis starts from an analysis of the main economic-financial ratios arising from the annual accounts of companies. Methodology is based on a counterfactual approach that allows to know what would have happened if a certain action that had not been carried out, by comparison with control groups. This methodology can detect the existence of causality between public aids policies and changes in business results (Rivera and Munoz, 2003). You select a random control group has similar characteristics to the groups under study, so that by applying statistical sampling techniques (stratified probability) are able to eliminate those factors which hinder the expected changes (independent own choice) and to obtain results from differences resulting from its own public action or decision to be evaluated. The reference control group provides information about the convergence or divergence of the companies under study for it, and for assessing whether the observed changes are due to become general or group they belong, however, to a change in behaviour as a consequence of the fact studied.

All firms' ratios in the four defined groups are from the SABI database, with the time horizon of the data series between 2000 and 2011. There was also a high dispersion of the values obtained by the youth motivated enterprises that require data cleaning to get results free of outliers. For this reason the samples were employed with the median statistic distribution as central reference position, and not the average, in order to eliminate the irregular behaviour of the tails of the distribution of the variables used.

Furthermore, to compare the results of the graphical evolution and the existence of significant differences between groups analysed, other statistical techniques of cross section are used. Specifically, we performed an analysis of variance (ANOVA) to detect the equality between the means of several groups, assuming normality and homoscedasticity of the dependent variables assumptions. However, the variables do not meet these conditions. Therefore, contrast non-parametric Kruskal-Wallis is used. This is

a nonparametric ANOVA F test version and detects whether different groups follow same distribution without normality and homoscedasticity of the variables.

The set of indicators used to analyse the performance of companies that have requested financial support are: Return on Assets (ROA), return on equity (ROE), the liquidity ratio and debt ratio. The debt ratio indicates the weight of borrowings compared to the company's own resources. This ratio will tell whether newly established SMEs that have come to public financial support are able to improve their access to long-term financial sources gradually reducing its dependence on borrowings to short. The company's ability to meet its payment obligations in the short and long term is analysed through liquidity indicators. Meanwhile, the return on equity (ROE), defined as the ratio of profit after tax and equity, said the result available free to the employer as compensation for the risk taken. Profitability, measured by the ratio of earnings before interest and taxes between the annual average total assets of the company indicates the efficiency in the performance of entrepreneurs in the management structure of the enterprise, both as its capital assets of its current assets, regardless of the method of funding.

Evolution of the efficiency indicators (profitability) of the companies that have received public aids

In this section we will obtain evidence about the behaviour of the efficiency variables (economic and financial profitability) followed by the four groups of companies identified and we will detect the existing differences depending on the origin of access to a long-term financing.

The ICO companies optimize throughout their entire life cycle the aid received by maintaining a economic profitability higher than the one obtained by the other groups, and a financial profitability similar to the sample that acts as representative of the tissue of Spanish recently created companies. (CONTROL). The evolution of the economic profitability of the companies in the sample of SGR is effective for the period during which they receive financial support (first three years of life), but as they repay the funds they face new complications, being positioned below market levels. The financial profitability, which supplies information on the surplus available for the businessman after deducting the taxes payment and the financial charges, that is, the profit derived from the risk taking and management of the resources, is maintained throughout the period below the profitability of other groups, converging, at the beginning of the crisis (2007) with the values of the other groups (15%).

The reason of this reduction can be found in the survival of the company, the lower risk of bankruptcy and the accumulation of the self-financing achieved. From that moment until 2011 the evolution of all the companies taken into account has maintained a downward trend of around 5%. The companies that have requested simultaneously both financial aid (BOTH) maintain a behaviour similar to the SGR companies (figure 1). Therefore we could affirm that the aids granted by a SGR have overcome the barriers of access to business financing while the ICO aids do not appear to meet that goal, given the high profits obtained over the period. These results confirm in what way the increased risk of the companies of recent creation requires high returns.

At this point it must be stressed that the organization has the financial expenses ratio in the groups considered to determine the importance of state aid received. They are, in this order, the CONTROL group, ICO, SGR and BOTH. If we organize by the aids received, we can highlight that the companies that have required aids from the guarantees system have to support a higher financial cost than those that have only obtained funds from ICO. The companies that rely more intensively on borrowed funds in the long term are those that have to dedicate most of their benefits to covering financial expenses. A greater degree of involvement in obtaining financial aids signifies higher financial expenses, but inferior if such funding has not a public character intermediation. To summarize, it can be affirmed that public aids allow newly created companies the access to bank resources in the long-term with really beneficial financial conditions.
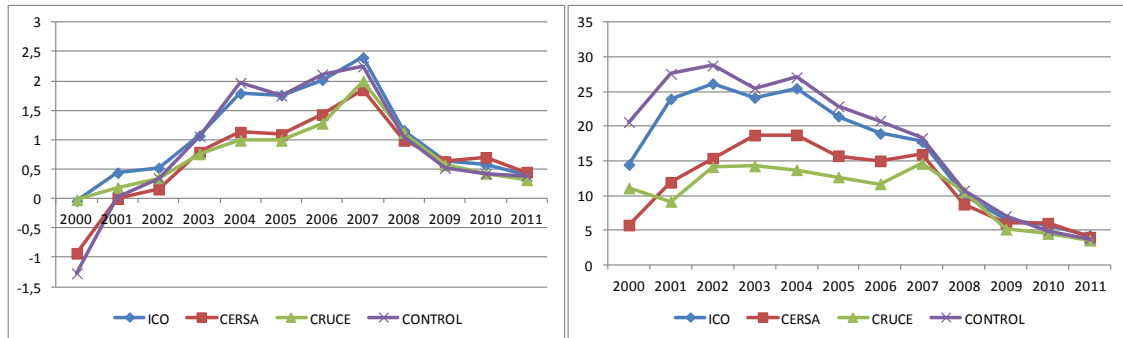
Source: Prepared by the author using information from the SABI database

Fig. 1. **Economic Profitability and Financial Profitability**

Thus, the learning process that the businessman acquires in managing the resources positively influences the evolution of the economic profitability by reducing the operating costs and the consolidation of his commercial demand, and influences negatively the financial profitability, given the lower level of risk of failure of the company as it is consolidated and secured in the market.

An analysis of the survival and the mortality of the different groups (Table 1) during the first six years of a company's life, just before the beginning of the crisis, shows that the companies that have received public aids manage to remain active longer than the CONTROL group companies. We can, therefore, appreciate how the aids are not limited to introducing the businessmen to the complicated market, but also to ensure their survival during the phases of expansion and development.

Table 1

Risk rate of the companies according to the type of financing, period 2000-2007

	Sample	**Survivors**	**Inactive**	**Survival Rate**	**Failure Rate**
ICO	10,018	9,531	487	95.14%	4.86%
SGR	2,218	2,087	131	94.09%	5.91%
BOTH	279	264	15	94.62%	5.38%
CONTROL	7,516	7,063	453	93.97%	6.03%

Statistical tests show the significant differences between ICO companies and the other groups. Throughout the study period the ICO companies have maintained the economic profitability levels superior to the ones of the CONTROL group, exploiting efficiently the public aids obtained. Meanwhile, the SGR companies have presented during the first part of the period rates superior to the ones of the CONTROL group, although after 2003 they have experienced a decline in profitability that situates them slightly below the CONTROL. Therefore, the profitability of the companies turn to external in long term financing through the guarantee scheme does not experience a positive effect in the long term, although they did in the early years allowing the survival and adaptation of these companies to the market. Table 2 presents the statistical tests used to determine if there are statistically significant differences between the groups.

The Kruskal-Wallis contrast reports differences among the groups, but does not specify which ones present a different behaviour. To identify them we used an ANOVA analysis corrected with the Brown-Forsythe test and the Tamhane test. The latter, considers that the difference between the averages is significant at a 5% level. Therefore, if the significance is greater than 5% it can be said that the pairs of values that exceed this level and form a homogeneous group and, by contrast, those that do not exceed it are groups with a differentiated behaviour. In this case, Table 2 indicates how ICO companies have a

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differentiated behaviour from the rest of the groups, except from CONTROL with which they form a homogeneous group. In turn, CRUCE and SGR form a second homogeneous group distinct from the above groups. These results would vary if the series under study started in the year 2007, given that from that moment on all companies have non differentiated behaviours in both profitabilities.

Table 2

Comparison of differences according to the type of funding received

Statistic significance	Kruskal-Wallis	ANOVA	Brown-Forsthe
	0.000	0.000	0.000
Test of multiple comparisons according to funding (Tamhane)			
Groups	SGR	BOTH	CONTROL
ICO	0.010	0.008	1.000
SGR		0.997	0.039
BOTH			0.008

All these results are conditioned by the sectorial composition of each of the groups considered. Thus, ICO firms differ from the companies that have obtained SGR guarantees on the higher percentage weight of the construction industry (19.2% in ICO vs. 10.5% in SGR) and on the lowest share of companies engaged in non-commercial services (34% vs. 42% SGR). For industrial companies – traditional manufacturing (15%) and intermediate and advanced manufacturing (2%) – there are hardly any differences in their weight percentage.

However, the importance that the traditional manufacturing sector acquires when we consider both public aids, assuming a 24.3% of the enterprises total, is remarkable. Logically, the elevated expenditures in order to acquire the complex and costly manufacturing facilities require large amounts of long-term financing, depending on the period of amortization of the non-current assets and on the expectations of cash flow generation, confirming the low assets rotation of this group. Nevertheless, taking into account the efficiency indicators depending on the activity sector, the companies in the construction sector are the most profitable and the most productive, although they are the ones with the lowest cash generation capacity. Immediately after, are situated the extractive and energy companies, in particular, the companies of renewable energy, which rapidly transform the benefits to cash flow. The liberalization of the energy sector and the construction boom during the period under study explain these results.

Evolution of liquidity ratios and debt capacity of firms with public support

The two following ratios indicate the degree of indebtedness of the company, and the resulting leverage and liquidity, which measures the company's ability to meet current obligations in the short term payment. In medium terms, the way the startups are financed can be summarized in the following manner: a low level of capitalization that does not exceed 15% of total funding sources, a intensive use of external sources in the short-term with a value close to 65% of total liabilities of the company and restricted access to external long-term financing. In the control group this funding represents just 22% of the total available resources. Therefore, we can verify that financial aid meet its goal of allowing access to long-term financing.

Thus, the right representation of figure 2 can be seen how companies with public aid have an ownership structure similar to the CONTROL sample, with a degree of leverage that ranges between 80-85% in the early years of their life cycle, but with a gradual reduction of external funds as loans are

repaid and the company is approaching its maturity phase, in full economic crisis. However, it is significant as the experience with banks that intermediate in granting public support has enabled these institutions to hold higher levels of long-term debt exceeding of the companies that have not attended to these support systems. This low participation of equity in the capital structure of start-ups could be due to the contributions made by other agents (family, friends, etc.) in the form of external financing without cost or at a reduced cost.

The common note in all groups is the positive trend regarding the equity, so that the level of capitalization increases as growth and consolidation is produced, as established by the theory of "hierarchy of preferences" the constitution of reserves and the gradual return of the external capital (Myers and Majluf, 1984).
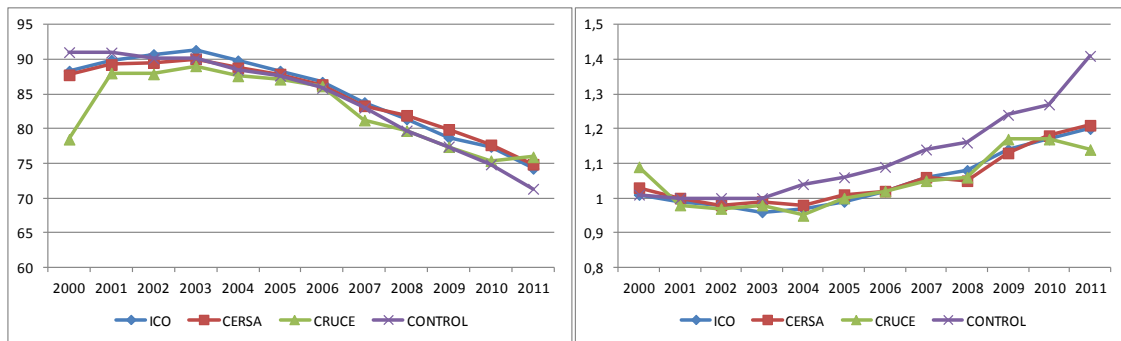
Fig. 2. **Overall liquidity ratio and debt ratio**

As companies go to its phase of growth and expansion is possible to detect changes in trend. There is a gradual increase in equity in all the groups considered accompanied by a reduction in the non-current liabilities and a maintenance of the short-term cash commitments. After six years there is a convergence between the companies with financial aid and those that do not. Therefore, of the evolution of the different ratios it follows that as companies consolidate continue to maintain as the main financial source resources in the short term while maintaining the low weight of the permanent financing, although with a progressive replacement in the origin of the same.

On the other hand, companies that rely on public aid presented a positive value of the ratio of liquidity (left figure of the graph 2) but below the control group. Even though all have very similar values, the one which provide less liquidity are the companies that have obtained guarantees (in particular CRUCE), in part, by its greatest difficulties of access to finance that pushes them to use all its resources to maintain their productive capacity and financial response, as well as by the greater volume of income to pay the interest of the funding. Table 3 lists the contrasts that will verify the statistical homogeneous behaviour of firms supported publicly. The temporal evolution of the series presents a slightly decreasing trend during the early years of business life, which does not preclude the maintenance of a reasonable excess cash flow from all groups. This behaviour seems to indicate a conservative financial management in order to be able to comply strictly with the corresponding obligations of payment. However, this approach leads to a series of implicit costs, but also in terms of opportunity cost, to not take advantage of these surpluses in profitable investments or maintain their productive capacity with the consequent reduction of their returns. Therefore, at the initial stage of its activity the entrepreneur prefers to abandon high returns in pro to transmit a lower risk, whereas under the company achieves to survive in the market there is an optimization of the management of current assets. However, during the economic recession companies prefer to increase their working capital in order to be able to meet any temporary situation that can ensure

them, either due to the lack of payment of your customers or by the rise of the interests of their financial sources.

Table 3

Comparison of differences in the liquidity ratio by type of funding

Statistic significance	Kruskal-Wallis	ANOVA	Brown-Forsthe
	0.000	0.000	0.000
Test of multiple comparisons according to funding (Tamhane)			
Groups	SGR	BOTH	CONTROL
ICO	1.000	1.000	0.000
SGR		1.000	0.000
BOTH			0.000

Conclusions

The first conclusion that can be drawn from the analysis is that the public financial aids to companies of recent creation is efficient because they improve the performance of the beneficiaries during the beginnings and they also increase the existence of differences between the average values of the efficiency indicators according to the type of aid received.

The analysis (charts and statistic contrasts) confirm the fact that the public aids have allowed the beneficiary companies (beneficiaries of ICO or SGR) to improve their business performance and in particular the financial profitability.

However, the financial profitability of the companies that have received an endorsement is below the CONTROL group profitability, converging, in a progressive way, into the average values of the period of the study, fact that confirms the improvements obtained during the period of the benefits of the endorsement. Nevertheless, it is important to highlight the two financial circles that the companies have been through during their own life circle: the stage of introduction and growth coinciding with the phase of expansion in the economy and the phase of maturity coinciding with a period of recession.

Therefore, as businessmen acquire not only knowledge and abilities, optimising the productive structure of the company, but also commercial skills on managing both the clients and the suppliers, the financial profitability increases. The financial profitability of the companies decrease as the risk of failure related to the beginning of the business activity is reduced.

In addition, the role of banks is essential to understand the situation. For banks, one of the most valued signs at the time of granting funds is the borrower's ability to repay debts and to present high profitability expectations. Furthermore, the use of banking brokerage by the ICO to grant public funds raises the question whether financial institutions use these resources in a discretionary way, that is, whether they fund their preferred customers. In some cases even the entrepreneur/ businessman himself doesn't know that the funds they received from their bank come from the ICO. This way, the restriction of credit would be eased for the newly established entrepreneurs.

However, the economic boom times in which financial aid was received, the increase of business wealth, the existence of low interest rates as well as the increasing bank competition, contributes to the fact that the aids received is not really perceived as needed. Therefore, to combine economic and social efficiency in the allocation of the aids, it is necessary to redirect the granted funds to beneficiaries who have higher financing needs, such as the collectives of women and unemployed, and to those companies with high growth potential. This would leave out of the system the entrepreneurs/ who could have obtained financing on the same terms. However, to retain the entrepreneurs who truly have financial

difficulties, it should be the ICO itself the one to make the final decision at the time of granting the aids, which would redefine the existing relationship with their brokers.

For the endorsed companies the progress of the business favours the increase of the financial autonomy, perceiving, in consequence, to a lesser extent the benefits from the public aids. These assessments along with the reduction of the efficiency ratios, as the debt is paid off, allow us to affirm, on one hand, that the entrepreneurs who resort to guarantee companies have greater financial difficulties and, on the other hand, that the additionally of the public aids is perceived more intensely within the group of the aidsed entrepreneurs.

Moreover, considering the changing economic cycle we can highlight the fact that companies that have received financial aids at the beginning of 2007, especially the beneficiaries of the ICO, have remained in a position which allows them to face the effects of the crisis. Therefore, faced with the reduction of the consumption, the companies who have received public aids have an operational profit that grows by reducing operating costs and by having reached a balance in adapting its production structure. Consequently, coping with market failures such as asymmetric information problems and adverse economic situations, the public aids are essential in order to reduce the problems of access to credit.

However, the configuration and the design of the public systems should be made considering the future sustainability of the system. The reduction of financial charges and the extension of the repayment deadlines for borrowers, without ensuring a correct return of the borrowed funds, should not make the public aids programs subject to successive interventions, since this would produce interferences in the functioning of the market.

Public aids, in the context of the ratios examined, are perceived and used by the companies in need – SGR and ICO BOTH, in this order – which justifies their existence. Therefore, although both programs pursue the same objectives, regarding the easy access to bank credit at an affordable cost that enhances the productive investment of newly established SMEs, although all types of SMEs can access them, the SGR are the ones that best fulfil their mission of removing barriers for the companies that actually have major financial problems.

Moreover, the benefits of the public aids programs for the borrowing entity should not be measured only by the amount of credit obtained or by the financial cost reduction because there are other equally relevant aspects, such as the positive experience for emerging SMEs. This first contact with credit entities and public institutions provide to them a valuable know- how, which will be useful during the stage of growth and consolidation of the company when it will have to interact and negotiate with financial institutions the application or renewal of bank financing. In return, the lender entity is also benefited by obtaining basic references useful for its relations with the companies as well as comprehension of the kind of information the lender entity should ask for.

The mutual guarantee systems or the ICO aids should not be used as the only way to solve financial nature problems. If a company is a bad borrower, it will remain a bad borrower. Therefore, according to the criteria of economic and budgetary rationality, mechanisms that allow a better distribution of resources among entrepreneurs with difficulties and at the same time transmit to the market the entrepreneurs' personal and professional integration with the project should be established.

This step requires a continuous relationship between the beneficiary and the public institution so as to obtain ex-post information on the application of funds. However, an excessive control is considered negative by the beneficiary, because it generates distrust. Consequently, throughout the operation, a constant relationship as well as an information feedback in both directions should be favoured. It is the responsibility of the public and the financial institutions in charge of the funds distribution to integrate to the public aids some reasonable and quantifiable indicators, in particular financial ones, and which should be known by the borrowers at all times, in order to measure the degree of exploitation of the investments.

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CHALLENGES FACING WOMEN ENTREPRENEURS IN ECONOMIES IN RECESSION. THE SPANISH CASE

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Abstract. During periods of economic recession public institutions focus their actions on accelerating the transition from a managed economy to an entrepreneurial economy. In the latter case, it is extremely useful to analyze the entrepreneurs characteristics and the results achieved by their companies, in order to have adequate aid policies tied to the creation of companies according to their real needs.

This knowledge is currently needed even more, given the growing participation of women as entrepreneurs and the development of new economic, social and regional policies that tend to promote female entrepreneurial activity.

The analysis, focusing on gender, is part of the result of a survey conducted in 2009, with two hundred fifty-one (251) answers from a sample of female Spanish entrepreneurs and three hundred fifty-seven (357) answers from a representative sample of the entire Spanish business community.

On the other hand, statistical techniques used in the analysis of the questionnaires search for evidence of female entrepreneurial activity tied to a business strategy based on market opportunities or the development of product policies / innovative processes generated by competitive advantages. In particular, we emphasize the technological effort and the existence of cooperation agreements in the field of innovation with companies and other agents. We take into consideration variables such as demographic, sectorial, psychological, environmental, organizational and the influence of public policies.

The characteristics of female entrepreneurs, that are deduced from the analysis, recommends a major effort and action balanced by public institutions in order to involve the entrepreneurial women in innovative activities that reinforce the global competitive environment (policies of stimulation of I+D+i, of technological cooperation, product design, reinforcement of sectorial and territorial clusters etc.) and favour the establishment of entrepreneurial women, creative and Schumpeterian, indispensable to the progress of the entrepreneurial fabric and the national economy.

Key words: *woman; entrepreneurial factors, innovation; public aids*

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Introduction

Women's influence in the development of the economy represents an important phenomenon among the social changes developed during the 20th Century, and their professionalism and leadership in certain economic and business areas is an accepted fact in the last decades. Bonano (2000) considers that one of the main strengths that will drive the general economy during the 21st Century will be the emergence of women in economic and entrepreneurial activity, something that politicians will not be able to ignore. Furthermore, the change in model from a management economy to an entrepreneurial economy as well as the progressive incorporation of women into these areas has meant the development of new economic policies – including those of a regional character – that try to stimulate female entrepreneurial activity, so it is important to both study and compare the characteristics of women entrepreneurs and the results their companies have to offer.

This paper considers a series of behavioural variables associated with entrepreneurial activity and is structured into two sections that search for specific aspects of entrepreneurs, specifically women entrepreneurs. The first studies the factors that allow the collection of the components that determine the Spanish women's entrepreneurial activity as well as groups or clusters of women entrepreneurs depending on the mentioned factors. The second analyses and looks for evidence of creative entrepreneurial activity, that is to say, that which has committed to business strategies based on sectors, innovative or dynamic market opportunities that generate emerging products. Both are interesting regarding the environment of regional and economic policies, particularly those referring to the promotion of two complementary entrepreneurial and economic areas: on the one hand, stimulating entrepreneurial activity with supporting policies that would reduce the barriers of entry and exit of companies into markets, and also, supporting policies for a competitive environment so that potential entrepreneurs could choose with greater probability competitive and innovative entrepreneurial projects, those situated closer to the "entrepreneur schumpeteriano environment".

Regarding institutional norms and their influence on the promotion of entrepreneurial activity by women, the second OCDE Conference of Ministers (2004) responsible for small and medium companies established a series of policy recommendations in order to incentivize entrepreneurial women. Among those, we can mention the following: a) increase the participation of women in the labour force, help support measures for the caring of children and equal treatment in the work place; b) include women entrepreneurs in the area of small and medium company policies; c) promote the development of entrepreneurial women networks; d) create public offices which promote and give voice to women entrepreneurs and e) evaluate periodically the impact of these policies on the success obtained in female entrepreneurial initiatives. Keeping in mind that the main investigation point as well as the policies and programs developed in recent years, normally do not take into account the specific aspects of women, these recommendations are developed to overcome market errors derived from gender discrimination which makes harder the possibility of women becoming entrepreneurs the same as men.

Sources of information and data bases

To know the personal characteristics and management strategies of Spanish business men and business women a study has been carried out using their direct input by means of specific questionnaires. To that purpose, in the investigation, two questionnaires have been designed: the first one focuses on a group of female entrepreneurs and the second one refers to a representative group of business people from the Spanish business network – according to the Directorio Central de Empresas (Central Directory of Firms) its distribution is based on size and sectors – Both questionnaires, count on common questions and questions designed according to the entrepreneur's idiosyncrasies. The field work, done by sending

questions via postal mail and then following up on each case, has been carried out by the specialized questionnaire company (*Dephimatica*).

The universal sample made up of the total number of companies contained in the SABI data base in its version of February 28th, 2009, consisted of 678,860 units with complete registers available. Of the universal sample of companies in SABI, a random sample has been chosen stratified into size and sectors (with special attention given to a certain percentage based on a company's age and location) at a significant level ninety-five (95%), obtaining a random size of 16,250 companies. Following the two above mentioned criteria from that sample, the companies managed by women total 3,124.

Regarding the questionnaires sent to the group of business women, the goal is to obtain three hundred (300) valid questionnaires representing the opinion of the group of entrepreneurial women, so in order to obtain that number of responses a sample of nine hundred (900) companies were chosen to whom questionnaire were sent. From this questionnaire that was sent to the entrepreneurial women, we received two hundred fifty-one (**251**) completed questionnaires. Regarding the questionnaires sent to representative business group from the Spanish business network the goal was the same, that is, to obtain another three hundred (300) questionnaires representing the opinion of the entire business group. Three hundred fifty-seven (**357**) completed questionnaires were received.

Methodology

The analyses uses psychological, demographical, sectored, environmental, organizational and is also influenced by public policy demographics. Through the use of descriptive and multivariable techniques the trends of the answers are analysed, in addition to making comparisons between the different groups being considered, comparisons are also made according entrepreneurs' gender.

This way, the descriptive analysis is developed in three sequences: the first one offers the profile and characterization of the entrepreneurs both male and female; the second one, a multivariable study of the main components that permit obtaining a group of factors explicative of the entrepreneur activity. For the factorial analysis questions and answers have been used that contain an evaluation by the employer through the procedure of 'Likert scales' or similar (very important, not important, etc.). With these results evaluative and other characterization regarding the businessmen or of the company, there has been created a set of forty (40) variables of which a study has been conducted of factors that characterize the entrepreneurial spirit and its relationship to the performance of the company. These factors, through cluster analysis, will provide the basis for determining homogeneous groups of businessmen according to their most determinate factors. And finally, the third stage explores the competitive creative capacity of business owners, especially the female entrepreneurs, using cross-tabulations of the results of the questions related to growth policies, product development, number of degree graduates in the company, R & D & I policy and choice of strategic business decisions. The use of the chi-square test determines whether there exist significant differences between the groups considered. Equally this statistical technique will be applied to learn the motives as to why the business men / business women decided to establish a business in a given place, time and specific sector.

Valuation of the determining variables of entrepreneurship: The case of female entrepreneurs

To find out what the main motives are that would cause a person to make the decision to become an entrepreneur, was included in the questionnaire as a series of questions concerning motivational variables, key to the survival of the business project and evaluation of public policies. Furthermore, variables as to the

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characteristics of the entrepreneur and his company, were previously transformed into Likert scale. All these variables show the different dimensions that define the multidisciplinary concept of a business owner (demographic dimension, psychological, organizational and strategic, economic environmental-sector, institutional policies, etc.). A total of forty (40) variables have been selected and grouped into five thematic sections: motivational factors for survival, valuation of public policies aimed at creating companies, the demographic profile of the business owner and characteristics of the company and its environment. As suggested by the works of Lafuente and Salas (1989), Lumpkin and Dess (1996), Baum, Locke and Smith (2001) and Grundry and Welsch (2001), the combination of the individual variables of the business owner and the environment enables a multilevel analysis that is able to explain both the components and the degree of importance of entrepreneurial activity. Table 2 shows, on the one hand, the valuation of the variables for the business women sample and the sample of entrepreneurs from the Spanish business group structure.

The results confirm that the enterprises are positively conditioned by motivational variables and survival factors and to a lesser extent, by the stimulation of public policies for the creation of businesses. Business owners looking to improve their quality of life through obtaining higher revenues to compensate for their effort and dedication. Specifically, the most valued variables are: autonomy, achieving self-realization, to be the leader of your own business, obtaining a sufficient level of income to make money in line with the effort reached values greater than 4 out of 5. At the other extreme, the variables least variable are the availability of leisure time and obtaining social recognition, with a value below 3 out of 5.

Among the variables that influence the survival of the company, having a good product is the only variable that gets the highest rating, with a note greater than four (4) on average. This is followed by the existence of a good corporate culture. On the contrary, in reality, the availability of financial resources is increasingly important to both initiate and to consolidate a business. Meanwhile, technological effort, is considered as "something important" to support the consolidation of the company. In relation to the valuation of public policies in Spain, it stands out that business owners underestimate public policy for the creation of businesses in relation to the other factors of business survival. None of the evaluations are above three (3) points out of five (5), whereas a lower valuation is given relative to taxation.

Table 1

Determinant Factors of entrepreneurship: The case of business women

Description of the variable	Measuring scale	Year 2009 – Total Entrepreneurs		Year 2009 – Women	
		Average	Standard Deviation	Average	Standard Deviation
Motivational variables					
Autonomy	Likert Scale (1 – "not important" to 5 – "very important")	4.37	0.97	4.37	0.96
Having free time		2.61	1.52	2.68	1.49
Pick work location		3.38	1.44	3.54	1.48
Prioritize family life		3.45	1.33	3.68	1.38
Attain self-realization		4.16	1.09	4.16	1.14
Work at my own pace		3.89	1.27	4.10	1.17
Contribute to society		3.58	1.28	3.76	1.29
Be the boss of your own		4.18	1.03	4.17	1.05
Accept a challenge		3.93	1.22	3.97	1.21
Show off personal abilities		3.27	1.36	3.70	1.33
Achieve social recognition		2.91	1.31	3.35	1.35
Reach a sufficient income level		4.00	0.99	4.19	0.97
Earn a high salary		3.41	1.16	3.66	1.17
Be paid according to effort		4.05	1.07	4.27	1.04

Description of the variable	Measuring scale	Year 2009 – Total Entrepreneurs		Year 2009 – Women	
		Average	Standard Deviation	Average	Standard Deviation
Survival Factors					
Have adequate product/service	Likert Scale (1 – "not important" to 5 – "very important")	4.46	0.84	2.95	1.46
Availability of financial resources		3.35	1.38	3.56	1.17
Good market expectations		3.46	1.2	3.78	1.46
Good company culture		3.89	1.29	3.56	1.30
Technological effort achieved		3.38	1.32	1.46	1.21
Valuation of public policies					
Social Security benefits promote the creation of companies	Likert Scale (1 – "not important" to 5 – "very important")	2.80	1.56	2.55	1.22
National government policies in relation to the creation of companies		2.41	0.98	2.22	0.95
The policies CCAA creation of companies		2.56	0.97	2.32	0.95
The red tape in the creation of companies		2.91	1.04	2.43	1.00
Tax regulation in the creation of companies		2.37	0.99	2.25	0.98
Rules are predictable and consistent		2.53	0.86	2.43	0.87
Government policies: Education		2.60	1.006	2.45	1.02
Policies of physical infrastructure		2.69	0.887	2.59	0.90
Policies regarding infrastructure and technologies		2.75	0.895	2.65	0.90
Characteristics of the business person					
Age	Scale 4 posic.	2.27	0.99	2.14	0.98
Professional experience	Scale 4 posic.	3.12	0.883	2.83	0.96
Level of decision making	Yes = 1; No = 0	0.61	0.49	0.71	0.46
Existence of another business owner family	Yes = 1; No = 0	0.64	0.49	0.63	0.48
Family experience related to activity	Yes = 1; No = 0	0.44	0.47	0.60	0.49
Previous company experience related to activity	Yes = 1; No = 0	0.50	0.5	0.30	0.46
University studies	Yes = 1; No = 0	0.39	0.48	0.21	0.41
Characteristics of the company/environment					
Age of company	Scale 4 posic.	1.33	0.52	3.52	0.63
Percentage of stock of principal shareholder	Scale 3 posic.	2.75	0.66	2.73	0.68
Size (based on number of employees)	Scale 4 posic.	1.29	0.59	1.29	0.55
Concentration of sales (3 main clients)	Scale 4 posic.	1.92	1.02	1.36	0.78
Activity sector	Scale 3 posic.	2.58	0.68	2.85	0.45

Source: Self developed based on questionnaire

By its part, the block associated with the business owner profile reveals the following characteristics: the Crisis and necessity have converted entrepreneurship into a feasible alternative for people under thirty-eight (38) years of age (25.07% of the cases); a lot of prior business experience in the management of other companies and concentration of all strategic decisions (financial, production, human resources, etc.) in the entrepreneur/owner-for sixty-one (61) percent of business. Family tradition is a significant factor in starting a new activity, given that sixty-four (64) percent count with having another business owner in the family, although the development of activities occurs in sectors different from other relatives (only forty (40) percent in the same sector as the family). Regarding educational levels, only forty (40%) of respondents have a college education.

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Finally, with respect to the group of variable characteristics of the company, in more than seventy-five (75%) of cases the promoting business owner counts on more than one hundred (100%) on social capital given to his micro company dedicated to the service sector. On the other hand, the surveyed companies have an average of sixteen (16) years, and even though they operate in seven business sectors according to the NACE 2009 to double digits, for the study they have been grouped into three core basic business activity sectors.

Below are the main differences found in the group of business women regarding the general group of business owners. Thus, women choose to start a business to reaffirm themselves in society, displaying their personal skills and seek social recognition (mean of 3.35 compared to 2.91 for total business owners). Regarding personal motivations that have influenced the decision to become a business owner, the group of women give a higher valuation to obtaining income, as well as the possibilities that setting up a company allow in prioritizing work and family life. These situation results are consistent given the greater number of dependents and the number of daily hours devoted to home care that supports the group of women over other entrepreneurs. In assessing survival factors also appreciated are different behaviours, in particular, women entrepreneurs consider unimportant technological effort in product or process innovations (mean of 1.46 versus 3.38 for the rest of business owners) and product or service have a right to market (mean of 4.46 to 2.95 compared for the rest). Of the other survival factors, the business women considered very important the provision of financial resources. Moreover, the business women underestimate all public policies aimed at the creation of companies, especially those relating to the red tape and bureaucracy during fundamental moments of society.

Finally, the main difference between the characteristics of business women from the rest of the business owners surveyed is less professional experience. Only thirty (30) percent of the business women businesses are related to their previous activity. By contrast, the family experience related to current activity is another factor determining the incorporation. Regarding the type of company stresses that well established businesses in the market, for over 16 years, with a strong presence in the non-commercial services sector, explains the low dependence on its three main customers.

Underlying factors of entrepreneurship in Spanish women

The high number of determinant variables of entrepreneurial spirit predicts its reduction through factor analysis, with the purpose of obtaining a set of core components of entrepreneurial activity, particularly because of gender of the business owner. To achieve this objective we have developed two analysing factors: one for all entrepreneurs and the second analysis specifically focuses on the group of women business owners. The significance of Bartlett's test, and the result of the correlation matrix -0.000 – is indicative of the existence of linear relationships between the variables, verifying the suitability of the factorial analysis applied. Only as a result are the results of the factor analysis of women's group presented. The analysis allows for the extraction of 11 factors, containing 58.59% of the variance variables for the sample of women.

The first factor is made up of all the variables associated with the valuation of public policies (economic services, fiscal and administrative) to support the creation of a company. Items with higher saturation level are those relating to national and regional policies to encourage entrepreneurship and to a lesser extent the administrative and tax incidence in the creation of the company. This factor reflects 12.3% of the total variance. This factor has been called "contribution of public support".

The second factor includes the following items: contribution to society, accepting a challenge, exhibit personal abilities, obtain social recognition and self-realization. This factor reflects 6.63% of the total variance. This factor represents the psychological dimension of the business owner, which is why it has been called "need for personal and social achievements".

The third and fourth factors that better explain the entrepreneurial activity is "autonomy" and "obtaining income". The degree of explanation of the variance is 5.4%. The factor "obtaining income" is composed of the variables to achieve a sufficient level of income, high profits and to make money in line with the exerted effort. The current economic situation highlighted as in times of economic growth and stability of the environment, obtaining income may encourage a person with an entrepreneurial spirit to go from being a potential business owner to being a business manager, replacing their current remuneration cash (wages, unemployment benefits, etc.) for the benefits the activity reports. However, in times of recession monetary motivation is less valued against the security of their compensation as an employee for someone else. For its part, the factor that includes the variables: working for yourself, being the boss of your own business, autonomy and choosing the location of the job (female sample) or self-realization (sample track), has been called "autonomy". Therefore, the items with higher saturation are those relating to monetary incentives and less motivation associated with self-directing.

The fifth and sixth factors are associated with the variables related to the company's survival and improved quality. The factor designated as "survival" (4.6% of the total variance) collects the five variables concerning the requirements that all companies must meet to ensure their survival (ordered by high levels of saturation): good market expectations, availability of financial resources, having a good corporate culture and having a product / service to meet the needs of your demand. With regard to personal welfare improvement involving the creation of a company, it has been defined as a factor called "quality of life" that tends to have free time, prioritize family life and the business relationship established with the previous activity . In analysing the explanatory weight of these components it can be confirmed as for women creating a company that just lets you enhance the reconciliation of personal and family life, as this factor only accounts for 4.6%.

Between the seventh and eleventh factor are the following: the seventh factor designated as "family tradition" (3.28%) is composed of the variables: existence of another business owner in the family and the family experience related to the activity. Both are positively correlated with the factor. The eighth factor is the factor designated as "sector-market breadth" (3.31%) composed of variables and sector concentration of sales (three main customers). The ninth factor is designated "accumulated experience" (4.28%) for the three variables which, in this order, include: the age of the entrepreneur, the age of the company and the percentage of shares held by the principal shareholder. Therefore, the factors associated with previous experiences (whether personal, work or family) are the ones that least explanation present. The tenth factor, explaining 3.82% of the variance is positively correlated with university studies, firm size and concentration level of decision making. This positive relationship may indicate that business women that finish their university studies utilized mainly micro companies as the legal form and assume most of the decisions, and as the businesses grow in size, they begin to decentralize decision-making. This factor has been designated "business size". Meanwhile, the eleventh factor (3.31%) includes some of the variables associated with professional experience and technological effort realized. As you gain experience in managing a business and its main activity the latest technology gets incorporated hence the name that this factor receives is "technological learning".

Groups of business women and characteristics of each group of business women

With the eleven factors identified a Cluster analysis was performed. The process of generation groups by the Howard-Harris algorithm is presented in Figure 1. This methodology creates homogeneous groups of individuals based on higher variance factors. The first division was made based on factor 9, accumulated experiences, yielding two groups (96 and 141 individuals respectively). In the second stage factor 8, sector-market breadth, is responsible for creating division, obtaining in this case three groups (83, 93 and 61). In the third stage factor 10, company size, provides four groups (69, 47, 57 and 64).

Finally, in the fourth stage, through factor 7, family tradition, the five groups are obtained. The validation of this grouping has been done through discriminant analysis. Below are the characteristic features of the five groups formed.

The first group consists of forty-nine (49) entrepreneurs. This group is defined positively by the satisfaction of the need for achievement and social recognition that running their own business brings them. They also have the greatest family tradition in the sector in which they carry out the activity. On the other hand, they consider important public policies in the creation of companies and the factors associated with the survival of the company. The low value of the later two factors could be explained by the way they entered the business through an inheritance or a family donation. For these reasons, they have been designated as "family business owners".

Factor 9 (Accumulated experience)
- Age
- Age of company
- Percentage of stock of principal shareholder

Group 1
(n = 96)

Group 2
(n = 141)

Factor 8 (Sector – sector-market breadth)
- Concentration of sales
- Activity sector

Group 1
(n = 83)

Group 2
(n = 93)

Group 3
(n = 61)

Factor 10 (Company size)
- Size (based on number of employees)
- University studies
- Level of decision making

Group 1
(n = 69)

Group 2
(n = 47)

Group 3
(n = 57)

Group 4
(n = 64)

Factor 7 (Family tradition)
- Existence of another business owner in family
- Family experience related to activity

Group 1
(n = 49)

Group 2
(n = 45)

Group 3
(n = 43)

Group 4
(n = 49)

Group 5
(n = 51)

Family tradition.
"Family business owners"

Economic dimension of the entrepreneurial.
"Entrepreneurial managers"

Predominance of the industrial sector and technological oriented.
"Industrial business woman"

Oriented to the new environment. Labour conciliation.
"Adaptive business women"

Maintain her job.
"Status quo business women"

Fig. 1. **Creation of groups for the sample of the women business**

The second group, consisting of forty-five (45) business women are characterized by the high value they attach to public policies and the creation of businesses, obtaining income according to the effort

exerted and the high regard of the determining factors for the survival of the company. On the other hand, the least value autonomy involved the management of a company. In addition, the ample professional experience they demonstrate and the low emphasis placed on the ability to reconcile work and family describe a type of business women fully committed to your business. Therefore, the strong economic dimension of the entrepreneurial concept present in this group of business women cause them to be designated as "entrepreneurial managers".

The third group of forty-five (45) business women is characterized by the lack of valuation of the factor associated with the sector and market breadth. This situation indicates that it is dealing with business women dedicated to non-commercial activities. Of the remaining explanatory factors of entrepreneurial activity, even though it does not represent an extreme value, highlighted by the low attention to obtaining income and high personal experience gained in other business activities like the importance given to technological factor as a means to ensure survival of the company. This group has been designated as "industrial business women".

The forty-nine (49) entrepreneurs that make up the fourth group, those with less professional experience, primarily value autonomy and the ease to reconcile family and professional life which comes from running their own company. This assessment is consistent with the high value they attach to the technological experience given that new technologies allow the performance of basic business activities from their own homes. For this reason, it has been designated "adaptive entrepreneurs", the high adaptability to working hours and high strategic opportunities are offered by information technology and communication.

The fifth and final group, consisting of fifty-one (51) business women, is characterized as being the oldest in age and being the oldest companies. They stand out as being the least that value technological effort, and the least needing to showcase their achievements and in obtaining income. These defining features seem to describe a type of business women who has carried out the same activity for a long period of time and has managed to establish herself in the market. For this reason they have been designated "status quo business women".

Women and creativity variables

Three of the questions, considered in the questionnaire, refer to the motive that the business owner used to decide to start his business activity in a particular industry, at that time and in a certain location. Table 2 presents in an unavailable manner the distribution form of the responses.

Table 2

Choice of business based on location, time and sector by gender (percentages)

Motives	Localization		Time		Sector	
	Follow up	**Women**	**Follow up**	**Women**	**Follow up**	**Women**
Family business	40.10	42.09	39.64	39.47	-	-
Strategic opportunity	29.78	33.62	29.85	33.07	28.12	27.45
Available resources	25.21	24.29	23.38	19.20	-	-
Experience/ knowledge	-	-	-	-	53.08	53.53
Special sector zone	-	-	-	-	13.88	9.24
Other reasons	4.91	0.00	7.13	8.27	4.92	9.78
Total	100.00	100.00	100.00	100.00	100.00	100.00

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The choice of a specific location is based on reasons of proximity to the personal home or the family, although women in the sample of this factor are situated two percentage points above the follow-up sample. This decision is reproduced when the temporary choice is considered, where 39.5% of the responses focused on personal issues, for example, a succession or inheritance of the company. Meanwhile the choice of sector appears determined by previous experience and knowledge previously acquired in a similar business or family business, as more than half of the responses focus on this possibility. Second, for the three categories of factors the answers relate to the motives of strategic opportunity, sector or market. Specifically, almost three out of every ten answers are found in these motives. Thirty-three (33) percent of the collective responses of the women show they chose the location of their business and the specific time by having spotted some type of opportunity such as the absence of companies engaged in this activity in the area. Nevertheless, the choice regarding activity sector by detecting an opportunity in the sector there only exists differences by gender. Third, the motives are different. If the location is a consideration, then one of four responses manifests the choosing of the location for being an area with wide availability of resources, both economic, human and material. The percentage of responses is slightly lower if you consider the available resources at the time, and especially the sample of women that seem to demonstrate a reduced availability of resources to establish the company. Finally, the business owners stated that the decision to create the company does not belong to any of the previous reasons.

Finally we analyse the relationships existing between the groups of business owners determined under the performed cluster analysis and various indicators associated with greater dynamism and creativity of entrepreneurial behaviour (product development, R & D, qualification of personnel, growth strategies, etc.). That is, we try to identify within the cluster characteristics of the same according to the indicators used, explain what group shows more dynamism, creativity and is forward-looking. In table 3 we present the relationship of indicators of entrepreneurial creativity with the identified cluster.

The results obtained, in the first place, present the average values of each variable, with respect to the total number of individuals, and second presents the situation that creates the distinct groups based on the average provided by the individuals composing each. Thus, if the group average is above / below the mean value of the global sample it is inserted positive / negative sign. However, if the sign + / - is accompanied by an asterisk (+ * or - *) this indicates the presence of more distant values above / below the mean. Finally, the statistical significance is shown (by using the chi-square). At a significance level of ten (10) percent the variables are found: choice of the business for strategic opportunity in time, strategic opportunity in the sector and the number of graduates. By contrast, there do not exist significant differences between the groups considered for variables related to the type of product / service offered, strategic choice, by geographical location, conducting R & D, technology cooperation agreements and the type of strategies growth to be developed in the future.

Table 3

Creativity and innovation characteristics of business women

Groups formed / Variables	Global sample: Values	Group 1 / Family	Group 2 / Creative	Group 3 / Employed	Group 4 / Adaptive	Group 5 / Status Quo	Signifi-cance
Number of individuals	237	45	49	43	49	51	
Type of product in the line up							
New in the international market	4.64%	-	+	=	+*	-*	0.427
New in the national market	9.70%	+	-	+	-	+*	
Known in the national market	8.86%	=	-	-	+	+*	
Standard or already know in the market	76.79%	=	-*	=	-	-*	

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Groups formed Variables	Global sample: Values	Group 1 Family	Group 2 Creative	Group 3 Employed	Group 4 Adaptive	Group 5 Status Quo	Signifi-cance
Business picked for strategic reasons							
Strategic location opportunity	50.21%	+	+	-*	+*	-	0.276
Strategic time opportunity	64.40%	-	-	+*	-*	+	0.008
Strategic sector opportunity	48.80%	-	-*	+*	-	-	0.011
Companies with cooperation agreements of R+D+I developments and innovation with other institutions							
Agreements	8.86%	=	-	+	+*	-*	0.862
Companies that perform activities specific to R+D+I (internally through external contract or both)							
R+D+I	17.29%	-	-	+*	-*	+	0.135
Growth Strategies in the future (of the companies that perform these activities)							
Internal growth	59.25%	+	+	+*	-	-*	0.367
Acquisition/ merger of other companies	7.40%	-	-*	-	+*	=	0.592
Establish cooperative alliances	24.69%	+*	-	+	-*	+*	0.453
Subcontracting of activities	23.45%	+	-*	-	-*	+*	0.633
Strategies with clients/provides	40.74%	+	-		-		0.131
Number of degree graduates							
Less than 5	96.62%	-	+	-			0.04
Greater than 5	3.38%	+	-	+	-*	+*	

Therefore, the analysis shows that group II, (forty-nine (49) business women, is fundamentally explained by the factor, market sector and amplitude (concentration of sales and business sector) is the one showing the highest concentration of values of the indicators associated with innovative and creative activity. This group of business women stands out significantly for being the ones to a large extent that have formed their company for having found strategic opportunity at the time and in a given industry, as well as for being a group of business women more committed to the development of R & D + I either internally or subcontracted to other companies or institutions.

Conclusions

The research, compared to other business types, presents the entrepreneurial women as being more dynamic and creative characterized by the valuation of policies to create companies, obtaining income based on effort and the consideration of survival factors. Professional experience and little emphasis on the ability to reconcile family life and work describe a typology of business women committed to their business. Furthermore, the current economic crisis has exercised its influence in determining the factors argued by business women. Moreover, the comparison of the factors obtained from the overall general sample of entrepreneurs regarding the sample of women just shows differences, except for a change in the

ordering of the factors and the minor importance that the group of business women concede to the technological factor.

Thus, according to the gender of the business owner it can be said that women are less dynamic in the creation of companies even though those who repeat as business owners have opened on average two companies, similar to the overall sample. Gender differences are significant when considering the commitment of business owners to the development of investment in R + D + I. Only two out of ten women have developed these activities in their company compared to thirty-eight (38) percent of business owners in the representative sample of the Spanish business network. This trend is reproduced if one considers the number of degree graduates and engineers in the company, especially in the case of those not having any degree graduates (sixty-two, 62%, of women).

With respect to the clusters formed the results are significant. Depending on the determinant factors of entrepreneurial activity the following five groups are deduced: family business owner, managers, industrialists, adaptors and status quo. Of these, the industrial business owners and the adaptors are those that show a greater commitment to the development of policies and agreements of cooperation in R & D, as well as in the training of qualified personnel, as the best way to ensure the survival of the company in time of current economic recession, like the present. Regionally, there is needed improvement in business women policies to promote entrepreneurship and stimulus to R & D in Central and South NUT, with the purpose that business women in these regions are brought up to the same levels as other regions in the use of strategic opportunities in location, timing or sector.

Therefore, the characteristics of women entrepreneurs described need a major effort and balanced action on the part of public institutions to involve business women in innovative activities that strengthen the overall global competitive environment (stimulus policies R + D + I, technological cooperation, product design, better human capital in the university or non-university function, reinforcement of sectorial, territorial and regional clusters, among others) and support the birth and development of Schumpeterian creative women entrepreneurs, essential for progress and innovation in the business network and the national and regional economy.

Nevertheless, support programs must be highly tuned to not only serve to highlight the importance of the phenomenon of women in entrepreneurial activity but to really see new business initiatives emerge, has unfortunately happened in the United Kingdom (Carter and Shaw, 2006) and other advanced countries.

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LA NECESSITE D'ELIMINER LES CONSEQUENCES DE LA CRISE FINANCIERE AVEC DES MESURES ACTIVES AU NIVEAU EUROPEEN AFIN D'ERADIQUER LE CHOMAGE DES JEUNES

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Abstract. Consequences of the financial crisis continues to affect growth and employment in the EU work, although growth is expected to recover gradually in early 2013. EU Youth Strategy aims to create more opportunities and better jobs for young people and promote active citizenship, social inclusion and solidarity. With them are concerned and active measures such as new program for education, training and youth, "Erasmus for all" proposed for the period 2014-2020, will be in the center of the new EU strategy for youth. This program provides a significant increase in funding, which would allow a total of about 5 million people to receive EU grants for education, training or volunteering abroad – almost twice as many by the number present in the programs 2007-2013. This study presents an analysis of these measures and their impact on reducing youth unemployment. Europe must continue a combination of fiscal policies with reliable structural reforms in order to create the conditions for sustainable growth to reduce current levels unacceptably high unemployment, especially among youth.

Key words: *youth unemployment, active citizenship, social inclusion, solidarity, grant program, "Erasmus for all"*

JEL code: K00

Introduction

En raison de leur statut d'entrants sur le marché de l'emploi, les jeunes se trouvent au coeur des mutations contemporaines du travail marquées par la libéralisation des marchés, les multiples pratiques de flexibilité et les nouvelles techniques et technologies de l'information. Leur situation vécue au travail, qui varie grandement selon les contextes nationaux, est l'un des meilleurs révélateurs de la diversité et de la complexité des changements en cours.

Le chômage comme un état de déséquilibre dans le marché du travail montre dans tous les pays d'Union Européenne un excèdent de population ouvrière jeune qui ne peut pas occupe ou trouve un emploi.

Chez les jeunes, le taux de chômage (après la statistique d' Eruostat), est de près de 23% dans l'Union Européenne, mais il y a plus de 2 million d'emplois vacants ne peuvent être comblés. L'Europe a besoin d'une réorganisation radicale de la façon dont l'éducation et de formation contribue au développement des compétences requises sur le marché du travail.

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Il s'agit d'un défi ne pourrait être plus difficile dans le contexte des mesures d'austérité généralisées et des coupes dans les budgets d'éducation.

Le taux de chômage comme indicateur qui permet de mesurer l'intensité de chômage calcule comme le rapport entre le nombre de chômeurs et les jeunes comme population de référence relève que actuellement, le taux de chômage chez les jeunes en Europe (conformément au Rapport européen sur la jeunesse 2012) a montrent déjà un rapport inquiétant: un jeune sur cinq est au chômage dans l'Union européenne. Une situation spéciale est en Espagne, le chômage chez les jeunes de moins de 25 est de 50%, alors qu'en Grèce, ce taux a atteint 55%. En revanche, peu de gens sont au chômage aux Pays-Bas, l'Autriche et l'Allemagne. Seulement 30% des jeunes étaient au chômage en 2010 ont trouvé un emploi en 2011.

Cette étude présente une vision du point de vue juridique dans le contexte social actuelle. Sans doute que l'économie d'un pays d'être en état d'équilibre sont nécessaires de mesures d'ordre économique relative a la quantité, structure et qualité de ressources humaines comme facteur de travail disponible pour les utilisateurs, mais on doit chercher aussi des instruments législatifs efficaces et toutefois en correspondance avec l'ordre juridique national et communautaire.

On peut discuter des actes juridiques d'application générale (lois, ordonnances, règlements etc.) ou des actes d'application particulière (contrats et accords entre entrepreneur et les fournisseurs de main d'œuvre, contrats d'aide professionnel etc.).

Les États membres ont renforcé les initiatives pour les jeunes dans l'éducation, l'emploi et l'entrepreneuriat.

1. L'éducation des jeunes, une préoccupation majeure pour l'Union Européenne

Un déséquilibre notable du marché de travail manifeste par les jeunes est causé par le manque non seulement d'emplois mais aussi à une formation professionnelle en correspondance avec la structure et la demande sur la marché du travail.

De nombreux diplômés universitaires ne sont pas prêts pour le marché du travail, pas prêts à suivre un cheminement de carrière et ne sont pas bien formés pour le processus de demande d'emploi pour des études de cas ou d'analyse des troubles de résolution. Les employeurs se plaignent qu'ils ont besoin d'au moins trois mois pour préparer les diplômés à des activités qui doivent continuer à travailler, conséquence du fait ce collège est de moins en moins pratique. Pour préparer les diplômés pour répondre aux exigences des autorités du marché du travail devrait rendre compte des problèmes du système éducatif.

La Commission européenne a lancé une stratégie dite de «l'éducation réorganisation» vise à encourager les États membres à prendre des mesures immédiates pour assurer la formation, les jeunes, les compétences et les compétences nécessaires sur le marché du travail et à atteindre leurs objectifs en termes de croissance et de création emplois. La stratégie, «L'éducation réorganisation» visant à un changement radical dans les systèmes d'enseignement, axée davantage sur "learning outcomes", c'est à dire les connaissances, les compétences et les habiletés que les élèves acquièrent. Le simple fait d'avoir participé dans le processus éducatif n'est pas suffisant. En outre, se sont considérablement améliorés et des connaissances de base en lecture, en écriture et en numératif et ont développé ou amélioré les compétences entrepreneuriales et de l'initiative.

«Erasmus pour tous», le nouveau programme pour l'éducation, la formation et la jeunesse proposé pour la période 2014-2020 sera au centre de la nouvelle stratégie de l'UE pour la jeunesse. Le nouveau programme prévoit une augmentation importante du financement, ce qui permettrait un total d'environ 5 millions de personnes de recevoir des subventions de l'UE pour l'étude, de formation ou de volontariat à l'étranger – presque deux fois plus nombreux par rapport au nombre présent dans les programmes période 2007-2013.

Pour assurer une plus grande compatibilité avec les besoins d'apprentissage des étudiants et du marché du travail, méthodes d'évaluation doivent être adaptés et modernisés. Il faudrait intensifier l'utilisation des

TIC et des ressources éducatives ouvertes dans tous les contextes éducatifs. Les enseignants ont besoin de mettre à jour leurs compétences par une formation régulière. La stratégie appelle également les États membres à renforcer les liens entre les écoles et les employeurs à fermer les entreprises de la classe et permet aux jeunes de découvrir le monde du travail grâce à l'amélioration des activités d'apprentissage dans un environnement professionnel.

En France, la licence professionnelle est conçue dans un objectif d'insertion dans l'emploi pour des étudiants qui souhaitent acquérir rapidement une qualification professionnelle répondant à des besoins et à des métiers clairement identifiés.

Elle repose sur les principes de la formation professionnelle intégrée en associant étroitement établissement de formation et milieu professionnel pour la conception de la formation, sa réalisation et l'aide à l'insertion.

2. L'adaptation de jeunes diplômes aux exigences du marché – cas de la Roumanie

Le monde économique et professionnel exerce également une pression et une influence importantes sur le devenir des universités et la professionnalisation de ses filières.

Aucun investisseur privé ne parvient pas à améliorer la situation parce que le nombre de nouvelles recrues est très faible, ce qui est produit principalement par l'incertitude économique dans ces pays. En outre, l'augmentation des impôts conduire à une augmentation des coûts de l'emploi formel.

Il y a aussi des raisons subjectives liées au comportement des agents économiques pour l'engagement des jeunes soit à cause de leur manque d'expérience ou qu'ils ne tombent pas dans la discipline de travail. Une solution économique est la formation de jeunes pour travail et la spécialisation dans le domaine de perspective à long. Cette solution doit être accompagne des acte politiques et aussi juridiques pour être soutenable, par exemple La Stratégie Jeunesse de l'Union Européenne (2010-2018) qui a été adopté par le Conseil le 27 Novembre 2009. Ses objectifs sont de (1) créer davantage de possibilités et de meilleure qualité pour les jeunes et (2) de promouvoir la citoyenneté active, l'inclusion sociale et la solidarité. Cette stratégie est divisée en trois cycles.

A la fin de chaque cycle est attirée rapport de l'Union Européenne sur la jeunesse en évaluer les résultats et de proposer de nouvelles priorités pour le prochain cycle de trois ans. Si le rapport est adopté par le Conseil, de nouvelles priorités seront applicables à compter de 2013-2015.

Il est essentiel d'adopter une approche de partenariat. Exigé des deux fonds publics et des fonds privés pour stimuler l'innovation et favoriser les échanges fructueux entre les universités et les entreprises.

Dans ce contexte, la Roumanie vise à aligner la législation roumaine avec l'UE besoins en termes de stages pour les jeunes diplômés pour faciliter la transition de l'école au marché du travail par une loi qui prévoit l'organisation de stages dans l'adaptation professionnelle sous contrat pour une période comprise entre six et 12 mois, après quoi les participants seront évalués et obtenir un grade.

Le Contrat adaptation professionnelle sera signé avec le contrat individuel de travail, ce dernier constituant l'annexe. Période d'essai peut être interrompu en cas de suspension de l'ajustement professionnel ou si le stagiaire est en congé de maladie pendant plus de 30 jours.

Une période de probation peut organiser des débuts professionnels, une fois après chaque formulaire de niveau supérieur des études supérieures en droit, sur la base d'un programme approuvé par l'employeur à la proposition de la tête des stagiaires opère.

La poursuite du programme de stage comprend la planification des activités qui seront réalisées, selon les connaissances théoriques et les compétences pratiques acquises pendant la formation.

Pendant les travaux de stage des stagiaires est réalisée sous la direction d'un formateur dans le même département dans lequel le stagiaire fonctionneront désigné par l'employeur des employés qualifiés avec une expérience professionnelle d'au moins 2 ans dans le stage doit être effectué.

Le formateur doit: coordonne le stagiaire pendant le stage; proposer des moyens de résoudre les œuvres attribuées aux stagiaires; superviser le respect des tâches position correspondante tenu des stagiaires; établir, à la fin du stage, un rapport d'évaluation des stagiaires.

L'évaluation du stagiaire consiste à évaluer l'acquisition des connaissances théoriques et les compétences pratiques nécessaires pour remplir les fonctions liées aux occupations dans lesquelles il a mené adaptation théâtrale professionnelle en fournissant une notation. Cela se fait par l'évaluateur dans les 5 jours après la fin de la période de probation.

L'adaptation des stages professionnels finances peut être fait à partir des sources suivantes: a) Le budget de l'employeur; b) Fonds social européen; c) Le budget de l'assurance-chômage; d) le parrainage de particuliers et / ou juridique

Les compétences professionnelles comprennent la mise à l'ordre du jour de l'adaptation aux exigences du marché.

Il doit être créé une base de données électronique sur le développement de l'offre de compétences et de la demande sur le marché du travail. Cela aidera ceux qui sont intéressés à prendre des décisions au sujet de leur formation professionnelle et de la formation fondée sur la situation actuelle du marché, ce qui augmentera leur employabilité.

Ce site pourrait être utile aux entreprises et les aidera à trouver du personnel qualifié dont elles ont besoin.

Un changement majeur de Code du travail roumain en 2011 est l'introduction de l'enseignement supérieur pour les diplômés de la période de formation

Aussi, en Roumanie, la Loi. 116/2002 sur la prévention et la lutte contre l'exclusion sociale crée des outils importants pour soutenir les jeunes dans le besoin et à risque d'exclusion professionnelle. L'Agence nationale pour l'emploi est tenu d'effectuer un accompagnement social personnalisé pour les personnes âgées entre 16 et 25 ans qui sont dans le besoin et à risque d'exclusion professionnelle afin de faciliter leur accès à l'emploi.

Les jeunes ont droit à des conseils et du personnel spécialiste de la médiation de l'Agence dans la préparation d'un plan individuel de la médiation. Afin d'employer les jeunes peuvent bénéficier d'une mise en place par un employeur agréé par l'Agence en vertu d'un contrat de solidarité. L'employeur a informé l'agence désigne un employeur dont l'offre d'emploi a été choisie comme agence de formation adapté territoriale des bénéficiaires et autres conditions figurant dans le dossier d'enregistrement compilé en tant que demandeur d'emploi.

Les dispositions de la loi no. 76/2002 en ce qui concerne le système d'assurance chômage et de qui régissent les mesures de stratégies et de politiques visant à protéger les personnes des risques de chômage, en assurant un niveau élevé d'emploi et de main-d'œuvre à s'adapter aux besoins du marché du travail, mesures visant à stimuler l'emploi doit tenir compte de «mesures visant à soutenir les personnes en recherche d'emploi et en particulier les chômeurs à acquérir le statut de salarié.

Ces mesures sont destinées, entre autres choses, de l'emploi des personnes à la recherche d'un emploi, aussi que des personnes représentant les diplômés de l'enseignement universitaire.

Les employeurs qui relèvent de l'emploi au cours indéterminée diplômés des établissements d'enseignement sont exemptés pour une période de 12 mois, de paiement vers le budget de l'assurance-chômage et reçoivent dans la même période d'une subvention mensuelle pour chaque diplômé.

La période de crise peut être une motivation supplémentaire pour les jeunes qui peuvent propulser l'entreprise, précisément parce que la situation actuelle rend beaucoup d'entre eux certainement pas à voir la vie dans un emploi.

Malgré les effets négatifs apportés par la crise financière, la situation peut conduire à l'émergence d'idées nouvelles dans les secteurs d'activité sous-exploitées jusqu'ici.

On doit mentionner que la Charte communautaire des droits sociaux fondamentaux des travailleurs met l'accent sur la participation communautaire sur l'emploi des jeunes.

3. L'aide accordé aux jeunes pour une expérience entrepreneuriale

Chez le jeunes le chômage apparaît aussi en raison de la tendance à chercher des emplois rémunères à des salaires plus élevés.

Les jeunes ne doivent pas voir la crise comme un obstacle, mais plutôt comme générant de nouvelles opportunités. L'existence des programmes pour les jeunes entrepreneurs est une réelle opportunité pour leur préparation dans leur démarche entrepreneuriale, au moins au niveau du savoir-faire et de réseautique de l'industrie.

L'éducation est un élément clé pour créer une société de plus en plus entrepreneuriale mais, pour être réellement efficaces, est nécessaire un vrai compromis des gouvernements qui devraient développer des stratégies globales.

Toutes les projets, d'inspiration européenne, qui se trouve dans toute l'Europe, que le soutien, par des moyens financiers et juridiques des jeunes jusqu'à 35 ans pour développer des affaires au sein d'un soutien plus large des affaires, le soutien à l'activité économique et développement de la Roumanie.

Toutefois, contenant des dispositions visant à stimuler la création d'emplois, un des exemples étant des régimes d'aides d'État, afin d'assurer un développement économique durable.

Au final est intéressant de mentionner que La Commission Européenne propose une nouvelle stratégie politique «Europe 2020» afin de soutenir l'emploi, la productivité et la cohésion sociale en Europe. En effet, l'Union européenne est actuellement confrontée à une période de transformation, résultant principalement de la mondialisation, du changement climatique et du vieillissement de la population.

De plus, la crise financière de 2008 a remis en cause les progrès sociaux et économiques réalisés par les pays de l'UE. Ainsi, la reprise économique entamée en 2010 doit s'accompagner d'une série de réformes afin d'assurer le développement durable de l'UE au cours de la décennie à venir.

Dans ce contexte la Commission a présenté des initiatives phares qui doivent être mise en place au niveau européen et dans les pays de l'UE, par exemple, l'initiative „jeunesse en mouvement", qui doit notamment permettre d'améliorer la performance du système éducatif, l'apprentissage non formel et informel, la mobilité des étudiants et des chercheurs, mais aussi l'entrée des jeunes sur le marché de l'emploi et la stratégie pour les nouvelles compétences et les nouveaux emplois, qui doit permettre d'améliorer l'emploi et la viabilité des systèmes sociaux. Il s'agit notamment d'encourager les stratégies de flexicurité, la formation des travailleurs et des étudiants.

Pour le 2013 la Commission européenne a proposée pour le Parlement européen une débatte „garantie pour les jeunes", qui prévoit que tous les jeunes chômeurs reçoivent une offre d'emploi ou de la qualité l'éducation et la formation. Tel que proposé par la Commission européenne, fera en sorte que tous les jeunes jusqu'à 25 ans bénéficient d'une qualité de l'offre d'emploi, formation continue, un apprentissage ou une recherche d'emploi dans les quatre mois de la sortie du système l'éducation informelle ou au moment de la perte d'emploi.

Cette mesure peut être considérée comme une de plus efficace des mesures actives pour la stimulation de jeunes pour une véritable intégration dans vie économique et sociale de leur pays.

Les États membres devraient créer des partenariats avec les parties prenantes et s'assurer que les services de l'emploi et du travail d'autres partenaires apportent un soutien aux jeunes impliqués à un stade précoce. Garantie pour les jeunes est soutenu par le Fonds social européen et est intégré dans l'emploi du travail de chaque Etat membre.

Conclusions

Les prévisions des experts annonce une évolution de la situation actuelle afin que le chômage pourrait continuer à augmenter parmi les jeunes.

La situation sur le marché du travail des jeunes doit être une priorité pour la politique du gouvernement, sont nécessaires une série de mesures spécifiques faciliter leur intégration dans le marché du travail. Toutefois les compétences sont essentielles pour la productivité et l'Europe doit réagir, étant donné la qualité croissante de l'éducation et offre de compétences dans le monde entier. Les prévisions indiquent que d'ici 2020, plus d'un tiers des emplois de l'UE seront remplis seulement les diplômés du supérieur et seulement 18% des emplois sont disponibles pour les personnes peu qualifiées.

Tous les efforts des états membres de l'Union Européenne sont aussi importants non seulement dans les trois directions qui ont faits le sujet d'analyse de cette étude, mais dans tous les domaines de la vie économique et sociale qui ont d'influence sur l'avenir de jeunes et leur présence sur le marche de travail.

Absorber un grand nombre des jeunes chômeurs dépend de possibilité réelles de chaque pays afin d'encourager les entreprises à accroître l'investissement en capital, la capacité à utiliser efficacement le leviers économiques en crise.

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BALTIC STATES ECONOMIES OVERHEATING EVALUATION

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Abstract. The paper proposes and discusses the structurally balanced economy growth model for evaluation of economy overheating in developing countries. The suggested model is applied for evaluation of possibility of overheating in Baltic States' (Lithuania, Latvia and Estonia) economies by analyzing its historical data.

Key words: *economy structure in short run, economic growth, overheating, evaluation method, Baltic States*
JEL code: O11

Introduction

Gradually the term of "overheating" that was so commonly used not long ago in 2006 – 2008 is left behind. This term is more often used in public and not in the scientific research. Though the authors of this paper think that overheating can be attributed with significant scientific content and it can be used in relevant theoretical and empirical research. The most commonly used recent term of overheating says that economics overheating is a situation when production growth exceeds its potential so that increasing capital potential is bigger than the ability of labor to cover its capacity. In this paper the "overheating" is treated as a situation when economy's development gets out of some qualitative-structural development path. In all cases the overheating causes the decrease of capital productivity and conditions economic downturn.

At the moment most of countries experience the lack of supply and the applicative importance of economic overheating problem is little. However the scientific and empirical **problem** of economic overheating understanding remains: there is no reliable method which could help to estimate the fact and the moment of economy overheating. This problem causes shortages in economy overheating management field. Governments and economic practices in most of the countries were not able to control economic expansion period and that lead to economic downturn. To find solutions of this problem is an important task not only for developing but also for developed countries which can experience the periods of rapid (even exaggerated) economic expansion that causes the formation of economy overheating.

So, this **paper aims** to present the alternative conceptual model for evaluation of overheating in developing economies which is based on assessment of imbalances in economy structure. It also aims to test the suggested model for evaluation of possibility of economy overheating in Baltic States' economies by analyzing their historical 1995-2010 data. The presented model should give better possibilities in the future to forecast moments when economy deviates from its structurally sustainable development trend. So it would be able to prepare adequate actions which could help to avoid the moment of economy overheating and prevent from losses that are caused by recessions.

The structure of the paper is as follows. First of all we present the theoretical background for evaluation of structural overheating in developing economy. Secondly, the conceptual idea of overheating evaluation and the model is presented. Next the suggested model is applied for research on Baltic State's

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economies during 1995-2010. The paper ends with conclusions and recommendations for structurally balanced macroeconomic management.

Theoretical Background

There are few ways suggested for evaluation of economy overheating in literature.

In overall economy overheating is analyzed in the context of forecasting of economy turning points. Some of the researchers relate economy overheating moment to the peculiarities of business cycles. Grinin suggests that „The „overheating" (boom) sub-phase [of economic cycle] may be conventionally demarcated by the moment when the output exceeds the highest point achieved during the previous business cycle" [1]. Part of the research models, related with Grinin's idea, aim to evaluate economy overheating by estimating GDP gap from its potential. Technically it is done by using statistical tools such as Hodrick-Prescott (HP) filter, Kalman filter or their derivatives (as in [2, 3, 4]).

In the applied macroeconomic analysis there are also cases when evaluation of economy overheating includes individual economic indicators that describe overheating the best. For example most often it is the increasing inflation which exceeds the limit of 3% is associated with overheating. Complex methods of economy overheating evaluation include more indicators (unemployment rate, current account deficit, monetary basis, etc.) and they suggest assessing the weighted average deviation from its historical average.

The common shortage of the previously mentioned methods is insufficient relation of overheating phenomenon with its factors. Although, there are few models [3] where econometric technique of classical HP and Kalman filters is used for evaluation of economy overheating adapting it for the evaluation of factors' influence (such as shortage of labor force, price pressure, etc.). In overall, the models used so far are more likely to use statistical and econometrical than economic approach for explanation the mechanism of economy fluctuations. HP and Kalman filters appliers use the term of "potential output" despite the fact that the concept itself is questionable and requires more detailed economic reasoning. These mentioned shortages and contradictions of economy overheating evaluation models and even the concept itself suggest that there is a necessity for further theoretical as well as empirical investigation on economy overheating. And most important there is a need for a method that could help to relate economy overheating and its factors, economic variables and which would show the mechanism of overheating formation.

In this paper we state that during the economy *overheating there are imbalances between supply and demand, capital and labor and it is followed by transformations of production structure*. So, by calculating the deviation of factual industrial structure from its "optimal composition" we can evaluate the "temperature" of economy. The idea of structural development *in long run* is broadly analyzed by Grinin, El-Hadj Bah, Menzie D. Chinn, Rogerson, Maddison, Syrquin, Kuznets [1, 5, 6, 7, 8, 9, 10] and others. Structural research included analysis of distribution of employees, income (GDP) among economic sectors and the development trends of their shares. The best know statement that arises from structural dynamics of economy is that historically economies develop from "agricultural society" to "industrial society" and then to service based economy (with deindustrialization) [10]. In a long term economy development the comparative share of industry labor force in total economy has an inverse U shaped form function [5]: as an economy moves from agricultural to industrial production the comparative share of labor force in industry increases, and this share declines when an economy moves to the "society of service". Some of the research includes the comparison of structural changes in developing and developed economies [5, 9]. El-Hadj Bah (2010) confirms that in general developing economies follow the development path of developed economies.

The previous researches on the development of economy structure suggests that *developing economies* should gradually narrow their lag by smooth changes of economy structure and experiencing the same structural development stages as developed economies did. Economy overheating problem is more relevant for developing countries because their development (aiming to converge the living standards) is more intense, so the possible deviations from optimal economy development trend are more likely. That is why in this paper we present model for evaluation of economy overheating for developing countries.

The authors of this research state that structural development aspect can be also applied for evaluation of the state of economy in *a short run*, namely, for estimation of the moment of economy overheating. In a short run rapid development process that is difficult to control may cause structural imbalances of production and its factors. In this paper such imbalances, deviations from "optimal dynamic structure" are treated as manifestation of economy "over-heating". Hereafter presented overheating evaluation model, being the econometrical solution, however also tempts to explain the economical mechanism of overheating through structural disbalance.

Methodology of Structural Economy Overheating Index

The analysis presented above backgrounds the suggestion of new method for evaluation of economy overheating in short run which is based on measurement of deviation of current economy structure from its benchmark. In the suggested case the benchmark of economy structure is the structure which developing economies are moving to according to their long run development trend. The idea of structurally balanced development is graphically presented in Figure 1.

We consider developing economies to converge with developed economies not only in terms of consumption but also in terms of structural organization of production. It means that estimation of structural component of developing country ($S_{it}*$) (see fig. 1) needs to include the structure of developed economies (SD_i), to be corrected in accordance to the intensity of structural convergence, and to be used as a benchmark. It suggests that the sectors which have a bigger structural lag from their structure in developed economies should experience faster growth. On the other hand, the sectors that initially have bigger comparative share in economy is expected to have a relative downward tendency in output and employment when aiming for the convergence benchmark.
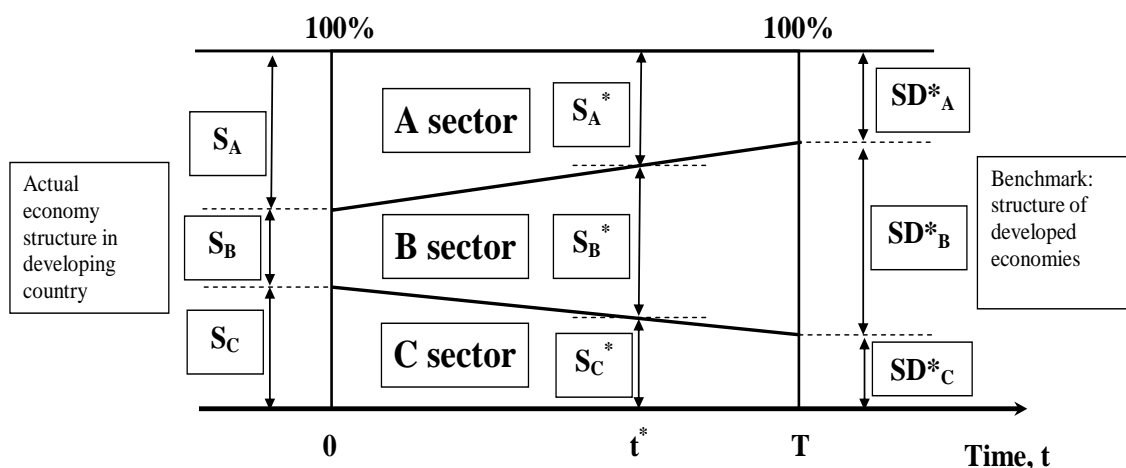
Fig. 1. **Convergence of the structure of developing economy towards the structure of developed economy**

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The Figure 1 demonstrates that in time t_0 the proportional distribution of employees between the economic sectors A, B, C in the developing economy are marked S_A, S_B, S_C and the economy is developing towards the structure SD_A, SD_B, SD_C which is appropriate for developed countries. The structure of developing economy changes and in case of its linear sustainable development at time t^* the structure of developing economy should become S_A^*, S_B^*, S_C^*. According to our concept the deviation from this structure shows unsustainability of economy development, structural imbalances, and ineffective distribution of resources. In this paper all these effects are called economy overheating.

The presented idea of structurally balanced development leads to creation of Structural Economy Overheating Index (SOHI). The Index is calculated in the following way (Equation 1):

$$SOHI_t = \frac{\sum_{i=1}^{n}\left|S_{it}^* - S_{it}\right| - RF}{RF} \tag{1}$$

where i – is the indicator of economy sector ($i = 1, 2, ..., n$ – the number of sectors included in the research); t – time index; S_i – the actual share of an i sector in the total economy; S_i^* – the dynamic structural benchmark of sector i which represent sustainable development of economy; RF – "Risk-Free" structural deviation.

The suggested model sums up the absolute deviations ($\sum_{i=1}^{n}\left|S_{it}^* - S_{it}\right|$) of actual economy structures S_{it} from their benchmarks S_{it}^* because we assume that any steep structural deviation from its benchmark could be harmful for sustainable development of entire economy, and this could cause the risk of overheating.

In this conceptual model there is an assumption that the development is continuous and has a linear trend. This assumption allows writing a linear Equation 2 which describes a structurally sustainable development of an i sector in time moment t S_{it}^*:

$$S_{it}^* = S_{i0} + k_i * t \tag{2}$$

$$k_i = \frac{SD_i^* - S_{i0}}{T_K} \tag{3}$$

where t – is a moment of time; S_{i0} – element i of a structure in time 0; k_i (Equation 3) – the rate of convergence of structural element i; T_K – is a time benchmark (the period of convergence – the time requested for convergence of developing countries economy with the structure of developed economies'); SD_i^* – benchmark of the share of sector i (structural element) in developed economy.

Risk-free structural variation RF is calculated in Equation 4, where i – the number of sector ($i = 1, 2, ..., n$); C – index of a country ($C = 1, 2, ..., m$); t – the year analyzed ($t = 1, 2, ..., T$); T – the duration of research period; SD_i^* – average benchmark share of sector i in developed economies; SD_{iC} – the share of sector i in C country in time t. Calculation of Risk-free structural variation RF is made on the basis of structural deviation of developed economies; it starts from estimating of average annual comparative shares of structural elements (SD_{iC}^*) (Equation 7). Afterwards the average annual structure of the entire group of developed economies is estimated (Equation 8). The estimated indicators are used for calculation of deviation of the sector i comparative share in every developed country C in time moment t (RF_{iCt}) from the calculated structural benchmark (SD_i^*) (Equation 6). These calculations are further used for estimation of average deviation of developed economy structure (RF_C) from their historical average (Equation 5) and general average structural

deviation of all developed economies (*RF*), taken as an average structural benchmark of some developed countries (Equation 4):

$$RF = \frac{1}{m} \sum_{C=1}^{m} RF_C = \frac{1}{(T * m)} \sum_{t=1}^{T} \sum_{C=1}^{m} \sum_{i=1}^{n} RF_{iCt} \tag{4}$$

$$RF_C = \frac{1}{T} \sum_{t=1}^{T} \sum_{i=1}^{n} RF_{iCt} \tag{5}$$

$$RF_{iCt} = \left| SD_i^* - SD_{iCt} \right| \tag{6}$$

$$SD_{iC} = \frac{1}{T} \sum_{t=1}^{T} SD_{iCt} \tag{7}$$

$$SD_i^* = \frac{1}{m} \sum_{C=1}^{m} SD_{iC} \tag{8}$$

Next we test the suggested conceptual model of evaluation of economy overheating and apply it for evaluation of overheating of Baltic States' economy.

Data and Methodological Background of Economy Overheating Index

In our research the "economy structure" is described by distribution of labor employed in a specific sector as a share of total employment of an economy. We use the NACE-R1 classification of economy sectors. We distinguish 6 sectors: A-B Agriculture; fishing; C-E Industry (except construction); F Construction; G-I Wholesale and retail trade; hotels and restaurants; transport; J-K Financial intermediation; real estate; L-P Public administration and community services; activities of households.

Table 1

**Initial economy structure of Baltic States (S_{0t});
average structure of employees in 1995-1998**

Lithuania					
Sector	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	19.02	19.1	17.6	20.0	19.4
C-E	22.02	22.0	21.5	21.8	22.8
F	6.53	6.6	6.5	6.6	6.4
G-I	22.29	22.5	23.1	21.7	21.9
J-K	4.51	4.1	4.7	4.5	4.7
L-P	25.64	25.8	26.6	25.4	24.8

Latvia					
Sector	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	18.66	18.7	21.0	17.3	17.7
C-E	21.06	20.1	20.3	21.3	22.5
F	5.14	5.3	5.0	5.3	4.9
G-I	23.32	24.4	22.7	22.8	23.4
J-K	5.41	6.0	5.0	5.7	5.0
L-P	26.40	25.5	26.0	27.7	26.4
Estonia					
Sector	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	9.48	8.8	9.2	9.8	10.2
C-E	27.00	25.7	25.8	27.9	28.6
F	6.34	7.2	7.1	5.7	5.4
G-I	25.56	25.4	25.5	26.0	25.4
J-K	6.52	7.5	6.6	6.0	6.0
L-P	25.21	25.3	26.1	24.8	24.6

In our test of proposed overheating evaluation model we use data of 1995-2010 on Baltic States (Lithuania, Latvia and Estonia) and EU economies (Denmark, Austria, Finland, Norway) from Eurostat database. The evaluation of Baltic States economy overheating begins from the calculation of average economy structure S_{0t} in 1995-1998 (results in Table 1). The structural situation of EU countries in 1995-1998's was taken as a benchmark SD^*_i to follow for less developed Baltic States (Table 2). We choose Denmark, Austria, Finland and Norway as the benchmarking countries because they are considered to be those of high living standard and their size is close to Baltic States population size. Developed States' economy's structure must be much more stable than the structure of developing economies and these countries are considered to be small EU countries if we look at the number of inhabitants as well as Baltic States.

As we can see from Table 1, in the beginning of research period (1995-1998) Lithuania and Latvia resembled in terms of structural situation. Comparing with them, Estonian economy structure distinguishes by more developed Industrial sector (C-E) and smaller share of employed in Agricultural sector (A-B). The qualitative situation of later countries can be evaluated comparing it with the economy structure of developed countries (see Table 2).

Comparing structural situation of Baltic States and those of benchmarking EU States in 1995-1998 we can see that on average developing Baltic States must make more reforms to reduce the share of Agricultural sector and Industry in terms of employment, and to develop more the sector J-K (Financial intermediation; real estate) (Tables 1 and 2). All other Service sectors of Baltic States must undergo some proportional changes reflecting the needed reduction in A-B-C-D-E sectors. In Table 3 we present calculations of projected annual convergence rates of 6 sectors in Baltic States, where we can see that Estonia must take less structural reforms to converge with the structure of developed countries in 1995-1998 (annual Structural adaptation rate for Estonia is 0.79, comparing with 1.11 for Lithuania)[2]. The

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[2] Calculations were made on basis of equation 3, taking assumpion of 30 years convergence period. Long term development strategy of Lithuanian economy which was prepared in 2002 and its later adjustments foresees that welfare in Lithuania will approach the EU average in 30 years (so here T_K=30 in equation 3). (Ministry of the Economy of the Republic of Lithuania, Lithuanian Academy of Sciences. Lietuvos ūkio (ekonomikos) plėtros iki 2015 metų ilgalaikė strategija, 2002). Calculations for all three Baltic States here were made on this assumption, because their initial situation is resembling.

convergence rates k_i were used for calculation of Baltic States individual dynamic benchmark structure $S_{it}*$ during all investigation period of 1999-2010 according to Equation 2 and EU States structural benchmark SD_i* calculations from Table 2 (Structural benchmark 1995-1998).

Table 2

Calculation of "benchmarking" structure (SD$_i$*) on a basis of economy structure in EU developed countries in 1995-1998

Denmark	1995-1998	1998	1997	1996	1995
A-B	4.05	3.8	4.0	4.2	4.3
C-E	18.46	17.9	18.3	18.7	19.1
F	5.68	5.8	5.7	5.6	5.6
G-I	25.31	25.5	25.4	25.3	25.0
J-K	11.40	11.8	11.4	11.3	11.1
L-P	35.10	35.2	35.2	35.0	35.0
Austria	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	7.24	6.8	7.0	7.4	7.7
C-E	19.41	19.1	19.2	19.5	19.8
F	7.74	7.7	7.8	7.7	7.8
G-I	28.46	28.5	28.6	28.5	28.3
J-K	10.59	11.3	10.7	10.3	10.0
L-P	26.49	26.5	26.6	26.5	26.3
Finland	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	7.08	6.3	6.9	7.3	7.8
C-E	21.27	21.3	21.1	21.2	21.4
F	6.18	6.6	6.4	5.9	5.8
G-I	23.06	23.5	23.2	22.9	22.6
J-K	9.90	10.2	9.8	9.8	9.8
L-P	32.52	32.2	32.5	32.8	32.6
Norway	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	4.76	4.4	4.6	4.9	5.1
C-E	16.28	16.2	16.4	16.2	16.3
F	5.72	6.1	5.8	5.5	5.4
G-I	26.75	26.6	26.6	26.9	27.0
J-K	9.92	10.6	10.2	9.6	9.3
L-P	36.58	36.1	36.4	36.9	36.9
Structural benchmark	**1995-1998**	**1998**	**1997**	**1996**	**1995**
A-B	5.78	5.31	5.63	5.94	6.24
C-E	18.86	18.62	18.76	18.89	19.16
F	6.33	6.54	6.45	6.20	6.12
G-I	25.90	26.02	25.95	25.91	25.71
J-K	10.45	10.97	10.53	10.25	10.05
L-P	32.67	32.53	32.68	32.79	32.69

Table 3

Projected rates of structural convergence (k_i) during 30 years period (according formula 3) in different sectors of Baltic States and Structural adaptation rate, in % points

Sector	Lithuania	Latvia	Estonia
A-B	-0.44	-0.43	-0.12
C-E	-0.11	-0.07	-0.27
F	-0.01	0.04	0.00
G-I	0.12	0.09	0.01
J-K	0.20	0.17	0.13
L-P	0.23	0.21	0.25
Annual Structural adaptation rate	*1.11*	*1.01*	*0.79*

In Table 4 we present results of calculations of structural deviation in EU advanced States, which were accepted here as benchmark countries for evaluation of Baltic States structural "overheating". Calculations according to Equation 4 demonstrate that the biggest deviation from four countries average structure is in Austria (12.60), but the average structural deviation in advanced economies is equal 9.17. According to our methodology the last number was used as a benchmark for risk-free variation RF, in turn used for evaluation of economy overheating in Baltic States.

Table 4

Benchmark of Risk-Free RF structural deviation according to the experience of developed countries

Denmark	1998	1997	1996	1995	RF$_{Ci}$
A-B	2.02	1.82	1.63	1.46	1.73
C-E	0.98	0.60	0.19	0.20	0.49
F	0.53	0.62	0.70	0.76	0.65
G-I	0.36	0.49	0.56	0.91	0.58
J-K	1.33	0.99	0.84	0.63	0.95
L-P	2.58	2.56	2.28	2.31	2.43
				RF$_{Cdenmark}$	**6.84**
Austria	1998	1997	1996	1995	RF$_{Ci}$
A-B	1.01	1.25	1.62	1.96	1.46
C-E	0.25	0.35	0.62	0.99	0.55
F	1.38	1.46	1.39	1.43	1.41
G-I	2.57	2.74	2.59	2.36	2.56
J-K	0.87	0.25	0.14	0.43	0.42
L-P	6.12	6.04	6.17	6.39	6.18
				RF$_{Caustria}$	**12.60**
Finland	1998	1997	1996	1995	RF$_{Ci}$
A-B	0.47	1.13	1.53	2.06	1.30
C-E	2.44	2.29	2.38	2.56	2.42
F	0.26	0.11	0.41	0.56	0.34
G-I	2.40	2.71	2.95	3.30	2.84
J-K	0.30	0.62	0.64	0.65	0.55
L-P	0.46	0.18	0.12	0.09	0.21
				RF$_{Cfinland}$	**7.66**

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Norway	1998	1997	1996	1995	RF$_{Ci}$
A-B	1.34	1.14	0.89	0.72	1.02
C-E	2.66	2.44	2.66	2.55	2.58
F	0.25	0.48	0.78	0.94	0.61
G-I	0.67	0.66	0.98	1.12	0.86
J-K	0.18	0.29	0.87	1.15	0.62
L-P	3.43	3.70	4.23	4.26	3.90
				RF$_{Cnorway}$	9.60
Average structural deviation in 4 countries group				*RF=*	*9.17*

Structural economy overheating index (SOHI) for the Baltic States was calculated for the period 1999-2010 using Equation 1 and presented in Table 5. The analysis of SOHI is the matter of next section.

Main Results of Evaluation of Baltic States Economy Overheating

In Table 5 we can see the deviations of factual employment share from projected dynamic benchmark; positives numbers demonstrate that relative share of employment in a particular sector is less than projected (benchmarked) and negative numbers – the bigger than sustainable share of employment.

Table 5

Deviation of actual economy structure from its own dynamic benchmark

$(S_i^* - S_i)$ **and** $\sum_{i=1}^{n} \left| S_i^* - S_i \right|$) **and evaluation of SOHI in Baltic States 1999-2010**

Lithuania												
Sector \ Year	10	09	08	07	06	05	04	03	02	01	00	99
A-B	4.5	4.8	6.7	4.7	3.1	1.9	0.6	-0.9	-0.5	0.4	-0.5	-0.6
C-E	3.0	2.5	1.2	1.6	1.5	1.2	1.1	0.8	0.8	0.9	0.9	0.9
F	-0.6	-2.3	-4.4	-4.6	-3.3	-2.3	-1.4	-0.8	0.0	0.3	0.5	0.2
G-I	-4.4	-3.6	-4.0	-3.0	-2.7	-1.1	-1.5	-0.3	-0.2	-0.6	-0.0	0.1
J-K	-2.8	-2.0	-1.4	-0.1	-0.3	0.4	0.8	0.5	0.3	1.2	0.8	0.8
L-P	0.3	0.6	1.8	1.4	1.7	-0.2	0.3	0.6	-0.3	-2.3	-1.7	-1.5
$\sum_{i=1}^{n} \left| S_i - S_i^* \right|$	16.0	16.0	19.6	15.5	12.8	7.3	6.0	4.2	2.3	6.0	4.7	4.5
SOHI	6.9	6.8	10.4	6.3	3.6	-1.8	-3.1	-4.9	-6.8	-3.1	-4.4	-4.6
SOHI, %	75	74	113	69	39	-19	-34	-54	-74	-34	-48	-50
Latvia												
Sector \ Year	10	09	08	07	06	05	04	03	02	01	00	99
A-B	4.3	5.1	6.5	5.1	4.1	4.3	3.2	3.2	2.2	2.9	3.5	1.7
C-E	3.90	4.8	4.2	3.8	2.9	2.4	2.6	1.5	1.4	1.8	1.8	1.4
F	-1.1	-2.3	-5.6	-5.7	-4.0	-3.4	-3.0	-2.0	-0.6	-1.5	-0.6	-0.7
G-I	-7.2	-6.7	-6.1	-5.2	-5.2	-4.6	-3.8	-3.9	-3.7	-3.6	-3.4	-1.8
J-K	-4.0	-4.5	-3.8	-2.9	-2.2	-2.0	-2.2	-1.9	-1.9	-1.5	-2.3	-1.2
L-P	4.2	3.5	4.6	5.01	4.3	3.4	3.1	2.9	2.7	2.1	0.9	0.7
$\sum_{i=1}^{n} \left| S_i - S_i^* \right|$	24.8	27.1	31.0	27.8	22.8	20.2	18.1	15.7	12.8	13.6	12.9	7.7
SOHI	15.6	17.9	21.8	18.7	13.7	11.1	8.9	6.5	3.6	4.4	3.7	-1.3
SOHI, %	170	195	238	203	149	121	97	71	40	48	40	-15

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Sector \ Year	Estonia											
	10	09	08	07	06	05	04	03	02	01	00	99
A-B	3.6	4.0	4.2	3.8	3.7	3.3	2.9	2.7	2.1	2.3	2.0	1.3
C-E	1.3	1.6	1.2	1.4	0.8	-0.9	-1.6	0.4	1.2	0.0	0.1	1.3
F	-0.4	-2.2	-4.7	-5.1	-2.7	-1.3	-1.2	-0.7	-0.1	-0.3	-0.4	-0.2
G-I	0.1	-0.3	-0.6	0.0	-0.7	-0.4	0.5	-0.4	-1.2	-1.4	-1.5	-1.2
J-K	-3.5	-2.9	-1.7	-1.3	-1.1	-1.3	-0.5	-1.5	-1.8	-0.8	-1.4	-1.2
L-P	-0.7	0.0	2.1	1.6	0.7	0.6	-0.0	-0.5	0.1	0.0	1.3	-0.1
$\sum_{i=1}^{n}\left|S_i - S_i^*\right|$	9.8	11.2	14.7	13.5	9.9	7.9	6.9	6.3	6.8	4.9	6.9	5.6
SOHI	0.6	2.0	5.5	4.3	0.7	-1.1	-2.2	-2.8	-2.3	-4.2	-2.2	-3.5
SOHI, %	6	22	60	47	7	-12	-24	-30	-25	-46	-24	-38

There are some common characteristics for all analyzed countries. These indicators suggest that Lithuanian and Estonian economies were overheated at the end of 2005 – beginning of 2006. Structural development of Latvian economy was incorrect, in our method terms, from the beginning of investigated period – in 1999-2000. However, Latvian economy also experienced more intense structural deviation in 2006-2007.

The research results indicate that generally all three countries suffered from too intense employment decline in A-B (Agriculture, fishing) and C-E (Industry) sectors in behalf of very intense growth in F (Construction), J-K (Financial intermediation; real estate) sectors. In Lithuanian and Latvian cases G-I (Wholesale and retail trade; hotels and restaurants; transport) sector also grew steeper than it was needed for sustainable structural development of economy.

Lithuanian average structural deviation is higher than Estonian; Latvian economy structural development situation is worst.

Talking about possible exit from structural overheating period, Estonian structural situation was close to sustainable level in 2010 (SOHI was 6.95%), but Lithuanian structural deviation at the same time was still bigger than in the beginning of overheating period (in 2010-SOHI was 75.22%; in 2006 – 39.94%). So, the structural situation confirms the common recognition about better ability of Estonians to manage their economy, comparing to Lithuania and Latvia.

This investigation shows that Governments must pay more attention to structural situation of economy applying policy tools for economy development corrections. But it is not only government that must survey structural development. Banks play an important role in modern economy development as it was during the recent worldwide economic recession, witch was related with a boom in banking sector, real estate and construction. That is an interest of banking sector to survey the riskness of loans in different economic sectors witch could also be assessed by the evaluation of economy structural deviation.

Conclusions

The paper argues that the moment of economy overheating in developing countries could be detected not only by imbalances between capital and labor but also in sectoral structure of economy. The suggested structurally balanced economic growth model proposes the Structural Economy Overheating Index (SOHI) which could be applied for evaluation of economy overheating. It is based on measurement of deviation of actual economy structure from its benchmark. In the suggested case the benchmark of developing economy structure is the structure which developing countries are moving to according to their development trend.

We applied the suggested conceptual structurally balanced economy growth model and estimated the moment of Baltic States economies overheating during 1999 – 2010. We used structural data of Denmark,

Austria, Finland and Norway as a benchmark for structurally balanced growth of Baltic States economies. The calculated SOHI indicators of structural imbalances suggest that Lithuanian and Estonian economies were overheated in the end of 2005 – beginning of 2006. Latvian structural development was not correct in our method terms – the imbalances in sustainable structural development in Latvia are observed from the beginning of investigated period, 1999-2000.

Generally all three countries, in our view, suffered from too intense employment decline in A-B (Agriculture, fishing) and C-E (Industry (except construction)) sectors in behalf of very intense growth in F (Construction), J-K (Financial intermediation; real estate) sectors. In Lithuanian case G-I (Wholesale and retail trade; hotels and restaurants; transport) sector also grew steeper than it was need for sustainable structural development.

Structural deviation of Lithuanian economy is bigger than Estonian. Estonian structural situation was close to sustainable level in 2010, but Lithuanian structural deviation at the same time was still bigger than in the beginning of overheating period.

Investigation shows that Governments must pay more attention to structural situation of economy applying policy tools for economy development corrections. Structural quality of Estonian economy confirms the common recognition about a better ability of Estonians to manage their economy.

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LA MIGRATION DES RESSOURCES HUMAINES EN EUROPE – UN PROCESSUS COUTEUX POUR L'ECONOMIE DE LA ROUMANIE

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The economic and social development of Romania in the last twenty years has been marked by a growing decrease in the national economic potential and, as a consequence, a decrease in the income of a large part of the population. In the same time with the global labour market liberalization, this economic status determined a large number of Romanians to look for work in a series of more developed European countries.

Our country has quite a high level of emigration, which implies serious problems at different levels (especially economic, social and demographical). Of course, in these circumstances, we should analyse the meaning of the concepts used to describe this process, its causes and consequences, and we should focus mainly on possible solutions to reduce its negative consequences.

The analysis of reference sources has allowed us to look more at the permanent concern about a process which was extended in large geographic areas and to find some authors and their similar or different opinions with respect to the migration of human resources.

The opinions presented in this paper result from both our documentation and the analysis and interpretation of some findings of a study we conducted last year, in the Bucharest University of Economic Studies. Although some quantitative research methods were used after processing a questionnaire, most of our results represent a qualitative study, based on the interpretation of some opinions of our students.

Key words: *human resources, migration, expertise, human resource management, career*

JEL code: L25

1. La migration des ressources humaines dans la littérature de spécialité

Avant d'analyser la situation de la migration des ressources humaines en Roumanie, il est utile de nous mettre l'accord sur la signification du concept de migration, tel qu'il est utilisé par les organisations internationales spécialisées. Ainsi, dans les périodes anciens, la migration était considérée comme un mouvement *en masse des tribus ou des populations d'une région à l'autre en raison du développement économique, politique ou naturel*; après elle a été vu comme un *geste pour changer de résidence et d'emploi à la suite de l'action de certaines facteurs sociaux, politiques, économiques ou physiques*; ou elle a été définie comme un *changement de résidence d'une personne dans le même pays ou d'un pays à un autre* [1].

Parfois, la migration est considérée comme le *mouvement d'une personne ou d'un groupe de personnes d'une unité géographique à l'autre sur une frontière administrative ou politique, désireux de s'établir de façon permanente ou temporaire dans un lieu autre que le lieu d'origine* [2]. Compte tenu que le mouvement entre deux unités géographiques ne doit pas apparaitre d'une façon directe, il faut faire la différence entre le *lieu d'origine* ou de *destination*, *zones de transit* mais aussi le *lieu de destination*

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accueillant ou de la *région accueillante*. Les mouvements à l'intérieur d'un pays sont généralement définis comme des *migrations internes* et donc les mouvements à travers les frontières internationales sont appelées *migrations internationales* [2]. Il existe de nombreux études dans la littérature internationale de spécialité qui examine la relation entre la migration et la croissance économique, mais peu des études empiriques dont certains montrant les effets positifs de la migration sur la croissance économique aux États-Unis et au Japon, mais beaucoup d'autres affirment le contraire, la migration est corrélée négativement avec la convergence des régions [3].

Si on regarde le phénomène de la migration en ensemble, nous pouvons constater que la période la plus importante pour la migration de masse volontaire a été le siècle d'après 1815. Environ 60 millions de personnes ont quitté l'Europe pour s'installer en Amérique, en Océanie et en Afrique du Sud. Un total de 10 millions ont émigré volontairement de Russie en Asie centrale et en Sibérie. Environ 12 millions de chinois et 6 millions de japonais ont quitté leur patrie et ont émigré vers l'Est et Sud de l'Asie. Un million et demi ont quitté l'Inde, à destination de l'Asie du Sud-Est et d'Afrique. Pendant les deux guerres mondiales la migration internationale a fortement diminué en raison de conditions économiques défavorables, mais aussi à cause des politiques d'immigration restrictives imposées par les pays de destination, en particulier les Etats-Unis. Également, nous pouvons signaler l'augmentation de la migration internationale qui a commencée dans la période d'après-guerre, en particulier entre l'Europe et les Etats-Unis. Ce fut une période de croissance relative de la migration en provenance des pays en développement vers les pays développés mais aussi l'émergence du phénomène des «travailleurs invités». Pendant les années '70-'80, les tendances mondiales ont favorisé les changements contrôlés des travailleurs temporaires avec le statut de 'invités', l'accès des immigrants étant limité à ceux qui sont très doués professionnel ou ceux dont les familles vivent déjà dans le pays de destination. Cette tendance est préservée jusque aujourd'hui, étant un processus de maintien des limites du chômage dans les pays hautement développés.[4]

Au niveau discursif, la migration internationale représente l'un des principaux moteurs du changement, à la fois du niveau de vie des individus, ainsi que de leur mode de vie. Au niveau mondial, toutes les six régions (Afrique, Asie, Amérique, Moyen-Orient, Océanie, Europe) du monde sont actuellement confrontées à une intense activité migratoire et en continue croissance. [5]

Les estimations mondiales indiquent qu'il y a plus de 210 millions de migrants dans le monde. Parmi ceux-ci, environ 20-30 millions sont des immigrants illégaux. En outre, depuis 1990 jusque aujourd'hui, les chiffres sont dans une constante augmentation (United Nations, *Department of Economic and Social Affairs*, Population division, 2009) (tableau 1).

Tableau 1

Estimation du nombre d'émigrés au niveau mondial au cours de 1990 – 2010

Année	1990	1995	2000	2005	2010
Estimation du nombre d'émigrés	155 518 065	165 968 778	178 498 563	195 245 404	213 943 812

Source: United Nations database POP/DB/MIG/Stock/Rev.2008 [6]

Dans l'étude de World Migration Report 2008: Managing Labour Mobility in the Evolving Global Economy réalisé par International Organization for Migration (2010), les auteurs ont estimé qu'au niveau de l'année 2010, la région ayant le plus grand nombre d'immigrants sera l'Europe (tableau 2), avec environ 69,8 millions d'immigrants, mais le pays qui accueillera la plupart des immigrants reste les États-Unis avec environ 42,8 millions (tableau 3). L'étude a aussi montré que la plupart des personnes vont émigré de l'Asie, notamment du Chine, de l'Inde et des Philippines (tableau 4) et, compte tenu des informations qui ont été publié après cette date, la plupart des prévisions a été confirmée.

Tableau 2

Estimations de l'émigration de la force de travail en 2010

Zone géographique	Les immigrants (en millions)	% de la population total
Europe	69.8	9.5
Asie	61.3	1.5
Amérique de Nord	50.0	14.2
Afrique	19.3	1.9
Amérique Latine	7.5	1.3
Océanie	6.0	16.8

Source: World Migration Report 2008: Managing Labour Mobility in the Evolving Global Economy [7]

Tableau 3

Estimations concernant les pays avec le plus grand nombre d'immigrantes en 2010

Pays	Migration internationale (en millions)
USA	42.8
Russie	12.3
Allemagne	10.8
Arabie Saoudite	7.3
Canada	7.2
France	6.7
Grande-Bretagne	6.5
Espagne	6.4
Inde	5.4
Ukraine	5.3

Source: World Migration Report 2008: Managing Labour Mobility in the Evolving Global Economy [7]

Tableau 4

Les estimations concernant les pays ayant le plus grand nombre d'émigrants

Pays	Estimation de la diaspora (en millions)
Chine	35.0
Inde	20.0
Philippines	7.0

Source: World Migration Report 2008: Managing Labour Mobility in the Evolving Global Economy [7]

Dans le même rapport réalisé par International Organisation for Migration, les experts dissent qu'il y a des pays où plus de 60% de la population est représentée par les immigrés: Andorre, Macao, Guam, Monaco, Qatar, Emirats Arabes Unis. En outre, si traditionnellement les principaux pays d'émigration ont été l'Australie, le Canada, la Nouvelle-Zélande et les États-Unis, dans ces dernières années ont également apparu de nouvelles destinations de l'émigration comme: l'Irlande, l'Italie, la Norvège et le Portugal. [7]

En ce qui concerne l'opinion publique au niveau international en matière de migration, de nombreuses études, y compris l'enquête Global Survey 2007, montre que l'émigration est considérée, par un pourcentage très élevé de la population des 47 pays participant à l'étude, comme un problème majeur.

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Avec l'exception du Japon, de la République Corée et du Territoire Palestine Occupé, dans tous les autres pays les responsables considèrent qu'il doit exister des restrictions en ce qui concerne la migration. [8]

Un aspect important concerne l'approche économique des théories des *migrations internationales*; cette analyse met en évidence trois principales lignes directives de l'analyse de l'émigration/immigration de la force de travail: *l'identification des facteurs qui déterminent la taille et la composition des flux migratoires; les modalités d'adaptation des immigrants dans le pays d'accueil; l'impact de la migration sur les économies des pays d'accueil et d'origine* [10]. En outre, les schémas de migration principaux trouvés dans la littérature économique peuvent être regroupés en deux grandes catégories [11]: *des modèles qui analysent les déterminants et les facteurs qui influence la migration internationale et des modèles visant son impact sur les économies des pays d'accueil et des pays d'origine, respectivement sur le marché du travail.* Conformément aux auteures, pour tester les différentes hypothèses tirées des modèles et des théories fondamentales de la migration internationale ont été principalement utilisé les régressions multifactorielles, lesquelles s'appuient sur un ensemble de *variables dépendantes* (le solde migratoire, taux d'émigration, le nombre d'immigrants) et respectivement des *variables indépendantes* (taux de croissance du PIB, le PIB / habitant, le niveau de l'éducation, les différences de salaires, le chômage, l'inflation).

2. La migration internationale de la force de travail en Europe

L'Europe est l'un des continents les plus attractifs en termes de migration de main-d'œuvre (force de travail), principalement en raison de la réduction des obstacles à la libre circulation des travailleurs au sein de l'Union Européenne. De plus en plus, de nombreux européens choisissent de travailler dans les pays les plus développés de l'Europe Occidentale à la recherche d'un meilleur niveau de vie. La migration de la force de travail est mise en évidence comme un défi au niveau de l'Europe, notamment en ce qui concerne les travailleurs non- qualifies, existent une multitude des problèmes déterminés par la culture, par les coutumes, par le style de vie différent vis-à-vis des pays d'émigration.

Au niveau de l'Europe occidentale ainsi qu'en Amérique du Nord, en Australie et en Nouvelle-Zélande, il y a une demande excédentaire de main-d'œuvre hautement qualifiée. Les systèmes éducatifs nationaux ne couvrent pas cette demande et, par conséquent sur ce segment de travail, les immigrants sont bienvenus et appréciés, d'autant plus que le travail est souvent beaucoup moins cher que le travail local. D'autre part, les travaux dits «bas» des pays développés sont toujours faites par les immigrants désireux d'exercer de telles activités, en dépit parfois de leurs compétences supérieures de leur travail. Un autre problème de ces dernières années est le chômage en Europe. Cela a de nombreuses conséquences sur les immigrants, qui sont les plus concernés de la perte d'emploi. Le rapport World Migration Report 2011 affirme que, au niveau de l'UE, la force de travail étrangère souffre le plus à cause du chômage. En Allemagne, le taux de chômage chez les immigrants était pendant l'été de l'année 2010 double face au taux de chômage des allemands: 12,4%, comparativement à seulement 6,5%. [9] En Italie, la crise économique et le chômage enregistré chez les travailleurs saisonniers ont conduit à l'agitation sociale sans précédent et des nombreuses protestations contre les immigrés, souvent même roumains. Cependant, au niveau de l'Irlande on estime qu'il aura des migrations pendant la période 2009-2013 environ 160 000 de personnes vers d'autres pays plus développés et moins touchées par la crise économique, si des mesures de redressement économiques ne seront pas prises. [6]

La migration nette au niveau de l'UE-15 a enregistré environ 600 000 personnes par année au cours des cinq dernières années du XXe siècle, ce qui représente la moitié des flux migratoires enregistrés par les Etats-Unis. Au cours de cinq prochaines années, ce chiffre a été doublé et pour la première fois, les flux migratoires en Europe sont devenus plus importants que ceux enregistrés dans les Etats-Unis.[11]

La migration n'est pas sans controverse en Europe. Certains pays, qui ont enregistrés de très faibles pourcentages de la population née à l'étranger, se sont tournés lentement dans des destinations des migrants. Cela a conduit à des changements dramatiques dans les communautés locales, les problèmes

d'intégration sociale ou manifestations racistes de la population locale. En chiffres, l'UE a enregistré en 2007 environ 29,1 millions des citoyens étrangers, dont 40% sont des citoyens des nouveaux États membres, la Roumanie (1,6 million), la Pologne (1,3 million) et la Bulgarie (310 000). [13]

3. L'évolution des migrations en Roumanie

En Roumanie, le phénomène de la migration pour l'emploi est une partie très importante de la migration roumaine au cours des 10 à 15 dernières années. L'organisation de Coopération et de Développement Économiques (OCDE) estime qu'environ 3,0 millions de roumains se trouvent dans autres pays membres de l'UE, seulement en 2008 environ 61 400 roumaines ont émigré dans l'UE pour travailler sur des contrats temporaires. Malgré ces statistiques, de nombreux experts estiment que le nombre des émigrés roumains est beaucoup plus élevé, car très peu d'entre eux se tournent vers des canaux officiels pour trouver un emploi hors de la Roumanie.

Pour illustrer ce phénomène, nous pouvons utiliser le graphique ci-dessous indiquant le nombre de personnes qui ont quitté la Roumanie au cours de 1990-2009. [14]
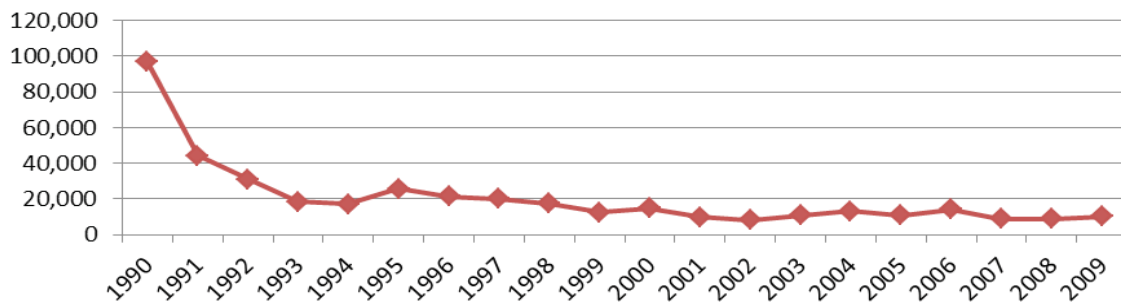
Source: Données officiels publiés par L'Institut National de la Statistique (2010)

Fig. 1. **L'évolution de la migration internationale entre les années 1990-2009**

L'analyse des données publiées montre que les premières années ont été caractérisées par une migration internationale très élevé de citoyens roumains. Nous notons que, dans le cas de la Roumanie, une première étape de la migration de travail temporaire à l'étranger a été celle, entre 1990 et 1995. Le taux d'émigration annuel au cours de cette période n'a pas dépassé le niveau de 5‰. Cette période a été l'étape d'exploration primaire de l'Europe par les citoyens roumains à la recherche de meilleurs emplois. Une deuxième étape de l'exploration de l'Europe par les citoyens roumains, on peut la considérer la période comprise entre 1996 et 2001, lorsque le taux d'émigration temporaire a atteint des valeurs de 6-7‰, un processus qui a été renforcée en Janvier 2002, après avoir obtenu l'accès à l'espace Schengen. Les départs temporaires des roumains pour travailler à l'étranger à 1000 habitants, dans la période 1990-2006 sont présentés dans la figure 2. On peut voir de ce graphique que la direction pour la migration dominante a changé au fil du temps. Au début des années 90, Israël et la Turquie ont été les principales destinations des travaux, l'Allemagne, l'Italie et la Hongrie ont été les destinations de seconde classe. Plus tard, après 2000, les pays latins comme l'Italie et l'Espagne ont devenu les principaux attraits de roumains qui veulent travailler à l'étranger, motivés par la facilité de transition de la langue roumaine vers les langues de destination, mais aussi par la législation permissive et tolérante vis-à-vis les émigrants. [15] Il y a de nombreuses conséquences positives de la migration de roumains pour travailler à l'étranger. D'une part, cela a conduit à une baisse du taux de chômage en Roumanie et, d'autre part, à une injection importante de capital, la plupart des roumains qui ont quitté le pays travaillent pour envoyer de grosses sommes d'argent à la maison.

■ – le premier départ; ■ – le total des départs
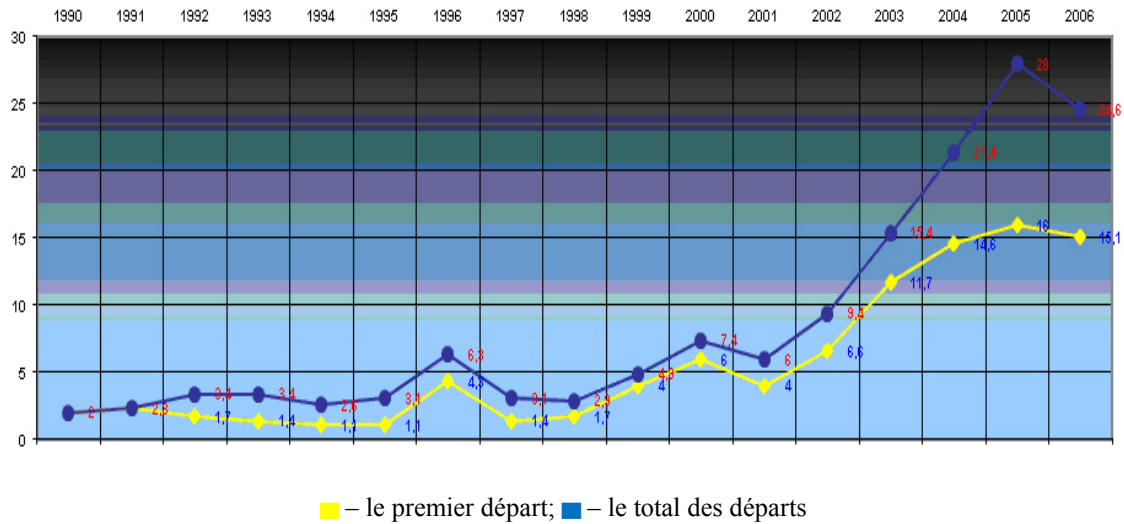
Fig. 2. **Départs temporaires pour emploi à l'étranger à 1.000 habitants (Roumanie)** [14]

Tableau 5

Le nombre de personnes qui ont quitté la Roumanie (répartition par sexe) [15]

Année	Hommes		Femmes	
	Données absolues	Poids (%)	Données absolues	Poids (%)
1990	46.335	47,80	50.594	**52,20**
1991	21.211	48,03	22.949	**51,97**
1992	16.085	51,63	15.067	**48,37**
1993	8.751	47,44	9.695	**52,56**
1994	7.886	45,99	9.260	**54,01**
1995	11.478	44,70	14.197	**55,30**
1996	10.079	46,82	11.447	**53,18**
1997	9.423	47,24	10.522	**52,76**
1998	8.460	48,24	9.076	**51,76**
1999	5.858	46,51	6.736	**53,49**
2000	6.798	46,08	7.955	**53,92**
2001	5.011	50,51	4.910	**49,49**
2002	3.700	45,38	4.454	**54,62**
2003	4.413	41,35	6.260	**58,65**
2004	4.934	37,72	8.148	**62,28**
2005	4.110	37,58	6.828	**62,42**
2006	5.341	37,62	8.856	**62,38**
2007	3.088	34,97	5.742	**65,03**
2008	3.069	35,12	5.670	**64,88**
2009	**3.768**	**36,90**	**6.443**	**63,10**

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En ce qui concerne la répartition par sexe, on observe dans le tableau ci-dessous que la plupart des gens qui ont émigré de la Roumanie sont des femmes, ce qui est justifié par les lieux d'emploi destinés aux immigrants dans les pays d'accueil. Par ailleurs, une autre chose que nous observons est une baisse du phénomène de la migration face aux années 90, le nombre d'émigrés roumains a diminué de façon spectaculaire au cours des dernières années pour lesquelles nous disposons de statistiques.

4. Carrière européenne ou le mirage de la migration parmi les étudiants roumains

L'année dernière, nous avons déroulé, à côté de nos collègues de l'Université de Porto, une recherche qui a visé la perception des étudiants économistes roumains et portugais vis-à-vis de leur carrière. La recherche effectuée a été en fait une approche comparative (Roumanie-Portugal) qui nous a permit aussi à mettre en discussion plusieurs points, y compris, par exemple, l'entrepreneuriat et la discrimination. Notre recherche a été présentée à la fin de 2012 dans une Conférence internationale et a constitué la base d'un article qui sera publié cette année dans une revue édité par la faculté de Management de notre université. Nous avons extrait de cette recherche quelques questions qui pourront nous servir pour mieux comprendre comment les étudiants perçoivent le thème de la migration. Ainsi, basés sur nos dialogues et sur des questions adressées aux étudiants, questions liées de la migration de la main-d'œuvre, ou plutôt de l'intention des étudiants de quitter le pays (soit pour des études plus approfondis, soit pour travailler) nous allons faire quelques remarques.

Avant de synthétiser nos conclusions, il est important de dire que la *méthode* utilisée dans notre recherche, est plutôt *qualitative*, parce que nous avons choisi nous limiter aux réponses des étudiants de l'Académie des Études Economiques de Bucarest sans prendre en compte ce qui pensent les étudiants d'autres universités (universités différentes du point de vue de la spécialisation, la taille, l'organisation, le caractère public ou privé et ainsi de suite). Certainement, les différences peuvent être très importantes si nous élargissons la recherche dans d'autres domaines de l'éducation (par exemple, nous nous attendons à des réponses différentes de la part des étudiants de l'université d'art). Comme point de départ pour d'autres recherches et compte tenu de l'objectif de la présente étude, nous considérons que cette limitation (étudiants économistes) ne crée pas de graves problèmes. En plus, le caractère simplificateur de notre approche peut aussi être balancé par le fait que certains répondants ont, en plus de la spécialisation économique une autre, par exemple le journalisme ou les études politiques et, de cette façon ce qui pourra rendre les réponses plus objectives. Le questionnaire a été distribué à 270 étudiants de l'Académie des Etudes Economiques de Bucarest. Le taux de réponse a été bon, on a reçu 124 questionnaires remplis, dont nous avons validé 107.

Parmi les résultats de la recherche nous pouvons retenir d'abord les réponses qui ont montré que, dans une grande mesure: *la décision personnelle est le facteur le plus important qui influence le chemin de la carrière; le rôle de la famille dans le choix de carrière diminue; les étudiants aiment travailler avec les étranger; ils n'ont pas des difficultés concernant l'utilisation de l'anglais; ils considère l'espace EU comme la première option pour une carrière à l'étranger; ils sont très contents d'avoir accès aux informations qu'ils trouvent sur l'Internet pour guider leur carrière; ils sont intéressés des opinions de leurs collègues; ils prennent en compte la possibilité de quitter la Roumanie pour une carrière à l'étranger; les universités ont un rôle important dans la détermination de la carrière.*

Au cours de notre recherche, l'intérêt pour une carrière en dehors du pays a été aussi l'un des éléments qui a attiré notre attention (en matière de résultats). Certainement, la plupart des personnes interrogées ont pris en compte les conditions économiques actuelles. Même si la plupart des étudiants considèrent que la décision personnelle est le facteur le plus important dans le choix et la poursuite d'une carrière, ils sont également enclins à croire qu'ils pourraient faire plus dans d'autres conditions, y compris dans d'autres pays (ce que n'est pas nécessairement vrai).
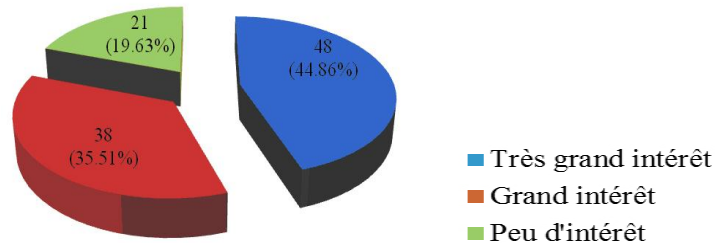
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Fig. 3. **L'intérêt des étudiants roumains pour une carrière à l'étranger**

Le tableau 6 présente quelques-uns des commentaires libres les plus intéressants que les répondants ont ajoutés à propos des perspectives sur la carrière à l'étranger. Les commentaires ont été regroupés par nous en deux catégories: des raisons pour quitter le pays et des raisons pour rester.

Tableau 6

La perception des étudiants roumains sur les perspectives de carrière à l'étranger

Raisons pour quitter le pays	Raisons pour rester
• „Je voudrais aller pour l'expérience, pour interagir avec des personnes de cultures différentes et pour voir si je peux me débrouiller tout seul dans un environnement étranger. C'est comme un test ... et je suis sûr que cela augmenterait la confiance en moi même. En outre, les opportunités de l'extérieur sont tentantes, et je pense qu'il y a beaucoup plus qu'en Roumanie." • „Une carrière à l'étranger est tentante parce que là le travail est respectée et les gens ne se guident pas par le principe de «laissez, il va comme ça!" • „Je prends au sérieux l'alternative de quitter la Roumanie, parce que à l'étranger les salaires sont plus élevés et il y a une meilleure diversité de possibilités de carrière; c'est une reconnaissance plus rapide du mérite; j'étudie aussi le journalisme et je considère que à l'étrangère il existe une possibilité plus élevé d'affirmation dans cette profession grâce au professionnalisme; ce qui est valable d'ailleurs pour d'autres domaines, comme le théâtre, par exemple." • „Les raisons qui m'encourageront à quitter la Roumanie pour le développement d'une carrière sont, soit personnelles, soit objectives. D'abord je sais que beaucoup de domaines sont traités de façon professionnelle et présentent plusieurs opportunités par rapport à ceux que nous offre le	• „Je n'irais pas, parce que j'ai une famille et des amis ici. Et peut-être je ne m'intègrerai pas là-bas. C'est un risque que je ne suis pas prêt à prendre, surtout parce que je ne pense pas que je ne pourrai pas réussir dans mon pays." • „Je veux mettre l'épaule à changer les mentalités en Roumanie, et je sens que je peux le faire seulement en restant dans le pays. Je ne pense pas qu'aller à l'étranger, serait une bonne idée." • „Bien qu'il puisse être une expérience passionnante à l'étranger, mais je vois beaucoup de raisons qui me font encore rester: certainement, principalement il y a des difficultés d'intégration dans une autre culture, puis, je pense à la possibilité d'une discrimination ethnique, en particulier dans le contexte des scandales actuels concernant des migrants de provenance de la Roumanie et de la Bulgarie; En Roumanie on peut toujours gagner bien dans certains domaines. À ne pas négliger le soutien de la famille et des amis qui sont dans le pays et qui ne vont pas partir. Je voudrais ajouter aussi la

Raisons pour quitter le pays	Raisons pour rester
marché du travail de la Roumanie. Les incitations financières ne sont pas nécessairement attrayantes, mais les processus de travail et l'attitude envers nous est différent. Une autre impulsion vient du monde de l'art: L'existence d'un large éventail d'expositions, d'art, de la musique, etc. " • *„Tout d'abord j'irai à l'étranger pour étudier, parce que dans notre pays, le domaine dans lequel je veux pratiquer n'est pas traitée avec la même complexité qu'à l'extérieur. La communication n'est pas encore un domaine très performant en Roumanie et dans la faculté il n'y a pas des activités pratiques. En conclusion, il est assez difficile trouver une place de travail en avoir seulement des connaissances théoriques. D'autre part, je préfère travailler à l'étranger parce que là, j'aurai la possibilité d'apprendre auprès de professionnels et de cette façon je me débrouillerai mieux. Chez nous, il existe aussi une autre difficulté, c'est à dire, l'absence de crédibilité face aux étudiants salariés; en plus, le salaire est très petit et l'environnement de travail n'est pas agréable.*	*sensibilisation de l'importance de la contribution qu'une personne éduquée dans l'enseignement supérieur peut apporter dans la construction d'une entreprise plus stable et plus efficace."* • *„Le soutien de la famille, des amis, est le principal obstacle à mon départ et la familiarité de la société roumaine ne peut être ignorée. L'idée d'un échec à l'étranger est une crainte que peut difficilement être surmontée."* • *„Ce que me tient dans mon pays sont les amis et la famille. J'aime mieux rester chez moi, entouré de mes proches, qu'être dans un pays étranger où j'aurai besoin de beaucoup de temps pour m'intégrer."*

Comme vous pouvez voir, il y a beaucoup des raisons pour les étudiants (soit objectifs, soit subjectifs), soit de quitter la Roumanie, soit de rester dans le pays. Ce qu'on trouve particulièrement utile et de prendre en considération, pour ceux qui décident de quitter le pays, le fait qu'ils ont dans l'esprit aussi la perspective de retour. Ils perçoivent le départ comme un sacrifice justifié pour obtenir un avantage financier soit immédiatement, soit à long terme, grâce à l'expérience gagnée à l'extérieur. Compte tenu de cela, ainsi que du fait que certaines études qui ont comme conclusion l'idée que la fuite des cerveaux peut être, plutôt un gain qu'une perte (car elle augmente la demande d'enseignement supérieur dans le pays et élève le niveau de vie de ceux qui sont partis et de leurs familles), nous pensons que le signal que nous avons tiré par le titre de cet article reste encore valable. Il est vrai que l'Etat roumain finance les études de certaines personnes qui quittent le pays et apportent une valeur ajoutée dans d'autres pays, mais certaines d'entre eux rentrent et à peu près tous (indépendamment si ils retournent ou pas) aident les familles restées dans le pays et aussi provoquent les autres qui restent devenir plus ambitieux.

5. Conclusions, les limites de la recherche et les opportunités

Basés sur les opinions formulées dans la littérature de spécialité ou sur des observations que nous avons fais sur la migration, nous pouvons facilement identifier un effet clé de ce processus: *la réduction de la population du pays*. De plus, on garde aussi à l'esprit le fait que la mobilité internationale est plus élevée chez les personnes qui ont l'âge approprié pour le travail. Par conséquent, les pays d'émigration se confrontent avec un processus de vieillissement accéléré de son propre peuple. Le facteur humain étant la source la plus importante de la croissance économique, les taux de croissance devient de plus en plus faibles.

La plupart des gens qui émigrent sont jeunes, et leur pourcentage est en continue augmentation ce que nous permet d'affirmer que la migration affecte les groupes d'âge avec des taux de fécondité élevés, en réduisant de cette façon ainsi, le potentiel des bébés nés en Roumanie. Cela est d'autant plus préoccupant que la migration devient permanente. Cependant, la structure de la migration selon le sexe révèle quelques modifications: les femmes immigrées sont de plus en plus nombreuses ces dernières années.

Poursuivant l'analyse de l'état actuel des choses, nous pouvons dire que la Roumanie, pourra être considérée comme un cas d'exemplification pertinente de la théorie néoclassique de la migration internationale. Cette théorie examine les différences de salaire et les conditions d'occupation d'emploi entre les états, aussi que les coûts associés à la migration internationale du travail, en traitant la migration en tant que une décision individuelle qui vise la maximisation du revenu. Ainsi, les migrants sont à la recherche d'un pays de résidence qui leur maximise le bien-être [5], mais ce processus de recherche est limité aux ressources financières des individus et aux règlements ou aux politique sur le plateau de l'émigration-immigration établies par les pays d'accueil et d'origine. Dans le même temps, l'approche néoclassique de la migration internationale souligne le fait que les pays d'accueil et d'origine ont un impact majeur sur le nombre de migrants et aussi sur la structure des flux associés, par l'intermède des politiques spécifiques mais aussi par les changements survenus dans l'activité économique.

Notre étude montre aussi que la perception des étudiants sur une carrière à l'étranger est positive, ce qui signifie qu'il y a des diverses raisons qui attirent les étudiants roumains à poursuivre leurs études à l'étranger soit pour acquérir un savoir précieux, soit pour s'installer définitivement à l'étranger. Cependant, nous ne pouvons pas dire avec certitude que la fuite des cerveaux est un réel problème pour la Roumanie, principalement parce que certains de ceux qui partent, reviennent après une certaine période, et d'autre part parce que, s'ils retournent ou non, les roumaines qui se trouvent à l'étranger sont un véritable soutien pour les proches laissés derrière et un exemple qui motive les personnes pour leur propre développement (y compris pour suivre une formation supérieur de qualité). Le phénomène avec lequel nous somme confronté n'est pas nouveau mais sa dimension et sa vitesse impose des investigations et des réflexions. Trouver des solutions pour les dilemmes formulées dans le titre de notre étude est une nécessité pour mieux comprendre l'évolution passée de ce phénomène mais aussi pour prédire l'avenir.

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MARKETING STRATEGY DEVELOPMENT FOR HYDROGEN IN ENERGETICS: IMPLEMENTATION PERSPECTIVES IN LATVIA

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Abstract. Hydrogen energy in recent years is developing rapidly all around the world. The promotion and implementation of the product (hydrogen in energetics (power industry)) is one of the most important topics for marketing theory and practice development. Product introduction to the world is encouraged by adapting various marketing strategies, depending on target audience and/or country energy sector specifics and other. Hydrogen in power industry from a scientific point of view in Latvia is being studied mostly by exact sciences and the need for marketing has not been evaluated yet, thus the research in this area has been relatively low. From previous studies of authors, it has been shown that the Latvian society knowledge about hydrogen energy is weak (Dimants et.al. 2011, Sloka et.al. 2012) and it is one of the reasons why the necessity of the marketing concept for hydrogen in power industry implementation has emerged. By using theoretical framework and the practical experience of other countries, authors have developed a marketing concept which is prepared as a basis for marketing strategy for the implementation of hydrogen in power industry in Latvia.

The concept consists of four elements: introduction, research, communication and cooperation. The most important aspects of hydrogen energy introduction are the development of technology, infrastructure adaptation and construction. Most important aspects of the research are social studies and technology (incl. materials) research. Most important aspects of the communication are science communication with society and public education issues. Collaboration is recognized as one of the most important elements – this element currently gains increasing attention. Key aspects of that include partnership development between the various levels of legal persons.

Key words: *marketing, renewable energy, hydrogen energy*

JEL code: M310

Introduction

By analyzing hydrogen research in Latvia, it was concluded that scientists who are not related to the social sciences are not sufficiently estimating the importance of marketing in hydrogen research, this frequently leads to science communication loss with society (Dimants et. al. 2011). Latvia has not yet extensive experience in economy with hydrogen as a renewable energy carrier.

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As in any market, also in hydrogen market consumer behaviour is influenced by various factors, including economic, socio-economic, personal, technological, etc. Power industry's products life cycle is fairly different from other consumer product life cycles, for example, in Figure 1 curve A shows power industry's product's life cycle length, in comparison – curve B shows other consumer products life cycle length, that can greatly differ from curve A.
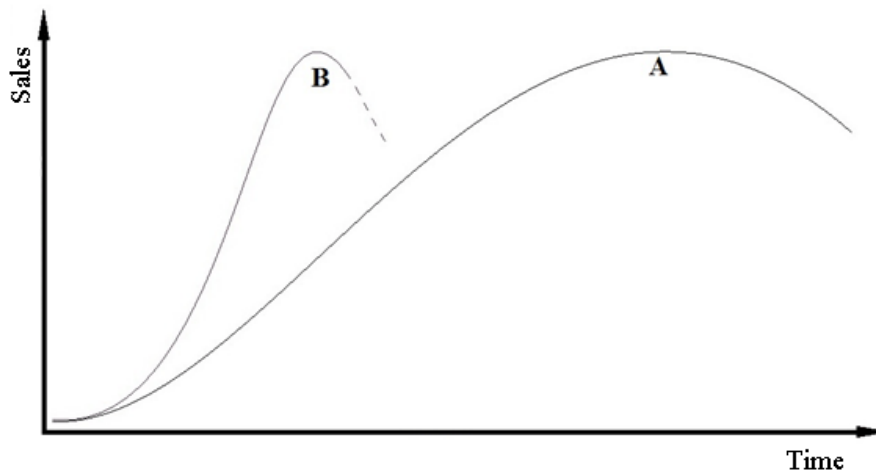
Source: author's construction based on the theoretical assumption of the product life cycle theory

Fig. 1. **A theoretical energy product (A) life cycle compared to traditional product (B) life cycle**
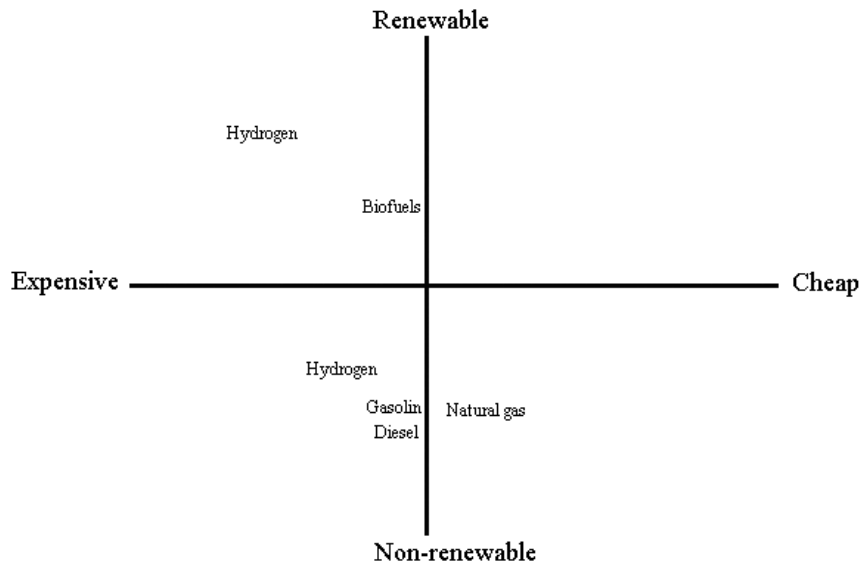
Source: author's construction based on the consumer's perception theory – Value-Based Marketing & Pricing, Competitive Marketing Strategy (Gale, 2006) through December 2012 (Eurostat, 2012), the average energy prices in Europe

Fig. 2. **Energy market through price comparison consumer perception matrix**

The main difference between both curves is time expression. Power industry's products development, introduction and also other phases may be several times longer comparing to a conventional product's overall life cycle. That is why life cycle stages in the development phase are greater in time and investment expression, according to the product life cycle theory (Levitt, 1965). Given the geographic, demographic, economic and social division in the country, Riga is the most suitable place to introduce hydrogen technologies. Considering, that majority of public is not introduced with hydrogen energy technologies; it is rather difficult to assess the future market size, as well as to segment the market with more detailed characteristics. Estimating market by consumer's needs and desires two factors were chosen: resource price and sustainability. In consumer perception matrix currently existing fuel comparison with hydrogen is shown (Figure 2). It reflects that hydrogen can be produced from renewable, as well as from non-renewable resources, wherewith in matrix it is displayed depending on the resource origin and costs. The lowest price can be achieved by producing hydrogen from non-renewable resources, whereas the ideal trajectory of development would be for an initial period to produce hydrogen using non-renewable resources, gradually moving towards the use of renewable resources for hydrogen production.

Currently hydrogen that is produced from natural gas is from 50 to 100% more expensive than gasoline. This price could be compensated by improving the efficiency of fuel cell cars. It is expected that by year 2020 hydrogen fee will fall to 2 dollars less than gasoline price. Marketing research is collection, processing, analysis and distribution of information in order to identify marketing opportunities and problems, develop and evaluate marketing activities and improve the marketing process (Praude, 2011). Thus information obtained in marketing research should be used for marketing activities development, estimation and also efficiency assessment. In The University of Latvia hydrogen technologies are studied in three faculties (Economics and Management Faculty of Physics and Mathematics, and Faculty of Biology (Kleperis et. Al., 2011), which may be the future basis for an alternative energy training course development.

By studying the development of the marketing mix there are different views on the topic. Australian author recommends that a new social marketing model that includes the other strategies employed in social marketing beyond product, price, place and promotion, and is also able to incorporate a more consumer oriented approach in which relational thinking, and a strategic and holistic approach to behavior change, would be beneficial to the field. Whilst not claiming to provide a perfect iteration of such a model, Gordon calls for a debate over what form such a model may concludes that the dominant four Ps marketing mix is no longer fit for purpose in contemporary social marketing. Mainstream marketing has identified that a focus on the firm, profits and transactions is no longer appropriate, with updated models of the marketing mix having been devised. Social marketing should also embrace change and advancement in relation to the marketing mix (Gordon, 2011) Marketing mix is used in order to progress the goals in target market. Researches show that different firms apply different levels of every one of these elements in marketing mix. These differences are also seen from one country to other country which liaises on can be referred to differences between nations culture, economic growth, product standards, distribution channels, communication strategy and pricing strategy (Kotler, 2002). These assumptions prove that the marketing mix elements can be changed depending on the goals to be achieved. For the success of the hydrogen wide introduction on the market it is absolutely necessary to provide the citizens with:

- Clear indication of the benefits and disadvantages of the technologies that are to transparently communicate by continuous and intensive information measures through all the available public channels (newspapers, media, schools to create from the very beginning the adequate framework, etc.).
- Consistent subsidies that help the market take-off especially during the introduction period.
- Involvement of the users, especially the ones that have already tested the technologies in terms of spreading their experience to other people, as the real experience can weight more than any

marketing campaign. Assure that retailers and service providers are committed to the H2 diffusion as their enthusiasm or reluctance about the new technology is crucial for the success of the market introduction, since they are vital for a durable satisfaction of the final users (Di Mario F. et. al. 2002).Re-tooling the marketing mix in social marketing can offer emancipation from the narrow confines of the four Ps framework. This suggestion is not a new one, and is not as radical as it first seems. Indeed, returning to the thoughts of Borden and Culliton, we see that they recognized the role of using available ingredients, adapting the recipes of others and sometimes inventing new ingredients. They did not propose that marketers remain within the narrow confines of a deterministic marketing mix, but explore different variables and combinations. Yet as the marketing discipline developed, the dominance of the four Ps model proposed by McCarthy ensued. Recently, the marketing discipline has begun to re-consider the toolkit. Social marketing appears to have lagged behind somewhat. Furthermore, efforts to expand the four Ps have appeared simplistic, clumsy, and displaying a strange predilection towards alliteration, naming six, seven then perhaps a limitless number of Ps? (Gordon, 2011).

Research results and discussion

In Latvia's case marketing concept has developed, which is prepared as a basis for marketing strategy for the implementation of hydrogen in power industry in Latvia, proposals for marketing model maintaining, as well as elaboration forerun concerning energy and transport sectors are necessary. Authors offer a marketing conceptual model (see Fig. 3) in which a major role is given to the interaction between the four working-dependent factors – research, public relations, collaboration and implementation. It is proposed to adapt marketing complex (4P) for given factors.
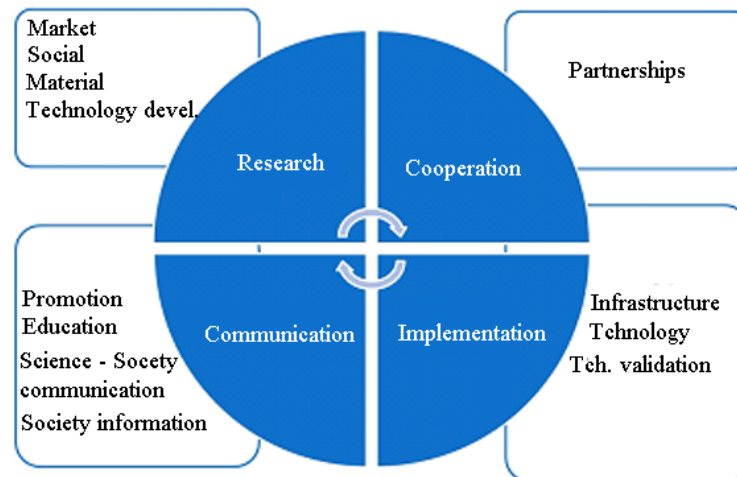
Source: author's construction based on O.C. Ferrell (Ferrel O. C.) and M. Hartlaina (M. Hartline) marketing theory.

Fig. 3. **Conceptual marketing mix model of implementing hydrogen energy Latvia**

Marketing activities' precise defining is one of the most important processes for operational marketing model.

Research – The technologies still has to improve meaning efficiency, costs and other applications. Research is needed for further development.

Cooperation - persuasive and regular advertising offers new business areas and new application (Brohman B., 2006). Cooperation's between private, government and scientific institutions up to now are one of the most effective tools used to implement technologies.

Implementation In the long term marketing campaigns are targeted on the successful implementation of energy efficient housing (Brohman B., 2006).

Communication Acceptance of energy modernisation should become mainstream, which needs sympathy and interest for energy saving to provide base for changing consequences (Brohman B., 2006). Acceptance, in its broader meaning, will include issues related to the changes in behavior that will be required to take up hydrogen technologies (for instance, due to the different safety risks posed by hydrogen), the added benefits (in terms of comfort and convenience) they will bring to consumers, their costs (both in monetary terms and as environmental consequences), their effectiveness in tack-ling energy and environmental problems, and the overall regulatory and institutional framework in which they will be embedded. Acceptance, in other words, refers to the extent to which the different types of hydrogen economies fit with established ways of life and align with people's 'views of the world' – the social and environmental values, needs, aspirations and expectations. Acceptance, finally, is dynamic and will be subject to change as the hydrogen economy – whatever this may be – unfolds (Ricci M., 2008). Some people within the political and public domain claim that providing people with adequate information will more or less automatically ensure more positive evaluations of emerging technologies. 'One-way' provision of information to the public at large can however be criticized harshly (Achterberg, 2010) the same can be said for having adequate hydrogen knowledge and supporting hydrogen technology.

Conclusions

Previous research has shown that marketing mix has become variable and potential for changes to achieve proposed goal. Presented conceptual marketing mix for hydrogen implementation consists of four elements which most closely represents required actions for hydrogen energy implementation in power sector with in development stage as it is in Latvia. Marketing activities precise defining is one of the most important processes for operational marketing model. The traditional marketing mix is experiencing changes and it is still useful to use for conventional product introduction. Hydrogen energy life cycle is comparatively larger then everyday product life cycle; witch encourages more detailed approach to each stage of the life cycle. Perhaps adapted marketing mix should be used for initial launch of energy product, like hydrogen. The implementation of these four marketing elements - Research, Collaboration, Implementation and Communication could promote increase of the public support and technology acceptance. After transition to a market development the traditional marketing mix could be applicable.

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Acknowledgements

THE SIGNIFICANCE OF EU STRUCTURAL FUNDS FOR POLISH ENTERPRISES: THE CASE OF THE LODZ REGION

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Abstract. The issue of how to stimulate economic growth and development remains an open question. The EU structural funds are meant to help solve the problem at the regional level within the framework of the cohesion policy. Only some of these funds are used to directly subsidize businesses that are the engines of growth in a market economy.

This paper aims to evaluate whether structural funds have played a positive and significant role in the development of enterprises in a region which does not belong to the economic leaders in Poland. It is based on the results of a direct study, statistical data and evaluation reports, as well as on the economic literature.

The direct study was conducted in 2011. It focused on micro-economic projects supported by EU funds in the Lodz region. Interviews were conducted with representatives of 80 enterprises, which had completed at least one such a project. We conclude that the subsidies from structural funds have positively stimulated modernization of the companies, albeit on a limited scale.

Key words: *EU structural funds, cohesion policy, enterprises*
JEL code: O12

1. Introduction

Art. 174 of the Lisbon Treaty (*Consolidated version,* 2010) stipulates that the "overall development of the Union" calls for actions that would guarantee real convergence of the regions, not only, as has been the case so far, in the economic and social dimensions, but also their territorial cohesion. These actions are designed to improve efficiency in the use of resources and reduce the disparities in living standards among integrating economies which, for various reasons, cannot be achieved by market mechanisms or by policies pursued by individual countries (Pelkmans, 1997). The cohesion policy, in its pro-efficiency aspect, should thus be treated as an equivalent of state intervention at the level of the Union, which facilitates long-term growth and economic development in circumstances when market mechanisms enable entrepreneurs to make decisions in line with the evolving competitive advantage of a region. In the light of new structural economics (Lin, Monga, 2010), state activities in the area in question can be justified by, e.g. market weaknesses in terms of the coordination of development processes in various sectors of economy. This is reflected in the inability of the private sector to ensure the availability, to market participants, of sufficient infrastructure to modernise and diversify the structure of production of goods and services. That is

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relevant to both its "hard" components, i.e. transport, communication, and energy, as well as its "soft" components, i.e. highly skilled employees, subsidies for investment purchases, working capital, or expansion into foreign markets. Interference can also be justified by the assistance it offers to entities which take the risk of implementing innovations connected with shifting to new, more modern and productive manufacturing sectors.

Structural funds and the Cohesion Fund, which redistribute a part of the Union's general budget for development and social purposes, are the most important instruments for achieving cohesion. The EU institutions have a decisive voice when it comes to deciding which programmes will be supported in the member states, which results from the conviction that this is the way to better allocation of production factors in all sectors of the economy (Molle, 2000). The selection of specific programmes is, however, a political compromise between equality and efficiency.

The success of the cohesion policy in all three dimensions depends, first of all, on the accelerated development of weaker regions, i.e. on the dynamics of the endogenous potential of their economies, not on social transfers which, by improving only the living conditions of the local community, fail to stimulate technological innovation or modernise production structures. The necessity of such distribution of funds relates mostly to regions where the level of income is low and the growth rate is slower than for their richer neighbours. The region of Lodz is a good example. Although GDP per capita increased in this region from 47% of the EU27 average in 2004 to 56% in 2010, the absolute differences in relation to the best regions in Poland-Mazovia and Lower Silesia - also increased (*Raport Polska 2011*).

In the financial perspective of 2007-2013 the basic document specifying the principles and directions binding in Poland for the allocation of structural funds is the National Cohesion Strategy. Its objectives and assumptions are detailed in 22 national and regional Operational Programmes. These programmes finance projects proposed by entities from the sector of public finances as well as by non-public entities, among which companies are the most numerous group. Over a half of the funds allocated for Poland end up in public infrastructural projects. Enterprises receive 30% of EU funds, but they implement the largest number of projects.

When taking into account the commonly known infrastructural weaknesses undermining the international competitiveness of the Polish economy (Schwab, 2012), the need for rational extension of the road and railway networks to stimulate growth remains unquestioned.[2] Nevertheless, the effective use of EU support at the microeconomic level seems particularly important to activate local production resources. Companies striving for maximisation of profit will, in the end, be decisive for the success of the cohesion policy.

Numerous research studies, evaluations, and reports discussing the effects generated by structural funds[3] are dominated by works on the macroeconomic, regional, and sectoral effects of individual Operational Programmes, not on the importance of funds for companies in regions, which do not have the best economic record in Poland. These latter effects are much less visible to the general public and do not have such a large impact upon the EU's image as do infrastructure projects. Hence, the objective of this paper is to explain the use of funds by companies in the Lodz region and to assess their potential importance for the modernisation of the region's economy. Conclusions are drawn based on a questionnaire study conducted in 2011 with the representatives of 80 companies which had completed at least one EU project in the Lodz region. Attention was paid to investment projects co-financed from the European Regional Development Fund (ERDF) under the Regional Operational Programme for the Region of Lodz (ROPRL). The maximum subsidy for such projects is EUR 2 mln.

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[2] At the present stage of development investing in local water treatment plants, airports, roads outside of transportation networks, aqua parks, concert halls and operas raises certain doubts (Gorzelak, 2012).

[3] (http://www.rpo.lodzkie.pl/wps/wcm/connect/rpo/rpo/strona_glowna/ewaluacja/badania_ewaluacyjne/)
Evaluations and reports are often commissioned by institutions, which distribute the subsidies that is why their impartiality can be questioned.

2. Characteristics of enterprises in the Lodz region

Poland is divided into sixteen regional administrative units (regions). The region of Lodz covers 5.8% of the total area of the country, with a population of over 2.5 million, i.e. 6.7% of the population of Poland. Compared to other regions, its economic development is moderate. In 2010 the value of the GDP generated in the Lodz region was PLN 1,416.6 bln, representing approximately 7% of the national GDP. In terms of GDP per capita the national average reached PLN 34K, while the same ratio for Poland was PLN 37.1K.

Since more detailed characteristics of enterprises in the Lodz region can be found in the literature (Dorożyński, Misiak, 2012), below we present only some data which *indirectly* illustrates the situation:

- in 2009 the share of agriculture and industry in the structure of the economy of the region, measured by gross value added, exceeded the average for the country as a whole, while the share of construction and services of all types (trade, finances and insurance, other services) was below the national average. This indicates a relatively greater dependence on traditional sectors (*Produkt…*, 2011);
- gross value added per working person in all sectors was 12 percentage points (pp) lower than the Polish national average (*Produkt…*, 2011). Agriculture and financial services were the closest to the national average, while the processing industry and trade services performed the worst in this respect (lower by 15 pp and 12 pp, respectively). Companies in the region were characterised by low productivity, which is mainly due to an anachronistic intra-sectoral production structure. That is particularly true of industrial processing, where the productivity index was among the lowest in Poland;
- the share of employment-related costs in gross value added was 39.8%, compared to the national average of 41.5% (*Produkt…*, 2011), which suggests that low labour costs constitute an advantage of the region;
- in 2011 the list of the 500 largest companies in Poland included only 14 companies from the Lodz region (with the best ranked at no. 27). This means that there are no local champions which, by developing cooperation networks with smaller companies, could become locomotives of economic growth in the region (*Lista 500*, 2012);
- in 2010 there were 38 companies with foreign capital per 100K inhabitants, compared with 60 per 100K for Poland overall. These companies accounted for less than 1% of all private companies registered in the region, and only 138 had a capital share higher than USD 1mln. In terms of the structure of companies employing more than 9 persons, companies with foreign capital had a 32% revenue share, 27% share in terms of financial results, 33% in terms of revenue earning costs, 10% in terms of employment, 20% in terms of fixed asset expenditures, and more than half of them dealt with exports and/or imports. This large share in terms of economic importance of the small, not very strong group of companies with foreign capital demonstrates how weak local competition is (*Działalność gospodarcza…*, 2011);
- when it comes to innovation, the region of Lodz is in the moderate group. Within that group, in the category of medium innovators and ranks next to last in the hierarchy of EU regions (*Regional…*, 2012). Its relative strength in this aspect consists in innovation enablers; a bit lower is the activity of companies in creating innovations, and the biggest weakness concerns the effects of implementing innovations. In other words, innovation potential in the region was relatively significant, outlays on innovation not among the lowest, but resources and the way such innovations were used did not translate into the commercialisation of new solutions, i.e. into economic results. This means knowledge is not considered significantly important as a factor that could improve the competitiveness of businesses in the region.

3. Possibilities of allocation of projects to companies

Enterprises may use preferential external sources of funding subject to the provisions on state aid. Since 2004 there are also programmes co-financed with the EU resources, which, because they are non-repayable, are highly attractive to entrepreneurs. They are addressed to various industries and sectors of economy, e.g. for investment in fixed assets, implementation of innovation, internationalisation of economic operations, and human resources development.

Regional Operational Programmes are the most important source of funding for companies at the regional level. Above all they enable the purchase of fixed assets. These programmes are complemented by the Operational Programme Innovative Economy, which co-finances, e.g. research and development of new technologies with subsidies that may exceed EUR 2M. Hence, big companies successfully apply for them, as well as affiliates of international holdings which operate in Poland.

By the end of September 2012, 6970 contracts were signed for the implementation of EU projects in the Lodz region. Companies were beneficiaries in 3540 contracts, i.e. more than half. Some of them have implemented more than one project however, hence the number of companies as signatories of the agreements amounted to 1905. Thus, less than 1 % of all economic operators in the region benefited from EU funds. The total value of contracts reached ca. PLN 8.5 bln.

The projects financed from structural funds can be divided into investment and non-investment projects (Dorożyński, 2012). The first category includes infrastructure such as roads, communications, social infrastructure, and the environment, and is addressed to government administrative organs and local authorities at various levels. Companies may apply for subsidies for modernisation and development of their production capacity.

Among non-investment projects, there is a special category of projects relating to public responsibilities in the field of an active unemployment prevention policy and social welfare. These are addressed mostly to local administration, as the so-called 'systemic projects', for which funding is guaranteed almost automatically, i.e. without the need to bid for it. The second category comprises projects connected with education available to schools at various levels, and to entities, including companies, which offer educational or vocational training courses. The third category includes projects that subsidise R&D projects and works, and the implementation and commercialisation of innovation. These projects are available to companies and entities working in the field, i.e. higher education institutions and research institutes. In the fourth group are projects that support entrepreneurship, designed for existing companies and potential start-ups.

The above demonstrates that all companies must apply for resources under operational programmes by submitting project bids, which poses additional requirements connected with the drafting of an application. Bidding also means competition which, in theory, should favour the selection of the best projects, on the condition that the institution which intermediates in budgetary allocations to projects is able to correctly evaluate the proposals in terms of their substantive merits. In most instances the proposals are economically reasonable, as they usually require the engagement of a beneficiary's own resources in the amount of 50% of the total value of the project, and profitability parameters (price) are conditioned by the competitive single EU market. However, in the Polish reality meeting the above conditions for optimum allocation of resources using administrative methods turns out to be very difficult (Geodecki et al. 2011).

4. Sample profile

The study included 80 companies from the voivodeship of Lodz that received assistance from EU funds. It was conducted between April and June 2011 as a direct and partly structured study, using the method of targeted sampling and individual in-depth (expert) interviews.

According to data generated from the KSI SIMIK 07-13 National Information System, since the beginning of the programme in 2007 until 31 March 2010, within the framework of the European Regional Development Fund 954 contracts for co-financing were signed under the Regional Operational Programme for the Region of Lodz. This means that our sample covered 16% of the beneficiary population.

Almost all respondents were based in cities, over 50% of them in Lodz (capital of the region), and only 5% in rural areas. Such a proportion correctly reflects the territorial dispersion of companies receiving EU assistance in the voivodeship.

Roughly 2/3 of interviews were conducted with members of the top management bodies: directors, CEOs or their deputies. The remainder of respondents occupied lower positions. They mainly belonged to the middle level staff: project managers and coordinators.

The questionnaire, which consisted of 36 questions in total, comprised classification questions as well as questions relating to behaviours and attitudes. They were of both the closed and open-ended type; some were accompanied by rating scales. Interviewers could ask for additional information, change the order of questions or ask for more detailed explanations. Open-ended questions were divided into two main thematic modules. The first referred to the respondents' opinion on the impact of EU funds on employment and human capital in their companies. The second concerned their evaluation of the administrative system of spending EU funds in the region. The average duration of interviews was approximately one hour.

The sample was clearly dominated (85%) by small and medium sized companies employing respectively between 10 and 49 and from 50 to 249 people. Micro companies were much more scarce and large companies formed the smallest group. Because of the structure of the economy in the region, we analysed mostly industrial processing and trading companies, as well as some construction companies but we omitted businesses from the agricultural sector.

5. Economic profile of the sample

Despite the economic slowdown in Poland in 2009, the majority of companies covered by the study increased both their sales and employment in the 2006 – 2010 period, and these two indices declined for only a very few companies. Only a small group (11%) increased sales with reduced employment, which may be interpreted as a symptom of accelerated modernisation. Almost all companies in 2010 were profitable and recorded a net profit.

In 2010, compared to 2006, there were more exporting companies and entities for which exports had become the main source of sales. Nevertheless, the overall importance of foreign markets remained minor. Although in 2010 almost 60% of companies recorded revenue from exports, it was the main source of sales for only 11%, and the only source for only 2%. Hence, the dependence of companies upon the economic situation in Poland was significant.

Exports played unequal role in individual sectors. More than three-fourths of industrial processing companies, one-half of trade companies, and only less than 30% of other servicing companies dealt with exports. All of the output of construction companies ended up in the domestic market.

Three-fourths of companies covered by the study were set up before 2001, meaning they were experienced in economic operations.

6. Project profile

The sample included companies which received assistance from EU funds. Almost half of them implemented only one project, more than one-fourth implemented two projects, while 15% implemented five or more. Thus only a small fraction of the sample had a great deal of experience in EU projects.

Our survey showed that this experience came about gradually. Some of the submitted applications were negatively assessed by intermediary institutions, a process experienced once or twice by a majority of the analysed companies. There were different reasons for rejecting applications, such as:[4] too few points in the evaluation (9), substantive errors in the application (9), formal mistakes (7), inconsistency of the project with the objective of a given measure (5), project not innovative enough (4), and misleading by the intermediary institution (3).

In order to better evaluate the importance of EU resources for companies, one should examine the motivations and motifs of companies which applied for project subsidies. In their answer to a closed question, the respondents could list several reasons. In their opinion the most important was the receipt of resources for technical modernisation of production equipment. Companies expected that this would be achieved by the purchase of more modern machinery, equipment and research devices, which will improve their market position. These expectations featured mainly in the group of small entities and in industrial and construction businesses. Acquiring soft skills that help gain markets (e.g. negotiating skills and languages) was treated as less important. The majority of companies perceived the participation in EU projects as a factor which enhanced their reputation, although this was not considered a primary goal.

The need to improve the quality of human capital motivated only one fourth of companies to submit an application. The importance of the factor was appreciated by much more service companies than industrial ones (but less than a half in both cases), which might relate to on average higher skill requirements vis-à-vis the workers and higher labour intensity in the service sector.
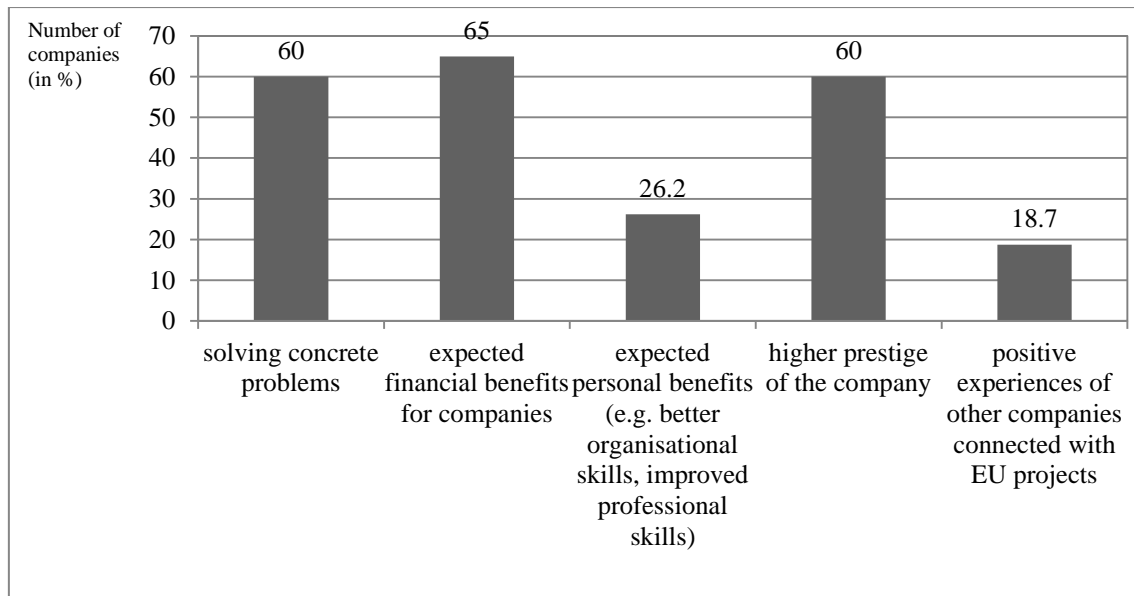
Source: own study.

Fig. 1. **Reasons for applying for EU funds**

In order to identify the major difficulties in the delivery of projects, respondents were presented with nine factors to rate on a five-point scale.[5] Besides the distribution of factors for our analysis of the

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[4] The share of companies listing particular reasons is given in brackets.
[5] The following scale was used for difficulties: a little or not difficult (1), a little difficult (2), moderately difficult (3), difficult (4), very difficult (5)

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answers, we used the mean, standard deviation, and coefficient of variability. Prior to this we assessed the reliability of the measure using Cronbach's alpha coefficient.[6] Its value of 0.744 means that the measure was highly reliable, hence the results which we obtained can be statistically analysed.

It turned out that, contrary to some earlier opinions and expectations, the implementation of EU projects did not cause any major problems (see Adamkiewicz et al., 2009.; Weiss, 2011, pp. 190-191). Most respondents stated it was "a little or not difficult" or "a little difficult". The mean (2.257) for all answers suggests that on average the difficulties were considered to be slightly more than "a little difficult". Assessments of individual factors were clearly differentiated, which is confirmed by the high values of coefficients of variability (almost all above 50%).

The most troublesome issue for respondents was the lack of experience in drafting the documentation, and the need to provide co-financing for projects. As a result, knowledge concerning how to prepare an application was strongly correlated to the frequency of applying for EU resources, which confirms the importance of the principle of *learning by doing* for success in competitive bidding. The vast majority of companies which applied not more than three times declared difficulties in drafting an application ("moderately difficult", "difficult" or "very difficult"), while over half the companies which applied for EU funds more than three times classified the difficulties related to the application process as minor ("little or not difficult" or "little difficult").

Table 1

Importance of experience in drafting project application and difficulties in using EU programmes

How many times did the entity apply for EU resources?	Difficulties in benefiting from EU programmes connected with the absence of experience in drafting project application		Total	Average
	v. little or none and little	moderately difficult, difficult and very difficult		
	in %			
1	21.7	78.3	100.0	3.304
2	36.4	63.6	100.0	2.905
3	30.0	70.0	100.0	3.100
4	55.6	44.4	100.0	2.556
5 – 9	83.3	16.7	100.0	1.750
10 and more	75.0	25.0	100.0	2.500
Total	**42.5**	**57.5**	**100.0**	**2.810**

Source: own study.

The requirement to contribute one's own resources and co-fund using them posed serious difficulties (at the very least assessed as "moderately difficult"). These especially concerned small and micro-companies, usually weak in terms of capital and struggling to maintain financial liquidity. Perhaps that was why their problems with providing their own resources could not be solved by applying for a bank loan. Even the cost of drafting project documentation was sometimes an obstacle, as these companies used the services of consulting companies when drafting the application. Hence, in terms of competition for EU money, bigger, better managed enterprises with adequate human and financial resources stood a better chance of winning.

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[6] This reflects the level of agreement among respondents in answers to individual questions, i.e. shows the probability of answers to questions on a scale from 0 to 1. The higher the coefficient, the better the answers measure the phenomenon covered by the study, (see Ferguson, Takane, 2004).

Table 2

**Ensuring own resources as an obstacle to benefiting from EU programmes,
and the size of companies**

Employment	Importance of ensuring own resources as an obstacle		Total	Average
	very little or none and little	moderately important, important and very important		
	in %			
up to 9 people	37.5	62.5	100.0	2.875
10 – 49 people	35.3	64.7	100.0	2.758
50 – 249 people	47.0	53.0	100.0	2.412
250 and more	100.0	–	100.0	1.500
Total	**43.7**	**56.3**	**100.0**	**2.557**

Source: own study.

Relations with the implementing institution and auditing bodies that monitor the use of EU resources were considered less of a problem. This would seem to be a good sign in terms of the organisation of state and local government administration in the region. One of its important tasks was disseminating information about projects to and among potential beneficiaries. Most respondents positively assessed the flow of information from the implementing institutions. However, these were the opinions of those companies which received funds ("in general the availability of information seems rather good. I and a large share of my acquaintances received the money from the EU so it cannot be bad. [...] Those who receive the funds say it is easy, those who do not, say it is difficult").
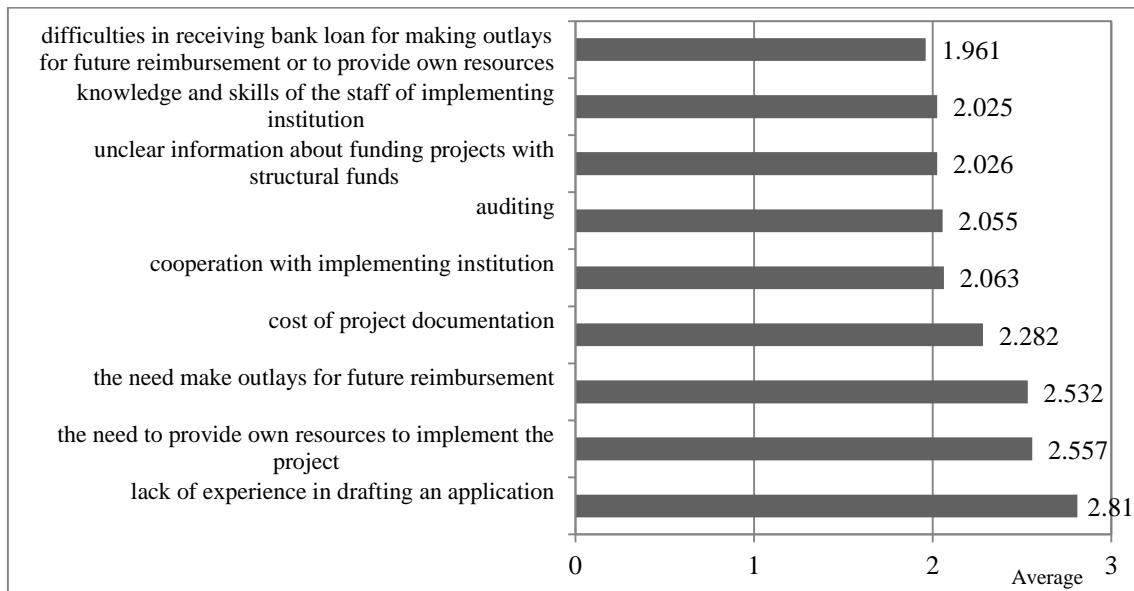
The means were calculated using the following scale of difficulties: little or not difficult (1), little difficult (2), moderately difficult (3), difficult (4), very difficult (5)
Source: own study.

Fig. 2. **Difficulty ranking for benefiting from EU programmes (by average answers)**

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7. Outcomes of EU projects

According to the vast majority of companies, the implementation of EU projects is worth continuing. This is confirmed by the fact that at the time the study was conducted almost three-fourths of respondents had already decided to participate in subsequent project bids, while only 2% concluded they did not need them for the growth of the company.
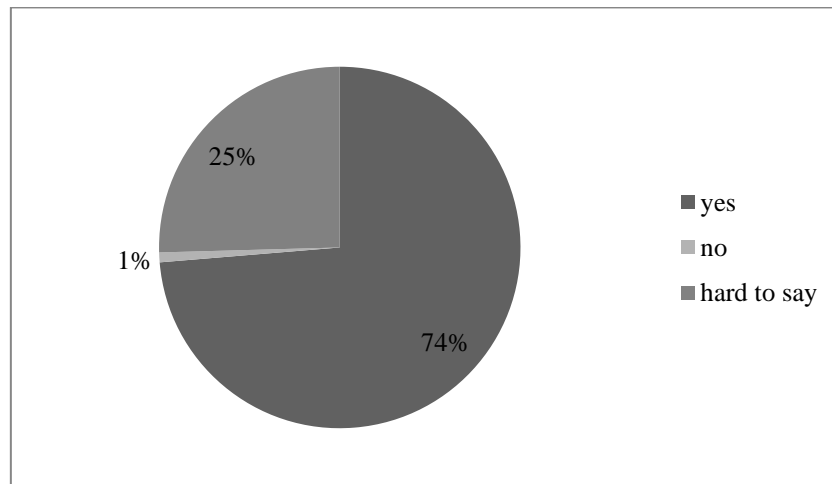
Source: own study.

Fig. 3. **The share of companies planning to apply for EU resources in the future**

Benefits and costs were assessed by respondents with reference to fourteen factors on a three-degree scale.[7] For most of them (56%) the balance was positive, and only 14% of respondents evaluated them negatively. Despite the 14% negative assessments, it should be noted that, as has already been mentioned, only 2% did not plan to re-apply for resources from Operational Programmes.

Our detailed analysis of effects showed that projects contributed mainly to the enhanced competitiveness of the majority of companies, mainly due to significantly improved technical equipment. This allowed companies to offer customers new products and/or services of higher quality. Productivity also improved. Over 60% of companies increased their sales, but on the domestic market rather than through exports. The introduction of new organisational solutions and improved business management had a much smaller impact upon the above changes.

As has already been stressed, for the majority of companies the main goal was to upgrade, in broad terms, their products and production. In our sample as many as 85% of companies stated that they achieved this aim, the rest had no opinion. This means that, from the microeconomic point of view, EU resources were rationally used. On the other hand, however, only a few companies improved their innovation potential by applying for patents, certificates, or other intellectual property rights to products and technologies. This may mean that the level of implemented innovation was moderate, and that improved competitiveness resulted from higher marginal productivity of investment.

Relatively few companies went beyond the acquisition of new machinery, establishing new commercial relations (mostly with domestic rather than foreign companies), implementing marketing innovation, and gaining access to new distribution channels. Average prices were not increased either, as

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[7] The following rating scale was used to assess the effects: yes, no, hard to say.

the activities undertaken served to strengthen strategies of competitive pricing rather than competing over the value of products sold.
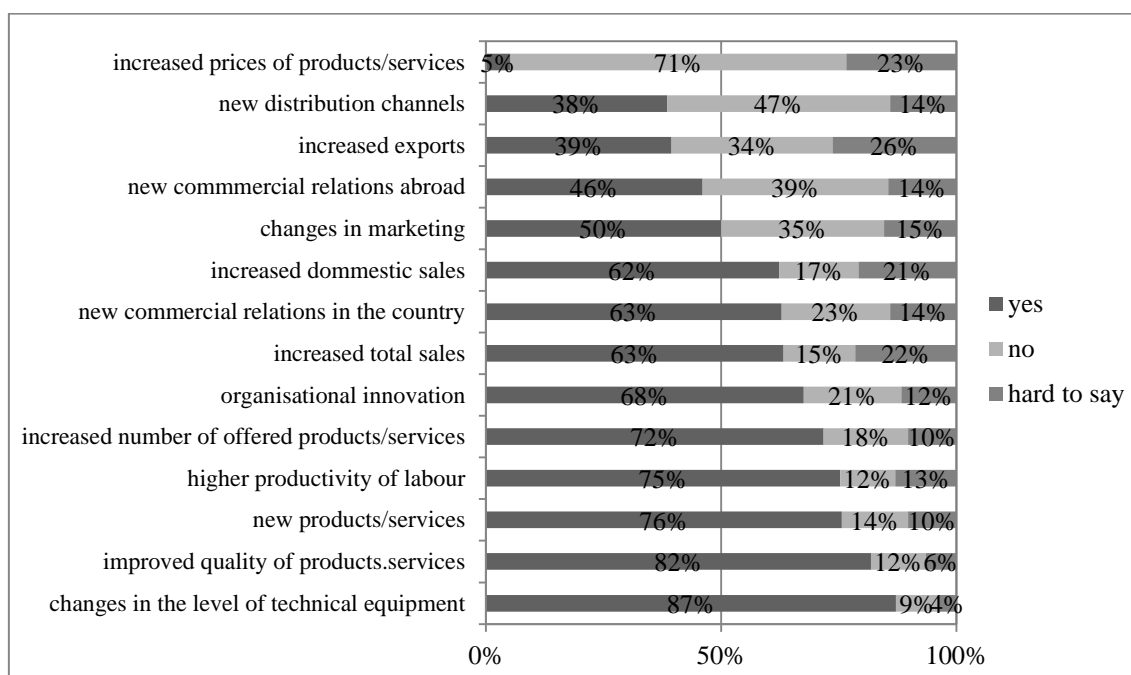
Source: own study.

Fig. 4. **Effects achieved as a result of the implementation of the EU programmes (share of companies)**

Table 3

Increase in innovation capacity as a result of EU projects (in %)

Item	Company's status			Total
	yes	in the process of obtaining	no	
Certificate of conformity of the quality management system with ISO standard	10.0	12.5	77.5	100.0
Other quality certificates	13.7	2.5	83.8	100.0
Patents for inventions	6.2	5.0	88.8	100.0
IPR for utility models	8.7	1.3	90.0	100.0
Rights to registered industrial designs	10.0		90.0	100.0
Protection of trademarks	12.5		87.5	100.0

Source: own study.

8. Impact of projects upon companies' human resources

One of the main objectives of the cohesion policy in Poland is the reduction of unemployment, i.e. better use of labour in quantitative terms. On the other hand, it is generally considered that the market

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success of a company and growth of the economy depend on the quality of these resources, i.e. on human capital (Florczak, 2012). For this reason in our study we looked at projects implemented by companies from the point of view of managing the human factor.

Projects turned out to be an effective stimulus for increasing employment in more than 70% of companies. The increases, however, were not that large and usually did not exceed five new jobs. Only a very few respondents hired more than 20 new employees. Employment was mostly based on employment contracts (96% of companies), i.e. the form usually most attractive to employees. Civil law contracts, which offer more flexibility to employers, were more scarce and were used by only 28% of enterprises.[8] There was only one case where the implementation of a project led to a decrease in employment. As could be reasonably expected, the increase in employment was much higher in medium-sized than in small companies.

A private company does not include combating unemployment as its primary objective, but rather aims at generating a profit. Hence respondents drew our attention to the inconsistency between the social and efficiency-related requirements in competitions for projects funded with the EU funds. They pointed out that purchasing machinery and equipment to implement technological and organisational modernisation is aimed rather at reducing labour costs than increasing employment. This lack of a propensity to hire new people was also dictated by striving to better use their own staff.

Most companies were rather clear about the requirements with respect to the skills and experience of employees they were seeking. While these preferences were strongly differentiated, nevertheless people with a technical background were definitely the most often hired. This was typical not only for industrial processing and construction, but also for the services industry. A clear preference was given to young people, in particular between 26-35, i.e., young but with some professional experience. Skilled workers were most in demand, with high skills, professional experience, and a specialist background.

However, companies hired only several people with high skills (mostly between one and four very rarely more). The newly recruited employees were not usually intended for managerial positions, and had a technical vocational background (e.g. machine operators, mechanics) or higher technical education (IT, engineers). It may be said they complemented human resources in companies without significantly altering their average quality. Only in a few individual cases were people recruited for managerial positions.

Table 4

Highly skilled persons employed as a result of EU funded projects *

Did the company need to hire highly skilled people as a result of project implementation?	Number of companies	
	absolute terms	in %
No	25	43.9
Yes	32	56.1
Total	57	100.0

* This question was posed only to companies which declared increased employment as a result of the project
Source: own study.

Human capital in companies which implemented EU projects also improved with the assistance of various training courses. Trainings were organised in more than three-fourths of the companies. The percentage was a bit higher for service companies than in industrial processing and construction. Employees were mostly trained domestically, much more rarely abroad. In more than one-third of the sample trainings and courses, they were attended by the majority of staff. These were very popular mostly in those sectors offering modern services.

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[8] Respondents could choose several answers.

Training was independent of position, but employees were trained more often than managers. In particular the courses for the former were of an *ad hoc* nature relating to the current needs of a company, as opposed to being designed to systematically improve skills. Upgrading skills was mainly related to investments, as in almost half of the companies it was connected with servicing the machinery and equipment purchased with EU funds. Other trainings, such as in computer literacy and practical skills necessary in given industries, were less popular. Some employees were acquainted with the regulations and procedures for the implementation of EU projects. Training courses addressed only to managers, which were much more rare, dealt mainly with managing a company, human resources, production, working time, and quality. There were very few foreign language courses.

The usefulness of training courses was assessed also in an open-ended question. Opinions differed ("… EU funds motivate employers to train their people, which is always positive. Improved skills usually lead to higher pay, which is also good. It is a pity, however, that some of the training courses made no sense. [...] We have serious reservations vis-a-vis the knowledge our staff acquired at courses. The only exception is in those cases where the company organises training itself to train its people in a given direction").
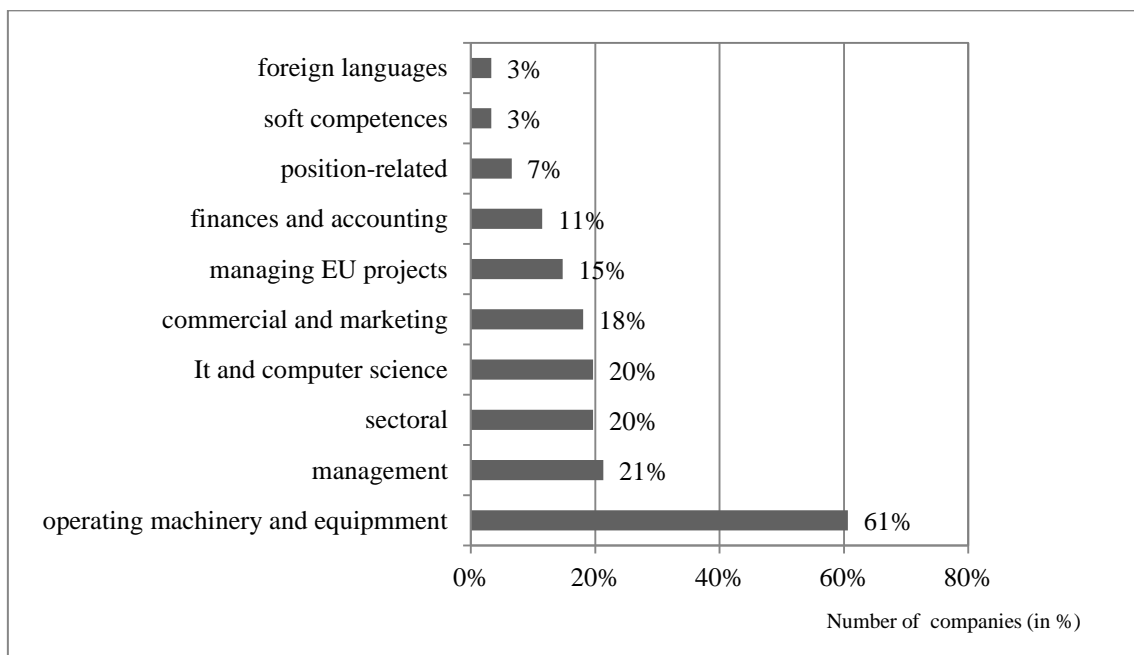
Source: own study.

Fig. 5. **Subjects of training courses (share of companies)**

The effects of EU projects on human resources in companies were determined by asking questions accompanied with a three-degree rating scale (no, little, big). We took account of eleven factors, which became our assessment criteria. Opinions were highly diverse. EU programmes positively impacted some factors, but less positively others. Assessments broken down by the size of companies and sectors were similar.

The impact of projects on employees' skills was assessed the highest. According to the majority of companies, it was very positive and contributed to improved skills and knowledge concerning

technological progress. Many companies pointed to better organisational skills of their managers. However, a number of companies assessed the impact as relatively minor. That is consistent with the opinions of companies presented in answers to open-ended questions („using structural funds contributes to improved qualifications, knowledge, and skills of the employees, which increases the technical level and quality of products which we manufacture and sell. Labour productivity increases, workers make fewer mistakes, and use more efficient tools").

To a limited extent EU projects led to a better identification of employees with their enterprises. In many companies staff rotation decreased and salaries and wages increased, but usually only a little.
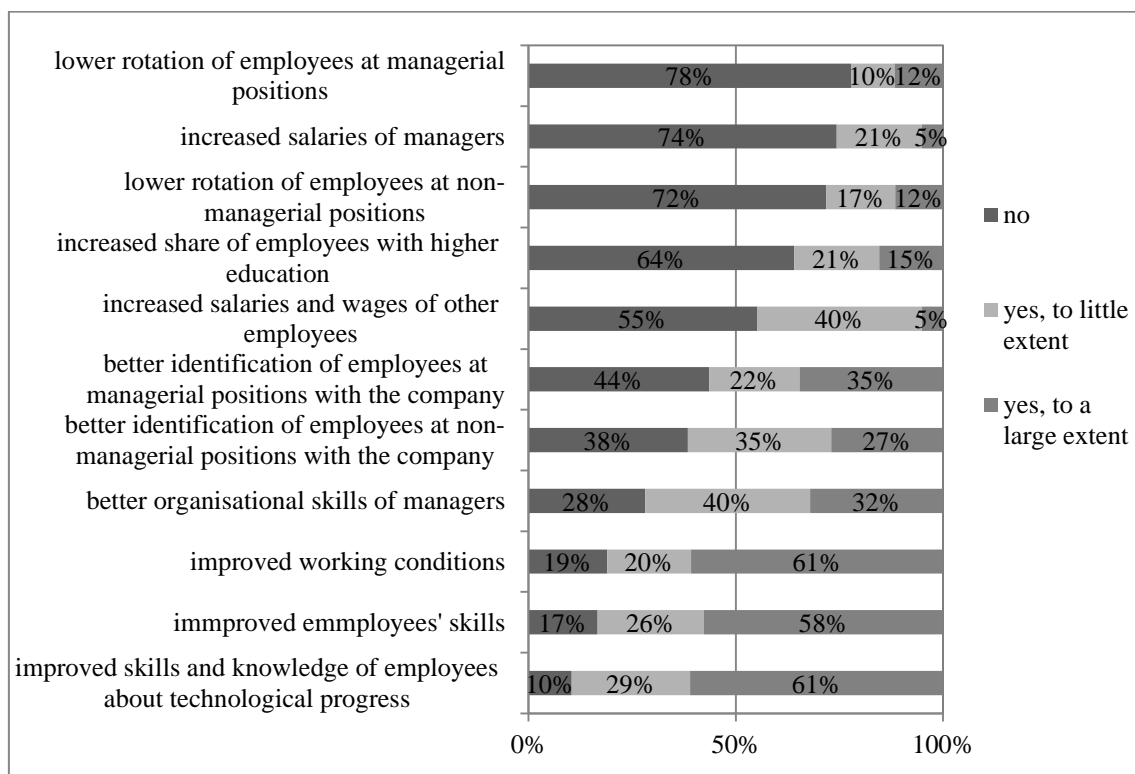
Source: own study.

Fig. 6. **Structure of impact of EU projects upon human resources (share of companies)**

9. Conclusion

The cohesion policy in economically backward regions in Poland should enhance their endogenous growth potential. In the Lodz Region economic growth depends mostly on the development of SMEs, which face particularly large problems in gaining access to external sources of funding and, out of necessity, must use their own capital resources. Hence, subsidies from structural funds can provide them with a unique opportunity for investment and support in their struggle for market success.

In fact, due to the scarce supply of EU subsidies, only a few companies have benefited from the opportunity. At the same time, as demonstrated by our study, the projects involved rarely introduced any

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new quality or provided foundations for sustainable growth. Above all they focused (successfully) on providing effective support to technical modernisation of existing manufacturing equipment and helped the beneficiaries increase their marginal productivity of capital by exploiting low labour costs. However, they contributed only to a small degree to the introduction of the latest manufacturing methods or switching to more modern economic sectors. Rarely were they used as a tool to invest in human capital. It may be said that although they contributed to the increased value of output of beneficiaries, only rarely did the projects encourage them to offer their products to more demanding foreign markets.

We must stress that this conservative approach was adopted by enterprises which had a past history of good economic results. Gaining access to structural funds in fact required sound finances and specific *know how* about the rules and procedures of competing for the resources. Thus, the funds were mostly allocated correctly from the social point of view and strengthened the more competitive market participants.

The study also shows that increasing the pool of subsidies for companies would not necessarily remedy the situation with respect to accelerating economic growth in the region, mainly because of the limited efficiency of the bureaucratic machinery that allocates the subsidies and the large transaction costs involved in direct allocation. This matter, however, requires a more in-depth analysis.

In the light of the forthcoming financial perspective for 2014-2020, the concept of local authorities to concentrate on use of the resources for growth-oriented rather than for social objectives has become of primary importance. Rational support to local businesses to create technological development and accumulate human capital should be an important part of the plan. However, it remains uncertain whether direct EU subsidies for businesses can become an effective tool for this.

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CORPORATE GOVERNANCE IN ALPINE CLUBS:
RESEARCH ON UMBRELLA ASSOCIATIONS

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Abstract. Corporate Governance is a "system by which companies are directed and controlled" (Cadbury 1992). This topic came into the field of high interest because of many worldwide crashes of corporations. The origin of this idea is to find in the for-profit area but there exist already some researches to transfer this idea to nonprofit-organizations. The challenge to transfer the idea of corporate governance to nonprofit-organizations is their distinctive features. The chosen research field in this paper to transfer the idea is Alpine Clubs in Europe. These clubs face the challenges of the legal framework as associations. Alpine Clubs consist of an umbrella associations as well as a certain number of legally independent branches, called sections. All organizations are guided by voluntary boards.

The empirical research is designed as qualitative explorative study. The main results are to find out the specialties of the governing systems of Alpine Clubs. Within this paper the research results are concentrated on the umbrella associations. Their governance system consists of voluntary boards and installed head offices providing paid staff to come across with the number of tasks. Communication and distribution of power between these two bodies are the challenges. The importance of stakeholders and their integration within the system will also be discussed within this paper. This research adds value to science by proving the practicability of the idea of Corporate Governance within the field of nonprofit-organizations.

Keywords: *corporate governance, nonprofit organization, voluntary board*

JEL code: L31

1. Introduction

The original meaning of corporate governance was established around corporations listed on the stock exchange: *"Corporate governance is the system by which companies are directed and controlled" (Cadbury 1992 #210).* Corporate governance came into the field of high interest because of many worldwide crashes of corporations. It seemed to be that the existence of balance sheets and their rules to establish them should be enough to show investors a "true and fair view" of a business. It did not. Corporate governance is a relatively new topic in nonprofit-research. There exist some researches concerning the transfer of this idea to nonprofit organizations, see for example Schnurbein (2008) or Bachert (2006). It has to focus on different core objects to those of for-profit organizations.

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For the discussion within the nonprofit-area Anheier presents a more widespread meaning of corporate governance considering all stakeholders: *"Corporate Governance is the system by which organizations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders, and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs"* (Anheier 2005, p. 230).

Corporate governance refers to arrangements of guidance and supervision (Siebart, Reichard 2004, p. 271) of an organization whether for profit-organizations or nonprofit-organizations.

2. Corporate governance in nonprofit organizations

As already mentioned corporate governance in nonprofit-organizations is different to those of for-profit-organizations based on several distinctive features of these organizations: Nonprofit-organizations have founders but no owner as natural or legal person who could be entitled to a part of the organization's profit (Jegers 2009, p. 144). Instead of an owner, stakeholders play an important role in nonprofit-organizations. Furthermore nonprofits' distinctive feature is the nondistribution constraint (Hansmann 2010, p. 61). There is no pie to divide (Speckbacher 2008, p. 313) between owners and consequently all stakeholders contribute to a common goal. The performance of a nonprofit-organization cannot be described by profit and loss compared to for-profit organizations. There are several bottom-lines (Schröer 2009, p. 148), they concentrate on task goals and the economic performance is only the basis (Schuhen 2005, p. 230).

In nonprofit-organizations there are people who wish to contribute their time, assets and idealism in order to achieve an objective in cooperation with other people. Nonprofits' personnel are volunteers in all levels of the organization, i.e. the board, too. An important part of corporate governance discussion in for-profit organization, the remuneration of board members, based on profit or loss of the corporation can be missed out.

Doing research on corporate governance in nonprofit-organizations the governing body is an important part to look at: The members of this body are not employed and consequently the governance of these organizations will be different. Most of the nonprofit-organizations in Europe are governed by a *voluntary board*: This structure does only exist in nonprofits where voluntary board members are in one and the same person executive and supervisory director (Siebart 2006, p. 230). This model corresponds to the one-tier model with executive and non-executive directors (Siebart, Reichard 2004, p. 275) but in this mere model members are either executive or non-executive directors. A very common structure to build the board in for-profit organizations is the two-tier model: There exists a clear separation between management and supervision by an executive board and a supervisory board (Mallin 2010, p. 122). According to the laws on associations it is possible to install such a supervisory board in nonprofits' governance system but the composition and size of the board matter more than the separate supervisory board (Hopt, Hippel 2010, p. 545).

Big nonprofit-organizations, as umbrella associations in this research, have installed additionally head offices with paid staff to come across with the big range of tasks. Paid staff is definitely rare in Alpine Clubs being contradictory to the philosophy of these clubs and besides that not to afford. The umbrella associations assist their members, the sections, in working voluntarily. They offer services which can be done very cost-effective for the total organization. Further, it provides the only full-time workforce throughout the total club and therefore can be aware of overall strategies, problems and current developments in all special fields of activities. The danger is the concentration of knowledge and possibility to influence the voluntary board. The communication between these two bodies and the distribution of power are the challenges within the governance system of nonprofit-organizations.

3. Research design

Alpine Clubs were founded as small associations. In the 19th century the idea to explore the mountains was very popular and so many small clubs were founded to spread this idea (Gidl 2007, p. 38). Today these clubs consist of a several number of sections which are legally independent associations and one umbrella association each which represents itself an association. The individual members are members of the sections. The sections are the members of the umbrella association.

The Alpine Clubs under research represent more than 1.5 millions of members, today. Following table shows these Clubs with its number of members, its spoken languages and the year of their foundation.

Table 1

Alpine Clubs under research

Club	Language	Number of members in 2011	Year of foundation
Austrian Alpine Club (OeAV)	German	414,833	1862, Vienna
German Alpine Club (DAV)	German	939,063	1869, Munich
Swiss Alpine Club (SAC)	German/French/ Italy/Romance	135,448	1863, Olten
Alpine Club of South Tyrol (AVS)	German	57,421	1869 as section of DAV, 1946 refoundation
Total number of members		**1,546,765**	

Source: author's construction based on data of Alpine Clubs

Hypothesis and Research questions

The research is based on a qualitative empirical study. Personal interviews are chosen as the adequate method to explore the knowledge according to the research questions. Honorary managers and paid managers are classified as experts within this system in the umbrella association. Interview-guidelines in slight variations helped to focus on certain questions and also to create other valuable information.

Following hypothesis is the basis for this research. The purpose of these questions is not to falsify hypotheses but to gain valid and reliable knowledge (Eriksson, Kovalainen 2008, p. 5) from these organizations.

"To meet the expectations of various stakeholders nonprofit-organizations change their corporate governance when passing critical structural factors".

This hypothesis will be explored by following questions:

- What are the specialties of the governance system in Alpine Clubs? What is meant by corporate governance in Alpine Clubs?
- Which are the critical structural factors for umbrella associations?
- How can stakeholders be integrated in the governance system in the umbrella association?

Within this paper the presentation of research results will be focused on the challenges of the governance system of the umbrella associations of these clubs. Within this frame the critical structural factors, the integration of stakeholders and the specialties of the governance system are presented.

Data collection

Data collection for empirical research

Organization/ interview partner	AVS	DAV	OeAV	SAC	Interview guideline
Umbrella association					
President = president of the umbrella association and of each Alpine Club	1	1	1	1	Interview-guideline 1a
Vice-presidents = members of the voluntary board	2	3	3	2	Interview-guideline 1b
Paid managers = Secretary General or executive manager	1	1	1	1	Interview-guideline 2

Source: author's construction

Above table shows the number of qualitative interviews done in this research. The interview-guidelines for the president and the vice-presidents and paid managers are slightly different. All interview-guidelines contain an introduction and three main groups of questions, i.e. questions regarding the governance system of Alpine Clubs, the qualifications for their function and questions on the decision-making process. Any group of interview has also some special questions.

Analysis of interviews

The method to analyze the qualitative interviews is content analysis (Schreier 2012). Considering the different interview-guidelines, the analysis is first done on each group of interview-guideline. The answers to certain questions have been clustered. Secondly the answers of all groups are analyzed and interpreted according to the research questions. As the Alpine Clubs under research are located in different European countries also specialties on that are to find out.

4. Critical structural factors for umbrella associations

The analysis of the interviews with the members of the voluntary board and also the paid manager result in vital answers to the governance structure of the voluntary board and also managing committee of the head office The members face different challenges in doing their job for these big organizations voluntarily. It is to consider if the actual governance system is useful or practicable for the future.

Structural factors – voluntary board
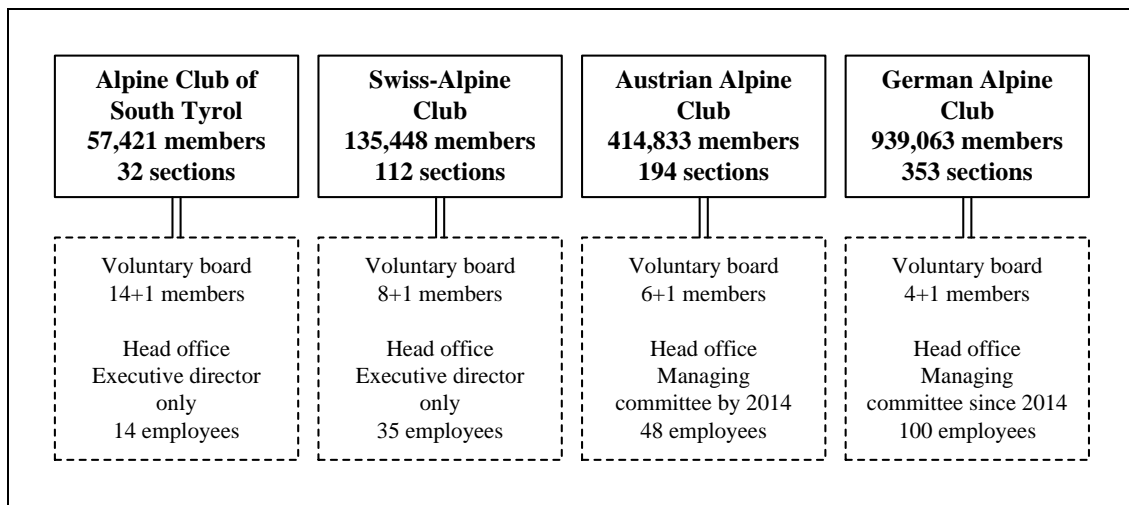
The voluntary board is the governing body of a nonprofit-organization. This refers also to Alpine Clubs. Volunteer leaders are responsible, accountable for the performance of an association as well as they represent legally their organization. This responsibility is laid down in the constitution and basically in the law on associations, see for example (Kossak 2009, p. 82).

Following figure shows the comparison of the umbrella associations of the four Alpine Clubs. The bench mark between them is their total number of members which are organized in sections. Obviously the number of sections will rise with the number of members. The number of members in the voluntary board declines surprisingly with the overall size of the Alpine Club. The number of projects, tasks, duties causes the number of employees and the structure of the operative management in the head office. It is either an executive director only or a managing committee.

Alpine Club of South Tyrol 57,421 members 32 sections	Swiss-Alpine Club 135,448 members 112 sections	Austrian Alpine Club 414,833 members 194 sections	German Alpine Club 939,063 members 353 sections
Voluntary board 14+1 members	Voluntary board 8+1 members	Voluntary board 6+1 members	Voluntary board 4+1 members
Head office Executive director only 14 employees	Head office Executive director only 35 employees	Head office Managing committee by 2014 48 employees	Head office Managing committee since 2014 100 employees

Source: author's construction based on data of Alpine Clubs

Fig. 1. **Umbrella Associations (membership numbers per Dec 2011)**

The interviews done on all levels of the umbrella association show that the voluntary board with its structure and size is a crucial factor (see Figure 1). Actually all members of these bodies see themselves as members of a steering committee, suited in between an executive committee and a supervisory committee. According to the respective constitution this body "is" the governing body of the organization. But the execution of this function cannot be compared to an executive committee of a for-profit organization. Members of a voluntary board are not available on normal working hours. They are not in a position to do a similar job as their counterpart in for-profit organizations. One President described the function with its inherent dilemma very perfectly: The voluntary board has to execute tasks which could be done by the paid staff of the head office, but it is not the will of the sections. The work of the voluntary board has to be subordinated to the actual system. That means that the members of the voluntary board have to cope with a lot of operational tasks which could be transferred. The strategic part of their job will be missed out to a certain extend. It is a challenge for the members of the voluntary board to do a good job according to the constitution and the will of the sections and in reality not to end in a "rubber stamp board" (Herman 2005, p. 156).

Most of the members work within their function nearly part-time. Some did or do even more. The crucial factor is the availability of members who are willing to work voluntarily nearly part time for minimum one term of office. One interview-partner came to the point: "If you want to have younger people within this function and not only elderly or retired people than it is necessary to change the temporal involvement on these functions".

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The volume of time and the size as crucial factor

The dilemma of the voluntary board members is the restricted time they have because of working voluntarily on the one side and the number of projects and tasks on the other side. As mentioned above the workload for an honorary manager is already on a high limit. The members of the voluntary board are not only the governing body of their organization they also legitimate the work of the head office done by paid staff and are role model for the voluntary work in the sections.

The size of the board is further crucial to the quality of decisions. The advantage of a small voluntary board is certainly the quality of the opinion building process and the time to make decisions. The disadvantage is according to the interviews the number of projects and tasks they have to take care responsibly as honorary manager. The Alpine Club of South Tyrol with its big voluntary board started a process to restructure this body: The number of members of the voluntary board will be reduced but at the same time another body will be installed. The German Alpine Club started a discussion to enlarge its body by one member.

A paid governing body as a solution?

The only possibility to cope with the big scope of tasks and the inherent complexity might be to change the governing board from working voluntarily to getting paid. But the installation of a "paid governing body" might be a dramatic change of the actual system and could have consequences on the legitimacy of the honorary guidance of the sections. A supervisory board made by honorary managers could be installed additionally to keep the described legitimacy. The operative power would be handed over to paid managers. The system may be similar to those of a two-tier model (Siebart 2006, p. 225) of for-profit organizations.
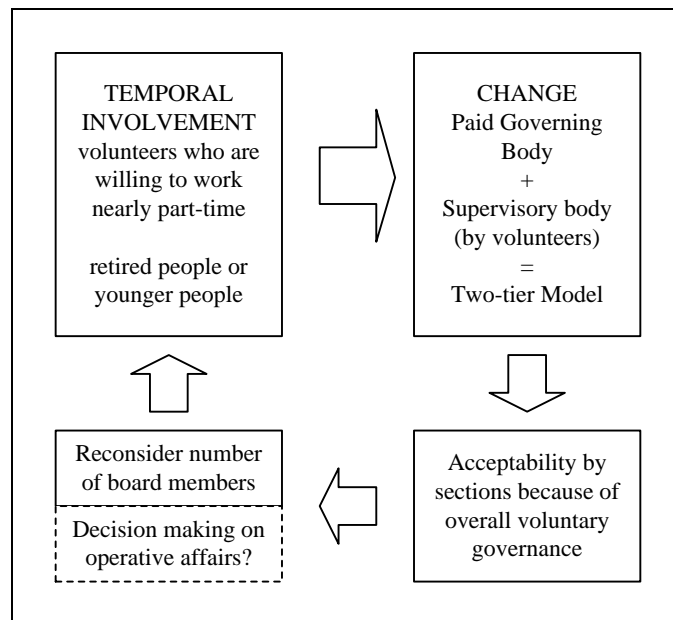
Source: author's construction

Fig. 2. **Structural performance factors for the Voluntary Board**

Above figure shows the consequences on the mentioned temporal involvement. The willingness of honorary manager working nearly half-time for this position is crucial to the governance system. The request not only working with retired people in this function may also be an important argument for a possible change. The complexity of tasks, the quickness of necessary reactions could have influence on the presence on normal working hours. The solution could be a change to a two-tier model with an executive board made by paid managers and a supervisory consisting of honorary managers.

Actually, sections do not want to hand over power to paid managers. The power should be with honorary managers. For this reason the acceptance of the described two-tier model is doubtful. Changing the constitution on it would be very controversial. The solutions within the actual system could only be to reconsider the number of board members, to reconsider which decisions are really to be made by the voluntary board.

The overall discussion might also be on the difference of the voluntary work as Chairman of a section and the voluntary work as board member of the umbrella association. This would help sections to overcome the actual border of thinking.

Structural factors – head office

Looking at all four Alpine Clubs with their umbrella associations a development can be seen of course. The total size of the club causes a different governance system according to Figure 1. All four umbrella associations have installed their head offices. The function they have to fulfill for their sections and the number of projects made it necessary to install them. The number of paid staff is dependent on the total size of the club and consequently the number of services they provide. The head offices of the Alpine Club of South Tyrol and the head office of the Swiss Alpine Club are guided by an executive director only. The Austrian Alpine Club will install a Managing Committee by beginning of 2014. The German Alpine Club has already installed a Managing Committee since 2003. The installation of a Managing Committee will change the tasks of the members of the voluntary board. The presidents and vice-presidents of the Austrian Alpine Club are evidence that the number of projects and decisions they have to do enforce the reduction of the operational workload.
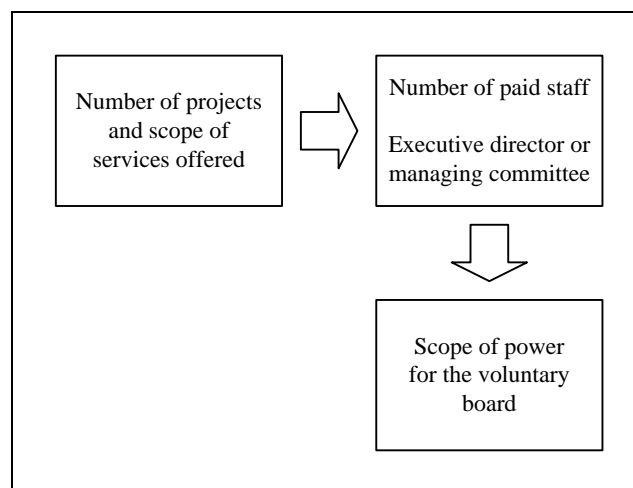
Source: author's construction

Fig. 3. **Structural performance factors for the Voluntary Board**

Structural factors for the head office means the number of offered services and projects, see Figure 3. This goes hand in hand with the function of the umbrella association. The overall size of the clubs shows that on a certain volume of projects it is even necessary to install a managing committee provided by paid managers than an executive director as one-person otherwise the voluntary board cannot be released from operative tasks. It is not to forget that even the managing committee is provided only with limited power but with wider power than those of an executive director. The voluntary board remains the governing body representing the Alpine Clubs outside and it holds the ultimate responsibility. This formal power is laid down in the constitution. The law on associations provides no limitation on a possible paid governing body.

Cooperation between voluntary board and head office and the distribution of power

All interviewees agree to the fact that the actual cooperation is only possible if the voluntary board trusts in the work the head office provides. All presidents and vice-presidents know that they are not in a position to work operational, they have to rely on their paid experts. The voluntary board is built as collegial body but the members are also responsible for minimum one special area, e.g. huts and tracks or mountaineering. Professional communication will be done directly by the respective member of the voluntary board and the head of the department.

These circumstances are not so different from paid managers of a for-profit organization. The heads of department are the experts in their field and assist the management. The vital difference is that the honorary managers are not available at normal working hours as they do their job voluntarily. They miss the inside information on topics which are discussed on the meetings of the voluntary board which may be a disadvantage in decision-making. In case of an installed management committee this disadvantage is compensated by the presence of the heads of the departments in several meetings.

The most important link to the head office for the voluntary board is the executive director. He is responsible for the distribution of information to the voluntary board. The presidents' communication channel to the head office is the executive director. The preparation of the agenda of meetings is also done between them and there the executive director can bring in a lot of informal power by suggesting the topics.

Siebart (Siebart, Reichard 2004, pp. 287) see the interaction between the voluntary board and the executive director more like a partnership than a superior-subordinate relationship. It goes without saying that the official power relates to the voluntary board. The principal is the president with its voluntary board members, the agent the executive director (Hung 1998, p. 106). The informal power is on the side of the executive director. The distribution of power is the cause or effect of a certain information asymmetry (Caers et al. 2006, p. 26). The information asymmetry of members of a voluntary board is inherent in the system and can be reduced only by a formalized structure of information and again by trusting each other. Power playing by paid managers can easily be done on this.

Stakeholders of the umbrella association and their integration

Stakeholders represent the missing owner and it is the board members who should be representatives of different stakeholders of the organization (Siebart 2005, p. 859). Consequently the board is accountable to their stakeholders. According to the definition of Freeman a stakeholder is *"any group or individual who can affect or is affected by the achievement of the organization's objectives"* (Freeman 2010, p. 46). Critics to the stakeholder theory say that it is not possible to consider all stakeholders as equal important (Sternberg 1996, p. 4). The question is which stakeholders are to be considered as important for the non-profit-organization. Within the literature there exists no unique suggestion to find out the important stake-

holders for an organization. The first step is the knowledge of "who" are the stakeholders of an organization. A brainstorming will provide a lot of stakeholders who will be clustered in a second step.

Speckbacher has developed a valuable method to reduce the number of stakeholders. First he narrows the general definition of Freeman by using the theory of incomplete contracts: A stakeholder of an organization is a party, a group that contributes specific resources that create value for the organization. There are at least two groups of stakeholders: primary stakeholders and ordinary stakeholders. Primary stakeholders are those, whose contractual claim on their return from the investment is incompletely specified and hence unprotected. To protect them from this "hold up" Speckbacher suggests to endow them with residual rights of control (Speckbacher 2008, pp. 302). Following table shows a corresponding overview with primary and ordinary stakeholders applied to Alpine Clubs and their umbrella associations.

Table 3

Primary and ordinary stakeholders of umbrella association of Alpine Clubs

Stakeholder Group	Stakeholders	Right to make decisions
Primary stakeholders	Voluntary Board	yes
	The sections	yes
	Federal Committee	yes
	Regional Committee	yes
Important ordinary stakeholders	Members – directly for selected services according to the principle of subsidiarity	no
	State's authorities for subsidies	no
	Friendly Alpine Clubs	no
	CAA – Club Arc Alpin	no
	Several sponsors	no
	Interested public domain	no
	Various stakeholders for any division in the head office, e.g. Mountaineering	no
	National important associations	no
	etc.	

Source: author's construction based on Speckbacher, 2008

The integration of stakeholders first is again along the constitution: The sections as members of the umbrella association can execute their residual right of decision making in the General Assembly of the umbrella association. There is a difference to the individual members of the sections. If they are not satisfied with the provision of services of their section, they may leave the club or change to another section. If the sections are not satisfied with the provision of services of the umbrella association they cannot easily leave the club because they may lose the status of being a section of the Alpine Club and the numerous services. Without them they are not able to offer the services on a professional level to their members.

The connection between section and the umbrella association is very crucial within this system: On the one side the sections are dependent on the provision of services of their umbrella association. On the other side it is the sections which are responsible to attract new members. The umbrella association will support by advertising material but it is above all the services of the local sections which motivate members to stay or leave. A so called "hold up" (see above) is not only on one side of this "contract", it is twofold. Sections get a lot of professional information from the umbrella association all over the year. In preparation of the General assembly they are also get the balance sheet and the budget. Nonetheless the

influence of the sections as members of the umbrella association is limited to their voting rights. It is above all a limitation that large sections cannot overrule small sections with their wishes and requests.

The possibility to discuss strategic lines deeply is not given on the general assembly because of the large number of members. Nearly all Alpine Clubs under research have therefore installed an additional body, the Federal Committee. The members of this committee have to represent the sections of special regions so the leaders of these Regional Committees are also members in it. Within the Federal Committee topics with importance for the total Club are discussed. Its decisions are mostly recommendations to the General Assembly and make the sections sure that decisions are going into the right direction. Besides this it has also several formal responsibilities.

As discussed primary stakeholders have their rights to make decisions. But there are a lot of ordinary stakeholders being important for the cooperation and communication within the Clubs but along the constitution they have no rights to make decisions. It may be dangerous to integrate further stakeholders in the decision making process but there are already installed bodies, e.g. the Federal Committee where some of these stakeholders could take part at least in communication and discussion of several topics. The question is which groups of the listed ordinary stakeholders should become a member within the mentioned Federal Committee. It could be helpful to install a supervisory committee (Madrian 1998, p. 205) where these groups of stakeholders could take part in communication and discussion.

Above table shows a lot of stakeholders with divergent expectations which should to be managed to preserve the effectiveness. It is not enough for the umbrella association to know who are their stakeholders, their "stakes" and their role sets (Freeman 2010, pp. 57), even after the reduction of their number. It has to take care of the relationship to them. Communication, information to stakeholders as they represent the missing owner is vital to the system. At the end of the day the performance of the umbrella association is based on the responsiveness to their stakeholders' concerns (Balser, McClusky 2005, p. 296).

5. The umbrella association and corporate governance – conclusion

The umbrella association plays an important role within the system of Corporate Governance, but cannot stand alone for corporate governance in its Alpine Club. It has to enroll its sections as only the total club can credibly represent this set of rules to the public. In public the community of solidarity, i.e. the umbrella association together with its sections is not divided into these parts as people are not insider of this system.

The voluntary governance throughout the system is a challenge within this "nonprofit governance". Alpine Clubs are very successful these days, they steadily grow and may have to change their structure above all those of the umbrella association. The biggest Alpine Club under research will be the first to deal with the question if the voluntary board of the umbrella association is still the effective form of governance. The outcome of such a change might be not conceivable for the total system as the voluntary board is today the legitimacy for the motivation working voluntarily in any function in the sections. It also legitimates the work of the head office done by paid staff. A supervisory board by volunteers could become an important link between the umbrella association and the sections.

The discussion within the umbrella association is also about the division of power. The formal power is clearly defined in the constitution and also formally executed this way. The reality might be upside down as the complexity of some topics need professional know-how which cannot be provided by honorary managers. The laid down function of the voluntary board as governing body of the umbrella association is just as well to discuss as the decision making power by the sections as members at the General Assembly.

The big value of the discussion of corporate governance in Alpine Clubs is to have a deep look onto the historical grown system, its strengths and weaknesses. It has not yet been started officially. In the end

the aim might be a corporate governance code for Alpine Clubs. The first step might be an evaluation of the system to answer the question if Alpine Clubs are already prepared for corporate governance or if there are some adaptations necessary to the principle of "direction and control".

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SUSTAINABILITY ACCOUNTING: A SUCCESS FACTOR IN CORPORATE SUSTAINABILITY STRATEGY

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Abstract. Over the past decade the requirements of sustainability were involved into the strategy of many companies. Besides the economic goals they also determine the exemplary social as well as environmental considerations. However, as several empirical researches show that their environmental and social performance only slowly improves. Therefore the application of the appropriate management methods and tools are needed to measure of the economic, social and environmental impacts of the strategic decisions and activities within the organization.

The aim of this paper is to study the interaction between the sustainability strategy and sustainability accounting as its key success factor. First, it starts from the conceptual definition of the sustainability and process of the sustainability strategic management. Then, the article introduces the new approaches for the appraisal of the strategic performance beginning with the conventional accounting, through the environmental accounting, to the sustainability accounting. Finally, relating to this a case study demonstrates the role and contribution of the sustainability accounting to the successful implementation of the sustainability strategy in a Hungarian company.

Sustainability has become a kind of 'mantra' in the 21st century. It includes the promise of development towards a more equitable society and a richer world in which the natural environment and cultural artefacts are preserved for future generations. *Sustainable development* is a challenge that today's companies also have to address as it significantly affects their strategy. While the idea of sustainability is vividly present in the life of many companies, they still cannot state about themselves that their operation is based on the principles of sustainability due to the lack of sustainability-related *strategies* and the knowledge needed to implement sustainability management *processes* and *methods*.

1. The process of sustainability strategic management

The dimensions and principles of sustainability open an opportunity for a conscious creation of sustainability strategic management processes together with the formulation and implementation of a *sustainability strategy*. According to Bieker's and his co-authors' wider interpretation, it gives a special emphasis to the statement that *corporate strategies have to meet the expectations of the company's present and future stakeholders without making any crucial compromises in terms of skills and*

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capabilities (Bieker et al, 2002). Kerekes and Kindler (1997) came up with a more accurate formulation, according to which "sustainability strategy puts an emphasis on such responsible corporate activities that regard the issue of sustainability as development and growth opportunities for the company, and as such, they are enforced in all fields of activity." It means that a certain system of advantages and disadvantages should be developed by which corporate actions can be steered in the desired direction.

Sustainability strategic management enables companies to develop and apply strategic methods and tools by which environmental protection and people's well-being can be ensured. This notion is expressed in Crutzen's (2011) definition as follows: "*On the one hand, sustainability strategic management establishes a link between social, environmental and corporate management and the strategy itself, on the other hand, integrating the social and natural environmental information to the company's management information and sustainability report*".

1.1. Strategy-making

Three major elements have to be integrated in the process of sustainability strategic management at the same time: *strategy-making*, *strategy implementation* and *feedback*. The first phase of the *strategy-making process* mainly serves the better foundation and effective implementation of *decisions having strategic importance*. In doing so, *the internal changes of a company* have to be determined *for the sake of sustainability* while more profoundly understanding the nature of social and environmental changes. In order to meet this requirement more easily, it is advisable to divide the complex work of formulating a sustainability strategy into four distinct phases which are the following: the definition of strategic inputs, strategic analysis, creating strategic alternatives and evaluating and selecting strategic alternatives.

1.1.1. The definition of strategic inputs

The first three elements of *strategic inputs* − the company's mission, values and vision − describe the company's *internal conditions*. These are linked to the company's strategic intent together with its strategic target system. The company's ability to realize its intent and reach its strategic goals of sustainability mainly depends on the influence and the *external* changes of social and environmental expectations.

Determining these strategic inputs in advance often proves to be difficult mainly because a sustainability strategy, at least in an explicit form, is not available.

1.1.2. Strategic analysis

The analysis of the company's *current and future situation*, *on the one hand*, means the timely recognition of both social and natural environmental requirements and taking into account the anticipated increasing pressure coming from stakeholders, which requires the continuous analysis of regulations as well as the values of the social and natural environment (*external factors*), *on the other hand*, it also assumes that the company is aware of its own internal resources and activities (*internal factors*) and it continuously evaluates their social and environmental impacts.

1.1.3. Strategic alternatives

During the strategic analysis mentioned in the previous point, the internal and external factors determining the company's sustainability strategy can be examined along with its capabilities and opportunities. Based on the results of the analysis, it becomes possible to formulate a *deliberate strategy or strategic alternatives*, explicitly expressing the company's basic position on the subject of sustainable

development. The five types of competitive sustainability strategies are defined by Bieker et al (2002) as follows:

The aim of *Strategy "safe"* is to reduce, avoid or handle the company's overall operational risk.

The aim of *Strategy "credible"* is to preserve and enhance credibility and corporate reputation.

Strategy "efficient" is designed to improve the social or environmental effectiveness of business processes.

Strategy "innovative" is aimed at increasing the range of socially and environmentally-friendly products and services.

The aim of *Strategy "transformative"* is to develop new markets and restructure already existing markets.

These five strategies are applicable both on corporate and divisional levels, furthermore they can also be successful with certain products or technologies. However, this classification seems idealistic as these strategic alternatives may overlap in practice, and no clear distinction can be made between them.

1.1.4. The evaluation and selection of strategic alternatives

In the above, we quickly followed the way in which a company acquires accurate knowledge on its macro-and microenvironment, its resources and its intentions, and we identified the possible strategic alternatives. For choosing from the range of strategic alternatives, it is not sufficient to define the possible directions of strategic development or strategic options, a system of criteria helping the managers responsible for making strategic decisions has also to be designed.

1.2. The implementation of the strategy

The second main phase of the process of sustainability strategic management is the implementation of the strategy which typically involves such tasks as action planning, defining the necessary resources, organization restructuring, management and leadership. Due to the limited space, we set aside the detailed description of these activities and we do not mention the *context* that mainly influences the introduction of strategies, either (small-sized companies, multinational and manufacturing companies, public utility companies as well as voluntary organizations).

1.3. The sustainability performance assessment, strategic feedback

For an organization, an essential part of the implementation of the strategy is to "keep its eye on the target". It means the *monitoring, evaluation and feedback* on the sustainability performance.

Monitoring and evaluation are intended to adjust the organization's sustainability strategy to the ever-changing conditions and to the changing social and environmental demands. The *strategic feedback* is an information on the changes in certain subareas or in the whole organization of the company as well as on the changes of the social and natural environment, and it has the potential to start adapting or redefining the sustainability strategy. This feedback closes the circle of sustainability strategic management and provides *the initial impetus* for starting the redefinition of the necessary strategy. This feedback is the basis for the *motivation* related to the strategy, thus enabling the organization to *continuously improve its performance*. All of this can only be conceivable if the appropriate information is available for the management on the course of the implementation of the strategy, the achieved sustainability performance and the occurring problems. In the modern organization of a company, a *sustainability accounting system* gives the basis for receiving information on monitoring, evaluating and giving feedback, its development history is briefly described below.

2. A new approach to strategic performance evaluation − sustainability accounting

In the course of sustainability strategic performance evaluation, companies need to build up and operate an accounting information system that meets the requirements of sustainable development. The development stages of accounting towards this direction are described below.

2.1. Changes in traditional accounting

Traditional accounting systems are information systems supporting the daily operation of economic organizations, with the purpose of observing, collecting, recording, measuring, classifying the economic events that have an influence of the company's assets, financial and earnings position, together with their impact. Therefore, the aim of accounting for stakeholders (owners, managers, creditors, inspection bodies, etc.) is to provide accurate information for making future decisions.

In the light of corporate sustainability, however, the generally accepted accounting principles, the range of those demanding accounting information and the content of accounting information all have to be reinterpreted.

2.1.1. A new approach to the going concern principle

One of the most fundamental principles in accounting is the going concern principle, which states that *"in the course of book-keeping and preparing the accounts, it must be assumed that the enterprise will maintain its operation in the foreseeable future, will be able to carry on its activities, and a significant decrease or closing down its activities is not expected for any reason."* (Act C on Accounting § 15 (1), 2000). This wording suggests that only a stable external environment allows the companies' activities on an unchanged continuation, and assumes what is also emphasized in Aras and Crowther's (2008) work, namely, observing the going concern principle results in keeping the companies' operations maintainable. However, a company's external environment should include the business (economic) environment in which it operates, the local and regional social environment in which the it is located, and the natural environment, which, in turn, gives a natural limit to the company's operations (Hódi Hernádi, 2012).

2.1.2. Reconsidering the content and the range of those demanding accounting information

Since the information provided by accounting systems are suitable for preparing and establishing decisions, that is why it is important to make the demanded information available. However, it would be reasonable to give an extended interpretation on the range of stakeholders. Therefore, according to Hódi Hernádi (2012), the population, meaning society itself, the natural environment, especially at local and regional levels, as well as future owners, employees, the next generations, and the future state of the natural environment all have to be taken into account. After all, the point of sustainability focuses on their needs in order to make all those decision-making opportunities accessible to them that are currently in place for present-day stakeholders.

The fundamental task of accounting is to provide reliable and real information on the operation of the company for market participants. However, different information is needed by different stakeholders. Therefore, an accounting information system should be established that is capable of collecting, organizing the social and environmental information necessary for making various decisions, and is capable of presenting and interpreting them to both internal and external users in a reliable and accurate way. In response to these changing requirements, traditional accounting systems have to change and improve accordingly. The next step of this improvement is the development and the implementation of environmental accounting systems.

2.2. The characteristics of environmental accounting

The concept of *environmental accounting* and reporting appeared in the literature nearly a decade ago. According to Schaltegger and Burritt's (2000) definition, *"environmental accounting can be defined as a field of accounting that includes those activities, methods and systems that record, analyse and report on the environmental problems of a given economic system or on the economic impacts of environmental protection activities"*. Environmental accounting systems basically consist of two parts, one of them deals with the environment-induced financial impacts, i.e. environment-related expenditures and savings, while the other part is concerned with the environmental impacts of the company's business, that is, how the natural environment changes as a result of the company's operations (Pál et al, 2006). Environmental accounting systems present the above-mentioned effects both by measuring in natural units and expressing in terms of money, as − opposed to traditional accounting − non-monetary and qualitative factors are also strongly emphasized here.

Thus, basically there are four areas of environmental accounting (Csutora and Kerekes, 2004): *internal ecological accounting, environmental management accounting, external ecological accounting*, and *environmental financial accounting*.

"So ecological accounting facilitates establishing a connection between environmental and economic performance together with the presentation of the interaction between these two types of performances" (Pál, 2011).

By focusing on the company's financial and environmental dimensions, environmental accounting systems ignore the impact of corporate activities on society. However, according to the conclusion of the present paper, all three dimensions must be taken into account in the development of accounting systems, giving way to sustainability accounting systems.

2.3. The theoretical framework of sustainability accounting

Borrowing the notion made by Schaltegger and Burritt (2010) *sustainability accounting* is the peak of accounting. Sustainability accounting, reaching far beyond environmental accounting, examines business operations by putting all three − economic, social and environmental − dimensions into its focus, and most importantly, it emphasizes the interaction of these dimensions in accordance with corporate sustainability.

The most widely accepted definition was presented by Schaltegger and Burritt (2010):

"Sustainability accounting describes a subset of accounting that deals with activities, methods and systems to record, analyse and report:

- *− First, environmentally and socially induced financial impacts,*
- *Second, ecological and social impacts of a defined economic system (e.g., the company, production site, nation, etc.), and*
- *Third, and perhaps most important, the interactions and linkages between social, environmental and economic issues constituting the three dimensions of sustainability."*

The development of a sustainability accounting system includes the following five elements: the aim of operating a sustainability accounting system; the principles and requirements of operating the system; methods and devices for data collection, data record, measurement and analysis; sustainability accounts and reports; and the qualitative characteristics of the resulting information (Lamberton, 2005).

2.3.1. The aim of sustainability accounting systems

Sustainability accounting information systems are *primarily designed to* evaluate the performance of the economic organization in terms sustainability, i.e. paying special attention to its economic, social and

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environmental aspects. Similarly to traditional accounting, sustainability accounting can also be divided into two areas according to the external or internal users provided with the necessary information.

The external stakeholders' need for information focuses on the accountability of the organization's operations both in social and environmental terms. In addition to this, sustainability accounting information systems provide internal stakeholders, the management with information relevant to the decision-making, thus playing an important role in strengthening the internal management of the organization. As it is possible to determine the effects and consequences of the measures taken to achieve sustainability objectives in the course of performance evaluation, it gives a good basis for the preparation of a possible intervention, that is, for controlling and feedback.

2.3.2. The principles and requirements of operating a sustainability accounting system

During the development of a sustainability accounting system, some important *principles* and *requirements* should be taken into consideration that specify the methods and devices applied in the course of data collection, measurement, and evaluation, as well as the content and the process of reporting.

As already mentioned, with the reinterpretation of the going concern principle, existing *accounting principles* also gain new meanings both in social and environmental terms.

The following principle is *the interpretation of sustainability at a corporate level*. It is an important issue because it determines the framework of the whole system. The company's sustainability goals, the compound realization of economic, social and environmental sustainability raise the issue of their integrated measurement and performance evaluation. Due to the complexity of the company's sustainability performance evaluation, *the boundaries of the sustainability accounting system* have to be clearly marked in a way that it still could be managed by the company.

The following essential requirement is the selection of the proper *period for accounting, evaluation and analysis*, that is, the determination of the period in which the company is evaluated in terms of sustainability.

The evaluation of the social and environmental impacts caused by corporate activities or the entire life cycle of a product requires the application of non-monetary, qualitative *indicators* beside the usual monetary indicators for measuring economic or financial performance.

2.3.3. Methods and devices for data collection, data record, measurement and analysis

The sources used for *collecting and recording data* are wide-ranging and abundant, however, in the selection process some cos-benefit aspects should be enforced.

Based on the collected economic, social and environmental data, it becomes possible to measure the company's sustainability performance, and it requires *a variety of benchmarks* and *evaluation methods*. Some of these are the cost estimation of decision alternatives regarding corporate sustainability (Bebbington and Gray, 2001), input-output analyses, life cycle analyses, and the mapping of social and environmental impacts. One of the most complete methods available for the management is the Sustainability Balanced Scorecard (SBSC), an integrated indicator system aimed at evaluating the company's performance (Fülöp and Hódi Hernádi, 2012), which is the basis for decision-making and monitoring the realization of objectives.

Considerable attention should be paid to the evaluation of environmental protection measures, the costs of social and environmental liabilities in order to make the company accountable in terms of sustainability.

2.3.4. Sustainability accounts and reports

The fourth part of sustainability accounting focuses on distributing both quantitative and qualitative information to users. Here, there are two key questions to be answered. What is the appropriate form and content of a *sustainability account*? How often should these *reports* be prepared and published?

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Sustainability accounting information are presented by the SBSC including a wide variety of performance indicators, and other sustainability reports based on the guidance of the Global Reporting Initiative (GRI).

Such reports should be made regularly through the entire lifetime of a product. It is reasonable to present and publish the company's accounting information related to sustainability on its website. The sustainability of the company's accounting information should be presented and published on the website, thus these continuously updated information on sustainability are made available promptly to the stakeholders.

2.3.5. The qualitative characteristics of information on sustainability

The information provided by sustainability accounting systems have to meet a number of important requirements. These are based on the *characteristics of* traditional accounting *information*, as well as on the guidelines of GRI sustainability reports. The two highlighted features are transparency and controllability. *Transparency* demands the complete publication of processes, procedures and assumptions (GRI, 2002). *Controllability* requires that the recording, organizing, analysis and publication of the presented data and information should be done in a way that enables auditors to certify data reliability (GRI, 2002).

The further requirements concerning sustainability information are: completeness, credibility, neutrality, clarity, materiality, timeliness, comparability and readiness for interpretation in the context of sustainability.

It is reasonable for companies wishing to comply with the requirements of sustainability to design and operate sustainability accounting systems since it is a kind of financial language for decision-makers.

2.4. The relations between sustainability strategy and sustainability accounting

Sustainability accounting systems must primarily meet the needs of the top management. Accordingly, the function of a sustainability accounting system is to identify, collect, analyse, and communicate feedback on the company's economic, social and environmental performance. In order to achieve this

- as a first step, the *identification* of those strategic and operational indicators should be carried out that are crucial to the success of the business and the creation values for stakeholders (Schaltegger and Wagner, 2006). In other words, in accordance with its sustainability strategy, the company systematically has to choose the appropriate goals of sustainability performance indicators, their structure and their information needs also should be planned.
- In the next step the required quantitative and qualitative data *should be collected* that include social and environmental costs, expenses and risks, then the financial benefits and savings of sustainable business operations, and finally, the natural effects on the society and the environment. These can be acquired either directly or indirectly by taking cost-benefit aspects into consideration.
- The third step is *to analyse* the company's sustainability performance, and then to monitor whether the company has met its strategic and operational objectives or not, and whether it has revealed the reasons for achieving or failing them.

Sustainability accounting systems thus support sustainability strategies, where they provide appropriate, reliable and real information on the sustainability results of the company. Apart from supporting managerial decision-making, the information provided by sustainability accounting systems can also be utilized in other areas that give a basis for reports on sustainability. The major corporate as well as micro- and macroenvironmental benefits resulting from operating a sustainability accounting

system are summarized in Table 1 as important contributing factors to the development and implementation of sustainability strategies.

Table 1

The benefits of operating sustainability accounting systems

Corporate benefits	Micro- and macroenvironmental benefits
• Presents the impact of sustainability performance on balance sheet earnings; • Maps cost-saving opportunities, revenues and financial advantages originating from sustainability-oriented operation; • Evaluates, handles and reduces social and environmental risks, liabilities, cost and expenses; • Creates more favourable conditions in the course of economic or investment negotiations, widens the range of potential investors; • Helps to determine the cost of production as well as set the price of a product more accurately; • Support establishing cleaner production projects, the evaluation of investments (by mapping the social and environmental effects of investment decisions); • Facilitates the appearance on the list of 'eco' suppliers; • Facilitates tracing energy and material flows more accurately, contributing to increased resource efficiency; • Helps the management to make responsible decisions; • Fosters the social and environmental awareness of employees while performing their tasks and strengthens their commitment and motivation.	• Satisfies the information needs of external users; • Makes better relationships with the stakeholders; • Ensures and improves the legitimacy, credibility and the reputation of the company; • The public recognizes corporate account-ability, transparency and trustworthiness in social and environmental issues, thus impro-ving the company's general acceptance; • Facilitates the comparability of the company's sustainability performance to other companies or industrial sectors; • Promotes the application and improvement of sustainability accounting by acquiring knowledge on the best practices; • Contributes to sustainable development on a corporate, national and global level.

Source: authors' calculations, 2013

3. The overview of the operation of a sustainability strategic management and a sustainability accounting system

The following case study illustrates how a sustainability accounting system can be used to promote the successful implementation of a sustainability strategy in one of Hungary's largest chemical companies. *Tiszai Vegyi Kombinát Public Limited Company* has 1114 employees and an annual sales revenue of 365185 million HUF. It is a production company which makes ethylene and propylene by processing naphtha and gasoline as raw materials.

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3.1. The company's current strategic position

Sustainable development is an integrated part of the company's strategy as well as its daily operation. Consequently, there is no separately handled sustainability strategy or sustainable budget strategy, instead, each and every program is based on concept of sustainable development.

According to this, the company has determined the following six areas of concern within the three dimensions of sustainability for the coming period between 2011 and 2015: economic sustainability, health and safety, communities, human resources, environment and climate change.

TVK pays special attention to creating a cleaner, better environment, safe and healthy working conditions, for which it regards prevention and responsible care as a basic condition. Thus, the basic principles of sustainability and environment-centered thinking are deeply embedded in the company's long-term strategy.

3.2. The structure of TVK's sustainability accounting system

The company is aware that nowadays the benchmarks of long-term success and social acceptance cannot be observed only in economic indicators. Its activity is increasingly evaluated in the light of the company's ability to reduce the negative effects on both the environment and society. This goal is served by the development and operation of a sustainability accounting system.

3.2.1. The aim of TVK's sustainability accounting system

TVK's sustainability accounting system contributes to the long-term realization of corporate sustainability by providing a well-established and applicable *planning and decision-making process* as well as ensuring an *effective controlling system*.

Its sustainability accounting system evaluates the efficient implementation of the formulated sustainability strategy together with achieving the designated objectives, furthermore, it encourages continuous improvement efforts, and helps to increase the level of *awareness* and *transparency*.

3.2.2. The principles and requirements of operating TVK's sustainability accounting system

Every industrial sector and every corporation have different objectives and, therefore TVK is not exceptional in individually identifying and defining its objectives and tasks in terms of sustainability, which reads as follows: *"Sustainable development is a corporate commitment for us that is aimed at equally integrating economic, environmental and social factors into our daily business operations, maximizing long-term value and keeping the license we received from society to carry on our operations."*

As a chemical company, it has a significant impact on the environment and society, the negative consequences of its operations are reduced by applying the *principles of precaution and responsible care*.

The company marks the *boundaries* of its sustainability accounting system following the guidelines made by is the UN's Global Compact and the GRI. In practice, it means that the company defines its strategic and operational objectives within the three dimensions of sustainability, and evaluates its sustainability performance.

The *evaluation period* of the company's sustainability performance is basically determined on a yearly basis. During product development, however, the "cradle to grave" concept also appears, that is, the health and environmental effects of these products are taken into account through the whole product life cycle.

The currency unit employed by TVK, according to its size and international influence, is expressed in million HUF or in a thousand Euros. In addition, metric tons are commonly used as a natural *unit of*

measure, partly for measuring the weight of the produced goods and partly for measuring environmental impacts.

3.2.3. Methods and devices for data collection, data record, measurement and analysis

The nature of information its sustainability accounting system is required to collect is derived from TVK's sustainability strategy and its objectives. In most cases, the indicators are based on measurement and calculations but sometimes it also happens that they are based on estimations depending on the subject or on the premises.

The operational environment and the company's performance are constantly analysed and evaluated in order to fully meet the shareholders' expectations.

Economic performance is evaluated by the quantification of environmental and social costs and revenues, the application of risk matrices, life cycle analyses and benchmarks. The impact on society is examined with the help of stakeholder analyses and social efficiency indicators. The company's environmental performance is monitored by applying condition test methods, eco-efficiency indicators, and input-output analyses. Since TVK pays special attention to developments contributing to sustainability, it measures the percentage of the realization of such investments together with their average level of preparedness.

For the integrated evaluation of corporate sustainability performance the Sustainability Balanced Scorecard is used. Apart from this, the company examines its compliance with the requirements of the GRI, its position in the ranking of sustainability and CSR, and it also appears in the definition of the Dow Jones Sustainability Index and the Oekom Research index.

3.2.4. TVK's sustainability accounts and reports

From the above, it is obvious that TVK is committed to sustainable development and communicates its achievements to the stakeholders. An annual report is issued on the company's sustainability performance. Although monthly and quarterly reports are issued for to the board of management, they usually focus on the financial situation of the company, lacking any social and environmental information. The evaluation of sustainability investments and projects is an exception, provided that they report whether their realization is carried out in due time, in the required quality and below the originally approved budget.

The company developed a standard form for its reports, ensuring the comparability of its accounts. In terms of economic and financial issues, detailed information can be found in the *Annual Report*, while more can be read about the company's sustainability performance in its *Report On Sustainable Development*. It has to be emphasized that the company's Annual Report also includes data reflecting its sustainable performance in an integrated way.

3.2.5. The qualitative characteristics of information on sustainability

By providing as many detailed and accurate industry-specific information as possible, TVK aspires to the greatest level of transparency in order to minimize the risks related to the anticipated economic, social and environmental changes and developments, and to ensure the comparability of the results. Therefore, the accounting information on its sustainability performance have to be *relevant, complete, comparable, accurate, timely, clear and reliable* and they equally have to be concerned with both the positive and negative effects (a *balance* should be sought after), they have to be in line with the stakeholders' expectations, they have to present *sustainability connections* as well.

As a summary, the logical framework of TVK's sustainability accounting system is shown in Figure 1.

TVK'S SUSTAINABILITY ACCOUNTING SYSTEM

1. Targets

– Planning, preparation for decision-making, monitoring
– Awareness and increasing the level of transparency

2. Principles and requirements

– Maximizing long-term value creation
– Precaution and the principle of responsible care
– Analysis period: year, the concept of "cradle to grave"
– Unit of measurement: million HUF, thousand Euros, metric tons

3. Methods and devices

– Environmental and social costs and revenues
– Risk matrix
– Life cycle analysis
– Social and environmental efficiency indicator
– Sustainability Balanced Scorecard

5. The characteristics of information

– Completeness
– Comparability
– Accuracy, timeliness
– Clarity
– Reliability
– Sustainability context

4. Accounts and reports

– Standard forms (Report On Sustainable Development, Annual Report, company website)
– Frequency of issues: year

Source: author's construction based on Leskó's interview, 2013

Fig. 1. **The logical framework of TVK's sustainability accounting system**

3.4. The result of TVK's sustainability strategy and its accounting experience

In order to maintain and reinforce TVK's regional petrochemical leadership, it is not enough for the company to implement sustainable development investments and develop a good relationship with the society, but it also has to quantify and evaluate its sustainability performance - as it is concluded in TVK's Report on Sustainable Development (2011).

It is essential for the management of the company to receive an accurate picture on the realization of its strategic sustainability objectives, the financial aspects of the company's sustainable operation, and the environmental and social effects of TVK's activities and products.

As it was shown in its sustainability report in 2011, the most effective results were achieved in relation to climate change and the environment, while the company was the least effective in the course of implementing strategic objectives regarding economic sustainability.

With TVK's increased activity and environmental awareness in relation to sustainability, the role of sustainability accounting information has become more appreciated, which is predominantly provided by the corporate sustainability accounting system. The company's accounting system establishes a connection between social and environmental issues and financial opportunities, furthermore it controls, maintains and enhances the company's economic, social and environmental capital, which may result in a significant competitive advantage. This is how the application of TVK's accounting system contributes to the company's sustainable operation and the successful implementation of its sustainability strategy.

4. The outcomings of the study and its contribution in the field of the management sciences

The novelty of the study could be evaluated or summarized from three aspects:
1. We further developed the general process of the strategic management according to the principles of the sustainability starting from the formulation of the sustainability strategy, through its implementation, to the performance assessment of the strategy. We identified the activities, tasks of the different sections of the process with the adequate modern management measures, and we described the determinants of the selection.
2. We overviewed the developing phases of the accounting in the last two decades from that aspect what extent the system integrates the principles of the sustainability into itself: traditional accounting (economic factors), environmental accounting (economic and environmental factors), and sustainability accounting (economic, environmental and social factors). We made a comparison of the characteristics of the different accounting information systems in order to make easier the selection of the measures and tools using them for the strategy performance assessment.
3. We presented the practical application of the conceptual model of the sustainability accounting system in a company case study, moreover we determined the relations between the sustainability strategy and sustainability accounting, and we listed the company and micro-environmentally benefits of the system.

Obviously, all of these results could be seen as the beginning steps of a new research programme that we should improve from both theoretical and practical point of view in the near future.

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PARTNER SELECTION PROCESS IN FRANCHISING

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Abstract. Franchising has developed into a major expansion strategy for different types of businesses, covering many sectors, mostly services. A franchising network builds on strong partners and a structured headquarters planning. The major problem discussion in this paper is finding the right business partners. This task has been a challenge for many businesses in the past and present, and especially for companies in the franchisor sector. Adequate selection allows for smooth and mutually benefitting relations, which usually turn into profitable and lasting alliances. Contrary to the right personnel decision, wrong decisions often arise from less strategic processes, and quick and unwisely taken decisions by the franchisor, due to lack of understanding of the problems to be solved or a lack of standardization in place. The aim of this research is to support pre-decision-making and to provide a summary of researched ideas on better future outcomes, when selecting a prospect. This analysis plays an important role in the quest for improving selection processes, company's self-assessments, and amendments for existing selection processes. The method used in this paper is content analysis by comparing a collection of articles, describing international franchise processes. Different industries and distinct companies reveal different criteria and strategies. The time frame of nine studies compared in this article starts in the late 1980s and ends in 2011 and covers the North American and European continent. As result, the author concludes from the analysis that depending on the businesses studied, not only country differences but also a company's strategy, and business sectors play a vital role.

Key words: *franchising, selection process, partner search*

JEL code: M16

Introduction

Successful franchising networks can be established when the franchisor recruits adequate franchisees, who provide the necessary prerequisites that fit the respective system -as in real life, partners need to match for a mutually benefitting operation. Mismatches create various problems for all parties involved and consume financial and temporary scarce resources. The key idea of recruiting an adequate partner is outlaid and examined from different perspectives as stated in the literature. This contribution finds answers to the following research question: What major topics are included in a successful franchisee selection? The aim of this research is to support pre-decision-making and to provide a summary of researched ideas on better future outcomes, when selecting a prospect. The research method is a content analysis with a comparison of a selection of articles written over decades on the problematic topic of the

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successful franchising. The findings are summed up in a critical overview of the presented research covering nearly three decades. Direct comparisons of articles are rarely found, as research in this particular area of franchising is scarce. Therefore, compelling this paper is a relevant addition to existing literature and an informative work for future research experts. The compared articles are taken from academic online databases and include publications in two languages, German and English. Limitations of the analysis are the timely marked periods from which the selected articles were chosen. An additional limitation is the theoretical examination of the presented sources composed in a literature review. To increase the overview of the researched topic a larger number of publications from an extended time frame should be taken into consideration.

The ancient French vocabulary introduces the term franchise, as it is known today: "franche, meaning free or exempt" (Lafontaine, Durlauf and Blumer, 2008). It used to be a privilege given out to a party for special trading rights by a sovereign institution of the region or country. The exclusive right was exchanged for a regular or initial fee, called royalty. Although it might not be obvious, one of the largest and oldest institutions for allowing franchise rights is the government, which generally owns monopoly rights or at least major shares of the communication structure or construction rights of a country. These monopoly rights are part of the safety strategy of a nation. "Franchising typically refers to contractual relationships between legally independent firms, where one firm pays the other for the right to operate under the latter's brand, or sell its product in a given location and time period. Franchised firms account for a large portion of commerce in the United States and around the world" (Lafontaine, Durlauf and Blumer, 2008). This definition explains the interrelation and interdependence of two parties bound by a contract. The good or service agreed on can nowadays be from any business branch and be traded nationally or internationally. The idea of the system is to expand the business rapidly with the help of others who buy the business idea. Vertical coordination and a uniform appearance of the interdependent franchise partners combined within a relatively flexible and slim company construct are necessary basics for such a specialized network system (Ahlert and Ahlert, 2010). In order to grow the business, partners have to be found and partnerships need to be established. However "picking winners is not a simple task and the difficulties inherent in the situation tend to be compounded by a number of additional factors" (Stanworth, 1995). Brookes and Altinay (2011) call the right partner selection "paramount" which can lead to failure if not executed wisely and divergence of goals partners have should have defined together during the selection process. The suiting combination of personal and business characteristics of a franchisee make up the success or failure of the franchisee's undertaking (Ramírez-Hurtado, Guerrero-Casas and Rondán-Cataluña, 2011). These commonly seen factors by rapidly growing distribution system selection processes are the ones to be compared and analysed in this paper.

Franchising has ancient roots and has survived centuries of ever changing business environments. It has been turning into a vital part of our economies, spreading all over the world. The following data shows the emerging importance of this type of network. In 2010 in the US, franchising activities made up over 11% of all nonfarm work (Blair and Haynes, 2009). Nearly 765,700 franchisors and franchisees created over 7.6 million jobs which managed an output of 706 billion dollars (Norton, 1988). In Germany around 463.000 people working for a franchisor or franchisee created a turnover of about 55 billion Euro in 2010 (Harrison and Haller, 2011) which rose from 22 billion Euro in the year 2000. While the service sector has the highest share of franchised businesses with 46%, second place is retail, third food and beverage and fourth craftsmen with 32%, 15% and 7% respectively. With a tendency of multi-unit ownerships it can be estimated that 20% of all franchisees own 50% of all franchises (Blair and Haynes, 2009). These figures give an insight of the importance of the business form and its potential in the future. To benefit from this trend, adequate tools have to be explored.

Based on the above-mentioned criteria, research in the franchising field is important and needs further attention. Acquiring new franchisees is a regular challenge and can impact the reputation of the systems. It is further an influential factor of the participating parties of the system (Bröker, 2004). The attention

paid to the franchisee selection process in order to expand these systems in a healthy and efficient way, is the topic of this paper and a frequently asked question in every day business life.

Research Results and Discussion

The selection process when expanding a franchisor's network is vital and decisive for the future. The process is dynamic and can depend on a company's age, size and business sector. Therefore, the life cycle of a franchisor influences also the emphasis on different characteristics in franchisees. The combination of wanted characteristics of a potential franchisee reflects the type of strategy a company uses (Rahatulaah and Raeside, 2009). Based on a franchisor's age the selection criteria for franchisees differ. Nascent firms emphasize selecting a culturally compatible partner with financial ability to pay all necessary fees, flexibility to work long hours, technical capabilities, and managerial abilities. Systems of six to eight years' existence prefer technical competence and references of past work experience. Compared to that, older franchise network systems look for financial and managerial abilities in their future partners to secure gains and add to the company's further years of operations (Rahatulaah and Raeside, 2009). Based on a franchisor's size the selection criteria slightly change. Smaller franchisors look for franchisees with managerial ability, trustworthiness, and work experience. They emphasize the availability of franchisee's financial resources and flexibility to work long hours due to scarcity of resources. In addition they seek another factor: cultural compatibility. In contrast to small firms, very small firms seek partners foremost with experience to increase their growth rate and perceived experience of the network. Medium size franchisors prefer managerial and entrepreneurial abilities of their potential new network entries. They also stress flexibility in working hours. For large franchise systems selecting new franchisees includes searching technically competent parties which are culturally compatible and include ethnic minorities in their search (Rahatulaah and Raeside, 2009). These findings show how much requirements vary, depending on the size of a firm. Based on a franchisor's business sector researchers found out that retail, specialized services, and food services look for franchise partners with cultural compatibility, technical competence, and financial ability and flexibility, whereas automotive, retail education, and property related services prefer franchisees with managerial ability, trustworthiness, and references. The majority of specialized services seek work experience in their future partners (Rahatulaah and Raeside, 2009). Overall this discovery shows that franchisees with managerial ability appear trustworthy. They are more likely to be included in the franchise network, as they are in the position to show records of past achievements (Rahatulaah and Raeside, 2009). These results demonstrate clearly a change of profile during a firm's life cycle when selecting candidates. Businesses need to realize and adapt the search process adequately. Although the selection criteria are similar, the importance given is different. On a regular basis every company should assess its current status as far as age, size, and business branch is concerned and bring it in line with the strategy pursued in order to search for the most suitable cooperating party. One tool for assessing the application of a candidate is part of the following paragraph.

Approaching the selection process from a different angle, researchers assemble questionnaires to check on the conformity of candidates. Looking for specific traits is one part of the processes, but also the recognition of what profile is really needed for a specific franchise is highly important. John Stanworth (1995) from the International Franchise Research Centre in Westminster, England developed a diagnostic questionnaire to support the franchisee selection process and to help franchisors to asses the needed resources in a business partner. In his research he mentions challenges franchisors face, for example resource scarcity of small networks. This situation obliges key staff to manage several functions at the same time, some of which they are no experts in. Another example is relying on gut feeling when selecting new franchises. This strategy is rarely admitted by a franchisor, as it easily can result in wrong

selection, followed by long-term problems. Stanworth also sees the spouse of a franchise partner as part of the. Husband and wife should work hand in hand to master upcoming work challenges. In Stanworth's view, knowing a candidate's attitude towards self-employment, self-discipline, limit of pressure level, ability to learn and obey, emotional behaviour, view of fairness, and bearing uncertainty is necessary to explore during the first phase of getting to know the applicant. Further areas he suggests to discover are a candidate's financial ability, level of support of the spouse, enterprise background, profit motivation, sales orientation, reception towards training, growth orientation, task delegation, long-term planning, and vision on future plans. Although the criteria are not ranked by importance as they depend on the eye of the beholder, the specific meaning of the terms show a concise approach of what are the most common criteria, franchisors should be aware of their prospective new partner, before welcoming him or her into the network. This in-depth and all-round profile testing helps the interviewer and the interviewee to understand mutual needs and prerequisites. The questionnaire triggers early intense conversations, which prevent possible misunderstandings in the time to come. After the parties enter a legally binding contract, these misunderstanding, which can be cleared at an early stage, may result in costly and hostile moments: "Franchisees with desirable characteristics can lower the agency costs to the franchisor in the form of less safeguarding and monitoring cost […] appropriate selection criteria can improve the efficiency of the contractual relationship for the franchisor" (Jambulingam and Nevin, 1999). Overall Stanworth's diagnostic survey finds out about an applicant's entrepreneurial qualifications and those of an employed director. Being a franchisee means working by yourself but within the support of a network. Knowing the orientation of a prospect helps majorly in the selection process.

Based on a guiding study of two US specialists in 1999 (Jambulingam and Nevin), three German researchers Ahlert, Brock, and Evanschitzky (2006) replicated the US research for the country of Germany and managed to find differences in evaluating key franchisee selection criteria. The original study examines a franchisee's attitude towards business, financial capabilities, experience and management skills, demographics, franchise relationship, and business outcome measures. In the cross country comparison the studies found out that especially the attitude towards business is highly valuable indicator in the US study. In the broad area of cooperation and opportunism, which resembled the dependent variables, the comparisons also show a slight difference between the American study and the German study, as the US population seemed to have a higher dependency. Cooperation appears more positively related to attitude toward business and traditional factors, such as age, gender, education, and experience in the German study, than in the US study. The findings reflect that franchisees feel and act differently; depending on what national background they bear. Soft skills were found to be a highly necessary qualification for being a successful franchisee in Germany. This comparison of studies shows evidence that a franchisor may face differences, when recruiting in other parts of the world. Whatever criteria are important to the franchisee, the franchisor should be aware and react accordingly to find the best solution for both.

In a summary of preferred franchisee characteristics in the Spanish service industry the study of Ramírez-Hurtado at al.'s (Ramírez-Hurtado, Guerrero-Casas and Rondán-Cataluña, 2011) displays several criteria to determine a franchise partner. Entrepreneurial capacity, professional experience, motivation, financial capacity, personality, extroversion, communication, capacity, and desire for success are among them. Through a survey of experts in the Spanish service industry, the researchers found the following favourable attributes: managerial capability, capacity for human relations, entrepreneurship, desire for success, willingness to work hard, previous experience operating a related business, loyalty to franchisor, financial level, and perseverance. Evaluating the attributes in a survey to 313 franchisors resulted in a ranking of the most important attributes. Loyalty to the franchisor was the highest ranked characteristic. This attribute is highly linked with commitment, trust, cooperation, and communication. Secondly ranked is managerial capacity, which refers to the knowledge and command of management. Both characteristics, knowledge and command of management, are especially valued in the service industry. Thirdly ranked is willingness to work hard (Ramírez-Hurtado, Guerrero-Casas and Rondán-

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Cataluña, 2011). Set in context with Jambulingam and Nevin (1999), who found that attitude towards business is the most important factor in their study, one can see that a franchisee's stance is decisive for the outcome of his or her undertaking. Both studies put this criterion in their top three ranking.

The author compared Ramirez-Hurtado et. al with Knight (1986) who made a test on Canadian franchise networks. Both ranked willingness to work hard highly. In addition Knight demonstrated that overall franchisor and franchisees see the advantages of franchising as business-to-business system advantageous for franchisor and franchisee alike. A small difference can be noted in the natural sceptics of franchisees towards investing their capital. Considering that the service industry generally operates in highly flexible personal environment and often in direct contact with the customer, the willingness to fulfil and exceed customer's expectations requires a lasting and strong will to work hard. This shows that the will to succed and to work hard overcomes apparent knowlege deficites. In Ramírez-Hurtado at al.'s study previous experience in related business is less important.

In order to find a franchise match, at least two parties have to agree on the conditions. It is not only the franchisor that is on the search for a fit, but also the franchisee. Partner selection criteria can therefore be viewed and analysed from two sides and may differ according to a firm's strategy and the corresponding position within its life cycle, as mentioned earlier. In a study about an American hotel franchisor selecting adequate European franchisees the research examined the interaction of franchisor and franchisee selection criteria. In this case study, personal chemistry, a subjective criterion which may be judged differently depending from person to person, is the most important criteria in the beginning of the decision-making process: "criteria of personal chemistry and communication facilitate the identification of compatibility between firms and their members" (Brookes and Altinay, 2011). Personal chemistry belongs to the group of partner-related criteria. Partner-related criteria on the one hand and task-related criteria on the other hand complement each other in a comprehensive selection strategy. The analysis of both requires extensive evaluation and distinguishes itself from other methods by its logical division and explicit definition. Task-related criteria are patents, technical knowledge, experience of management, access to marketing and distribution systems, and financial resources. Partner-related criteria are comprised of a character of a potential franchisee, culture and history of the future partner, trust of parties, and also corporate culture if the franchisee is an enterprise and not a private person. Franchisor and franchisee use partner and task-related criteria to evaluate the other party and to determine whether working together could be beneficial. The initial phase while getting to know each other includes both criteria. Later, during the negotiation process the importance of partner-related criteria increases. Active communication between future partner and franchisor is vital to explore the other party and to getting to know each other. This strategy triggers mutual learning and development of trust amongst the business partners (Brookes and Altinay, 2011). The screening and selection process is the key to prevent possible upcoming problems and is a base for establishing transparent and growing partnerships.

Altinay and Okumus (2010) mention three steps of decision-making in an international franchisee selection process. In addition three decision taking types are characterized: rational decision making, processual decision making, and political decision making. As in this case decisions for or against a certain franchisee are taken on several management levels within the corporation, distinct motifs by the decision makers determine one or the other type. The distinct types are connected to three steps: initial lead, selection, and approval. The first step, initial lead, explores the possibilities of a project, including meeting people personally to "see how sincere these people are" and starting a personal relationship with them. The author accounts this as a partner-related criteria, mentioned above by Brookes and Altinay. Altinay and Okumus (2010) refer to the elements of trust and character which should be explored in a potential partner before the next stage starts. Moreover, the culture of a certain target market is crutial. A possible culture gap between the expectations and thoughts of a franchisor and those of a franchisee who belongs to a different culture, could be imense. According to Altinay and Okumus (2010) the next stage of the three steps is called selection. Its main function is screening the project proposals. In context with Brookes and Altinay the author accounts this to task-related criteria.

As far as the hotel industry is concerned, the financial screening takes places in this specific stage and that is when possible contribution to the shareholders are reviewed. Franchisor's brand standards are compared to the franchisee's brand strategy. In this selection stage Altinay and Okumus found out that communication is an important source of information for the relevant questions to answer, as the whole selection process involves negotiations between parties. The last step is the committee approval and it involves the presentation to a wider audience. They do not need to know details but have to grasp the big picture, especially the financial part of the project is of high value. Only after all parties agreed to go ahead with the new project, it gets approved. As a result of the study the researchers state that financial implications are crutial for decision making. Further it has to be mentiont that rivalry amongst decion makers can result in insufficient knowledge for one party and distort the view on the project (Brookes and Altinay, 2011). However, communication is once again stressed and found to be exremely important for building an opinion which forms the base for further decision making.

Table 1

Overview of examined sources

No.	Author	Examination	Findings
1	Rahatullah and Raeside, 2009	From a franchisor perspective, what influences the selection process?	Selection process depends on firm's size, age and business type and differ according to firm's strategy
2	Stanworth, 1995	Do franchisees have more qualities of an entrepreneur or an employed manager?	Franchisees have qualities of both categories.
3	Jambulingam and Nevin, 1999	Evaluation of key franchisee selection criteria in US market.	'Attitude towards business' is a highly valuable indicator.
4	Ahlert, Brock, and Evanschitzky, 2006	Evaluation of key franchisee selection criteria in German market.	'Soft skills' are a highly valuable indicator for outcome.
5	Ramírez-Hurtado et. al, 2011	Preferred franchisee characteristics in the Spanish service industry.	Ranking: Loyalty to franchisor, managerial capability, willingness to work hard.
6	Knight, 1986	Comparing attitudes towards franchising from franchisor and franchisee perspective.	Close agreement on advantages of franchising, with franchisees being slightly more skeptical.
7	Brookes and Altinay, 2011	Interaction of franchisor and franchisee selection criteria.	Different selection criteria (task and partner related) apply during different stages of selection process.
8	Altinay and Okumus, 2010	Evaluate franchisee decision-making models (from franchisor standpoint) and the influence of organizational factors.	Communication and knowledge influence three models: rational decision-making, process decision-making, and political decision-making. All types show three steps of action: initial lead, selection, and approval.
9	Meek, Davis-Sramek, Baucus and Germain, 2011	Developing a theory of franchisor-franchisee relationship.	Continuance commitment is only dimension that keeps franchisees from leaving relationship.

Source: author's summary of studies based on the order mentioned in the text

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A good partnership is nurtured by effective communication. Communication is a vital part of any relationship. In the sense of franchising this means dialogue and interaction between partners to nurture and grow a mutually benefitting business career. Meek at al. (2011) found out that lack of communication increases the propensity to leave the partnership. Communication and commitment are two aspects that go hand in hand in a determined partnership. Three dimensions of commitment have been found: affective (emotions), normative (obligations), and continuance (recognition of cost when leaving network). Linking these commitments with social exchange theory, it implies that these dimensions explain the existence or non-existence of a franchise partnership (Meek, Davis-Sramek, Baucus and Germain, 2011). Commitment, as described in these dimensions, classifies whether the franchisee has a strong will to stay, the need to stay, or the obligation to stay. Affective commitment lowers absenteeism, increases the sense of belonging to the partnership, and therefore results in the desire to stay in the interactive partnership. In contrast to other researchers Meek et al. found out that the propensity to leave the franchise depends mostly on continuance commitment. Nevertheless, researchers agree to the point that communication on a frequent, rational, and reciprocal basis triggers emotions of belonging (Meek et al., 2011). These finding are simple to relate to since all our lives are paved with relationships, some more intensive than others, however personal experience in everyday life confirms these theories.

Table 1 gives a visual overview of the above-examined articles and their findings. The sources discuss main issues of franchising and demonstrate key aspects of franchising literature, which are studied on a continuous basis. Most research results test foremost the North American and European market.

Conclusions, proposals, recommendations

The content analysis of the different studies outlaid above give insight in the variety of factors that need to be taken into consideration, when starting to choose a potential future business partner. Although the studies were published in different years, the overall message is similar: A prospective partner should complement the franchisor's abilities and support its needs. Depending on many factors, the decision-making concept should be conducted in line with the size, age, and business sector the company operates, the overall and specific regional strategy of a firm, the requirements of the task, the personal environment the business operates in, and the form of communication prevailing.

1. Resulting from the findings of the examined articles the author points out that there is a common and strong need to clarify the characteristic of the party selected. This is clear in Brookes and Altinay (2011) and Rahatullah and Raeside (2009). That franchisor has to know in what position his or her company is and what franchisee profile exactly suits the strategy of the business. Only with a complete picture of the requirements for a specific business it is possible to assemble an ideal profile of a complementing franchisee. Interpersonal skills and individual prevailing characters of the selecting party add to the difficult construct of finding the perfect fit.

2. Concluding from the articles and the common arguments of Ramírez-Hurtado et. al (2011), Ahlert, Brock, and Evanschitzky (2006) and Jambulingam and Nevin, (1999) display the difficulty if the entire selection process and its development. It is possible to design a hypothetical model with ranked factors, which can be checked in certain stages of the decisions process, but in reality the ideal combinations are very rare to find. Consequently required criteria have to be compensated if they are not available in the desired quality or quantity. A lack of the searched ideal section qualifications should be realized by all parties and openly discussed at an early stage, while franchisor and potential franchisee get to know each other.

3. The distinction of the articles is not so much the year in which they were published and the level of knowledge on which they were built respectively, but rather the different approaches they used to tackle

the common problem of franchisee selection. Hard facts as much as soft facts play a vital role and personal chemistry, as well as attitudes, or certain financial situations can trigger decisions either way.

4. Resulting from points one to three, the view of the entire decision-making participants might not be the same, as several individuals who could opinionate differently under certain circumstances. Based on the decision makers, personal experience, information, and knowledge of the specific topic, distinct opinions may result. As long as there is no standard level of judgment established beforehand, which then acts as common and homogeneous ground for all decision-makers decisions on agreeing on a party can vary.

Finally the overall contribution of this paper is to compare and analyze different sources in the franchisee decision-making process. For this reason it is important to mention the assessment and overall acknowledgement of the status quo in a firm. After that specific goals and the resulting needs for the organization have to be evaluated. Following this process, an individual profile of a prospective party fulfilling these needs should be created before starting the selection process. The more intense the preparations, the higher the quality of the outcome and the level of satisfaction for franchisors and franchisees, and the less the future cost, resulting from mismatch and dissatisfaction.

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AN EXPLORATORY STUDY ON THE IMPACT OF ORGANISATIONAL LEARNING ON ITS CORPORATE BRANDING

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Abstract. Purpose. Rapid rise in the competition coupled with rapid change in the business environment has forced organizations to come up with new technologies, processes and procedures to beat competition and turn challenges into opportunities. The unprecedented rise in the importance of knowledge management is the result of growing pressure on the organizations to effectively manage the knowledge within the organization. In 1980s and 90s, organizational learning gained importance in the management studies (Fiol and Lyles, 1985; Leibowitz and Beckman, 19981). Corporate brands on the other hand, are an increasingly important element of organisational and marketing strategy (Balmer, 2001a; Olins, 2000, Gilani 2011). Among the changes that businesses make as they move towards globalisation is a shift in marketing emphasis from product brands to corporate branding (Balmer, 1995, 2001a, b; de Chernatony, 1999, Gilani 2011).

This research paper brings together the two subject areas of corporate branding and organizational learning in order to develop the competitive advantage of an organization. While the importance of these issues has been widely accepted, to date the linkages between organizational culture, learning, corporate branding and corporate identity have scarcely been examined together in the literature, particularly from an empirical perspective.

Design/Methodology/Approach. This research paper explores the relationship amongst the two broad concepts with empirical research on data collected from organisations that imply their organisational learning towards their corporate branding. This particular research conducts an exploratory research using the case study method for collection of interviews to have an in-depth understanding of the phenomenon of organizational learning and corporate branding through *"Hybrid knowledge"*. The data collected would be analysed through qualitative methods using thematic content analysis. The exploratory findings would be used to devise a conceptual framework on the subject area.

Originality/Value. The aim of this research is to explore more about the effectiveness and impact of *hybrid knowledge* on organizational learning as a tool to improve its corporate branding. For the purpose the higher education services industry was selected to explore the new strategies for generating more profit through knowledge management in an organization. Knowledge management plays a vital role in bringing the organization competent with knowledgeable, experienced and skilled employees effective for generating more profit for any industry.

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The research is original in its nature as there have not been many instances where the two subject themes of organisational learning and corporate branding have been interrelated and overlapped. This research would pave new research avenues to be explored and enhance academic contribution on the common subjects.

Practical Implications. The motivation of this thesis comes from literature review to explore the impacts of organizational learning on corporate branding and the effectiveness of the employee participation in the whole process is the outcome of organization performance and satisfying the end users.

Key words: *corporate branding, organisational learning, employee learning, knowledge management, brand management*

JEL code: M14

1. Introduction

The following research is focused on the impact of organisational learning on the corporate branding. This research explores the linkages between the knowledge growth and corporate growth in an organisation. Learning in an organisation is continued at both internal and external levels but ground breaking result is the growth in corporate branding and converting the branding into corporate branding.

This research paper brings together the two subject areas of corporate branding and organisational learning in order to develop the competitive advantage of an organisation. Corporate brand management has increasingly been seen as a strategic key issue from the point of view of shareholders/owners, top management and other stakeholders due to the fact that in the ever increasingly turbulent, dynamic and competitive markets, corporate brands are ways of creating trust, stability, and differentiation in the market.

Organisational learning prioritizes the creation and acquisition of new knowledge, and emphasizes the role of people in the creation and utilization of that knowledge. In this way, organisational learning presents an important route to performance, success and competitive advantage for the organisations. The strategic marketing literature reflects a growing interest in the role of competitive environment on a firm's marketing strategy and performance. Drawing on organisational learning theory and strategic choice theory, it is argued that a firm's strategic adaptation occurs through managerial perceptions of its corporate identity which then contributes towards its corporate branding. The focus of this research paper is on exploring the impact of organisational learning on corporate branding of the firm.

While the importance of these issues has been widely accepted, to date the linkages between organisational culture, learning, corporate branding and corporate identity have scarcely been examined together in the literature, particularly from an empirical perspective. There is some evidence that organisational learning is associated to employee commitment to enhance the corporate brands but only a few studies have focused on the effect of culture and learning on corporate identity and corporate branding. This research paper explores the relationship amongst the two broad concepts with empirical research on data collected from education institutions where brand plays a vital role.

2. Review of literature

Organisational learning is a vital component of any organisation, industry and production company (Abernathy, 1999). The applicable literature in this segment will explore major concepts, reasons and

main ingredients involved in organisational learning related to its policies with new trends and its overall impact of corporate branding in diverse form of organisations providing different kind of products and services. It will also emphasize more on tacit knowledge management side by side with explicit knowledge of an educational institute.

The theory of organisational learning was first initiated by March and Simon, (1958) during their work on organisation. Organisational learning relates to a series of acts which are helpful in gaining the capability by which the organisation increases its ability and competency to defend the change pertaining internal and external environment. Knowledge increases with the learning and knowledge transfer to all entities of the organisation via integrated system of communication resulting in the implementation of new processes (Cooper, 2000).

2.1. Major characteristics of organisational learning

Senge, (1990) explains Individual thinking and knowledge effects the decision making and necessary actions, hence the whole process revolves around how things may be assumed? The emphasis is basically on the vision which is shared among the knowledge groups and builds for progress in order to create true dedication rather than fragile effort. As soon as people intermingle their visualization becomes clearer and a well-built commitment is produced.

Dienes and Perner, (1999) explain the conversion of knowledge from tacit form to explicit form that it requires more explanation and to convert knowledge into explicit from tacit requires explanation and amplification through different means following different procedures i.e. images, models gestures and. clarification of tacit knowledge through model or descriptions. Finding out or discovering more knowledge entails the merging, sorting in groups, rearranging and restructuring of number of related means of explicit knowledge.

2.1.1. Knowledge management

There is clear difference between the raw or unrefined knowledge and refined knowledge (Edwards, 1994). This type of information is converted into usable form to get the relevant information and output in an organisation in order to attain the goal. The process through which knowledge is converted and information is used in the implementation of strategies is called Knowledge management. Considering the case of corporate branding additional characteristics must be achieved linking between first and second phase of generating the knowledge management strategy. The first phase emphasize on the scheming and arrangement of the existing information within the organisation, on the other hand second phase focused on the improving the conditions and achieving the innovative results after the generation of the knowledge from the information available after learning and innovation (McElroy, 2000).

2.1.2. Tacit knowledge

As this manuscript is more focused on with tacit knowledge, it is ready to lend a hand at this spot to think about the meaning of the word used in the discussion, and in comparison with explicit knowledge. The term tacit knowledge is the knowledge which cannot uttered externally without involvement of gestures (Ashkenas *et al*., 1998). It's the knowledge which is linked to one's own experience and familiarity, which is not expressed in any way. The question arises why the Knowledge and necessary information remain tacit for long period of time in some cases for years?

It is because their must not valuable and efficient way to drawn it out from workforce i.e. staff, employee and top management too.

Tacit knowledge is drowned out from persons own experience and understanding which results in building of personnel standards and principles and in turn changes the way of doing things and attitude. These changes have an effect on responses and further activities (Sternberg, 1997).

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Tacit knowledge over and over again covers as an insight perception and the proficiency in knowledge among the individual group, but alongside it can also cultivate and put forward rivalry, hostility and violent behaviour if the building of behaviour and the nature of experience gained from the past is pessimistic and negative. In a nut shell one can say that tacit knowledge is neither positive nor negative; it's worth and effectiveness can be judged from the approaches with which it can furnish the organisation (Liebowitz and Beckman, 1998).

2.1.3. Explicit knowledge

Explicit knowledge is the knowledge that can be explained and easily understood without gestures and can be easily uttered out for gaining better outcome. The materialization and expression of explicit knowledge show discrepancies significantly ranges primarily from utterance and expression in small businesses to more recognized, stand arable and acceptable information basis in multinational companies and large organisations. The accessibility of explicit knowledge is simple and straightforwardly but the overall competence and usefulness depend on the way of transferring information in an organisations. Explicit information in knowledge management can be easily codified into understandable knowledge and information which can be transfer and implement formally in organized manner (Nonaka and Takeuchi, 1995).

2.2. Employee; The major carrier of tacit knowledge

The main carrier of tacit knowledge is the people who are more experienced and knowledgeable in an organisation, they can disperse their views and experiences in the organisation. During the process of knowledge sharing, an idea with new insights develops which give birth to knowledge and understandings. In contrasting to tacit knowledge approach, explicit knowledge approach give you an idea about the enlightenment of knowledge can be done by individuals and that knowledge can be formulated as well, while some assistance may be required. It is necessary for an organisation to take certain steps necessary in order to be more competent, these steps includes acquiring, creating and knowledge sharing with the skilled people. The main intention or reason for doing so is to convert the tacit form of information into explicit and keeping this information in documented form for future referencing (Goh, 1998).

2.3. Corporate branding

There has been recent upsurge in the corporate level concepts and theories of brand management (Balmer, 1998, Ind, 1992, de Chernatonay 2001). The increase in the corporate level branding and marketing has given uplift to the knowledge of the organisation and asserts the understanding that employee's participation in processes involving corporate branding is very essential.

(Balmer, 1998, 2001) contributes theories indicating corporate image, identity, branding, and reputation under one roof of "*corporate marketing mix*". Corporate branding shows the relationship of organisation stakeholders with the organisation through the organisation's employees. The accomplishments of organisations largely depends on the approach, mind set, activities and actions in conveying the promises committed by organisation through branding to its valuable customers and external stakeholders. It can be the factors within the organisation which will enhance the branding value and internal branding that are automatically aligned with the employee behaviours (De chernatony, 2001; Tosti and Stotz, 2001).

According to Hatch and Schultz, (2003), the expectations of the consumer from the organisation regarding its product and services, directly depends upon the perception of the brand in the mind of the consumer. Educational institutes use the branding in number of ways both purposefully and theoretically. Corporate brand is the organisation's main asset, which is utilized with efficiency and requirement resulted in the deliberate outcome.

2.4. Organisational Learning effects culture and identity

(Schein, 1992, 1999) explained that a company's tradition is more important and valuable. He further argued that personnel value should have to meet the corporate traditional value. Direction and strategies made by the organisation should not be changed frequently. Observing the area of organisational identity, researchers Dukerich and Carter (2000) have made clear differences in the point of view related to identity raised by people inside and out of the organisation. Balmer and Soenen (1999) created a series of corporate identity covering from authentic to perfect bases of identity, supporting the acts of people to keep up the correspondence within the boundaries of organisation with statements of hopes and objectives.

2.5. Organisation culture and branding

The corporate brand value is created by the most important source of organisation and that are the members of the organisation where organisational culture is rooted in the behaviour of those members within the organisation. Generally the standard of the brand and the reliable culture collectively form the actual linking between guarantee made by promises on the brand plus the services delivered by the corporation. The vision of the organisation and the culture are the two most important factors in the success of the organisation but there is one more factor involved which supports these two factors and that is the image concerning the organisation (Hatch and Schultz, 2001).

2.6. Employees; The major asset corporate brand

Employees are the most valuable assets of the corporate branding organisation. It is very important to recognize their activities and understand their requirements; hence organisational culture gained importance in recent literature on employee behaviour (Harris and de Chernatony, 2001, Ind 1992, Keller 2000 a, b). Employees of the firm are the main source of establishing the bonding between the organisation and its stakeholders, in addition to this they are the main foundation to corporate branding by providing a meaning to it (Hatch and Schultz, 2001). Corporate brand acts as a source of providing the necessary information related to the services offered by the organisation. It is finding out the ways to examine how efficiently the information to the consumers is transferred through corporate branding. Wilson (2001), and Balmer and Soenen (1999) argue that a corporate brand is communicated through the employees by keeping in mind that employees are the part of the company that act as a very volatile interactive and permeable platform. In the light of the external stakeholders, Duncan and Moriaty (1998) recommended that transformation of knowledge progression can increase and can get better branding relationships.

2.7. Employee learning impact on corporate branding

Core values of the organisation are very essential and they are the main principles of the corporation on the basis of which the services brand can be differentiated from the others by encouragement and motivation. These rules and principles of the organisation direct the organisation and employee to face any kind of uncertainty which is unmanageable intrinsically (Durgee *et al*, 1996; Jones, 1999; Schultz *et al*, 2000), and as a result forecast most evident, 'artifactual' behaviour (Schein, 1992). The connection and association amongst the core values of the corporation with employees and customers with the efficient endorsement of learning in the organisation is significantly towards the success of the corporate brand. The learning organisation directs the employees to understand behaviour of the customers in more detail and helps them identify the requirements of the surroundings in fulfilling the commitment by delivering the best quality services ending in the excellent performance of the corporate brand after learning. This becomes

more evident if the shared values of the employees are more focused towards the consumer-focused interactions moving ahead of their prescribed work description (Bettencourt and Brown, 1997).

Organisation that are more concerned about the internal communication among the member of the organisations regarding the changes in the internal and external environment are basically engaging the employees in the learning processes where not only individuals go through the learning process but organisation as a whole learns (Thomson and Hecker, 2000). This enhances the status and standing in the competitive environment with successful corporate brands (Dortok, 2006).

2.8. Organisational learning and corporate growth

Greenberg and Baron (2003) explained the bonding between the learning and the corporate growth by improving the corporate branding. Much of part of the researchers view involves how the organisation learns and gains the corporate growth through corporate learning. Many scholars look upon the management of knowledge as a major factor of organisational competitive advantage over its competitors.

Gaining the competitive advantage also depends on the stability of the market, if the market is unstable there is more likely to be chances of gaining the competitive advantage over the competitors, by focusing more on the organisational learning and finding the ways of making new products instead focusing on the same product. One the other hand it is also obvious that organisations following learning curve approach lose its market share during the phase of turbulence, but will go on to be better when market becomes steady and the consumers are more price as well as image conscious.

2.9 Organisational learning impact on corporate images

Aaker (1996) pointed out that in the views of main stakeholders, the organisation becomes very responsible and innovative, creating new ideas with changing demand and through learning. Considering the argument related to the organisational learning, which enlarges the corporate image in the thinking and observation of stakeholders (Keller, 2000a, and b), it is evident that the values concerning the brand is accordance with the organisation value and culture norms.

Considering the case of organisational learning and corporate branding, the association of corporate image with culture amplifies the understanding and knowledge of the organisation as a whole, and creates that concept of what living the organisation is? (Dowling, 2001). Finally it increases the importance and reputation of the organisation. The above reflections detail the linkages between corporate branding, corporate images, organisation culture and the organisational learning. Corporate branding is basically struggling towards the organisation uniqueness through organisational learning and then communicating that learning to internal and external groups. Learning in this way has very positive impact on the behaviour of the stakeholders in order to generate more brand equity at the corporate level (Fombrun, 1996; Hatch and Schulz, 2001).

2.10. Gaps in review of literature

Reason (2007) explained the classes of behaviour which becomes the reason for organisational learning failure but did not mention the remedial measurement to recover the losses, and prevent the failure of learning in the organisation in future. Reason (2007) also explained the main grounds for the failure of learning in an organisation but failed to find the ways to implement practically.

Falconer (2006) described the relationship among organisation learning with tacit and explicit knowledge and productivity from the communication of tacit knowledge though e-learning cycle but

failed to described the learning outcome in organisation other than online learning as well as the relationship among explicit, tacit and organisation learning with the image of organisation branding.

Selamat and Choudrie (2004) and Sandars (2004) both explain the circulation and understanding of tacit knowledge in an organisation through IT but were unable to explain the learning outcomes through the utilization of explicit knowledge and the sharing of explicit knowledge gained from the codification of tacit information for effective and up to dated changes in an organisation.

Witt and Rode (2005) argued some of the points affecting the reputation of the corporate brand the most important of it is internal and external factors along with the standard of the organisation but did not mention that learning is the continuous process and the lack of learning in an organisation from the experiences and from the resources also have very critical effect on the corporate branding, learning from internal and external resources.

Dean and Sharfman (1996), focuses more on the top management team for decision making neglects the operated level team who are in direct contact with the external environment all the time, successful organisations consider the point of view of both the classes then come up with new and updated strategy in the radiance of enough information from internal and external sources.

Given the above reflections on the subject of corporate branding and organisational learning, the researchers have identified a clear gap in the literature that encompasses the impact of organisational learning on its corporate brand. This gap would be attempted to be addressed by this this research concept and a clear influence of the organisational learning processes on the corporate branding of the organisation would be explored and identified.

3. Research methodology

The aim and seeking of this research is to look around and explore the world of knowledge management in the field of corporate branding by developing innovative learning approach *"hybrid knowledge learning approach"* in the field of organisational learning of higher education sector. The research would also look at the impact of organisation learning on the efficiency and usefulness of organisational learning strategies with effective ways of gaining knowledge and impact of gained knowledge on corporate branding.

Given the exploratory nature of the research, qualitative research method seems to be the most appropriate research methodology. In this regard, a series of inductive qualitative in-depth interviews were conducted by the carefully chosen respondents of a viable case study organisation. This research follows the collection of information through interviews the most relevant method for this research is the qualitative research method using the most understated and straight approach for the compilation of natural facts. (Webb, 1994).

Researcher in this research selected an academic organisation named NUST which stands for National University of Science and Technology, situated in Pakistan and delivering educational services in graduate and post graduate levels of higher education.

To accomplish the aim of this research in-depth interview were carried out, the selection of the respondents were based on the position and designation in an organisation mainly focussed on the most influential top management of the organisation, who are well informed in their field and contributing their active part in sharing their tacit knowledge which then be utilized to enhance the learning as well as the corporate branding.

The main focussed areas during the interview sessions were as follows:

- Methods of organisational learning;
- Employee involvement in learning and decision making;
- Branding image, name, vision, loyalty;
- Corporate branding strategies of the researcher.

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4. Data Analysis and Findings

The research study is analysed using the content analysis method. Content analysis usually pertains to the editing the data in order to find the most relevant information out of the flock of data collected previously. It provides more consistence and rational background for the reduction of the information and using the effective one. In more sensible way content analysis is understood as *"pattern or theme analysis"* (Miles and Huberman 1994).

All the transcribed data was then codified to enable thematic content analysis. The data was divided into many themes and codes to identify the many factors that constitute the process of corporate branding and organisational learning. The identified codes and sub-codes were then developed into logical themes in the light of the collected data. It involved the exploration of the collected data in the meaningful and sensible way, as well as the comparison and finding the relationship among different part of the information collected (Miles and Huberman 1994).

4.1. Summary of findings

The researcher conducted face to face interviews with the top management of the organisation. There were 7 face to face interviews conducted by the researcher as a whole in different locations because Heads of Departments (HODs) are situated at different locations in the country. All interviews are coded in a proper way and the coded data was analysed by the researcher using content analysis. The collected coded data was compared and linked with the literature review to find out the linkages between theory and corporate practices. The data was analysed from the point of corporate view in three categories as cleared from the table above:

1. Organisational learning;
2. Employee;
3. Corporate branding.

CORPORATE VIEW

Organization Learning	**Employees**	**Corporate branding**
✓ Learning from external sources	✓ R&D	✓ Competent brand
✓ Learning improves knowledge	✓ Innovation	✓ Good ranking
✓ Learning process	✓ Administration	✓ Publications and
✓ Learning from Student exposure	✓ Behaviour & Expenditure	projects
✓ Student and faculty learning	✓ Employee learning impact on branding	✓ Technical advancement
✓ Tacit and Explicit knowledge	✓ Seminars and Workshops	✓ Infrastructure
✓ Knowledge sharing	✓ Faculty learning is mandatory	✓ Brand quality
✓ Informal learning	✓ Leadership	✓ Brand trust
✓ Knowledge transferring	✓ Employee involvement in decision making	✓ Brand promotion
✓ Learning from students	✓ Learning through Communication	✓ Brand name
✓ Academic indicator in Organization learning	✓ Competent faculty	✓ Brand standard
✓ Learning expand vision	✓ Teaching is learning	✓ Brand perception
✓ Education and awareness	✓ Cultural impact on learning	
✓ Culture impact on branding		

Fig. 1. **Identified themes and categories from the content analysis of the primary data**

The above categories were identified as the factors in the domain of organisational learning to have a direct impact on the organisational learning process that influences the corporate brand of the organisation.

The following sub categories were then devised to explain the stance of the interviewees on their perception on the impact of organisational learning on corporate branding.

4.1.1. Impact of Organisational learning on corporate Branding

Learning has a direct impact on the branding process; the brand becomes so strong if there is continues learning in an organisation, and the organisation finds new ways to become more demanding. The director of the organisation agrees with the researcher's research objectives and explains that new ways of learning contribute to the branding of the organisation. If the learning of faculty as well as students is efficient then the organisational brand gets the strength as a result. The director further explained that there is no other way for example in research if you cannot do good research you cannot have publication. Hence the academic publications contributed by the staff and students would be a good evidence of organisational learning process and therefore contribute as a branding factor. Whether organisation learns from formal or informal ways (Ind, 1992), the tacit or explicit knowledge learning never ends. As long as organisation is enthusiastic for learning the brand of the organisation will be leading corporate brand in the competitive market. One of the HOD argued in the following words: '*It (the enthusiasm factor of an organisation towards its learning process) has a great impact because you see that the organisation is running in an informal way and it increases learning. The more they learn the more they can compete the more they can have an impact on its image which results in contributing towards its brand in a way."* HOD1

4.1.2. Knowledge growth

Explicit as well as implicit are the two form of formal learning, which is presented by the researcher as hybrid knowledge. One of the respondents was of the opinion that as organisation increases its gains of knowledge there is not only growth of knowledge treasury of the organisation but also growth of the corporate brand. This is reflected by a statement of another HOD as follows:

"Because you see whatever we learn it is imparted to students they do not learn only from books but experience from guest speakers from seminars conferences and for example you are sent to spend some time to China and when you come back you tell the stories to students that is the way Chinese are doing that. You should do the same so we try to improve our curricular what the other is doing." HOD2

4.1.3. Management skills improves

With learning and gaining knowledge the skills of the faculty and management increases, with increase in the skills of management ultimately produce competent quality products (Kapferer, 1992). This was well explained by a respondent as follows:

"The learning process transform to competency of faculty, when you to hire a faculty member when they teach they teach quality products produce quality products." HOD4

Same point of view is discussed by other participant as:

"That is very encouraging, for administration staff we run short courses and for professional there is a system in Islamabad. This enhances our reputation as a learning brand". HOD1

4.1.4. Progress in learning and product after monitoring

It was asserted by the participants that good research and development (R&D) in the organisation will have very encouraging impact on the branding. Output will be only productive if the input given to the organisation will be of better quality. An HOD described the detailed point as:

"Learning has a great impact on the brand of NUST. Our faculty members are well trained and really know how to conduct a good research. The contribution will result in the quality branded product i.e. our students. Research of your faculty and the teaching capability of faculty are the strength and our graduates. If output is good and research publication are large and you are securing a lot of funding and competent corporate branding". HOD3

The data further revealed the justification of the organisational learning having a great influence on its corporate branding by explaining that the progress in learning at the organisational level results in better products and services which enhances the corporate branding of the organisation.

As one of the director clearly says during the interview.

"There is direct link between learning of an organisation and its brand which has its roots in learning for new products and services". HOD5

4.1.5. Improves corporate growth and learning skills

Organisational learning is not an individual learning it is team learning. Organisations contributing towards growth of its corporate brand have a direct impact of individual learning projects on the organisations corporate brand. Such organisations are definitely contributing in research as well as in learning process. In the words of a director of NUST, '*If a person has a research group, he has the passion for doing research, he also takes research assistant along he also include in the learning. So it is a team work. And over all the organisation is benefiting from it hence improving the brand name and perception."* HOD4

Other participant supports it as:

"The way the NUST support the research is amazing. NUST supports its research publication activities in great detail and in doing so it does not have any limits." HOD1

While other participant present it as:

"To wrap up the whole thing I think there is the impact of our national learning on its corporate ranking". HOD1

The following factors were identified as the variables that contribute towards the corporate branding of the case study organisation. These factors are a direct consequence of the learning process of the subject organisation and hence show a direct link to the corporate branding process of the organisation through its knowledge management processes and activities.

Brand Determinants affecting organizational learning in Higher Education Service Source	**NUST major elements of corporate branding**	**Impact of Organization Learning on corporate Branding**
✓ Consumer-staff relationship ✓ Size of the university ✓ Availability of information ✓ Service quality, Availability/Accessibility, Reliability & Stability ✓ Fees of the university ✓ Personality and lifestyle	✓ Environment ✓ Affordable ✓ Creative ✓ Accessible management	✓ Knowledge growth ✓ Management skills improves ✓ Progress in learning and product after monitoring ✓ Effective corporate brand ✓ Improves corporate growth and learning skills ✓ Highly competent corporate brand

Fig. 2. **Brand Determinants affecting organisational learning in Higher Education Service**

5. Discussion

Organisation learning is a continuous process in an organisation (Cooper, 2000) resulting in positive outcome (King, 2001). Organisational learning gives support to decision making process (Cumming *et al*, 2001) while individual thinking and knowledge effects the decision making process (Senge, 1990; March and Simon, 1958). Organisations build strong competencies through organisational learning. Organisation learns from two major sources tacit (Ashkenas *et al*, 1998) and explicit (Nonaka and Takeuchi, 1995). Information and the gained knowledge are managed in an organisation as a refined knowledge (Edward, 1994) where employees are the carriers of tacit knowledge (Goh, 1998).

Organisational learning results in innovations which ultimately have strong impact on branding which in turn improves the performance of the organisation (Agarwal *et al*., 2003; Hyvarinen, 1990; McElroy, 2000) After implementing new ideas and knowledge the market share of the brand increases and internal learning develops the sustainability of the corporate branding (Fitzgerrald, 1998). Organisation learns from internal sources (human resources, R&D, supplier and management) as well as external sources (consumers, people, and associations) and corporate branding is influenced by internal and external resources (Witt and Rode, 2005). Consequently strong brand develops with the passage of time which is reliable and encouraging giving a very optimistic view to the customer experience (Olins, 2000).

The process of learning in an organisation is also affected by the *vision* (Collins and Porras, 1994; Hatch and Schultz, 2000) *culture*, specifically the traditions within the organisation (Schein's (1992, 1999) and *identity* of the organisation (Dukerich and Carter, 2000). It is the vision of the organisation that influences the brand perception and adds to the brand competencies. Balmer and Soenen (1999) assert that the people (employees) in an organisation develop the environment of hope that ultimately meets the objectives of the organisational identity. Successful organisations have strong brand image which develops after organisational learning (Hatch, 2001) and give origin to corporate image (Vallaster and De chernatony, 2003).

Employees in an organisation are the most delicate, dear and important asset of the organisation that are in direct contact with both internal and external environment delivering the services in the desired manner in achievement of brand promises for the expansion and maintaining of the corporate branding (Hatch and Schultz 2001; Harris and De Chernatony, 2001, Gilani 2011). It is the employees in the organisation that are responsible for building the strong linkages between the organisation and the stakeholder whilst experience the exchange of knowledge in an organisation (Hatch and Schultz (2001). Employees understand the organisation's core values which help in retaining the corporate brand and improve the brand supportive values (Hardaker and Fill, 2005). Employee learning has a very influential impact on the corporate branding by understanding the behavior of the customers and stakeholders whilst incorporating the organisational core values in their corporate culture throughout its learning process resulting in a strong corporate brand (Bettencourt and Brown, 1997; Dortok, 2006). Organisations that involve employees in their decision making processes are actually providing the platform to the employees to learn through communication both with internal and external sources (Grunig *et al,* 1995: 169).

Organisation learning has direct impact on corporate branding by increasing corporate growth, via corporate learning and resource base view (Amit and Schoemaker, 1993; Barney, 1991, Gilani 2011). The supervision of organisation gained knowledge after improving the corporate image (Dowling, 2001), brand awareness, encouraging the involvement of stakeholders (Aaker, 1996; Fombrun, 1996; Hatch and Schulz, 2001) by modifying the corporate strategy consequently results in attainment of organisational goals. Corporate branding improves directly with the progression of the knowledge treasury of the organisation (Kapferer, 1992), so it is directly linked to the learning process within an organisation (Balogun and Jenkins, 2001).

Given the multiple factors identified within the detailed data analysis, a conceptual framework has been devised to indicate the influence of organisational learning on the corporate branding process of an organisation. This is reflected in figure 3.
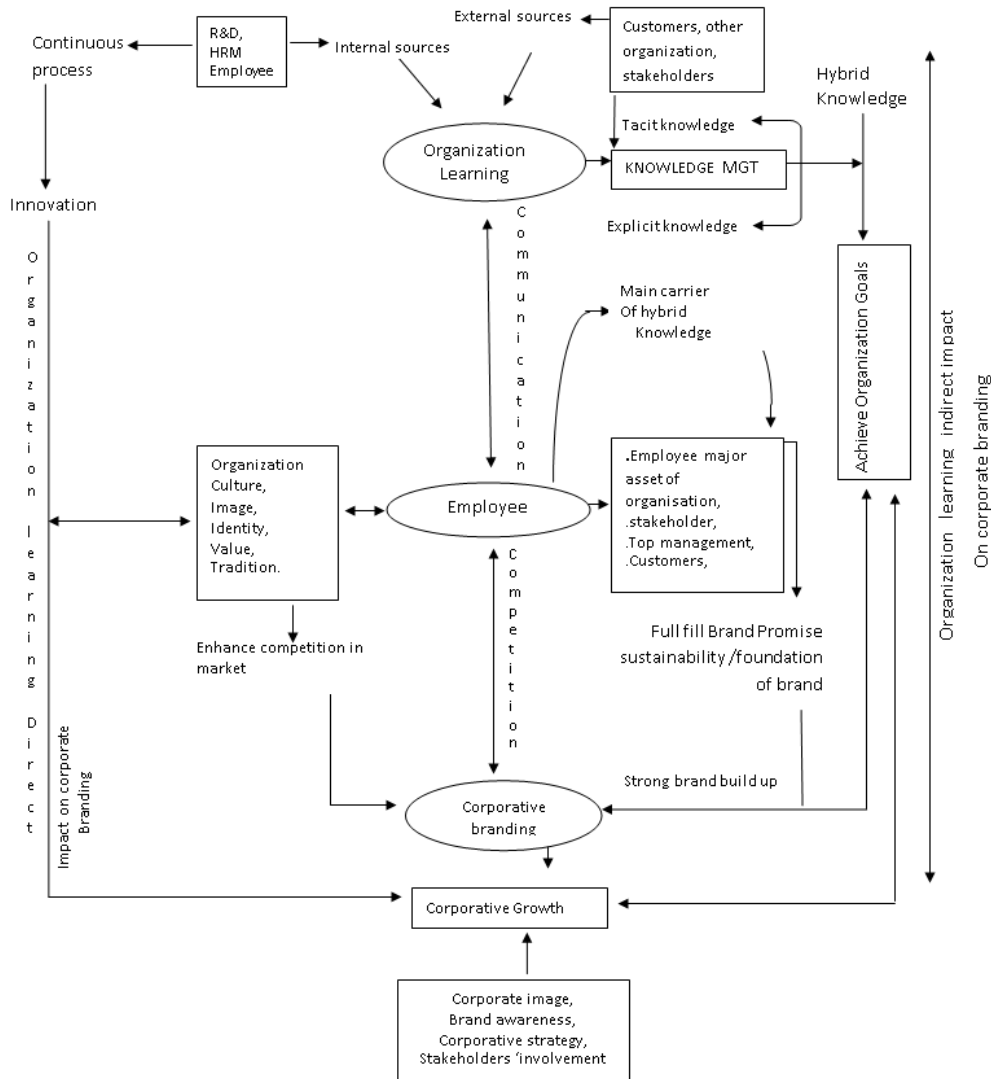

Fig. 3. **Conceptual Framework explaining the impact of organisational
learning on its corporate branding**

6. Research conclusion

This research work focussed on implication of organisational learning processes on its corporate branding and to explore the linkages between the two concepts. The researcher in the field of practical

knowledge selected the case study to finalize the methods of conducting the research by collected the primary data from the field of interviewers and secondary data from reachable sources. The case study particularly selected by the researcher is the National University of Sciences and Technology (NUST) which is a higher educational institute of Pakistan. Researcher described the significance of organisation learning processes and main elements of corporate branding by getting the general idea from over viewing the selected organisation as a whole. Gaining the position and maintaining the position as a competitive corporate brand in the internal market is challenging, with continuous learning in the organisation they can achieve their goals and objectives.

The backbone of any organisation whether services industry or manufacturing industry is the employees of that industry. Employees can never be neglected in order to achieve the goals and objectives of the organisation. Employees are the bond between the learning and branding processes. The basic feature is the channel through which knowledge growth and learning takes place. Learning of the employee is basically the process of learning in an organisation and organisational learning becomes resourceful for the competency of the product. Building communication skills within the different level of members of employees and strong leadership abilities of the top management makes it possible to bring about the proficient corporate brand as a result of learning and implementing the innovative strategies. Second most important aspect is the technical advancement in every field of the competent market, the exposure to the technical knowledge opens the world of more research and learning. If the organisation has equipped with such a high level of absorbing competencies and potential, then it can excel in the market with a dynamic pace. The organisation must also have the potential to manage the generation of hybrid knowledge as it is the main theme of any business strategy to implement the technology which can be easily dictated by and incorporated within the culture of the organisation. The most important elements building the bridge amongst the factors of employees, organisational learning and corporate branding are the culture and vision rooted within the core values of the organisation. Sharing the vision with the stakeholders and communicating it in the desirable cultural environment has a strongly positive impact on the corporate branding via organisational learning.

7. Recommendations

As mention above researcher used the probing technique for interview because of the covering the vast knowledge not sticking to specific point, but the most regular question from the top management (head of departments) of the NUST was asked about the productive suggestion and ideas, which can bring about the positive impact on branding through learning and which is not done so far, the bullet points are;

1. Encouraging the innovation through learning strategies involving the operational staff in the application of new policies.
2. Improving the skills of technical staff utilizing volume of communication tools by sharing and implementing knowledge in required area.
3. Develop the learning techniques according to the requirements of the department.
4. There is need further research to discover the association of the brand image with service brand.
5. Focus more on the codification of hybrid knowledge in the field of branding and centralization of decision making practices.
6. The academic labs should be updated with the passage of time otherwise the organisation will lose its competent position in international raking.
7. Drop rate from the course is also very high which badly affects the reputation and image of the brand, even in some students not only fails, but they go without any degree. Try to reduce the failing rate.

8. In some areas time is not managed according to the desired schedule, try to overcome this discrepancy.
9. Need to extend the number of merit seats by providing more accommodative facilities as large number of students apply for admission in undergraduate degree programme.
10. Boost up the brand loyalty and brand image through awareness, because the misconception in the mind of the people is that NUST is only for armed forces, but actually it's for everyone preferring the civilians.

7.1. Research limitations

It is usually acknowledged that the literature regarding the processes in research is subjected to different form of limitations (Webb, 1994) .The key limitation in this research work is the selected organisation is based in Pakistan and the research is limited to the top management of the organisation. The data collected, findings and analysis are limited to the corporate view of the subject organisation. The progression of the thesis is limited to head of the different departments. In this regard it can criticized by lacking the point of view of faculty and customers point of view which is not covered in the research studies. This paves way for a chance to be explored in future research work. Secondly the 90% of the management of organisation is controlled by the military, as the foundation of this organisation is military based although the knowledge seekers are about 88% of civilians. The recommendations, findings, suggestions and analysis as a whole is for single organisation but these finding can be applied to any higher educational organisation all over the world to improve the corporate branding through organizational learning.

7.2. Scope for future research

Research conducted by the researcher can be applicable and extendable to other areas elaborating as:
1. Researcher suggests that this research work is exploratory based research focusing theoretical framework, side by side providing conceptual framework for services and higher educational sector to enhance the corporate branding. Hence it is applicable to number of case study organisation including the retail sector.
2. Research is used for any kind of comparative study with the organisation performing worldwide and exploring the new world of organisation learning elements effective for corporate branding.
3. The impact of corporate branding on the behaviour and attitude of the stakeholder and organisation as a whole.
4. As explained in the limitation that this research is based on the primary data collected from top management. It also provides new ways to exploratory research on any services or manufacturing organisation based on point of view of customers and operational faculty.

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NEW MODEL OF QUALITY DEVELOPMENT IN AUDITING COMPANIES

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Abstract. At the beginning of the century the public balance scandals led to an international discussion over the quality of audits. The work of the statutory auditor viewed with increasing distrust, so the legislative responded with new laws and directives to raise quality in audits.

Aim of the research is to prove if there a standardized understanding of quality in the profession of auditors.

After analysing important aspects in quality theories according to business administrations, service quality and quality in audits it was clarified that no single area of business economics offers a uniform definition or approach to the term "quality". Neither the profession of auditors, nor the legislative which passes new laws and regulations stating "by this, a higher quality will be reached", have a uniform view of quality. However, this is absolutely necessary for a uniform and broad understanding of quality, because quality in audits must be more than "to do our jobs rightly" (cf. Pfitzer, 2006, p. 187).

For this reason, the author developed a "**New model of quality development of auditing companies**", named the **AuditCompanies-QualityDevelopment-Model (AC-QD-Model).** To fulfil all the expectations of the different receivers of audit services, all legal and professional requirements as well as one`s own expectations, a model of audit quality has to be developed, that is very broad. As the term also needs to take into account the regulations mandated by law and by professionals, it must consider aspects of product-based, of manufacturing-based and user-based approaches (cf. Garvin, 1988, p. 319).

Expert Interviews have been conducted to support the theoretical approach and literature review.

In this paper the author focuses on all components of this new model and presents the possibility for the companies to design their individual quality model.

Key words: *quality, quality in audits, small and medium-sized auditing companies*
JEL code: M4, M42

Introduction

At the beginning of the century, the public witnessed scandals of companies like "Enron", "Parmalat" or "World.com" and the high financial damage for shareholders, which is linked to these scandals. This led to an international discussion over the quality of audits, since prior to this almost all of the affected

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companies concerned had received an unrestricted audit certificate. Doubts concerning the quality of auditing were voiced to a heretofore unheard of extent. The quality was questioned and the work of the statutory auditor viewed with increasing distrust, nationally as well as internationally. The criticism directed against the profession of auditors as a whole, led to a great loss of trust in the public. To regain the trust in statutory audits, political leaders were forced to take action. The United States of America responded to this discussion with the "Sarbanes-Oxley Act", while the European Union passed the Directive 2006/43/EC.

The Directive updated the statutory provisions for the professional guild of auditors to increase the quality of audits. In detail, the Directive demanded an external quality-control-system and a public supervision for the profession of auditors. In addition to that the Directive set arrangements, which should improve the cooperation between the EU-regulation offices.

The EU-member-states, including Germany, Austria and Latvia were obligated to integrate this Directive into national law by June 28th, 2009. A characteristic of directives passed by the EU is that the directive sets a frame and the member-states are in charge of filling the frame. In addition, since the year 2000, there have been a number of amendments and new professional frameworks on the national as well as the European level, which up to that point had not existed to this extent for the entire auditing profession. According to their respective explanatory memorandums, these extensive regulatory impacts are supposed to improve the quality of the auditors' work and reestablish public trust, which forms the basis of the statutory audit (cf. Moxter, 1981, p. 580).

The view of the present financial crisis, the final audit has again returned to the headlines and renewed discussion. As a consequence of the financial crisis, the European Commission has published a green book, in which several measures are presented which are to contribute to raising the quality of final audits as well as dealing with the general role of the final auditor.

The aim of this research is to prove whether or not there is a uniform understanding of quality in the profession of auditors. The empirical confirms the theoretical proposition that there is no uniform understanding of quality and even no holistic understanding of it in the auditing profession.

The Novelty of the research is a new quality model developed by the author, a "New model of quality development in auditing companies", named the **AuditCompanies-QualityDevelopment-Model (AC-QD-Model).** This new model is a holistic quality approach for the whole auditing company, which makes it possible, that every auditing company considers any component of the AC-QD-Model for their own company and determines them individually.

Research question and analysis

The key research question for this research is: Is there a standardized understanding of quality in the profession of the auditors? Because of new laws and regulations are implemented on the grounds to raise quality in audits and auditing companies.

This research paper is part of a wider research approach executed over the last 3 years. The research questions and tests were analyzed scientifically and proven with several expert interviews with four different expert groups. The four groups include representatives of the auditors themselves, reviewers of quality control, the professional representatives and professional consultation.

Hypotheses and results of the expert interviews were presented and published at the international conference in Kufstein[2] There the main results of qualitative expert interviews were discussed.

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[2] International Conference "International business and economics conference" in Kufstein, Austria from 3-5 August 2012. Title of the paper: "The Effects of the External Quality Control on the Auditor Market in Germany, Latvia and Austria".

With the first open qualitative question it was examined, how the four expert groups defines quality for their companies in general and specifically for statutory audits. This question was asked against the background of the different existing definitions of the term quality and quality in audits. Additionally, it was asked, how comprehensive the quality perception of the interviewed companies is and if there is a company that sees quality as a holistic corporate approach – as the author does.

After literature review that shows, that there is no uniform approach of quality, the answers to the question above do not present a surprise. Each of the interviewed auditors defines quality in his company and in audits differently. In general the answers limit each one to a single characteristics, such as compliance with professional duties (stated 17x), fulfillment of legal obligations (stated 20x), apprenticeship and advanced education of the professional and his employees (stated 14x), as well as the on-site commitment of the auditor, accurate work, documentation and the four eyes principle. As this was an open question, the possibility to mention different quality characteristics was given.

First result of the research was that there is no uniform understanding of quality and even less a holistic understanding of quality to be found among the interviewed auditors and the quality control reviewers. The quality reviewers see quality mainly as object-related. Thus, the fulfillment of legal requirements and standards is rated as quality by 60% of the interviewees and the usage of auditing software by 40%. Only 30% of the quality control reviewers bear in mind their customers` satisfaction.

The overall conclusion is that none of the interviewed four groups has such a broad understanding of quality that they consider quality as a holistic business approach in the center of their everyday work. In all responses only single aspects or characteristics are seen and described, which mean quality for them.

The quality definitions and approaches examined by this research show that there is no uniform method of defining and testing individual quality. All definitions and approaches discussed are somewhat fragmentary from their own viewpoint.

Focusing on quality theories and the requirements and laws the profession of the auditors has to fulfill the new model was developed.

Theoretical Background of the New Model of Quality Development in Auditing Companies

After analyzing the most important quality theories according to business administrations, service quality and quality of audits it was clarified that no single area of business economics offers a uniform definition or approach to the term "quality". Neither the profession of auditors, nor the legislative which passes new laws and regulations stating "by this, a higher quality will be reached", have a uniform view of quality. However, this is absolutely necessary for a uniform and broad understanding of quality.

For this reason, the author developed a "**New model of quality development of auditing companies",** named the **AuditCompanies–QualityDevelopment-Model** (**AC-QD-Model).**

To fulfill all the expectations of the different receivers of audit services, all legal and professional requirements as well as one's own expectations, a model of audit quality has to be developed, that is very broad. As the term also needs to take into account the regulations mandated by law and by professionals, it must consider aspects of product-based, of manufacturing-based and user-based approaches (cf. Garvin, 1988, p. 319)

Because quality in audits has to be more than only an addition of these three categories the author's new model of quality management of auditing companies puts quality - according to the research approach of Kellner (cf. Kellner, 2010) and Feigenbaum (cf. Feigenbaum, 1991, p. 896) - in the center of the entire entrepreneurial activity; as a holistic model of quality. The complexity of quality needs a holistic model of quality in which quality must not be regarded as static (cf. Seghezzi, 2007, p. 37). Quality therefore is to be seen as the basic attitude of the enterprise, a central point in everything the company does. For positioning quality this does not mean to offer "just as much quality as needed", but to offer "as

much quality as it is possible" (Seghezzi, Hansen, 1993, p. 86) Such a holistic approach is owed to the profession of auditors, as any auditor in any country has a great responsibility and also a great privilege. Auditors fulfill public services and thus are subject to strict professional regulations. The public, creditors, shareholders and other interested parties expect that they can rely on the auditors as guarantors of integrity and the credibility of final audits (cf. Langenbucher, 1997, pp. 63).

With the implementation of this holistic model in every auditing company, highest quality will be achieved through the fact that the auditor as well as the entire office, perform business by complying with all the legal restrictions and vocational duties.

The designed model creates a uniform method of derivation for the quality of each respective company. It is important to create a uniform understanding and a uniform framework, how quality is derived and defined with regard to the respective company. Therefore, it is not about finding a uniform quality – which does not exist – but about finding a uniform method of defining and controlling individual quality. Each company has to define its own quality using the method explained below. The way and method how quality is to be understood is uniform, but each company defines for itself its own individual quality. This result is a different and individual quality for every company.

The Individual Components of the AC-QD-Modell

The different (in total eight) components that influence quality certainly have different emphases, but nevertheless need to be taken into consideration and need to be regarded by each company in order to reach a holistic model of quality.

Legal and Professional Requirements

The profession of auditors has to fulfill diverse and broad legal and professional duties when it comes to carrying its duties. As these duties are partly anchored both in the respective legal regulations (HGB, WPO) and in professional regulations and statements, they will be presented in the following in one chapter.

Basis for the work of an auditor

To be allowed to word as a professional auditor, there are broad admission requirements in all countries. They require a personality beyond reproach, various financial conditions according to §10 WPO, completion of studies and practical working experience in the auditing profession as well as passing a general exam. Subsequently the public appointment and swearing in before the Chamber of Auditors follows (cf. §§ 15, 17 WPO). The practice of an occupation in a professional society is widely regulated. The Auditors Regulations determine in which legal form the profession is allowed to be practiced. The basis for the practice of an auditor in an auditing company is the approval through the supreme authorities (cf. §§ 1, 30 WPO).

Professionalism

The practice of a profession is governed by broad legal restrictions that are stated in the Auditors Regulations and the Commercial Code. Independent, diligent, discreet and independent professionalism is

part of the general professional duties (§ 43 WPO). The auditor has to word in an unbiased manner especially when providing audit reports and expert reports (§ 43 Abs. 1 WPO). Even beyond his profession, the auditor needs to "prove himself worthy of the trust and respect that the profession requires" (§ 43 Abs. 2, S 2 WPO). In addition broad duties for the implementation of final audits arise from the §§ 318 HGB as well as from the institutional professional supervision. The institutional professional supervision consists of the sectors (cf. Paulitschek, 2009, p. 238) of supervision, which is established by the Chamber of Auditors in Berlin, the system of auditor supervision, which also includes the external quality control by which the internal quality assurance system is controlled to show whether or not it fulfills the legal mandates (cf. Jehle, 2007, p. 20) as well as of the supervision by the law (so-called enforcement laws). One needs to differentiate the system of auditor supervision and supervision by laws, as they focus on the accounts. If any indications of neglect of professional duties are revealed by this, they are to be reported to the auditor`s supervisors for further investigation.

Professional Requirements

Auditors practice, like doctors or lawyers, a so called liberal profession. The special character of a liberal profession is based on the professional understanding, the practice of the profession and the view of the profession as a public service (cf. Helmschrott et.al., 1998, p. 22). Liberal professions all have to comply with certain regulations for their respective practices, which are based on the professional ethics rules. For auditors in Germany these are the German Auditors Regulations (WPO) and the regulations and standards specified by the vocational statutes and statements of the institute. The vocational duties presented in the following profoundly influence the presentation of the auditor in public:

- independence, impartiality, and the avoidance of conflicts of interest;
- conscientiousness;
- discretion;
- personal responsibility;
- professional dignity.

Independence – the most important characteristic of the professionalism of auditors – is established by the legal and professional duties as well as by the Code of Ethics. Because of its great importance in the developed quality model, independence will be presented as a separate component below.

The principle of **conscientiousness**, regulated by§ 43 sect. 1 sentence 1 WPO, is substantiated in § 4 of the Professional Code for Auditors. Conscientious professionalism requires that the auditor complies with legal regulations and technical rules when carrying out his duties. Therefore, employees are placed under the obligation to comply with the regulations of the quality assurance system of the company, as well as to document this accordingly (Professional Code WP/vBP, § 4, p. 5) Additionally, professional training, regulated by §4a BS WP/vBP, forms the basis for a conscientious professionalism. When agreeing on the remuneration for audits and reports, it needs to be considered, that the remuneration can guarantee the quality of the professional work (§ 55 WPO)

In accordance with §43 sect. 1 sentence 1 WPO, the auditor is obligated to exercise **discretion**. According to the regulations of the professional code (§§ 9, 10 Professional Code), auditors are not allowed an unauthorized disclosure or usage for their own purposes of facts and circumstances they are entrusted to them or that they come to know while exercising their profession. This obligation to discretion also applies to final audits. The obligation to secrecy is without time limitation (§9 Abs. 3 professional code) and also holds true for the company's employees.

Personal responsibility, regulated in §44WPO, §11 professional code, means that the auditor exercises his tasks entirely under his own responsibility and free of instructions. He forms his own opinion and makes his own decisions. He must not accept jobs, if he cannot carry out his work with professional

responsibility. The compliance with the regulations of personal responsibility serves to secure the quality of the job being done. Moreover, it is meant to contribute to the auditor reaching an independent judgment.

Professional dignity includes, that the auditor abstains from any work that is incompatible with his vocation or the reputation of the vocation, regulated in §43 sect. 2 WPO. He has to be aware of his special vocational duties resulting from the fact, that he performs legally mandated final audits and that the public and his clients trust his judgment (cf. Leffson, 1998, p. 90). "He therefore has to prove himself worthy of the trust and dignity his profession requires, also beyond his professionalism"(IDW, 2011, p. 33). Concretely, it goes without saying that the auditor is not allowed to agree on success fees, to make or accept the payment of a commission (§55 WPO), and donations. The same applies to all employees of the auditor.

Code of Ethics

The prerequisites for implementing this complete concept of quality in an auditing company consists first of the consideration and the compliance with all legal and professional requirements as well as paying attention to the guidelines of the Code of Ethics (International Federation of Accountants, 2012). Those comprise very extensively all prerequisites the auditor needs to consider and fulfill in his office and while undertaking the different audits. The **professional requirements**, which are predefined in the professional by-laws of the respective countries, contain e.g. the obligation of an objective and diligent professionalism, the obligation of personal ongoing training as well as those of employees and the obligation to confidentiality, to name but a few. The **legal requirements** concern the attention to the various independence and exclusion criteria, confidentiality, diligence, independence as well as the obligation of providing an unbiased report and audit certificates, to name but a few here as well. The **Code of Ethics** for Professional Accountants applies to all professionals that are members of a member-organization of the International Federation of Accountants (IFAC) and contains the behavioral-standards for auditors applicable worldwide. The purpose of the Code of Ethics, which is published by the IFAC in an up to date version in July 2012, is to "serve the public interest by: contributing to the development, adoption, and implementation of high-quality international standards and guidance; contributing to the development of strong professional accounting firms" (Code of Ethics for Professional Accountants, p. 1). They also contain professional obligations such as integrity, objectivity, functional responsibility and diligence, confidentiality and independence, to name the most important (cf. Code of Ethics for Professional Accountants, p. 3)

Independence

As it becomes clear in the short explanation above, certain tenets such as confidence and independence, are to be found in all three divisions as mandatory elements for the auditor. This shows, of course, the great importance the adherence of these tenets has got for qualitative professionalism. Still, the adherence to these legal and professional standards is only to be found among the foundations of this new holistic model of quality, the so called principles. Quality needs to be more than simply fulfilling these given laws and principles.

This holistic model of quality is only to be achieved by the auditor, if he performs his task with complete independence and without biased and if he does not allow his opinion to be influenced. The independence of the auditor is the cardinal quality of honesty in the holistic model of the author. Only a completely independent auditor is able to guarantee that his judgment is unbiased and free of any external

influences. Independence is – as mentioned before – required by all three elements of the principles, but it is part of the professional duties that the auditor has to fulfill. However, independence means more than the fulfillment of a professional duty, it is of utmost importance and the chief aspect of the whole model.

Regarding the different legal and professional regulations of independence, it can be observed that independence is theoretically widely regulated, e.g. through the limitation of shares and voting power an auditor has in a company that he is to assess; through the agreement on a limit to the remuneration limit; expulsion in case of concern etc. Nevertheless, in practice, there are problems of demarcation occurring again and again due to unclear legal terms, such as bias. In the reference, the auditor's independence is divided into "independence in fact or independence of mind" and "independence in appearance". If an auditor is independent "in fact or in of mind", he or she has the ability to make independent audit decisions, even if there is a perception of lack of independence or if the auditor is placed in a potentially comprising position (cf. McGrath et. al., 2001, p. 39).
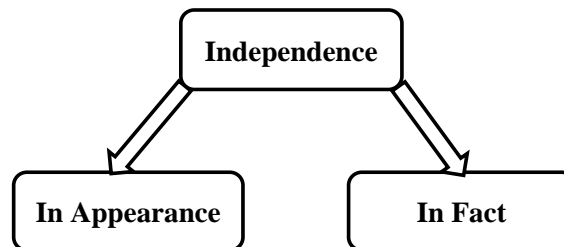
Source: designed by the author, 2012.

Fig. 1. **Independence of an Auditor**

But it could be, that even when the auditor is "in fact" independent, that there are some facts that may make the public believe, that the auditor does not "appear" to be independent. It could be, that users of financial statements believe, that they cannot rely on annual audits of financial statements (cf. Lowe et. al., 2001, p. 90). Therefore the perception of the public and of users of financial statements it is also an important consideration in the discussion of auditor independence. It is necessary, that a reasonable third party recognizes that there are no conflicting interests that might be prejudicial to the auditor's independence (cf. Quick, 2005, p. 92).

Clients

For achieving this holistic model of quality, the highest possible quality needs to be the mission of each and every office. That means, the mission is to reach the highest quality in all sectors and levels of the office. Therefore it is of utmost importance that each office defines "its quality" and decides for itself, as their unique selling point. The determination of what quality is for each individual office is necessary, as it differs for each office. Each office has different mandates with different expectations and needs. As the office "knows" it mandates, it will be able to provide a quality in harmony with its mandates and therefore will be unique in fulfilling all expectations. What's more, the recipients and addressees of the services will differ in the respective office. For example, if an audit company assesses a company oriented toward the capital market, the recipient of the audit will not only be the company itself, but also a multitude of shareholders. In contrast to that, small companies mainly assess small and medium-sized companies, where shareholder and manager are the same. Therefore, the expectations will differ due to

the different circles of recipient. Only the office is able to determine its own quality for the respective recipient.

Employees

The employees are of importance for implementing a broad quality model in two ways: For one thing, they need to be included in the implementation and realization of a model if this model is to be successful, and secondly the employees play a vital role in an audit company when it comes to carrying out final audits and hence determine the quality of the work and the company.

Well-trained, skilled employees are one of the basic prerequisites for flawless work and hence an important component in the new quality model. Only well-trained employees are in a position to find errors in annual final audits and to reveal them. Qualified job handling requires securing a high level of qualification of the employees.

Therefore, it is part of the professional duties of the auditor to inform his employees when employing them about the respective legal and professional regulations, to inform them about independence rules, to obligate them to confidentiality and to introduce them to the company's quality assurance system. Furthermore, each employee has to confirm a declaration of independence annually and before each auditing assignment.

The development of employees is an important aspect in any audit company. The professional code (§6 BS WP/vBP) mandates, that sufficient practical and theoretical training of the trainees and the further education of specialized employees has to be organized and that specialized information has to be provided. Next to the education and training, the appraisal of the specialized employees at reasonable intervals is part of company's duties.

Competition

The auditors market has been influenced by an increasing competition as well as by tendencies of international harmonization, which led to a drastic change in the auditors' market during recent years. The indicator for this intensification of competition is the continuing process of concentration in auditing companies. During the past 20 years, this process of concentration has led to the "Big-8" becoming the "Big-5", on the basis of the "Big-Eight-Companies"[3] still in existence in the 80s through different fusions from 1989 to 1998. Triggered by the Enron-collapse, the Arthur Andersen group was split up und merged partly with other auditing companies, so that since then there are only the "Big-4" (cf. Koecke, 2006, p. 24), which are continually expanding their market position, so that the EU already is alarmed a system relevance in their green book dated the 13th of October 2010 (European Commission, 2010). The consequences, that would arise from the disappearance of the "Big-4" are being compared to the experiences made during the last financial market crisis (European Commission, 2010).

It is evident from recent studies, that there also is a tightening process of concentration taking place amongst medium-sized auditing companies (cf. Koecke, 2006, p. 233). One reason for further mergers is that the increasing internationalization of the clients and the increasing demands made on auditors can be met more easily by bigger unites. In the auditing market research other facts such as cost advantages (economics of scale), advantages of diversification (economics of scope) and financial disadvantages of small and medium-sized companies are seen as reasons for the process of concentration (cf. Koecke,

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[3] To the "Big Eight-Companies" belonged Arthur Andersen, Arthur Young, Coopers & Lybrand, Deloitte Haskins & Selle, Ernst & Whitney, Peat Marwick Mitchell, Price Waterhouse and Touche Ross, see. Markus, H.B. (1996), pp. 206, Büchele; Gschrei, 2011, 60 p.

2006, p. 36). Economics of scope means as far as audits are concerned, that the production of the auditing service becomes cheaper the more auditing services are rendered (cf. Hofmann, 1982, pp. 32). The reason for the increase of the concentration of providers in the auditing market can be cost advantages due to the company's size (cf. Lück, 1999, p. 66). These cost advantages can be proved by statistical analyses, which make a connection between productivity and the practical turnover.

The intensification of competition in the auditors' market can be seen in the increasing competition for medium-sized mandates by second-tier and the "Big-4"companies. An increasing effort of the "Big-4" companies to obtain auditing orders of medium-sized mandates, as well as an aggressive pricing policy between small and medium-sized companies can be observed (cf. Fischer, 2004, pp 95).

The demands for auditors, especially those of medium-sized companies, who usually supervise other medium-sized companies, have increased as part of advancing globalization, also in medium-sized companies, in recent years. Clients moving successfully in niches need auditors with respective special skills. This again causes the auditing company to build up and keep ready respective specialized advice capacities (cf. Henze, 1999, p. 10), which is getting more and more difficult for small and medium-sized companies not focusing on only one sector. Other increasing demands for small and medium-sized auditing companies are the result of the capital market orientation for financing the growth which goes hand in hand with the internationalization of companies (cf. Haßlinger, 2011, pp. 26). This capital market orientation requires the compliance of certain accounting regulations plus prompt financial reporting.

The development pictured above shows that it is getting more difficult, especially for small and medium-sized auditing companies to survive the increasing processes of concentration. This is true especially before the backdrop that there is a strategic deficit noticeable in these auditing companies.

The Public

Auditors have suffered a loss of confidence through diverse accounting scandals, and the public has doubts as to the independence and the performed audit quality of auditors. All this happens even though the trust in the auditor is the basis of the institution of final audits (cf. Moxter, 1981, pp. 579). It is of crucial importance to restore this confidence, as external legislation is accessible for the public and the public in return relies on its correctness (cf. Lück, 1999, p. 1). The annual final audit is the main result of accounting and the investors of the capital market rely on the final audits made by auditors.

The final audit fulfills three functions: the control-, the information- and the accreditation-function (cf. Orth, 2000, p. 17). The **control function**, which included the correction- and the prevention-function, is considered as the main task for the auditor. The control function is directly based on the principal-agent-conflict between investors and management and the possibilities of influence of management on the accounting (cf. Buchner, 1996, p. 5). The control-function is to ensure, that the annual final audit and the situation report meet legal prescriptions. The **correction function** includes revealing mistakes in the accounting; the **preventive function** is to lead the company to avoid mistakes from the very beginning of setting up their final audits in the future (cf. Quick, 1996, p. 2).

A further task of the annual final audit is to inform the supervisory board or the legal representatives and people outside the company about the results of the audit (**information function**). A precondition for this is the responsible reporting of the final auditor as well as compliance with legal and professional disclosures. The audit report and the oral reporting to the general assembly or the supervisory board are the respective instruments of information (cf. Wiemann, 2011, p. 39).

The audit certificate of the annual auditor summarizes the results of the final audit and furthermore contains an assessment of the accuracy of the accounting towards company externals (**accreditation function**). With this assessment as part of the accreditation-function, the auditor takes on a role as an

„information mediator" between the company and external third parties, for which the audit certificate often is the only source information offer of the result of the final audit (cf. Orth, 2000, pp. 19).

The AuditCompanies-QualityDevelopment Model (AC-QD-Model)

Based on the holistic model of quality, the author develops the following **AuditCompanies-QualityDevelopment Model (AC-QD-Model)**, which includes and taken into account the eight components. This model enables each audit company to define its own quality standards according to a uniform method.

Source: designed by the author, 2012

Fig. 2. **AC-QD Model**

Summary New AC-QD Modell

Above, the single components of the author's new AuditCompany-QualityDevelopment Model (**AC-QD Modell**) were presented. For this holistic approach to quality, it is important, that each audit company consider every component for their own company and defines it individually. In this way, every audit company has the possibility to define its own quality my means of a uniform model.

The whole office will back the decision only if they decide, define and find their own idea of quality. This quality needs to be "lived" every day, in all sectors described, on all levels and by every employee. The inclusion of the whole office – that means of all employees – is a vital prerequisite for the fulfillment of the mission of "extensive quality". Quality cannot just be ordered by the employer, but needs to be followed and set as an example by him.

To sum it up, the holistic model that each office develops considering all aforementioned components that the office accommodates to the current conditions; considers the independence as the chief precept and thereby makes sure that expected and obtained quality correspond. Quality doesn't arise from quality

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control but will arise when it becomes the task of the whole auditing company exemplified by the auditor and each employee. Quality has to be the unique selling point (USP) of the auditing company; every task in the company has to be aimed at fulfilling the quality requirements it set for itself. At the same time, the auditor has to keep his independence, and by consideration of his professional duty, create values in his work, which will fulfill the expectations of the shareholders, of the public and of the audited company. The auditor has the responsibility but he has to include his employees in the whole process.

The **Novelty** in this model is, that there is no existent model that includes and combines all eight components. Only when all components are taken into account by the auditor he is able to develop his own quality model as a holistic enterprise approach and will get so "quality as much as possible".

The novelty is that the design of the AC-QD-model offers a uniform method for deriving an individual quality for each company. It is important to create a uniform understanding and a uniform framework, how quality is derived and defined with regard to the respective company. Therefore, it is **not about finding a uniform quality** – which does not-exist – but about **finding a uniform method of defining** and **controlling individual quality**. Each company has to define its own quality, using the **AC-QD-model** explained below. The way and method, how quality is to be understood, is uniform, but each company defines for itself its individual, own quality. This results in a different and individual quality for each and every company in the way that every company will get "as much quality as possible".

Professor Peemöller draws the same conclusion in his recent essay: "Legal rules, professional regulations and reform proposals by commissions aim at the sagacity and the freedom of judgment of the auditor, in order to ensure an appropriate judgment. These efforts **will not be fruitful, if the auditor does not have the commitment to his work to perform it with the highest possible quality**" (Peemöller 2012, p. 37).

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MARKETING COMMUNICATION 2.0: A DYNAMIC APPROACH FOR THE SERVICE INDUSTRY BASED ON THE CUSTOMER RELATIONSHIP LIFECYCLE

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Abstract. An increase of customer retention is usually regarded as a strategic corporate goal, but no differentiation regarding customers or customer segments is accomplished. Hence, no profitability orientation exists, because retention strategies as well as marketing communication strategies are used for profitable as well as unprofitable customers (Georgi, 2005, p. 231 f.). A concept is required, which takes these aspects into consideration, as well as the customer's perspective towards retention strategies, especially concerning marketing communication. Lifecycle concept is well known from performance in kind, but is also crucial for services and service marketing. The focus of this concept is the assumption, that every performance has a limited lifetime and the selling of this performance underlies a cyclic development over time (Wiesner and Sponholz, 2007, p. 27). First of all, the purpose of this paper is to gain insights about the changes in needs and expectations in terms of communication of hotel customers during relationship lifetime and the impact on communication and hence, also retention strategies. With the help of a questionnaire, hotel customers in different customer lifecycle phases are asked for their needs and interests concerning marketing communication. With these insights, the creation of a new dynamic communication approach for the hotel industry is possible.

Key words: *service marketing, customer lifetime, dynamic communication approach*

JEL code: M31

Introduction

The purpose of this paper is to introduce a new model for customer retention in the hospitality industry through a more efficient and effective marketing communication strategy, which takes the dynamics of the customer relationship lifecycle into consideration. For this reason, the customer communication lifecycle is introduced, to offer a more integrated and appropriate model for marketing communication in the hotel industry. The invention of this lifecycle takes the dynamics in communications in consideration, which are otherwise ignored by usual communication methods. As indicator for the communication lifecycle compared to the relationship lifecycle, the C.A.L.I., is created, the communicational adhesion lifetime index. This index is developed to illustrate the differences in need for communication during the different lifecycle phases corresponding to relationship intensity in the relationship lifecycle model.

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Theoretical Framework

The main goal of using the customer relationship lifecycle model for customer retention is the efficient realization of customer retention in different phases of the relationship of the customer with the firm. The phase of the relationship determines the measures, which should be used for successful retention. The rationale is that based on the phase of relationship, the most appropriate way for customer retention can be derived (Georgi, 2005, p. 237). Within the lifetime of the customer relationship, characteristic phases can be identified, which represent different states of the relationship from a customer's perspective. Due to the different phases, management tasks for customer retention differ (Stauss, 2011, p. 320). Furthermore, the aim is present customers certain buying opportunities not only in a way that satisfies their needs. Also to present and communicate purchase possibilities in an enjoyable way is a main task (Tsai, 2005). The lifecycle idea should be integrated in the strategic planning and implementation process of Integrated Marketing Communications (IMC). Especially in a competitive environment it is crucial that companies involve detailed information about their customers. Furthermore, modern integrated marketing requires the integration of customers needs, motivations, attitudes and actions. Additionally, the main purpose of modern marketing is not to persuade people, but to satisfy the customer, which is the essence of customer orientation (Mihart, 2012). Also due to the changed natures of marketing communications in the Internet era, new strategic and tactical perspectives are required (Ivanov, 2012).

One main aspect of the analysis of communication characteristics is the special phase of the customer lifecycle in which a relationship is. The customer lifecycle shows the different stages of a customer relationship. To identify the stages, the development of the strength of relationship can be used, operationalized for instance by the customer turnover as well as the duration of relationship (Georgi, 2005, p. 231 f.). Thus, customer lifecycle of relationship can be regarded as an analogy to the product lifecycle model in terms of the customer-provider relationship. The customer lifecycle model was developed correspondently and was developed to show the ideal-typical temporal process of a customer relationship (Stauss 2000, p. 15, Stauss, 2011, p. 322, Bruhn, 2009, p. 59 ff.).

Research question, model description and hypotheses

The goal is to examine how the relationship lifecycle can be used to create a corresponding cycle for marketing communication purposes and how this customer communication lifecycle is able to make customer retention in the hospitality industry more successful and more efficient.

The marketing communication sent out by the provider and received by the customer is able to fulfil different aims. In service marketing, three main aspects can be communicated with the help of marketing campaigns: Emotions, offers and information. First of all, communication has an informative character and is able to close information gaps. This may be the case for instance in terms of new offers or detailed information about facilities. Information is able to reduce uncertainty at the beginning of the customer provider relationship. Furthermore, information is not only necessary to reduce risks before the stay, but is as well important after the purchase decision to inform customer about hotel services in particular, sport facilities, restaurants and all other facts that increase the pleasure of the hotel stay. Furthermore, communication is able to transfer emotions, which are especially important, if the customer provider relationship is at the peak of the lifecycle curve. Hence, communication in this area seems to be less interesting. Emotion transfer should help to create and support loyalty and customer retention. Only if communication meets customer expectations, it will be able to push further purchase decisions. Offers include all special prices, packages or last minute deals for instance that are communicated to customers. Since the intensity of the relationship changes over time, also the need for these three different aspects is supposed to change. Hence, marketing should

adapt communication based on the different needs in the different phases of the customer-service provider relationship. It is postulated that customers have a certain need for information to reduce perceived risks before their first stay. After their first stay, if they know the hotel experience for instance briefly but not in detail, a further need for information may arise. After many repeat stays, the need for further information is assumed to decrease, because no more risks are perceived and the product is well known. Concerning emotions, they are important to build up and to strengthen loyalty, so it is assumed that the need for emotions increases over time. When it comes to offers, it is likely that customized offers are required in every phase of the customer lifecycle, but the need will decrease if customers know the product very well and know special rates etc. very well. Furthermore, loyal guests are less press sensitive (Reichheld, 2001) and are less interested in lower rates than new guests. Thus, the following main hypotheses can be postulated:

H1: Within customer lifecycle of a hotel guest, the interest and need for communication from the hotel changes.
Based on the customer lifecycle phase, the need for communication in terms of information (a), offers (b) or emotional content (c) is assumed to change accordingly. Thus, the following sub-hypotheses can be formulated, based on the operationalized indicators:

H2a: The longer the customer relationship, the lower is the need for information of customers about the service.

H2b: The longer the customer relationship, the lower is the need for cheap offers in communication.

H2c: The longer the customer relationship, the higher is the need for emotional content in communication.

This approach tries to describe the guests' perspective in the communication dialogue and tries to go one step beyond classical marketing campaigns. Marketing communication is regarded as an integral part of the dialogue between guest and hotel. Additionally, the customer is regarded as an active part of communication and not as only as a receiver of mass marketing messages. Since the guest is interested in communication from the hotel, the hotel must know his specific needs and wishes and the differences in the communicational adhesion. To influence customers, it is required to deliver the right message with the right content during the right customer lifecycle phase. To use marketing budgets more efficiently and more effectively, the hotel should know the differences.

Goal of the communication model

Based on the theoretical considerations, a new communication model is invented. The following assumptions regarding the new model are empirically examined in the next step. The relationship lifecycle model shows that relationships are dynamic and hence, also marketing measures must be dynamic to be efficient and successful. To achieve this, a dynamic model for marketing communication is required. The goal is the creation of a more efficient model for marketing communication at the example of the hotel industry. Efficiency refers to an improvement in customer retention, which leads to increased customer turnovers and profits. The new model should offer a substitute or at least a supplement to usual segmentation methods, which are used to implement a more customized marketing communication strategy. Customers are segmented with the goal of offering a more individual and appropriate marketing communication strategy. The problem of classical segmentation methods is that they are often only past oriented or one-dimensional. Since the focus of nowadays marketing lies on the relationship between the customer and the provider, this relationship should also be the base for a new communication approach. Since this relationship is rather dynamic, the new communication model should take the same dynamics into consideration.

The ideas, considerations and rationales of the customer relationship lifecycle model are used to create a corresponding model for communication: A customer communication lifecycle. This new

customer communication lifecycle can be regarded as a derivative from the customer relationship lifecycle model. The new model should help to implement the findings of the relationship lifecycle model in terms of marketing actions over the customer lifecycle. The findings of the relationship lifecycle should be matched with special communication strategies per lifecycle phase. The communication lifecycle should consist of different communication strategies for the different phases. The goal is to offer the customer a communication strategy, which is mostly appropriate to customers' current phase of lifecycle. From a customer's perspective, the communication offered should meet his expectations in a higher extent than before.

Model indicators

The relationship lifecycle model consists of various characteristics, which must be adapted to the requirements of the communication lifecycle model. The adaptation of the model starts with the indicators for the different characteristics. The relationship lifecycle model is usually illustrated in a coordinate system to show the intensity of the relationship over the course of time. Regarding the customer communication lifecycle model, first of all, the indicator for the duration of the relationship must be adapted. This aspect is illustrated usually as length of relationship by the abscissa. Second, an indicator concerning the ordinate, called relationship intensity in the relationship lifecycle models, must be chosen. Within this new communication model, this indicator represents customers' intensity of expectations and interest for marketing communication during the relationship over the course of time. Third, an appropriate phase separation, based on the indicator, which determines customers' marketing communication expectations, must be accomplished. Then, based on the definition of the phases, the characteristics of each phase must be analysed. The following table shows a comparison between the usual indicators for the relationship lifecycle and the corresponding indicators of the new customer communication lifecycle.

Table 1

Comparison of indicators relationship lifecycle and customer communication lifecycle

Characteristics	Relationship lifecycle	Customer communication lifecycle
Indicator for the abscissa	Duration of the relationship	Customer lifetime, measured in days from the first purchase until the last purchase, which occurred so far, to measure the length of the active customer-provider relationship
Indicator for the ordinate	Intensity of the relationship	C.A.L.I, the communicational adhesion lifetime index, which illustrates the changes in customers' expectations towards marketing communication and the changes in intensity within these expectations

Source: Own illustration

Based on the customer relationship lifecycle, the phases for the communication lifecycle are defined correspondingly. Based on the chosen indicators, the phase boarders are modified due to the requirements of the communication lifecycle. The table below shows the four phases, phase names, indicator for phase separation, starting point for each phase and end of all phases.

Table 2

Customer communication lifecycle phase characteristics

Phase	Phase name	Separation indicator	Starting point	End of the phase
1	Socialization phase	Only one purchase so far	First purchase	First repeat purchase
2	Growth phase	Active repeat customer	Second purchase within one year	Time frame between the first and last (until now) purchase less than one year
3	Maturity phase	Active, stable repeat customer	Repeat purchases within one and two years	Time frame between the first and last (until now) purchase within one and two years
4	Risk phase	Threatened repeat customer	Repeat purchases within more than two years	Time frame between the first and last (until now) purchase more than two years

Source: Own illustration
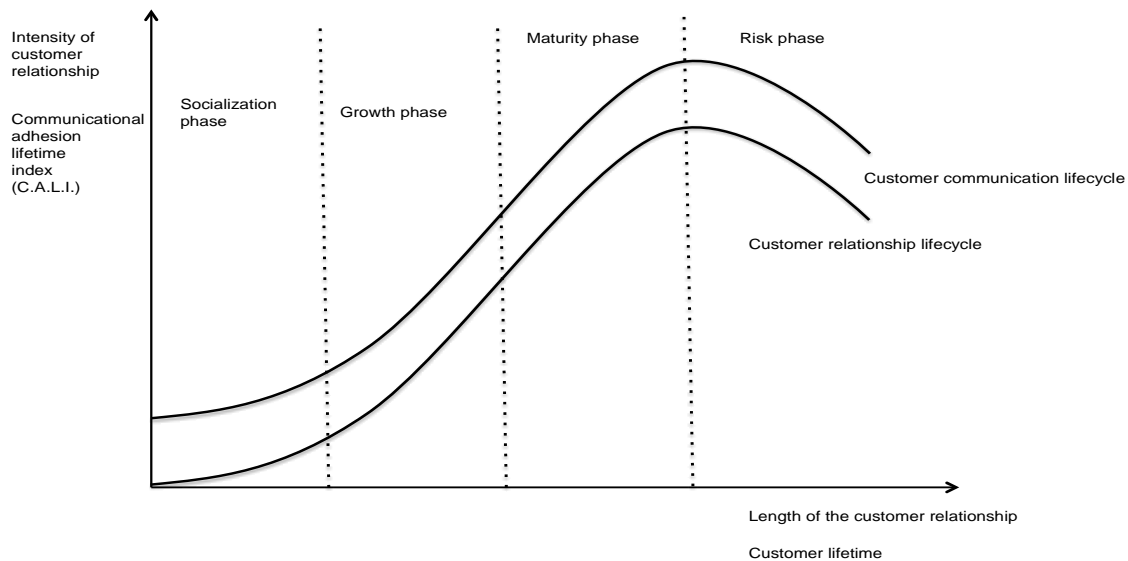
Source: Own illustration based on Bruhn, 2001, p. 48 and Stauss, 2000, p. 16.

Fig. 1. **Customer relationship lifecycle and customer communication lifecycle**

Based on the classical illustration (Bruhn 2001, Stauss 2000) of the customer relationship lifecycle, the illustration of the communication lifecycle is accomplished. The communication lifecycle is hence also separated into four phases, starting with the socialization phase at the beginning of the relationship. Then, the growth phase follows, were the relationship is increasing in terms of its intensity. With regards to the communication, the willingness of customers to receive communication, attention and interest is arising. Hence, the C.A.L.I. is increasing correspondingly to the intensity of the relationship. The third

phase is the maturity phase, were the relationship intensity as well as the communication lifecycle is at its peak. The final phase, the risk phase, starts with a slow decrease in intensity of the relationship. Also the communicational adhesion lifetime index is assumed to decrease. With the help of communication, the decrease is supposed to slow down to delay a final defection of customers. The following empirical work is conducted to analyse the assumed dynamics in reality.

Research results and discussion

Data source and analysis design – methodology

To analyse the dynamics in different phases of the customer communication lifecycle, a questionnaire was used. The questions concerning marketing were integrated in an existing guest questionnaire of a European hotel group with about 30 hotels. Most of the hotels are also located in Austria, followed by Italy, Croatia, Czech Republic, Serbia and Slovakia. The portfolio of hotels is separated into wellness hotels (14 hotels), a luxury premium collection (three hotels), family hotels (8 hotels) and city hotels. The main focus is on leisure guests, but especially in the city hotels (four hotels in sum), business travellers play an important role[2]. All transactional information concerning the hotel stay is stored in a multi-property management system. If a guest makes a reservation, this information is stored in the system, including all available information concerning name, postal address, email address, arrival date, depart date, number of guests, room type etc. The information stored in the operative reservation system is transferred in an extra database for marketing purposes. Within the import process, data is cleaned and structured to be ready and appropriate for marketing communications.

Two days after the departure, guests get a post-stay email. This email contains a "Thank you for your stay" message and the possibility to evaluate the hotel group and the previous hotel stay itself. If the hotel guests clicks on the link in the newsletter to open the questionnaire website, a personalized ID (alphanumeric) is transferred to link the questionnaire to the guest who fills it in. This enables a link between the questionnaire and the guest profile in the marketing database. After the guest has filled in the questionnaire and has clicked on "send", the results are saved and written back into the database. Hence, the information about the guest's evaluation of the stay and the hotel group can be linked to the guest's profile with segmentation and transaction information. The advantage is that guests can fill in the questionnaire faster, because they do not have to add demographic information about themselves. Furthermore, analysis possibilities are much more detailed, because the purchase behaviour including revenues, all demographic information and evaluation results can be linked. This enables an analysis based on different guest types and guest segments.

To answer the research questions and to examine the postulated hypotheses, questions regarding the interest for marketing communication, the perceived importance of marketing communication as well as the desired content of marketing communication, were added to the post-stay guest questionnaire of the hotel group. An own part in the questionnaire, labelled "Marketing" was created, were all questions concerning marketing communication are stored. This question block is one part of the whole questionnaire and has to be answered of any guest who fills in the questionnaire and was not linked to a special purchasing behaviour. Since the precise information concerning the customer lifetime and customer lifecycle is available, no questions regarding the individual phase of the customer were required. Questions were asked concerning the importance of additional information, the importance of offers and the importance of getting a "Thank you" from the hotel.

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[2] *Falkensteiner.com,* Date of insight: 28.10.2012

Furthermore, guests had to specify their desired content of the next marketing communication to evaluate the personal importance of different types of contents. This was integrated to evaluate the desired content in the context of the different lifecycle phases. Guests had to decide between information, offers or emotional content. The guests could rate the other marketing questions from unimportant to very important on a six point Likert scale. The question concerning the need of a thank you from the hotel was asked only by a yes or no question. The question concerning the desired content of the next marketing campaign was a choice question, which offered the different alternatives. This question was designed as control question, because if guests tend to be highly affected to marketing actions, it may be the case that the rate every content equally high. To specify their desire regarding the content of the marketing campaign, this question was integrated. Here, the guests really had to think and to decide what is the most important content for them. Hence, this question is highly representative regarding the examination of the appropriate content per customer communication lifecycle phase.

The questionnaire version including the marketing communication questions was sent out at the beginning of July 2012 for the first time. To have a representative time frame with a sufficient amount of responses, questionnaire responses were used from July to the middle of October 2012. Overall, about 24,140 guests arrived in total during this time frame in all hotels of the hotel group and had a correct email address available, were the questionnaire could be sent. A total amount of 2,816 questionnaires were filled in. This represents a response rate of 11.7%, which represents a relatively high quota. The average opening rate for email newsletters of the hotel group lies at 25% for unique opening. This means that every guest who opens the newsletter is only counted once, no matter how often this guest opens the newsletter in total. Since the response rate lies at nearly 12% and the average opening rate at 25%, nearly every second guest who opened the newsletter with the questionnaire also answered it completely. Since the hotels are located in different European countries and customers are rather international, the questionnaire was sent out in different language versions. It was available in English, German, Italian and Croatian. Corresponding to the language, which was saved in the reservation system of the hotels, the guests received the questionnaire. This facilitates the process, because guests did not have to choose the right language before starting to fill in the questionnaire.

Table 3

Overview frequencies of customer lifetime in days, classified

		Frequency	**Per cent**	**Valid Per cent**	**Cumulative Per cent**
Valid	Phase 1: Single stays	1,664	59.1	59.1	59.1
	Phase 2: <1 year	352	12.5	12.5	71.6
	Phase 3: 1-2 years	294	10.4	10.4	82.0
	Phase 4: >2 years	506	18.0	18.0	100.0
	Total	2,816	100.0	100.0	

Source: Own calculation based on questionnaire results

Based on the customer lifetime value in days, the classification of the variable was accomplished in accordance to the phase boarder definition. Hence, all guests with only one stay so far and hence, no customer lifetime in days available, are in phase 1 for single stays. 1,644 respondents, what equals 59.1%, are in phase 1. The next phase, phase 2, was defined for all repeat guests with not more than one year between their first and last stay. 352 guests are in the growth phase, what equals 12.5% of all guests, who answered the questionnaire. Phase 3, maturity phase, refers to all guests with a customer lifetime of one until two years. 294 guests are in the maturity phase, what equals 10.4% of all guests. Phase 4, the risk phase, contains all guests with more than two years of active relationship and 506 guests are located

within this phase, what equals 18.0% of all guests. The distribution contains a minimum of approximately 300 answers per phase type. Hence, the answers per phase can be regarded as representative due to a sufficient number of answers per phase.

The question concerning the desired content of the next marketing campaign was especially important to evaluate the changes in expectations per phase. The respondents had to decide, which marketing campaign content is the most important for them, because they were only allowed to choose one content out of three possible choices (offers and packages, exclusive news representing the emotional content or relevant information). The next table shows the absolute and relative figures for the different contents per lifecycle phase in a contingency table.

Table 4

Content of marketing campaign and customer lifetime

			Customer lifetime value in days – classified				Total
			Single Stays	<1 year	1-2 years	>2 years	
Marketing 5 – content of campaigns	No answer given	Count	231	45	24	50	350
		% within Customer lifetime	13.9%	12.8%	8.2%	9.9%	12.4%
	Offers and Packages	Count	960	183	150	242	1535
		% within Customer lifetime	57.7%	52.0%	51.0%	47.8%	54.5%
	Exclusive News	Count	269	82	97	178	626
		% within Customer lifetime	16.2%	23.3%	33.0%	35.2%	22.2%
	Relevant Information	Count	204	42	23	36	305
		% within Customer lifetime	12.3%	11.9%	7.8%	7.1%	10.8%
Total		Count	1664	352	294	506	2816
		% within Customer lifetime	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Own calculation based on questionnaire results

The amount of respondents without an answer at all, decreases from 13.9% of guests in phase 1 (single stays) to 8.2% of guests in phase 3 and 9.9% of guests in phase four. The content "offers and packages" is constantly decreasing from phase 1 to phase 4. In phase 1, 57.7% of all respondents rate offers as the most important content. Contrariwise, only 47.8% of guests in phase 4 chose this type of content. Only 16.2% of all respondents in phase 1 chose "exclusive news", but 35.2% of guests with a lifetime of more than two years rated this content as most desired. Relevant information has been chosen from all segments relatively seldom (10.8% on average). 12.3% of guests in phase 1 chose information, whereas only 7.1% of guests with the longest lifetime chose this content. Based on these results, a chi square test was accomplished. The results are highly significant with a p value < .0001.

Table 5

Chi Square test marketing campaign and customer lifetime

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	111,740[a]	9	0.000
Likelihood Ratio	108,709	9	0.000
N of Valid Cases	2816		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 31.84.
Source: Own calculation based on questionnaire results

Due to the nominal scale of the desired content, a Cramer's V was conducted to analyse the strength of association. With a also very high significance (p<.0001), Cramer's V shows an existing, but weak correlation (.115).

Table 6

Cramer's V marketing campaign and customer lifetime

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Nominal by Nominal	Phi	0.199			0.000
	Cramer's V	0.115			0.000
N of Valid Cases		2816			

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Source: Own calculation based on questionnaire results
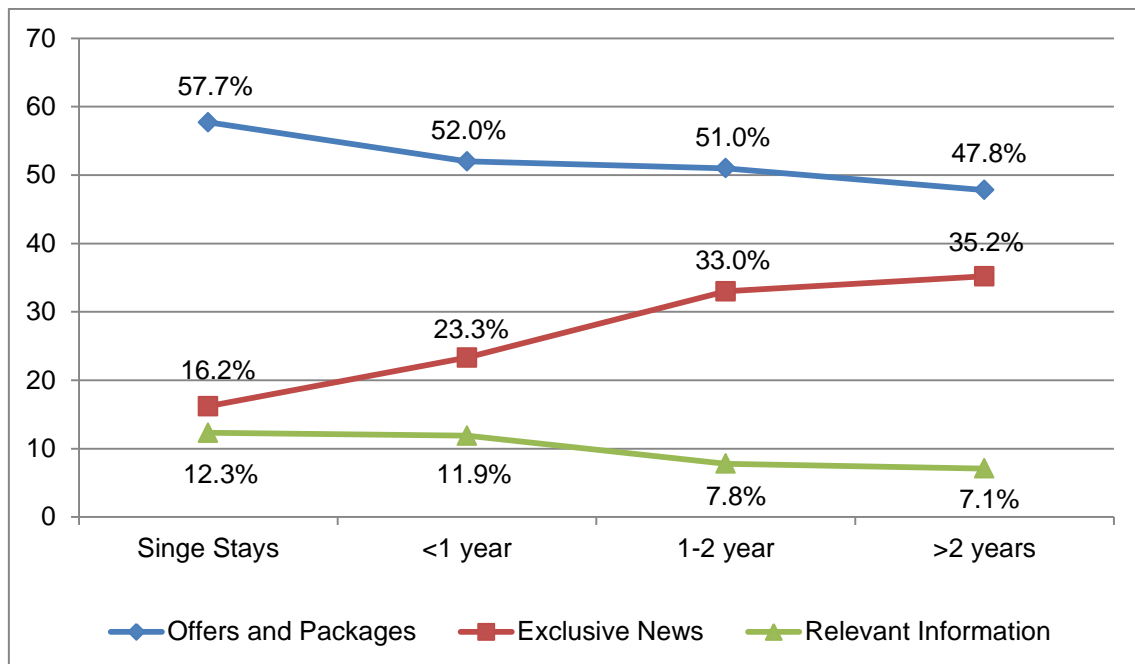
Source: Own illustration based on questionnaire results

Fig. 2. **Desired content of marketing campaign per lifecycle phase**

The need for communication in terms of information, offers and emotional content changes. Since the need for information of customers about the service decreases during customer lifetime, H2a is supported. Also H2b is supported, because the illustration shows the fact that the need for cheap offers in communication decreases from phase to phase. Finally, H2c is supported, since the expectations towards exclusiveness and emotional content increases from 16.2% in the first phase until 35.2% in the final phase.

The next chart above shows the dynamics of desired content per communication lifecycle phase. "Offers and Packages" is decreasing from phase to phase as well as "Relevant Information", whereas "Exclusive" news is increasing in a high extent from phase to phase. Several questions regarding the

importance of marketing communication were integrated into the questionnaire. The importance of information, exclusiveness and offers were asked separately. To show the overall importance and to examine the C.A.L.I per phase, the sum of the three values for each importance was calculated. Then, in the next step, the mean for each phase was determined. The next table shows the results. The highest mean has group 3 (1-2 years), where the peak of the intensity of the relationship as well as the expectations towards communication was assumed. Furthermore, single stay guests in phase 1 have the lowest mean. This supports H1, because the expectations, needs and interests of a hotel customer in terms of marketing communication change during customer lifetime.

Table 7

Mean of overall marketing importance per lifecycle phase

Customer lifetime – classified	Mean	N	Std. Deviation
Single Stays	11.9050	1663	4.78698
<1 year	12.6648	352	4.75749
1-2 years	13.1939	294	4.08859
>2 years	12.9980	506	4.48650
Total	12.3311	2815	4.68926

Source: Own calculation based on questionnaire results
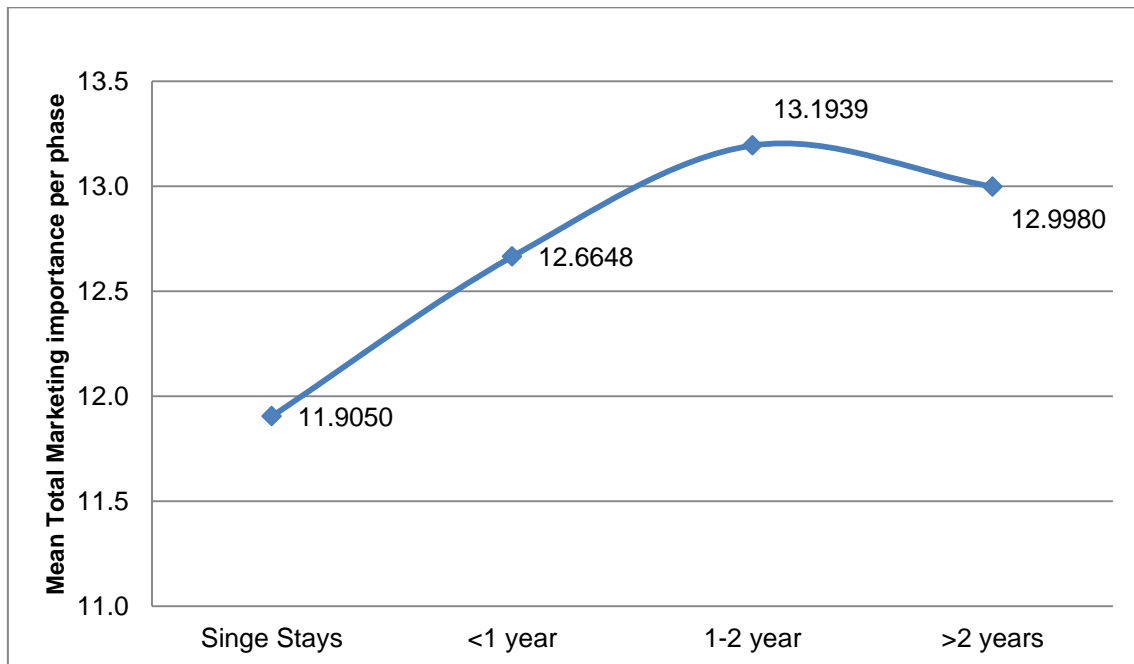
Source: Own illustration based on questionnaire results

Fig. 3. **Importance of marketing communication**

The Chi square test, comparing the overall perceived marketing importance, consisting of emotions, information and offers, is significant with a significance level of 5% (p value is 0.027).

Table 8

Chi square test importance of marketing communication and lifecycle phases

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	75.740[a]	54	0.027
Likelihood Ratio	78.671	54	0.016
Linear-by-Linear Association	30.972	1	0.000
N of Valid Cases	2815		

a. 10 cells (13.2%) have expected count less than 5. The minimum expected count is 0.73.
Source: Own calculation based on questionnaire results

Since both variables are ordinal, the gamma value could be calculated. The value shows a weak association (0.127) with a high significance ($p<0.0001$).

Table 9

Gamma value marketing communication and lifecycle phases

	Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal Gamma	0.127	0.020	6.321	0.000
N of Valid Cases	2815			

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Source: Own calculation based on questionnaire results

Conclusion

The findings presented in this paper are only an extract from the comprehensive results of the empirical work. Nevertheless, these considerations and examinations are important regarding the design of the new communication model for the hospitality industry. It was possible to show that a creation of a customer communication lifecycle, corresponding to the relationship lifecycle, makes sense. Within customer communication lifecycle of a hotel guest, the interest, needs and expectations concerning information, offers and emotions change. Hotel marketers should take these changes into consideration in the future. During the relationship, the need for information of customers about the service becomes less important. Contrariwise, the question concerning the desired content of marketing campaigns was able to show that the importance of emotional content and the desire for exclusiveness increases. Especially very valuable guests with a high customer lifetime expect emotional messages to feel important and pampered. Another interesting finding is the fact that the importance of offers decreases during the relationship as assumed, but the overall importance is still very high. This means that all guest segments expect a certain extent of appropriate and customized offers within their received marketing communication. This will be a prerequisite for successful customer retention in the hotel industry in the future.

The proposed customer communication lifecycle is able to offer a more dynamic and customized solution for segmentation purposes. Furthermore, it offers insights regarding an integrated marketing communication concept in the hotel industry. Integrated communication is commonly considered as management process, but also requires the underlying integrated mechanics to operate effectively (Smith, 2012). The customer communication lifecycle can be considered as one mechanic towards communication integration. The conducted questionnaire was able to show that customers' expectations towards marketing communication change during the relationship. Furthermore, the intensity and interest changes accordingly to the intensity of the relationship. It is a main goal for service marketers, to design

new strategies for marketing communication, which take these dynamics into consideration. Additionally, due to a better understanding of customers' wishes, an increase in efficiency and output of marketing communication campaigns is likely. The next step within this research project is an operationalization of the different strategies per phase. Furthermore, it would be interesting to accomplish a similar research product in a different service industry to compare the results. Another important fact would be the integration of the lifecycle in the whole integrated marketing communication strategy of a hotel company. Since interaction between the instruments of the communications mix, which target at the same market segments are able to create synergy, a further increase in marketing effectiveness may be possible (Prasad and Sethi, 2009).

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ACTUAL PROBLEMS OF PUBLIC-USE RAILWAY INFRASTRUCTURE DEVELOPMENT MODELLING

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Abstract. The current work is aimed at studying the actual problems in modelling Latvian public-use railway infrastructure (hereinafter – the railway infrastructure) development and targeted on defining both key variables and test indicators.

The research was based on the analysis of the statistical material and the observance of existing methodological approaches with a feedback to the Latvian specific distinctions described in the work. The output indicators of the model were adopted from the National Development plan 2020 and stated at the beginning of the study. After that externalities were segregated as an outside environment and expressed in correlated indicators. Completely available statistic data for the scoped factors was analyzed for its significance within an ample horizon and summarized in system tables.

The following conclusions were drawn:
1) methodological solution is needed for evaluation of the endogenous factors with indicators that can be fixed directly for the railway infrastructure;
2) there is no reliable data from non-European stakeholders on outside impact on the Latvian public-use railway infrastructure.

Therefore, further academic research is needed on how to create and secure the flexible and sustainable railway infrastructure development model. The survey method for further examination of purposed system of indicators is provided for discussion.

Key words: *public-use railway infrastructure, modelling, evaluation of sectoral statistics*

JEL code: H410

Introduction

The Latvian Railway is a powerful institution and its managing entity "Latvijas dzelzceļš" (hereafter – the infrastructure manager) is one of the largest employers, taxpayers and one of the most valuable companies in Latvia. According to the condition of the section 6 of the Railway Law "the State public-use railway infrastructure shall be developed to meet the needs of the economy and its development, the interests of stable transportation, and the requirements of environmental protection". Due to these factors the Latvian railway is a grand player on the macroeconomic level and its outcomes of operations and development should be measured on the macroeconomic level despite its microeconomic legal position.

The development of the national economic interest policy cannot be experimented with because it can lead to major losses. So the railway infrastructure development model (hereafter – the model) should be worked out and applied to a current situation in order to imagine trends in the economy and affecting

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factors in logical or mathematic expression. This formalized concept has to show how input (exogenous) factors alter output (endogenous) variables and relationships between the railway infrastructure and the national economy to allow analyse short, medium and long term changes in the national economy structure caused by the changes in the technical, political, economic and financial proceedings of railway infrastructure as well as predict the national economy impact on the railway infrastructure indicators and vice versa in order to identify the necessary changes in the proceedings of the railway infrastructure so that the national economy objectives can be achieved.

It is crucially important to define in advance the base case (Job van Exel et al, 2002) whilst detecting specific characteristics of the model object. Then, relevant external and internal effects should be determined (Button, 1993; Rienstra, 1998). Finally, the key support and trouble determinants may be assumed as well as interaction between them and network effects that can appear in wider economy (e.g. changes in output of regions and employment) (James J. Laird et al, 2005). Given the sectoral meaning of rail statistics, the output macroeconomic indicators are not directly quantifiable "with and without" implementation of an railway infrastructure development strategy. Therefore this work is **aimed at** defining key variables and test indicators of both endogenous and exogenous factors of the model and target setting for methodological solution for microeconomic level criteria assessment on national economy level.

In spite of many studies have tried to establish statistical links between investments in railway infrastructure development and national economic growth (Crainic T.G., 1984; Shiftan, Y. et al, 2002; Weisbrod G., Reno A., 2009; Абрамов А., Галабурда В, 2002; Канторович Л.В., Лившиц В.Н. 1982; Мачерет Д.А., 2006; Терешина Н.П. et al, 2002), the common trend is to design specific models for each project or specific problem (Banister D., Thurstain-Goodwin M., 2011; Griskeviciene D. et al, 2012; Nair R.et al, 2008; Patļins A., Kuņicina N., 2009; Thomopoulos N. et al, 2008). The variety of the interrelated distinctive features that impact the Latvian railway causes difficulties in expressing them in terms of exogenous and endogenous factors of existing models. Therefore, it is necessary to work out a new system of possible long-term period statistic indicators that can be effective input of the model. In order not to distract from the main objectives it has been decided to examine appropriated criteria from fixed output to possible input. For this reason the endogenous factors of the model have been stated at the beginning of the study. Then signature features of the model object have been described. After that externalities have been segregated as an outside environment and expressed in correlated indicators. Completely available statistic data for the scoped factors have been analysed for its significance within an ample horizon and summarized in system tables. The survey method for further examination of purposed system of indicators is provided for discussion.

Research results and discussion

1. The specifics in modelling Latvian public-use railway infrastructure development

The needs of national economy are vital objectives of the railway infrastructure development. Therefore the efficiency of the railway system development should be measured within it integration in national policy and output indicators for the model needs should be adopted from the national policy planning documents. The highest level of them is the National Development Plan 2020 (hereinafter - NDP 2020) issued by the Cross-Sectoral Coordination centre in 2012, then – the Transport Development program (issued by the Ministry of Transport in 2010) after that – the Strategy of the railway infrastructure development (issued by the infrastructure manager in 2009) that outflows to hundreds of individual projects.

The Latvian railway infrastructure has a number of distinctive technical, political, economic and financial qualities that should be presented by the model describing reasons of diminishing marginal productivity of the railway infrastructure. In order to find out the optimal usage of the railway capacity and investment leverage, the model should explain development of which production factor (or combination of factors) gradually decreases output of the railway infrastructure and where a margin is whereby additional investments no more increase the benefits. It is important to highlight that the productivity of the railway infrastructure service is not unique and depends on the structure of the predetermined objectives: passenger and freight shares in transportation, social and ecological policy provided and others. Therefore output of the model should be fixed with concrete test indicators before examining input. NDP2020 indicators (see Table 1) matched to the transport development have been chosen for appraisal of **endogenous factors**.

Table 1

The endogenous factors of the model

Priority	The objective of the National Policy	Indicators
National Economic Growth	Highly productive, export capable industry and internationally competitive services	*Exports of goods and services (% of GDP)* *Productivity (thousands euro per labourer)* *Productivity of natural resource use (euro per resource ton)*
	Excellent business environment	*Ranking of Trading Across Borders in Doing Business index* *Freight turnover in Latvian big seaports millions ton per year*
	Advanced research and innovation	*Investments in R&D (% of GDP)* *R&D (personnel % of labourer)*
	Energy efficiency and production	*Energy consumption (oil equivalent kg per 1000 euro of GDP)* *Intensity of greenhouse gas emission (CO2 equivalent ton per 1000 EUR of GDP)*
Individual's Securit-ability	Development of competencies	*Adult education (% per labourer)*
	Decent work	*Dynamics of salaries (% to previous year)*
Growth For Regions	Promotion of economic activity in regions – unleashing the potential of territories	*Regional developments index* *GDP per capita regional dispersion* *Income tax in municipal budgets (EUR per capita)*
	Availability of services for creating more equal work opportunities and living conditions	*Passenger turnover in public auto transport (millions passenger km par year)*
	Sustainable management of the nature and cultural capital	*Forest territories (% of total Latvian square)*

Source: author's construction based on National Development Plan 2020 (Cross-Sectoral Coordination centre, 2012)

The technical distinctions of the Latvian railway arise from a historical fact that the Latvian railway infrastructure was built not for domestic needs, but primarily in order to transport bulk and raw materials from Russia, Belarus and other former Soviet republics to Baltic seaports. Therefore most the Latvian

railway technical characteristics (1520 mm gauge, partial electrification with 3 kV voltage, axle load 23.5 t, allowable speed, length and weight) differ from the railway infrastructure prevalent in Europe and correspond to heavy transportation. This kind of usage has been preserved to this day. Therefore the origin of most important factors influencing rail operation arises from the global Eurasian traffic flow not from the Latvian economy.

The majority of the Latvian railway has been constructed as the single-track (trains can travel in only one direction at a time). This factor, as well as such technological circumstances as irregular cartage from neighbouring countries and uneven detraining in the seaports, light running in West-East direction and others causes incomplete capacity utilization which is also a distinctive condition in comparison with two-track networks or networks where several alternative routes have been developed.

Contrary to European dominant passenger transportation share in railway usage, this kind of railway consumption is not so widely used in Latvia and has a negative dynamic. Reasons for this situation are not only the impact of the distinctive **demographic factors** (reduction of the population and its spending capacity, the centralization of the population around the capital and others), but also the technological features (low platforms, lack of locomotives and wagons, inefficient station services development).

The political distinctions of the Latvian railway sector are harmonized with the European Union legislation that provides liberalization, vertical separation (i.e. separation of infrastructure managers from railway undertakers), prevention of congestion, territorial cohesion, elimination of technical barriers. Currently, railways and their' integration into the overall transport system is summarized in large programming (White Paper, Rail and Public Transport for a low carbon future, Interoperability of the rail system, Action Plan on Urban Mobility, etc.) and regulatory (Fourth Railway Package, Passenger Rights Regulation and other) documents where the key trends are: significant greenhouse gas (GHG) emissions reduction by 2050; shifting freights to railways or waterways; high-speed and conventional rail passenger transport; technological innovations; prevention of accidents; congestion and noise reduction.

The development of railway infrastructure conditions is affected by the Organization of Transport Ministry Cooperation (hereinafter – OSJD) as well. OSJD main objectives are development of common rail space within the Eurasian region (mostly on 1520 gauge territory), railway competitiveness in transcontinental direction, as well as scientific and technical cooperation in promotion of the rail transport. Major OSJD activities initiate development and improvement of international railway transportation mainly in Asia direction and cooperation on the solution of the problems connected mostly with technological aspects of railway transport (wagons turnover, border crossing, statement of accompanying papers etc.)

As a result of the great impact of external policies, the internal level of the policy planning documents (Latvijas dzelzceļš, 2009 and Ministry of Transport, 2010) does not always adopt general guidelines of NDP2020. Worse still internal national policies can interfere with each other in order to achieve limited funding or other advantages. There is no any common policy coordinator at transport sector so that financial leverage can be secured. In this context, the relationships among microeconomic, sectoral, multisectoral, national economy and global transport network development perspective should be analysed in modelling the economic processes of the Latvian railway. This mixed approach allows a deeper understanding of the railway infrastructure requirements and capabilities.

The heavy pollution of the Baltic Sea due to the increasing oil transport in the Baltic Sea poses a particular risk to the **eco**system and therefore environmentally friendly transport policy was adopted by the European Commission. That includes a proposal, summed up as a "polluter pays" principle that will remove the existing differences between various modes of transport.

The Latvian railway primarily **economic distinctions** are in organization form, meaning that public administration process is entrusted to a commercial undertaking. Even in the 18th century, A. Smith wrote that every single entrepreneur is used to enhance their own capital, without respect to general well-being. Also the Latvian railway's Strategy shows that the infrastructure management is targeted on microeconomic behaviour.

Supply of a railway infrastructure services is inelastic. On one hand sustainable investments and maintenance activities should be made to provide secure infrastructure service, on the other hand the obtained potential technical capacity of the service cannot be accumulated and should be used at a particular time in accordance with the work schedule. The demand for infrastructure services has dual properties: at the domestic market it has monopole qualification but at the external market there is a strong competition among various transit corridors. The potential buyers of infrastructure services do not pay attention to the transport cost components and are interested in the total price of moving goods from loading to unloading points. Therefore the demand for infrastructure service depends on the price level throughout the supply chain as well as non-price factors that are included the so-called World Bank Logistics Performance Index (World Bank, 2012): customs, quality of infrastructure services, international policy, competence, tracking and reliability.

The Latvian Railway has such **a financing distinction** like lack of investments. Till 2004 the Railway Law provided that 50% of the excise tax on diesel fuel used in rail transport was a source of infrastructure funding. Later a decision on the withdrawing of special public budgets was adopted. As a result there is a situation where road infrastructure undertakers use infrastructure relatively free, but operators of the railway infrastructure pay access charges where wear and tear is included. The average track access charges in Latvia are one of the highest in Europe (IRG-rail, 2013).

The infrastructure manager as a state joint-stock company may attract credit resources as follows: personal loans (not used because of insignificancy and cost); leasing (minimally used because of difficulty to manage); bonds (not used because of strategic importance of the railway); issue of promissory notes (not used); bank loans. So far the infrastructure manager has used mainly the resources offered by the financial sector due to their availability, relatively low price and possibility to grant the loan without hypothecating property or shares.

The Latvian bank statistics show that about 90% of foreign direct investments (hereafter FDI) in land transport division have Russian origin.

The infrastructure manager intensive use another kind of guaranteed resources like the Cohesion Fund, the European Regional Development Fund, the Trans-European transport network, the European Commission program "Marco Polo" that means developing the railway infrastructure in accordance with the programs' priorities.

Summarizing section 1 the following can be noticed: the Latvian infrastructure rail due to the specific usage with accent on freight transit has dual dependence on cargo flows from CIS countries on the one part and European political heat on the other part. Some features like underfunding and uncoordinated policy might create state failures risks.

2. The exogenous factors of the model

The outside environment effect (factors that cannot or can be narrowly controlled by the Latvian railway development policy makers) exerts as **exogenous factors** and can be characterized using indicators of six main impact groups: technology, ecology, demography, economy, finance and policy.

The assessment of external impact is quite resource-intensive. There are also many complete models that provide integrated approaches and indicators. For example, European Commission can supply extensive technical documentation on each of the individual country HERMIN models and can facilitate the initiation of such work in the Member states (European Commission, 2012). But all observed existing models have been designed for each concrete task and project like Cohesion Policy and are not comparable with specific characteristics of the model observed above. However the establishment of a new model unit can be undertaken extracting suitable parts from existing models.

The impacts of **technological** development appear as the productivity of railway infrastructure. Ortuzar and Wilumsen (2001) offered time saving as the most significant indicator of transportation

benefits. Later Shires at el, 2002 provided an extensive meta-analysis of the value of time. Both this researches are mostly focused on passenger traffic, but this type of measure can provide sufficient information for the most significant trends like unification and standardization of technological processes for all transport modes. Given Latvian distinctions, the impact of compatibility with on-demand services like interoperability, sorting, storage and clarifying should be taken into account excessively.

Global **economy** trends predetermine traffic intensity and freight structure and provide reduction of the infrastructure service cost due to reduction of fixed costs load per transportation unit. Economic factors in the Latvian case of dominant bulk transportation depend on following: global production overall and consumption volumes; deployment and development of a regional transport corridor in connection with location of material resources and choice between different modes of transport; the level of service requested by different goods; as well as world price and demand for the row material (Adamsone L. 2000, Aleksejevska J., 2007, Caprara A. 2011, Slotins D. 2009, Zarins A. 2011).

A significant impact on international trade can be made taking into consideration global regionalization trend expressed in growing interdependent of countries with ever-increasing specialization in concrete fields. For example, the enlargement of China's industrial geography to the West leads to the development of the intermodal connection in East-West direction. These facts and growing interest in development alternate transport corridors for meeting perspective demand are not taken into account in above studies and call for additional examination.

Since 2013 when the Basel III agreement entree into force, negative trends in **financial** sector like lack of long-term resources of the European banking market and higher resource prices (due to the need to raise more capital) have been rising and providing a global framework for bank capital adequacy, stress testing, liquidity risk and market standards. A further objective of Basel III (2012) is to strengthen and promote global consistency in liquidity risk supervision using the set of indicators. These indicators provided for banks in the near future converts to bank requirements that will impact European bank investment policy. Slovik, P. and B. Cournède (2011) offered the approach of quantifying the impact of Basel III capital requirements on bank capital levels and bank lending spreads that can be used for evaluation of financial sector impact to national economy and transport sector.

The indicators and evaluation approaches of European funds are included in the declaration of relevant policy. For example, impact evaluation of Regional Policy falls into two approaches using a mix of methods: counterfactual methods to quantitatively estimate an impact, theory-based methods to understand the underlying mechanisms and the context of an intervention thus helping to modify or generalize it to other contexts. Ex-ante evaluation for each European program is available on relating agencies websites and on special European Commission Funds site.

Many researchers (Titarenko, D. 2006, Stikuts, D. 2003) and research entities (OECD 2000, European Bank for Reconstruction and Development, 2001) have examined FDI impact. Based on these assessments, it is most likely that foreign investors (usually a multinational corporation) decide to enter into another market through FDI because of lower costs and higher productive efficiency than of its domestic competitors.

Ecology impact is much investigated matter. Weisbord et al. (2009) examined three types of impacts: environmental quality, health, and broader economic impacts on the basis of medical studies relating death rates to concentrations of various pollutants. Ortuzar and Wilumsen (2001) also take into account total pollution emissions and noise levels, the impacts of transport projects on road-accident costs. It should be taken into account that ecological trends in European Union have dual impact in the Latvian case. On the one part the benefits (or loses) of rail transport identification as a priority must be evaluated associated with additional cost on compliance of environment friendly requirements. For this purpose Boardman, Greenberg, Vining, & Weimer (2001) translated measured impacts into monetary values and calculated standard financial decision criteria such as net present value (NPV), internal rate of return (IRR), and benefit/cost ratio using CBA un MCA in practice. Shefer (1994) even generated ranking criteria for monetizing such indicators as a congestion, landscape and traffic flow and road accidents.

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These methods of evaluation are recognized as not sufficient (Johansson-Stenman, 2005; Yitzhaki, 2003) because they don't require effects to be equitable in sustainable mode. So on the other part long-term advantage of commonweal must be expressed in some concrete figures.

Demography trends are easy to be analysed and predicted using common statistics. Researching the demographic factors, it is essential to respect the territorial location of the railway infrastructure and take into account cross border demography. The main components of the demographic assessment are: population, geographical distribution; family structure changes; aging et al. Different kinds of existing models offer approved demography impact assessment across European Union territory SASI, CGEurope, SCENES, TIPMAC and other. There are also many studies that have focused on evaluation of the concrete impact using different kinds of indicators with the main focuses on territorial cohesion, environment and human wellbeing. It complies with the major use of rail in 1435 rail space (from 61% in Slovenia till 94% un United Kingdom of the total train/km volume in 2010), which is passenger traffic, and cannot be fully transferred to the Latvian case because of the great difference in exploitation mode (only 38% of the total train/km volume in 2010) and the absence of crossborder connection. Several national projects (the Mobility plan of Riga, RailBaltic) have particular evaluation of demography impact, but it is done in connection with the context of the concrete project.

The implementing of transportation by using rail technology has **ecological** advantages over other modes of transport. This conclusion was made in 2012 by the State Railway Administration that in accordance with Railway Law is responsible for the development of the rail environmental policy.

Political clout should be considered irrespectively to exogenous factors. This is not a separate power but leverage that can multiply positive/negative impact of externalities or adapt strength/weaknesses of internalities. For example, Russian railway development strategy (Правительство Российской Федерации, 2007) to protect directions to national seaports has a certain influence to technological, economic and financial activities. On other hand European Cohesion policy permits an opportunity of alternate development of the infrastructure. Therefore needs to identify and to qualitatively estimate relevant policy planning documents arise.

3. Indicators of the factors

The statistics of the infrastructure service are contained on the forth level of the national accounts system (NACE 52.21) but all available indicators are given in non-pecuniary expression. Businesses related to the infrastructure service that is rail freight and passenger service are contained on the third level of the national account system (NACE 49.1. and 49.2.). Only several factors can be measured in macroeconomic rates. Availability of statistics is presented in Table 2. It may be concluded that the endogenous factors of the model presented in Table 1 don't directly quantifiable with and without implementation of development strategy or project and thus call for methodological solution for evaluation with indicators that can be fixed directly for the railway infrastructure.

All criteria presented in Table 2 can be compared with European country statistics. A number of publications and data sets are available on transport thematic as well, but rail sector in the mentioned documents is specified more for passenger not for freight. There are several additional sources like UIC (the worldwide international organization of the railway sector) that provides statistic data (length of lines worked at end of year, stock value, train performance, staff number, rail traffic) for world railways, OSJD (Organization for Co-operation between Railways) provides similar information about Eurasian region (mostly 1520 rail) and Lursoft that supplies financial data from annual reports of specific companies like EBIT, Current ratio, Equity ratio, ROA, ROE.

Indicators presented in Table 3 have been selected for further correlation and optimization (detection of margin) analysis in order to assess the endogenous factors of the model presented in Table 1. Summing indicators and appraisal methods proposed in different researches that are applicable to the Latvian case

and available in comparable sources, the set of variables has been selected for further examination as provided in Table 4. The qualitative analysis of policies on stress/protect for each externality and at each policy level should be done inter alia.

There is a huge dissonance in input factors of the model. As on the one part economy and technology trends are generally outside Europe but on the other part the development of the Latvian railway should be carried out ensuring European Union policy establishing a single European railway area.

Table 2

Available data for transport evaluation in Latvian statistics database

LR Statistics Database	Available data with feasible specifying		
The first available NACE level	4th level	2nd level	Transport sector
ECONOMY AND FINANCE			
Business Tendency		*all available*	
Consumer Prices			*all available*
Enterprise Finances		*losses/profit*	*leasing/factoring*
Government Finances			*expenditure of general government sector*
Gross Domestic Product			*GDP, GVA, deflator and output and intermediate consumption (specified region)*
Investment			*investments by corresponding countries*
Producer Prices	*all available*		
Employment and Unemployment			*all available*
Household Budget			*transport expenditure specified by regions and age groups*
Labour Costs		*all available*	
Occupied Posts and Job Vacancies		*all available*	
Social Security			*subsidy of transportation costs*
Wages and Salaries		*all available specified by regions and occupation*	
INDUSTRY, CONSTRUCTION, TRADE AND SERVICES			
Construction	*For railways – by costs indicators and regions*		
Indicators of foreign affiliates	*Construction of roads and railways, freight/passenger rail transport, support activities – by countries and costs indicators*		
Trade and Services	*Freight/passenger rail transport, support activities – by countries and costs indicators*		
TRANSPORT AND TOURISM			
Cargo traffic by mode of transport (thsd t), cargo turnover by mode of transport (mln tonne-kilometres), cargo traffic by rail (thsd tonnes), freight traffic by rail by group of goods, cargoes loaded and unloaded at Latvia's ports (thsd t), sea transport: cargoes loaded and unloaded at different ports of Riga (% of total cargo turnover), cargoes loaded and unloaded by type of commodity (thsd tonnes), passenger traffic (mln passengers), passenger turnover (mln passenger-kilometres), road traffic accidents in statistical regions, cities under state jurisdiction and districts			

Source: author's construction based on www.csp.gov.lv data.

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Consequently there is no reliable data from non-European stakeholders and research instruments should be developed in order to process it. The following methodology for the identification of the political impact and out-taken variables is offered for discussion:

- developing a list of stakeholders to be interviewed for this case - rail operators, marine terminal operators, ports' authorities and transport policy-makers in corresponding states;
- consultations on three main topics: a) best-practice intermodal chain characteristics (information sharing on capacity planning, seasonal and operational irregularity and rolling stock turnover); b) partners' demand, capacity and other operational matters wherever commercial competitive considerations do not prevent this; c) investment planning among chain participants;
- case study on possible common processes and activities that link the stakeholders together in the rail logistics system and problems that interfere with development coherence;
- more detailed examination of the issues that might be obtained from an individual stakeholders industry specific or even company specific operating practices.

Table 3

Indicators for assessment of the endogenous factors of the model

Distinction	Indicators (NACE, Lursoft)
Technical	*Length of network in use, km* *Share of network in use, %* *Freight traffic volume, t km* *Passenger traffic volume, passenger km* *Electric/diesel traction share of freight traffic, %* *Electric/diesel traction share of passenger traffic, %* *Staff per track-km* *Traffic units (millions) per staff* *Traffic units (millions) per track-km Implied gross ton-km/net ton-km ratio*
Economical	*Value of Fixed assets, LVL* *Turnover, LVL* *Operating revenues, LVL* *Average track assess charge, LVL* *Average tariff, LVL* *Electricity prices, LVL per kw* *Diesel prices, LVL per t*
Financial	*Annual dividend after DSCR, LVL* *Public subsidy assumptions (operational and capital), LVL* *Outstanding amount of credits and bonds, LVL*

Source: author's construction.

Table 4

The exogenous variables of the model

Factors	Variables	Data source	Appraisal methods
Technology	*Clearance time, days;* *Lead time, days;* *Number of agencies;* *Logistics Performance index;* *Indicators in neighbor rail construction.*	World Bank, questionnaire survey	Quantitative and qualitative comparison of technological conditions with rival transport corridors
Ecology	*Share of renewable energy in transport, %;* *Greenhouse gas (GHG) emission index;* *Energy dependence, %;* *Implicit tax rate on energy, EUR /t of oil equivalent;* *R&D intensity in transport (% of GDP).*	Eurostat, Latvian Railway Administration	Comparison with White Paper on transport policy (2011).
Demography	*Labour costs, EUR;* *Number of households within transport corridor regions;* *Transport expenditure in household budget,%*	Eurostat, questionnaire survey	Quantitative and qualitative comparison of demography conditions with rival and corresponding transport corridors
Economy	*Mining of main product transported;* *Purchases of main product transported, EUR;* *Producer prices indices of main products transported;* *Price indices for transport by mode;* *Modal split of freight and passenger transport, %.*	Eurostat, questionnaire survey	Quantitative and qualitative comparison of economy conditions with rival and corresponding transport corridors
Finances	*Bank capital level, %* *Bank lending spreads, %* *Investments in the infrastructure, millions EUR per line km* *Investments in cooperating logistic chain, millions EUR* *Inflation, % to previous year*	Eurostat, World bank	Quantitative comparison of finance conditions with rival transport corridors and corresponding logistic chain

Conclusions, proposals, recommendations

This work performed an analysis of possible key variables and test indicators of the both endogenous and exogenous factors of the public-use railway infrastructure development model using brief analysis of common appraisal tools and analysis of statistical indicators that could be used for this purpose in the Latvian case. Based on the results of the analysis, the following conclusions can be made:
1) the Latvian public-use railway infrastructure development model should be worked out and applied to a current situation in order to imagine trends in the economy and affecting factors to allow solving of the short, medium and long term tasks;

2) the efficiency of the public-use railway system development should be measured within it integration in national policy therefore the endogenous factors and output indicators for the related model needs should be adopted from the national policy planning documents - National Development plan 2020;

3) lack of the availability of statistics does not allow direct quantifying of indicators of the endogenous factors with and without implementation of development strategy or project and thus call for methodological solution for evaluation with indicators that can be fixed directly for the railway infrastructure;

4) the Latvian railway infrastructure has a number of distinctive qualities should be presented by the related model describing reasons of over- or underfunding due to diminishing marginal productivity of the railway infrastructure and effects of dual dependence on cargo flows from CIS countries on the one part and European political heat on the other part;

5) the exogenous factors of outside environment effect have been systematized in six main impact groups: technology, ecology, demography, economy, finance and policy and the set of indicators have been selected for further correlation and optimization (detection of margin) analysis in order to assess the endogenous factors of the public-use railway infrastructure development model. The political clout have been considered irrespectively to exogenous factors as not a separate power but leverage that can multiply positive/negative impact of externalities or adapt strength/weaknesses of internalities;

6) there is no reliable data from non-European stakeholders on outside impact to the Latvian public-use railway infrastructure.

The further research of the both endogenous and exogenous factors of the public-use railway infrastructure development model will include a deeper analysis of the non-conformity seen in the results of the analysis:

1) creating of the methodological solution for evaluation of macroeconomics test indicators with indicators that can be fixed directly for the railway infrastructure;

2) developing of the research instruments in order to process reliable data from non-European stakeholders for the identification of the political impact and out-taken variables.

These conclusions only should be used with a strong link to the main ideas of the work.

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HOME LOAN MARKET SEGMENTATION IN CROSS-SECTION OF DWELLING PURCHASE READINESS

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Abstract. After the heavy fall in economy 2009 the grave competition in the Latvian market for home loan is a serious challenge to the lucrativeness of retail banking institutions. A common suggestion is that banks ought to respond to this challenge by making better use of market segmentation techniques. The general notion is that banks should concentrate their marketing efforts to serve a particular segment of the retail market. Therefore this paper discusses and presents a new adaptive approach to segmenting a bank's customers who are planning the dwelling purchase.

Purpose. This article demonstrates the application of behaviouristic segmentation to the retail commercial banking by using home loan market as a case example.

Design/methodology/approach. Data were gathered through self-administered questionnaires. The paper is based on a variety of statistics and on an overview of factors influencing bank selection to home loan obtaining and usefulness of the information provided by different sources. Two sets of variables were used to profile market segments.

Findings. Study results indicate that there are statistically significant differences between purchase-planning and purchase-not-planning bank customers in their assessment of the relative importance of criteria considered in bank selecting and information sources used for this aim.

Originality/value. More concentrated and focused on the several positions marketing strategies are recommended to reach better commercial banks' performance.

Keywords: *home loan, marketing, segmentation, commercial banks*

JEL code: M31, C12, G21

Introduction

The banking retail market can be subdivided into the commercial market of individuals on the one hand and commercial market of small and medium sized enterprises on the other. Retail markets represent the products to end-users and differ from the corporate market. Corporate markets consist of very large corporations and government accounts offering high volume sales and requiring professional account management (Emmanuel *et. al.*, 1993). Thus in this paper the author investigate home loan banking retail market. In contrast to industrial and corporate markets, in the banks' retail markets, financial services help in economic renewal of nation through enlarged production activities, improves nation life style and

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fulfil convergence of people through disposable credit, also retail loans bring better yield. Retails markets (such is the home loan market) represent tempting actual and potential consumers for the commercial banks.

With the enlarging competition, consequences of crises and technological improvements in commercial bank marketing, the needs to make faster and better market achieving decisions are greater than ever.

The grave competition in the Latvian market for home loan is a serious challenge to the lucrativeness of retail banking institutions. A common suggestion is that banks ought to respond to this challenge by making better use of market segmentation techniques. The general notion is that banks should concentrate their marketing efforts to serve a particular segment of the retail market (Thomas *et. al.*, 1993).

High indices of market concentration in the banking industry has made it more and more significant for banks to appeal customers' needs better so banks can increase consumer satisfaction and loyalty. Any approach to increase customers' satisfaction and loyalty should also result in higher profitability. Commercial banks are considering methods of strengthening the relationship with their customers. In order to identify optimal opportunities banks need to be able to identify which services or products customers are interested in. Segmentation also carries on a better interpretation of customers' needs and responses; it may also help financial institutions identify new opportunities in existing customer groups. The goal of market segmentation is to increase customer satisfaction based on a better understanding of what the customers need and want (Thomas *et. al.*, 1993). Effective segmentation helps to use better resource assignment, better identification of opportunities in the markets, and also better marketing tactics and strategies (Kotler and Keller, 2008; Wind, 1978).

The major objectives of this study are:
- to determine the significance of selected factors in choosing a commercial bank by dwelling purchase-planning and purchase-not-planning bank customers segments;
- to present the in-depth theoretical research of the segmentation possibilities.

The purpose of this paper is to demonstrate the application of behaviouristic segmentation to the home loan market by using bank customers' readiness to purchase dwelling.

Theoretical Background of Bank Commercial Markets Segmentation

The idea of segmentation of homogeneous consumer mass into the sub-segments was first considered by Chamberlain (1933) and Robinson (1933). These two great economists, working at the same time, created major worth to the theory of defective competition by showing the methodological and empirical flaws of perfect competition and its supposon of homogeneous demand and supply functions. So the economist Smith (1956) included Chamberlain's and Robinson's ideas and assumptions in his work and papers on products segmentation and differentiation. He resulted that an enterprise adopting differentiation and segmentation strategies would be apt to diversify its consumers or market offering and gain the benefits of larger flexibility of the product mix and as result greater profitability.

Therefore the conception *Market segmentation* was first and well-defined by Smith (1956) as "viewing a heterogeneous market as a number of smaller homogenous markets, in response to differing preferences, attributable to the desire of consumers for more precise satisfaction of their varying wants".

Since Smith's work (1956), researchers have improved a variety of segmentation kinds and methods such as benefit segmentation (Haley, 1968), psychographic segmentation (Ziff, 1971) and life style segmentation (Wells and Tigert, 1971). Consumer packaged-goods producers embraced widely these new methods and approaches for segmenting their clients and markets. More lately, bank researchers and finance marketers have also tried to segment consumers according to benefits desired (Minhas, 1996; Alfansi, 2000; Machauer and Morgner, 2001), predilection for payment ways (Lawson and Todd, 2003)

or a variety of clients' psychographic variables (Harrison, 1994). With the rapid growing of internet banking, theoretical marketing researchers have concentrated their attention to these developing segments of the commercial banking industry (Lee et al., 2005; Maenpaa, 2006; Rugimbana, 2007; Ozdemir et al., 2008). In the author opinion, these segmentation methods possess significant shortcomings; little samples, inferior sampling frames and questionable measurement instruments. Also the segment structures created by the research-marketers were too common and incapable of providing commercial finance institutions with actionable based on the internet marketing strategies. In addition, the general analysis framework used in these works is starkly several from the one which most banks use in segmenting their consumers, integrating those that involve in internet banking. The banks' approaching is radically several from the standard approaches used by marketing theoreticians in segmenting users of internet banking (i.e. benefits sought, adopters and non-adopters, perceptions of internet banking services and socio-demographic characteristics) (Zuccaro and Savard, 2010).

Market segmentation in the retail banking sector today is still predominantly based on externally-observed demographic or economic criteria such as profession, age, income or wealth (Thomas *et. al.*, 2010). Using consumer demographics is important because banks can no longer be "all things to all people" but must focus their effort on specific customer segments to achieve market presence and positioning (Coffey and Palm, 1999).

There is no only one correct approach to segment a market. Often different segmentation ways will meet Kotler's (Kotler, 1980) criteria. Kotler divides market segmentation approaches into four major ways: geographic, demographic, behaviouristic and psychographic. Each of ways will be discussed.

Geographic Segmentation

Geographic segmentation is the simplest area to understand. When a market is segmented geographically, one is saying the consumer needs or the ways to fill those needs vary geographically. This can mean by region of a country, population density or climate (Beane and Ennis, 1993).

Geographic segmentation tests an organization's ability to establish itself in new and often foreign markets. It must locate the source of market demand and endeavour to link itself into the system. In other words, market demand must be uncovered and a suitable way found to satisfy it. Despite where offices are, companies must define segmentation on the basis of where their customers are. Avoiding an area of growing demand on the basis of current exposure is hardly proactive. Particularly in today's ever-shrinking world, where technology takes to places previously unattainable, the organisation must extend itself. Failure to do this would put organizations in the position of being in the wrong place at the right time (Wills, 1993).

Companies must not yield to artificial boundaries, such as national borders, but develop a marketing plan relevant to the area in which it will be used. Geographical segmentation tells that where office happens to be is immaterial. What companies need to know is where their customers are (Wills, 1993).

According to Wills (1993), segmentation in the context of international banking is carried out in a number of ways. An example of one such method is to establish two broad segments — territory and activity – as is currently performed by many international banks. While at first these seem distinct, in practice they overlap.

Also Wills supposes that there is an urgent need to refine segmentation on the international banking front and the following is a sampling of sub-segments which are worth examining:

- segmentation on the basis of country, rather than general region;
- segmentation on the basis of industry type and the ownership type (state, publicly quoted, subsidiary of a multinational);
- segmentation according to balance sheet structure;
- segmentation according to the stage in the company's life cycle (Wills, 1993).

Demographic Segmentation

The study by Beane and Ennis (1993) demonstrates that demographic segmentation appears to be the most prevalent form of market segmentation. This is probably because consumers are placed on definite scales of measurement, which are easily understood. The information is easily interpreted, relatively easily gathered, and easily transferable from one study to another (Beane and Ennis, 1993). Common demographic variables are age, sex, size and type of family, income, educational level, race, and nationality. Combinations of these variables are sometimes used depending on the degree of specificity required in the segment construction (Beane and Ennis, 1993).

Especially the age of the consumer is a popular basis for segmentation (Stanley *et. al.*, 1985). Banks have responded to age segments with the development of a number of several products and services (Lewis, 1981; Lewis and Bingham, 1991). Lewis et al. (1994) find that young people have been characterised as emphasising the importance of material possessions, being more concerned with consumption than saving, and seeing money as vital for personal success. This inevitably leads to a variety of credit behaviours and borrowing requirements (Sum Chau *et. al.*, 2010).

Also Beane and Ennis (1993) state that some of the problems that other researchers seem to have with demographics stem from their attempts to segment entire markets. Demographics will not be good descriptors of segments if the segments do not clearly exist. As was stated earlier, it may not be possible to segment a market completely, but this is acceptable if some segments can be clearly identified (Beane and Ennis, 1993).

Psychographic Segmentation

Psychographic segmentation depends entirely on the approach, that clients think, their inherent preferences and clients' life styles. Psychographic segmentation is often called life-style segmentation. Beane and Ennis (1993) conclude that no one set of life styles exists, but in general terms fairly finite groupings are not difficult to develop. This type of research analyses consumers first and then applies the product to them in hopes of discovering different usage patterns. Life-style segments are usually derived by submitting a questionnaire to a random sample of people, perhaps based on broad demographic requirements. Psychographic or life-style segmentation becomes a little more difficult to explain in that researches are no longer looking at clearly definable, quantitative measures, but are beginning to investigate such things as social class and way of living (Beane and Ennis, 1993). Wells (1975) called psychographics a quantitative attempt to place consumers on psychological dimensions. Ziff (1971) states that attempts to define psychographics narrowly have proved difficult.

According to Beane and Ennis (1993) psychographics can serve as the next step in research if a demographic study produces no clear or actionable segments. Basically, when one uses psychographics in an attempt to segment a market, one is trying to incorporate part of the inner person into the understanding of that market. Rather than being concerned solely with age, sex, or marital status, personality characteristics, values and beliefs, and life style are considered (Beane and Ennis, 1993).

Plummer (1974) discusses life-style segmentation and finds that it does a better job in describing segments than demographics alone. He describes life-style segmentation as a mix of demographics and psychographics.

Behaviouristic Segmentation

Kotler's fourth and the last group of segmentation variables is behaviouristic ones. This method includes such areas as user status, purchase occasion, degree of loyalty, readiness stage, benefits sought, degree of usage and marketing factor sensitivity. So clients are segmented based on knowledge of the response to the product or attitude.

1. Is the Bank Marketing standardization Opposite to Local Market Segmentation?

While segmentation strategies have changed for the better over time, the approach still tends to be more macro rather than micro. By using mostly demographic and economic criteria for segmentation, it is probable that the standard service packages developed on the basis of macro segments that are offered to customers may not suit them well and may lead to dissatisfaction (Machauer and Morgner, 2001). To resolve this conundrum, it may make sense for banks to engage in finer forms of segmentation – such as grouping respondents according to their responses to particular variables (Thomas *et. al.*, 2010).

About fifty years ago, market segmentation was considered as faultiness in market structure rather than as a more exact adjustment to consumer or customer requirements. From this time, the advances of applying marketing approaches to the heterogeneous needs and wants of consumers are recognized. Today in the frames of globalization, the focus has moved towards understanding for similarities and the investigation for "global segments". As a result of these metamorphoses Hassan and Katsanis (1991) defined global market segmentation as follows: "Global market segmentation is the process of identifying specific segments, whether they be country groups or individual customer groups, of potential customers with homogeneous attributes who are likely to exhibit similar behaviour" (Hassan and Katsanis, 1991).

This tendency of globalizing economies enhanced a new objective – how should the banks segment a global or international market? Segmentation of an international bank services market is accorded with the supplement of different country specific and dimension.

In national markets consumers characteristics such as nation, age, education, sex, incomes social class, marital status, etc. and attitudes toward a brand or certain product are often employed as bases for differentiation and segmentation. In international banking markets an extra measurement has to be treated, i.e. national or country characteristics. For example, every country or region have its own specific and different economic, social, cultural, political, technological, environmental and legal characteristics influencing marketing strategies, decisions and clients/market responses.

The several approaches and perceptions of multinational companies detected their segmentation methods. Besides the change from searching for differences towards the concentration on similarities mentioned earlier, one can notice the influence of the evolvement of multicultural strategies and the internationalizing environment.

According to Association of Latvian Commercial Banks statistics the most commercial banks with the highest rates in assets, credits and debts in Latvia of 2012 are parts of different international financial groups, for example, *Swedbank*, *SEB banka*, *Nordea Bank Finland Latvia Branch*, *DNB bank*.

Therefore these banks have standardised international marketing strategies, because each of all financial groups has certain guidelines regard to overall main strategy, clients achieving and loyalty creating.

It is necessary to understand that according to Financial and Capital Market Commission data these banks are included in the market share of five largest banks. International financial groups regulate the main part of all marketing activities in the Latvian commercial banks market. Does it mean that international standardization provided by financial groups excludes any accordance to local market specifics, incl. segmentation?

In the author opinion it is only logical and right, that local marketing activities and segmentation should be corresponding to national client's needs and possibilities. Also some researches states that local segmentation helps to realize financial groups strategies.

Researchers (Frank, Massy and Wind, 1972) proposed three methods to segmentation of international market:
1. Analysing each country or region as individual segment;
2. Analysing groups of countries or regions with analogues characteristics as individual segments;
3. Analysing the whole world as one segment.

In these approaches researches do not pay attention that there can be groups of consumer in different countries or regions that are similar and may form few cross-national segments. At the same time, this fact was investigated by Hassan and Katsanis (1991) who considered three main segmentation approaches:

1. The approach "country cluster";
2. The approach "cross-national";
3. The approach "world segment".

The segmentation approach "country cluster"

Sethi and Holton (1973) defined a method for clustering countries. They provided that as banks grow, the "every region or country is several" approach might prove to be less useful and a grouping method might be more necessary. Researches recognize the abilities of standardization offers as a part of main strategy.

The segmentation approach "cross-national"

Jain (1989) proposed commercial banks market segmentation as a method of dividing several countries or regions into homogeneous groups, thereby focusing on local country segmentation. Also Jain mentioned a number of stages that should be done in order to achieve segmentation criteria usable for classifying global markets.

The segmentation approach "world segment"

Levitt (1983) mainly defined the "world segment" approach. The thought that customers are becoming increasingly homogeneous around the globe helped him to identify one world segment, composted of customers wanting services and products with the lowest price and the highest quality. Levitt proposed that differences of realized preferences for specific service or product features do not influence on the client buying behaviour when is offered standardized product with low price and high quality.

2. Home Loan Market Segmentation in Latvia

An empirical research was conducted based on collected data from a sample of 1187 respondents, using author's created questionnaire during an Internet interview, where 15 questions was posed in web-site www.visidati.lv. Data from 1254 respondents were collected, of which 1187 are usable for investigation. The design of questionnaire structure was based essentially on measurement scales. Hence in order to measure respondents' home loan bank selecting criteria items relating to choice factors were used. All respondents fielded how much they are affected by each criterion selecting the bank for home loan obtaining. The criteria mentioned were measured on ten-point scales, ranging from not at all to very much. Also the survey contained the data to analyse the respondents' belonging to concrete bank, readiness to home loan obtaining. Finally survey obtained demographic data, such as gender, age, marital status, incomes and occupation.

The demographic profile of all respondents is shown in Table 1. The age of the respondents ranged between eighteen and seventy, with the median age being 28. This sample is unique in that no other survey in the existing marketing literature regarding home loan banking has included the most employed

and high school educated respondents (see Table 1). For home loan banking, such impressive per cent of employ and education indicates a more representative data regarding target market.

For the analysis author chose the population of home loans target market, not all Latvian population, because the home loan product is complicated and high involvement product that is not freely available to all citizens. For selection of population of home loans target market author has used results of expert interviews and author's empirical research on mortgage loan holders.

As a result of author's investigation (consultations with experts and gathering the views of their opinions), it was found the profile of home loan product target market, on the basis of which the author implemented the survey. In order to ensure the planned sample size, the author selected the respondents according the results with population census 2011. Questionnaires have been placed under Internet link that was sent to all survey respondents, which were carefully selected and for some of the several reminders were necessary. Thus author communicated with respondents before link sending.

The questionnaire contained also such groups of questions as:
1) the respondents' satisfaction of their housing conditions;
2) the respondents' readiness to purchase dwelling and obtain home loan;
3) the respondents' attitude regarding home loan obtaining.

Table 1

The respondents' profile in survey on home loans in January 2012 – February 2013

Sample demographics				
Demographics	**Total, %**	**Planning dwelling purchase (n=457), %**	**Not planning dwelling purchase (n=730), %**	χ^2
Gender				5.963
Female	46.2	53.7	46.3	
Male	53.8	51.6	48.4	
Age				14.42*
18 – 24	8.6	56.5	43.5	
25 – 34	47.6	61.1	38.9	
35 – 44	19.5	69.5	30.5	
45 – 54	17.5	83.6	16.4	
55 – 80	6.7	49.9	50.1	
Education				3.75*
Primary school	0.3	32.2	67.8	
Secondary / professional secondary	8.8	28.7	71.3	
Not finished higher education establishment	23.7	52.1	47.9	
Higher education	67.1	50.8	49.2	
Employment status				23.47*
Employed	97.4	57.8	42.2	
Unemployed	2.6	27.3	72.7	

* Significant relationship for 0.01 significance level.
Source: author's calculations based on author's survey January 2012 – February 2013, (n=1187)

Close analysis of the profile shows that while planning and not planning dwelling purchase respondents were similar in their gender terms, there were statistically significant differences in terms of other demographic characteristics. Purchase-planning bank customers were mostly educated, of a younger age group. Purchase-not-planning customers were older than their planning customer counterparts in case if age bracket is 36-80 years. As well as the demographic characteristics of respondents, data related to the bank most used, number of cohabiters and satisfaction of housing conditions were also investigated.

Dependent variable

So as mentioned before all respondents were divided into dwelling purchase planning versus purchase not planning bank customers by using the author's designated method. This method generated 457 purchase planning and 730 not planning.

There were statistically significant differences between purchase-planning and purchase-not-planning bank customers on the bank most used, number of cohabiters and satisfaction of housing conditions (see Table 2). It is of considerable interest to check for differences in the evaluative design across concrete demographic categories. The results and data obtained could be interesting and useful to bank specialists in linking and identifying importance measures to bank customer choice and behaviour.

Table 2

Banking characteristics of respondents of survey on home loan possible holders
January 2012 – February 2013

	Planning dwelling purchase (n=457), %	Not planning dwelling purchase (n=730), %	χ^2
The most used bank			8.471*
Swedbank	29.0	71.0	
SEB	29.4	70.6	
DNB banka	46.7	53.3	
Citadele banka	29.1	70.9	
Nordea	41.2	58.8	
ABLV banka	23.8	76.2	
Other bank	40.3	59.7	
Number of cohabiters			12.538*
None	36.1	63.9	
1	37.3	62.7	
2	33.5	66.5	
3	42.2	57.8	
More than 3	41.3	58.7	
Satisfaction of housing conditions (scale points)			14.623*
1 – 3	55.1	44.9	
4 – 6	53.4	46.6	
6 – 8	49.3	50.7	
9 – 10	44.2	55.8	

* Significant relationship for 0.01 significance level.
Source: author's calculations based on author's survey January 2012 – February 2013, (n=1187)

Investigation of the Table 2 shows that purchase-planning customer segment is mostly DNB bank's and Nordea bank's clients, who had higher number of cohabiters and who evaluate their satisfaction of

housing conditions with lower scale points. As well as the satisfaction of housing conditions and number of cohabiters related to customers plans, factors considered in choosing bank were also investigated.

Independent variables

Two sets of variables were explored to profile the above defined market segments. Therefore the first set was related to significance criteria, which included factors influencing bank choice to home loan obtaining in cross section of dwelling purchase planning (see Table 3). Respondents were asked to assign on a ten-point differential scale the importance of factors in choosing national bank to home loan obtain.

Table 3

Factors considered in choosing bank to home loan obtaining in cross section of dwelling purchase planning in Latvia home loan possible holders 2012-2013

Factors influencing bank choice to home loan obtaining	Planning dwelling purchase (n=457)		Not planning dwelling purchase (n=730)		t *value*	Signifi-cance, *p*
	Mean	**SD**	**Mean**	**SD**		
Interest rate	5.07	2.47	4.89	2.82	-4.567	0
Fees and commissions	7.09	2.31	6.73	2.84	-0.947	0.393
Repayment terms	8.82	1.52	8.38	2.65	-5.616	0
Possibility of the amendments to the mortgage loan agreement	7.47	2.17	7.88	2.7	1.16	0.217
Established relationship	7.66	2.21	6.59	2.22	2.005	0.522
Personnel appearance	7.85	2.84	7.11	1.87	1.264	0.809
Personnel friendliness	7.08	2.71	7.11	2.14	-2.074	0.008
Personnel competence	4.8	2.35	4.91	2.24	-2.403	0.986
Personnel consideration	9.19	1.73	8.64	2.49	-1.701	0.219
Personnel care	9.06	1.51	8.52	2.92	-1.05	0.05
Loan-competent specialists' recommendation	7.4	2.65	7.66	2.83	-0.268	0.235
Service fastness	6.63	2.44	5.96	2.7	-0.797	0.002
Shareholders structure of bank	6.27	2.96	6.07	3.12	-1.174	0.164
Image / reputation	5.78	2.68	6	2.85	-1.395	0.241
Social responsibility	5.6	2.71	5.48	2.08	-3.145	0.426
ATM accessibility and functionality	8.71	2.53	7.92	1.81	-1.189	0.789
Friends' recommendations	8.02	1.76	7.81	2.9	1.968	0.295
Conveniently of branch location	8.99	1.43	8.33	2.6	-1.231	0.09
Width of branch network	8.77	1.42	8.89	2.49	-0.017	0.017
Loan cover of the property value	8.05	2.76	8.09	2.61	-2.667	0.03
Acquaintances' recommendations	6.13	2.15	5.49	2.38	0.242	0.207
Attractive brand	4.89	2.78	4.39	2.19	0.641	0.036
Famous brand	5.92	2.51	5.42	2.52	1.237	0.247
Relatives' recommendations	6.44	2.61	5.55	2.67	0.855	0.344

Scale points 1 – 10, where 1 – factor has not influence at all, but 10 – factor has very high influence
Source: author's calculations based on author's survey January 2012 – February 2013, (n=1187)

The second set of survey questions was created to generate data concerning perceived usefulness of the information provided by different sources in cross section of dwelling purchase planning (see Table 4).

Table 4

Descriptive statistics of the respondents evaluating of information sources on home loan obtaining possibilities in cross section of dwelling purchase planning January 2012 – February 2013

Information sources	Planning dwelling purchase (n=457)		Not planning dwelling purchase (n=730)		t *value*	Significance, *p*
	Mean	**SD**	**Mean**	**SD**		
bank web sites	6.40	2.33	5.33	2.30	2.471	0.238
responses in the Internet	4.33	2.88	4.09	2.85	2.368	0.028
advices of loan experts	7.05	2.47	5.92	2.31	0.352	0.846
pamphlet	4.96	2.81	4.39	2.69	0.347	0.002
advices of friends	5.86	2.40	5.54	2.71	3.438	0
information in the press	4.98	2.81	4.13	3.05	2.149	0.051
advices of relations	6.16	2.66	5.09	2.75	1.846	0.052
consultations in a bank branches	7.43	2.70	7.49	2.91	1.574	0.027
advices of middleman	4.24	2.75	3.06	2.89	3.258	0.741
information at TV	3.69	2.70	3.25	3.03	0.129	0.729
advices of acquaintances	5.00	3.00	4.54	3.03	2.592	0.014
information at radio	3.70	3.04	2.67	3.30	-1.357	0.01

Scale points 1 – 10, where 1 – source is not important at all, but 10 – source is very important
Source: author's calculations based on author's survey January 2012 – February 2013, (n=1187)

Table 4 presents the perceived importance of several information sources by purchase-planning and purchase-not-planning bank customers. A ten-point scale was used, where 1 means that source is not important at all, but 10 means that source is very important. It was hypothesized that consultations in a bank branches could be most important. Thus both of investigated bank customers types rated very high this source.

3. Study findings

Factors influencing bank selection to home loan obtaining

Table 3 shows a comparative profile of the two opposite market segments pursuant to the importance segments (different in dwelling purchase readiness) placed on bank choosing factors. The t-test was

presented to test for the statistical significance of patronage factors between purchase-planning and purchase-not-planning mentioned bank customers' type. A mean score for the importance of each criterion was calculated too.

There were statistically significant differences between purchase-planning and purchase-not-planning investigated bank customers. Interest rate, repayment terms, social responsibility, loan cover of the property value, personnel competence and personnel friendliness were more important for purchase-not-planning bank customers, whereas established relationship and friends' recommendations were mentioned as the most significant factors considered by purchase-planning bank customers that was analysed in this study.

Usefulness of the information provided by different sources

Table 4 presents the perceived usefulness of different information sources by purchase-planning and purchase-not-planning such bank customers' segment as home loan target market. A ten-point scale was used where 1 means useless and 5 is very useful. There were statistically significant differences between purchase-planning and purchase-not-planning bank customers. Purchase-planning bank customers pointed the usefulness of advices of friends, advices of middleman, bank web sites, responses in the Internet, information in the press, advices of acquaintances, consultations in a bank branches and advices of relations higher than purchase-not-planning high-educated women bank customers' segment.

Conclusions

This study, conducted in all Latvian regions, demonstrates that commercial bank managers can practice the evaluative factors used by bank customers in choosing a commercial bank to home loan obtaining.

The results suggest that purchase-not-planning respondents perceiving a high level of personnel behaviour and extra features of home loan offered by the bank. More exactly, respondents, who are planning dwelling purchase, assigned a higher level of factors influencing bank choice to home loan obtaining than did the purchase-not-planning respondents (the mean of all factors was higher).

The difference of perceived usefulness of different information sources by two segments can be explained by the conceptual distinction between them.

The results have important implications for commercial banks in developing marketing and operational strategies in Latvia. Dwelling purchase-planning and purchase-not-planning bank customers are two segments with different demographic and behaviour backgrounds give the possibility for cross-segment research in the area of home loan marketing.

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DEFORMATION OF A SALARY AND COMPENSATION OF EXPENSES OF LABOUR IN THE INDUSTRY IN TERMS OF REFORMING

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Abstract. One of the main tasks set by the President before the Russian Government is to double gross domestic product. When implementing policies aimed at economic growth, staffing issues become especially important and large-scale. On the background of keeping favourable macroeconomic parameters the serious problems connected with the fundamental structural disproportions, low competitiveness of the Russian industry, a sharp differentiation of regional development and rupture in levels of incomes of various segments of the population are continuing to accumulate. The period of economic recession was accompanied by triple depreciation of a real salary and its redistribution in favour of the export-oriented branches accumulating a rent and financially-credit sphere. At the present stage of development of Russia's economic problems in living standards and the factors determining its dynamics, have become very important. The direction and pace of further reforms in the country and, finally, political and economic stability in society largely depend on decisions of these problems. Solving these problems requires a policy worked out by the state, the central point which would have been a man, his well-being, physical and social health. That's why all the transformations that anyhow can lead to changes in standards of living, cause a great interest in the diversified levels of population.

Key words: *salary, labour, industry, increase, growth, productivity*

JEL code: J31

The transition of the domestic economy to a market economy mechanism has caused some fundamental changes in the functioning of industrial enterprises. Effectiveness of their management increasingly depends on the ability to withstand technological and organizational competition. One of the main tasks set by the President before the Russian Government is to double gross domestic product. When implementing policies aimed at economic growth, staffing issues become especially important and large-scale. Radical reforms of management of a national economy led to the necessity of changing conditions and the character of functioning of all economic entities in Russia, whose economy has transformed from a mainly resource-based to information-technological. However, the practice of the last decade shows that domestic enterprises are hard to adapt to the conditions of innovation development, in which the role of the main production resources is played by the human capital and information.

In 2008, the first vice-premier of the Russian Federation, Dmitry Medvedev, speaking at the Krasnoyarsk economic forum, has formulated four basic directions and the seven problems on which Russia

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should concentrate four next years: "We must concentrate on the original four "i" – institutions, infrastructure, innovation and investment".

Advanced management experience shows that in the modern economic conditions characterized by the increasing role of information technology, the motivation and content of labour activity of people are change, the decision of difficult industrial problems is accelerated, the efficiency of management is considerably raising, the functioning of traditional industries is changing and new industries of economy is created, that promotes adaptation of industrial enterprises to the market economy principles.

The tendency of decline of labour efficiency has interrupted in 2003 renewed. Without productivity growth it is impossible to solve any of the most important problems facing our country, such as: to improve the welfare level of Russian citizens, their quality of life, to provide the competitiveness of Russian products in the domestic and world markets, to convert the extensive economic growth, provided with extraction of power resources in the intensive growth based on the latest advances of scientific and technological progress [1]. This problem is one of the most important for Russia because labour productivity is 5-7 times lower than in the United States, and we are on 75 place among 117 countries in the world on the level of competitiveness. The characteristic feature of the Russian economy, according to the Federal State Statistics Service, is a sharp break in the dynamics of real salary and labour efficiency, is 2.4 times.

On the background of keeping favourable macroeconomic parameters the serious problems connected with the fundamental structural disproportions, low competitiveness of the Russian industry, a sharp differentiation of regional development and rupture in levels of incomes of various segments of the population are continuing to accumulate. The coefficient of income concentration (Gini coefficient), according to the Federal State Statistics Service, reached 42.2% in 2009. On this indicator Russia has caught up with the USA and has overtaken other countries of the "Group of Eight" in 1.1-1.6 times (Figure 1).
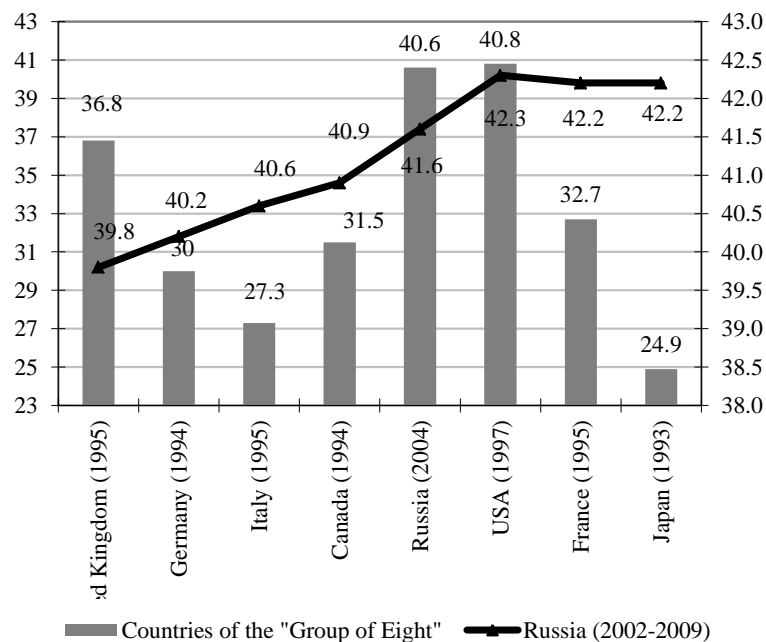

Fig. 1. **Coefficient of income concentration, %**

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The period of economic recession was accompanied by triple depreciation of a real salary and its re-distribution in favour of the export-oriented branches accumulating a rent and financially-credit sphere.

As a result in the branches responsible for reproduction of human potential and innovative development where the most qualified and educated part of cumulative labour force is concentrated, falling of payment was much deeper, than on economy as a whole. According to Household Survey on social protection of the population – 2002, among employees with a salary below a living wage 28.8% of them had the high education, and 43.3% – secondary-special education. In regenerative growth (1999-2006) there was some increase in a salary at reduction of its differentiation. However, firstly, the average level of earnings has not reached till now the level which was before reforming; secondly, rupture decrease is connected with attempts to reduce backlog from a living wage of labour incomes of the most low-paid workers. Thus, at rupture reduction between the poor and the poorest uniform low level of payment of a majority of the employed is fixed.

The differentiation of a salary between branches and categories of employees has reached unjustified sizes. If in 1990 the ratio in payment between branches was 1.8 then now this ratio has exceeded 8.0. The monthly average salary of workers of the gas industry in 8 times has exceeded payment in agriculture, in 7 times – in light industry, in 5 times – in mechanical engineering. A salary in mechanical engineering where the most qualified personnel works, in 2.5 times more low, than in electric power industry and in 1.5 times more low, than in the food-processing industry. The branches of the light and the food-processing industries, having about identical qualifying structure of workers, intensity and complexity of labour, differ on payment more than twice. Differentiation in an average salary between economy branches is about 14 times. The highest level of payment for labour is in the branches taking a monopoly position in the market, such as in the gas and oil-extracting industry, in fuel and nonferrous metallurgy. The lowest salary is in agriculture, light industry, welfare branches.

The level of an average salary of educators, workers of public health services, culture, and population social protection is in limits of 42-47% from its level in the industry. Only the salary in the scientific organizations has risen to the industry average level. The average salary in the regions of the country is differing in 11 times.

Table 1

The dynamics of a salary and labour productivity

	2000	2005	2006	2007	2008	2009
Per capita incomes per month, rub.	2 281.1	8 111.9	10 196.0	12 602.7	14 939.2	16 856,9
Average monthly nominal accrued salary of workers in the economy now.	2 223.4	8 554.9	10 633.9	13 593.4	17 290.1	18 637,5
Average monthly nominal accrued wages of employees of organizations by economic activities, rub.						
Extraction of minerals	5 940.2	11 080.9	13 912.4	16 841.7	19 726.9	23 145.2
including mining and quarrying of energy producing materials	6 985.1	13 080.3	16 135.5	19 903.3	23 455.9	27 614.5
Manufacturing activity	2 365.2	4 439.1	5 603.4	6 848.9	8 420.9	10 198.5
The dynamics of productivity, as a percentage of previous year		105.5	107.5	107.5	104.8	95.9

In the current economic conditions increase of the real size of a salary in all spheres and branches of economy, at the enterprises of all forms of ownership, its transformation into the reliable source of means providing worthy existence to the employee and his/her family and growth of investment potential of the population continues to remain the most important task. In works of the academician of Russian Academy of Sciences D.S. Lvov and other economists it is proved that on level of a salary backlog of Russia from the developed countries more than on level of performance [2]. Distinction of workers' incomes in the countries of Europe is presented on fig. 2 [3].
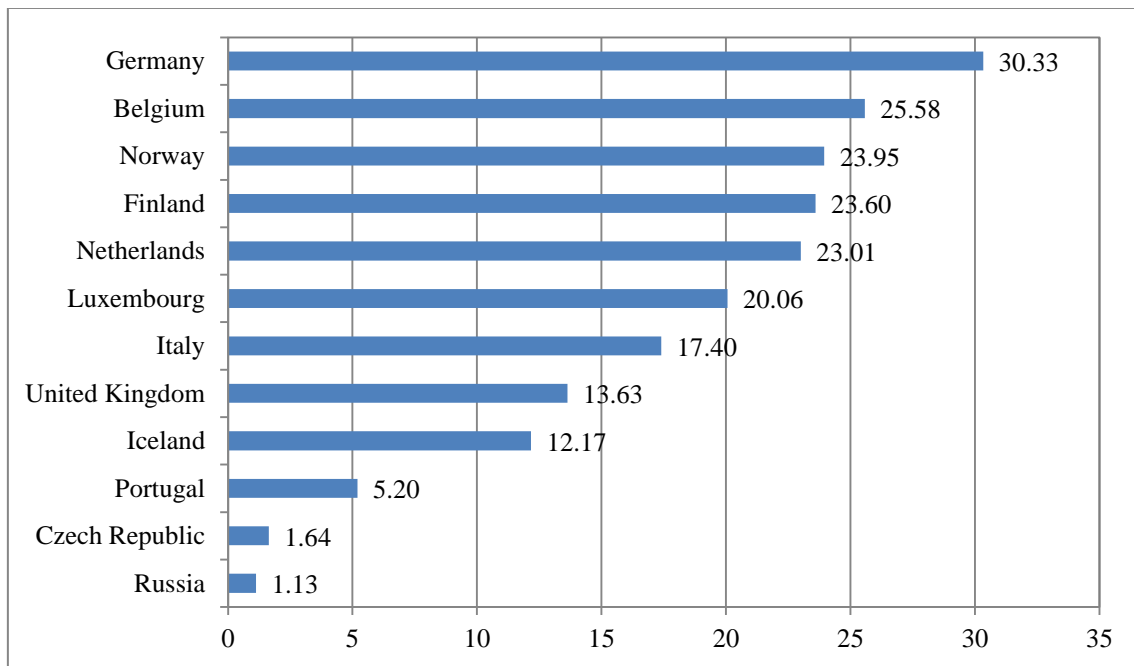

Fig. 2. **Average hourly earnings of European industrial workers (U.S. $)**

The information of the International labour organization for 2002 about duration of working year and efficiency of work in some countries is resulted in tab. 2.

Table 2

Duration of working year and efficiency of work in 2002[4]

Country	The number of working hours per year	Labour productivity per person employed (thousand dollars)
USA	1820	60.7
France	1550	52.5
UK	1710	45.0
Japan	1800	43.5
Germany	1460	42.5
Russia	1740 (2000)	11.1 (2001)

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The main brake of development of our country, according to the academician of the Russian Academy of Sciences R.Nigmatulin, is extremely low salary majority of the population. It is established that if on the basis of tax reform the incomes of 10 % of the richest citizens of Russia will be reduced by 7 % the salary of 10 % of the poorest will increase twice. The prices will rise, but not more than on 25 % (at 100 % growth of earnings). The majority of authoritative economists share this position, suggesting the government to change system of taxes and payments for use of natural resources. Herewith often refer to opinion of the Nobel Prize for Economics in 2001, Joseph Stiglits: "On inequality level Russia is comparable with the worst Latin American societies of semi feudal type" [5].

The Ministry of Labour and Social Affairs In 2001 has prepared a series of the measures directed on improving of a salary and increased state regulation in the field of a salary, as one of the priorities of state policy is the establishment and maintenance of the minimum social guarantees in payment for labour. After economic reforms happened in our country vesting of the enterprises and the organizations the rights to solve problems of the organization of a salary of employees independently establishment a minimum size of a salary remains to one of few levers of direct state influence on salary level. However owing to serious financial restrictions it is used inefficiently. Low level of the minimum salary influences in the direct image understating of the price of labour on a labour market, sharp strengthening of differentiation of a salary between employees, promotes prosperity of the so-called "latent" forms of a salary, various ways of its conclusion from under the taxation. Perfection of system of payment for labour of employees is directed on approach of the tariff rate of the first category of a uniform scale of charges to a living wage of able-bodied population and in the long term lead up to the level of an average salary in the organizations of budgetary sphere to 80% from a similar indicator in the industries.

Table 3

Differentiation of expenses for labour force in 2009

| | Labour costs per employee per month | | | | The ratio of maximum and minimum cost, time | The coefficient of variation*,% |
| | maximum | | minimum | | | |
	RUB	In % to the average of the corresponding activity	RUB	In % to the average of the corresponding activity		
Mining and quarrying	303 534.7	602.4	5 339.8	10.6	56.8	67.7
Basic metals and fabricated metal products	135 746.5	489.7	5 066.2	18.3	26.8	55.0
Machinery and equipment	219 097.0	931.9	5 070.2	21.6	43.2	78.7
Manufacture of electrical and optical equipment	203 182.5	956.6	5 038.9	23.7	40.3	78.1
Manufacture of vehicles and transport equipment	264 106.8	1 139.4	5 688.5	24.5	46.4	78.3

* The coefficient is calculated as the ratio of the average deviation of labour costs for each organization, from the average level of the activity (calculated as standard deviation) to the average costs for the relevant activity.

The optimum size of a salary in expenses of the enterprise/cost price of production assumes establishment a payment for labour in such size that it provided profitable work of the enterprise, nor-

mal reproduction of labour according to qualification, age of an employee. In modern reforms and in post-reform period in the majority of the industrial enterprises absolutely unreasonably and economically unfairly ceased to be engaged in planning and the deep analysis of productivity and payment that, along with other reasons, has led to warps of a parity of rates of increase of a salary and labour productivity.

The most important way to influence on the efficiency of labour activity is the organization's effectiveness (and increase of efficiency of the organizations is the motivation) based on tangible and intangible incentives. In modern market conditions especially actual problem is that in these types of motivation it is necessary to search for the reasons of unsatisfactory efficiency of the organizations, the reasons on which motivation doesn't satisfy to requirements of the organizations for increase of efficiency of labour and economic activities as a whole, and these types of motivation are necessary for improving [6, p. 218.].

According to Federal State Statistics Service, in 2009 considerable differentiation of level of expenses for labour in the same kind of economic activities remains (tab. 3). So, in mining operations there are the organizations which level of expenses more than in 16 times was above than industry average in manufacture of vehicles and an equipment – in 11 times.

Dependence of level of monthly average expenses for labour force on the sizes of the organizations on number of employees is marked. In the majority of the surveyed kinds of activity level of monthly average expenses was the highest in the organizations with more than 1000 working persons, though the quantity of the fulfilled hours per month on the average on one employee was above in most cases in the organizations with small (to 100 persons) number of workers. In the large organizations (with number of 1000 persons working more), expenses on the average on one employee in 2,5 and 2,7 times exceeded level of expenses in grouping of the organizations of these kinds of activity with the least number of employee (to 50 persons).

Table 4

The monthly average expenses for labour force in depend of number of employees of organization in 2009, RUB

	Groups of organization with the number of employees, man					
	less than 50	50-99	100-199	200-499	500-999	1,000 or more
Total surveyed activities	19 255.7	20 902.8	25 759.9	27 623.4	30 407.8	34 108.9
Mining and quarrying	32 429.5	33 343.5	43 316.9	40 436.7	39 060.4	54 174.7
Manufacturing industry	15 745.6	16 629.1	20 200.4	21 215.9	22 748.5	25 467.4

Irrespective of the sizes of the organizations on number of workers high level of expenses for labour has developed in financial activity, air and space transport, mining. In the majority of the surveyed kinds of activity in 2009, as well as earlier, higher level of expenses for labour in the nonstate organizations was observed. In the non-state organizations as a whole by the surveyed kinds of activity level of labour costs was above on 6.6% in comparison with the state and municipal organizations.

For fourteen years (since 1995 to 2009) the size of monthly average expenses for labour in Russia has increased in 22.4 times, taking into account a consumer price index the increase has made 1.5 times. Significant changes have occurred in structure of expenses for labour in these years. In order to of methodological comparability the structure of expenses for labour for the surveyed years is calculated without group of the taxes and tax collections which structure for these years has completely changed. In 2009, as compared with 1995, the proportion of the core group of costs – wages and salaries (17.6 percentage points) significantly increased. The share of expenses on vocational training hasn't changed. Relative density of other groups of expenses has decreased, including in such socially-focused groups, as expenses

of the organizations on maintenance of employees with habitation and expenses on cultural and community service.

The basic component in expenses of the organizations for labour is the salary. Expenses on a salary are formed of payment for fulfilled and unfinished time, single incentive payments, and also payment of a food and the payment of residing having regular character. Payment understating works against economic growth disturbs to labour productivity increase. It not only undermines a material basis of reproduction of labour force, but reduces possibilities of formation of the budget and social funds.

Table 5

Hourly wages [7, p. 732]

Country	Hourly salary, USD	Country	Hourly salary, USD
USA	16.4	Chile	4.3
UK	13.8	Korea	7.2
Germany	22.7	Mexico	4.0
France	14.4	Hungary	2.7
Japan	12.3	Czech Republic	2.5
Canada	17.1	Poland	4.3
Italy	16.4	Russia	1.7
Turkey	2.6		
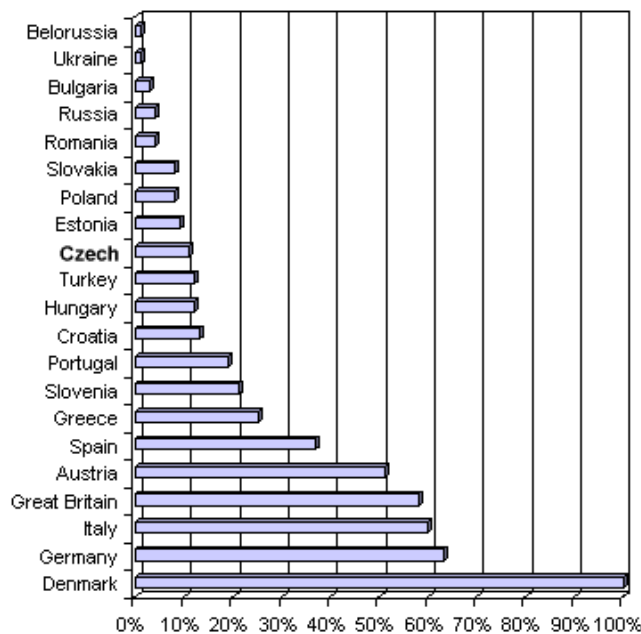
Fig. 3. **Average Annual Salary in European countries
(compared to Denmark, 28 EUR per hour = 100 %)**

The share of wage costs in total costs an average of the surveyed organizations extraction of fuel and energy resources in 2009 ranged from 75.3%. In general, by the surveyed kinds of activity increasing the number of employees in organizations the proportion of salary costs in total costs for labour decreased (from 80.5% in organizations with fewer than 50 employees to 76.8% in organizations with a number of employees over 1,000 people), although the absolute level of a monthly average salary has developed in the amount of 15 rubles to 26 493.3 187.7 rubles in groups of organizations with the appropriate number of employees.

Irrespective of the size of the organization of the number of employees, a high average monthly salary per employee was observed in the organization of mining operations – 36 191 rubles.

It is necessary to give a priority to increasing the purchasing capacity of payment, to lift a salary in 2.5 times at the expense of recovery of gross national product to level of 1990, i.e. to provide economic growth, to approach level of nominal payment to size of an hour salary in the developed western countries (see Table 5).

GDP growth rates depend on the growth of purchasing power of the population. The higher the salary of the population, the higher purchasing power and the need to increase production.

Every dollar paid to workers in Russia, gives in 3 times more final product than in the U.S. (tab. 6).

Table 6

**Comparative evaluation of productivity and wages-return in GDP
(purchasing power parity exchange, 1994) [7,** p. 732]

Group	Country	Hourly productivity in GDP, USD	Hourly salary, SD	GDP per $ 1 salary
1	USA	27.2	16.4	1.7
	UK	22.0	13.8	1.6
	Germany	27.7	22.7	1.2
	France	28.8	14.4	2.0
	Japan	21.6	12.3	1.8
	Canada	23.4	17.1	1.4
	Italy	30.6	16.4	1.9
2	Turkey	10.3	2.6	4.0
	Chile	9.7	4.3	2.3
	Korea	9.6	7.2	1.3
	Mexico	14.5	4.0	3.2
3	Hungary	8.8	2.7	3.3
	Czech Republic	8.5	2.5	3.4
	Poland	6.2	4.3	1.4
	Russia	7.6	1.7	4.6

At the present stage of development of Russia's economic problems in living standards and the factors determining its dynamics, have become very important. The direction and pace of further reforms in the country and, finally, political and economic stability in society largely depend on decisions of these problems. Solving these problems requires a policy worked out by the state, the central point which would have been a man, his well-being, physical and social health. That's why all the transformations that anyhow can lead to changes in standards of living, cause a great interest in the diversified levels of population.

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MEASURING INNOVATIVE PERFORMANCE

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Abstract. Nowadays innovation is the main driving force to economic growth and prosperity. Europe has a long tradition of good performance in research and innovation, and each Member State has its own policies and programs on research and innovation. The support and development of innovation performance is one of the priority tasks for the government of Latvia. The targets of European Union (EU) within the Europe 2020 strategy for smart growth include combined public and private investment levels to reach 3% of EU's GDP as well as better conditions for R&D and Innovation. Latvia has made some progress towards the Europe 2020 target indicators, but there is still place for improvement in a significant number of areas as Latvian innovation rate is still below EU's average.

European Commission declares a need to produce an indicator to measure Europe's progress towards a more innovative economy. The indicator will measure the progress of strategy and represent overall research and innovation performance and reasons why it differs between member states. An important aspect of the indicator is that it should allow comparability on the global level.

Latvia should consider the applicability of new innovation indicator. The paper aims to discuss the innovation performance of Baltic States and to examine the usability of the new approach of calculating Europe 2020 Innovation Indicator in case of Latvia.

The theoretical and methodological evidence is based on the analysis of the economic literature, scientific works published by Latvian and foreign scientists; the legal documents of European Commission; the statistics database of the Central Statistical Bureau of Latvia; Eurostat and other international statistical and methodological materials. Bibliography review, as well as methods of statistical analysis such as grouping, processing and comparative analysis has mainly been used in the paper.

Keywords: *Europe 2020 strategy, high-growth enterprises, Community Innovation Survey, Innovation Indicator, methodology*

Jel code: C0, C13, O31

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Introduction

Innovation is a major force of economic growth. In the context of the Europe 2020 Strategy, an innovation indicator is developed to measure Europe's progress towards a more innovative economy. The new innovation indicator measures the share of high growth innovative enterprises in the economy. Business register of the Central Statistical Bureau (CSB) of Latvia keeps all the necessary information to carry out identification and calculation of high-growth enterprises by the required criteria.

The EU data show that Latvia's innovation performance is one of the lowest among the Baltic States and in Latvia there is one of the smallest numbers of high-growth companies among the newly-established enterprises. So, the CSB argues whether an approach of high-growth innovative enterprises is suitable in Latvia.

Europe 2020 strategy and performance of Latvia

Europe 2020 is a strategy for reviving the economy of European countries, based on a vision of 'smart, sustainable, inclusive' growth (Europe 2020). The three axes of the strategy are:

- Smart growth: developing an economy based on knowledge and innovation;
- Sustainable growth: promoting a greener, more resource-efficient and competitive economy;
- Inclusive growth: fostering a high employment economy delivering social and territorial cohesion.

The Smart Europe sub-index consists of four pillars of various aspects of Europe's ability to develop smart economies:

Pillar 1: Enterprise environment − improving the overall enterprise environment.

Pillar 2: Digital agenda − making full use of information and communication technologies.

Pillar 3: Innovative Europe − sufficient investment in research and development (EU targets include combined public and private investment levels to reach 3% of EU's GDP and better conditions for R&D and Innovation).

Pillar 4: Education and training − improving the quality of higher education and training.

The capacity of countries to innovate depends on various factors – innovation support services, technology transfer mechanisms, R&D and ICT infrastructure, the existence of effective education and training institutions, the mobility of researchers, business incubators, new sources of finance and local creative potential, good governance etc. Performance in R&D and innovation varies across the EU's countries (Regional Policy for Smart Growth in Europe 2020).

Table 1

Rankings on the smart sub-index

Country/Economy	SMART		1. Enterprise environment		2. Digital agenda		3. Innovative Europe		4. Education and training	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Estonia	11	4.79	12	4.13	5	5.94	16	4.07	12	5.03
Latvia	23	4.05	21	3.69	20	4.60	24	3.30	22	4.61
Lithuania	19	4.29	25	3.53	11	5.35	21	3.49	17	4.81

Source: The Europe 2020 Competitiveness Report: Building a more Competitive Europe. 2012 Edition.

Table 1 shows rankings and scores between Baltic States on the smart sub-index. **Estonia** ranks 11th in the overall smart sub-index. Estonia's greatest strength relates to the country's digital agenda (ranked 5th), driven by strong information and communication (ICT) laws, strong company use of ICT and high government prioritization. At the same time Estonia has low R&D spending, a lack of available researchers, little collaboration between universities and the private sector in research and low registration in patents and industrial designs. This is also reflected in the education and training pillar ranked 12th, where Estonia does relatively well in educating its citizens, but could improve by upgrading training schemes.

Latvia is not focused on a knowledge-based economy (ranked 23rd). In particular, Latvia's low innovative capacity does not bode well for the future (ranked 24th in the Innovative Europe), because of a lack of scientists and engineers and inefficiencies related to scientific output. Over the longer period of time, moving towards a knowledge-based economy will require considerable efforts in education in order to increase participation and quality.

The cornerstones of **Lithuania's** productivity are the progressive digital agenda (ranked 11th), stable results on education and training (ranked 17th), reflecting Lithuania's high enrolment in tertiary institutions. Improving educational quality (22nd on the OECD Programme for International Student Assessment – PISA) and removing administrative obstacles to entrepreneurial activity are two areas that would help the country move towards a knowledge-based economy while increasing social inclusion (The Europe 2020 Competitiveness Report: Building a more Competitive Europe. 2012 Edition.).

Estonia and Latvia have many similarities in the context of economy, R&D and innovation. However, Estonia performs better in many aspects. The statistical data shows that in Estonia the science and research is much more developed, e.g., there are fewer barriers for entrepreneurs to conduct the business activity, and there is a larger value added in the national export. The main problems in the innovation systems of Latvia and Estonia are the poor connection between research institutions and the enterprises; the poor orientation of the research towards the needs; the researchers become old and number of researchers is decreasing constantly. These problems are more topical in Latvia than in Estonia (Early stage business needs analysis. Research Report.).

R&D intensity

Investments in research and innovation are crucial for all countries, but countries start with different capabilities. R&D intensity that is R&D expenditure as a percentage of GDP, reflects the R&D and innovation performance in a given country. The Europe 2020 strategy sets an objective for R&D intensity as a 3% of GDP, most member states have already adopted their national R&D intensity target for 2020. Total R&D expenditure is split between private and public funding. Private R&D funding is the main component of total R&D expenditure in the more advanced knowledge economies. Its level reflects the attractiveness of the national innovation system for business investments. Public R&D funding shows the commitment of a government to promote R&D and innovation activities directly and through the leverage effect on business R&D expenditure. In Latvia, Lithuania and Estonia structural funds have become a significant – if not the main – source of public R&D funding (Europe 2020 Targets: Research and Development.). While it is important to define target of the GDP to R&D, these 3% should not be a target in itself, and should mobilize a wide range of different instruments, not just public resources to finance public research (Overall Assessment of the Communication from the Commission, Europe 2020, a Strategy for smart, sustainable and inclusive growth. 3 March 2010.). According to statistical data, Latvia has the lowest R&D intensity in the EU (0.6% of GDP in 2010). For Latvia R&D growth is targeted at 1.5% of GDP for 2020 (see Figure 1).

Latvia and Lithuania set very ambitious national target with regard both to starting levels and past trends (see Table 2). Latvia and Lithuania are among Member States, which need to fundamentally raise their rate

of increase in R&D intensity to reach their target. The financial crisis of 2008 had a significant impact on the R&D expenditure in Latvia, in order to achieve its 2020 target; Latvia has to increase the R&D intensity both in the public and the private sectors. According to the Latvian National Development Plan 2014-2020 'Establishing knowledge as the key resource for the country's development means that people as the creators and disseminators of knowledge become the main driving force and the beneficiaries of this development. In such a growth model, knowledge determines the quality of the labour force, the use of capital and the development of technologies' (Jankovskis, J. et al. 2012). The support and development of innovation performance is one of the priority tasks for the government of Latvia.
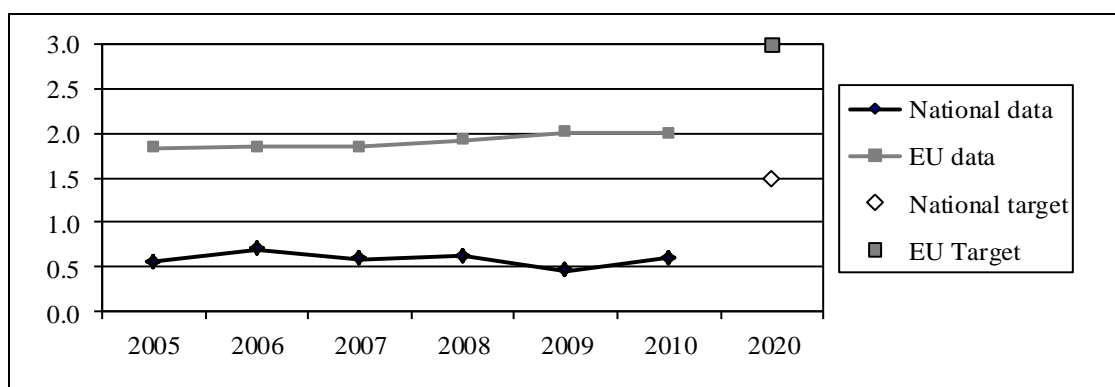
Source: Europe2020 in Latvia.

Fig. 1. **Gross domestic expenditure on Research and Development (% of GDP);
National data of Latvia and EU data**

Estonia is among Member States, which are on track to reach their target based on their average rate of progress over the period 2000-2010. Estonia has relatively ambitious target according to its starting point.

Table 2

Situation of Member States with regard to their R&D intensity target

	R&D Intensity			
	2010	**Target 2020**	**Average annual growth (%) 2000-2010**	**Average annual growth (%) required to meet the 2020 target 2010-2020**
EU	2.00	**3.00**	+0.8	4.1
Estonia	1.62	**3.00**	+10.4	6.3
Lithuania	0.79	**1.90**	+3.1	9.1
Latvia	0.60	**1.50**	+3.1	9.5

Source: Europe 2020 Targets: Research and Development.

The target on R&D intensity in Latvia (1.5%) is significantly lower than in Estonia (3%). Even if Latvia will be able to achieve its goal in 1.5%, performance of Latvia will be far below the EU average and even below the rate of Lithuania and Estonia.

The vision of Europe 2020 strategy for the 21st century is built on a partnership between the European Commission and the Member States. While the Member States set national targets and set out the R&D and innovation support policies, the European Commission evaluates progress, gives policy recommendations and develops initiatives to stimulate sustainable growth and jobs at the EU level (Europe 2020 – The EU strategy for smart, sustainable and inclusive growth).

Innovative Latvia in Figures

Latvian companies generally belong to the larger size classes: not only are there proportionally more large companies; even within the SME sector the medium sized and small segments make up a higher percentage of the total than in the average EU country (see Table 3). Services are the leading sector in terms of number of enterprises (49%) and value-added (43%), with shares very close to the EU average; however, they create only 36% of the jobs (against 40% in the EU as a whole). Trade plays a greater role in Latvia than in the other EU countries, especially in terms of employment (31% of the total). What concerns high-tech manufacturing and knowledge-intensive services, they are less important in Latvia than in the EU as a whole: their 22% share in the creation of value-added is 9 points below the EU average. In manufacturing 68% of Latvian SMEs have specialised in the low-tech segment of the market (to compare, the EU average of 53%).

The Latvian SME structure used to be even more oriented towards larger enterprises than it is now, but the crisis caused a major fall in the number of all size classes except micro enterprises, which grew until 2010 and then levelled off at a much higher level than before the crisis. The recent reforms, which made it easier and less expensive to found and run a micro enterprise, have played an important role in increase in the number of new micro enterprises.

Table 3

SMEs in Latvia for 2011 – basic figures

	Number of Enterprises			Employment			Value added		
	Latvia		*EU27*	Latvia		*EU27*	Latvia		*EU27*
	Number	**Share**	*Share*	**Number**	**Share**	*Share*	**Billion €**	**Share**	*Share*
Micro	70 011	88.7%	92.2%	148 382	27.1%	29.6%	1	16.4%	21.2%
Small	7 313	9.3%	6.5%	144 307	26.4%	20.6%	2	22.8%	18.5%
Medium-sized	1 408	1.8%	1.1%	131 148	24.0%	17.2%	2	26.6%	18.4%
SMEs	78 732	99.8%	99.8%	423 837	77.4%	67.4%	5	65.8%	58.1%
Large	195	0.2%	0.2%	123 743	22.6%	32.6%	3	34.2%	41.9%
Total	78 927	100.0%	100.0%	547 580	100.0%	100.0%	8	100.0%	100.0%

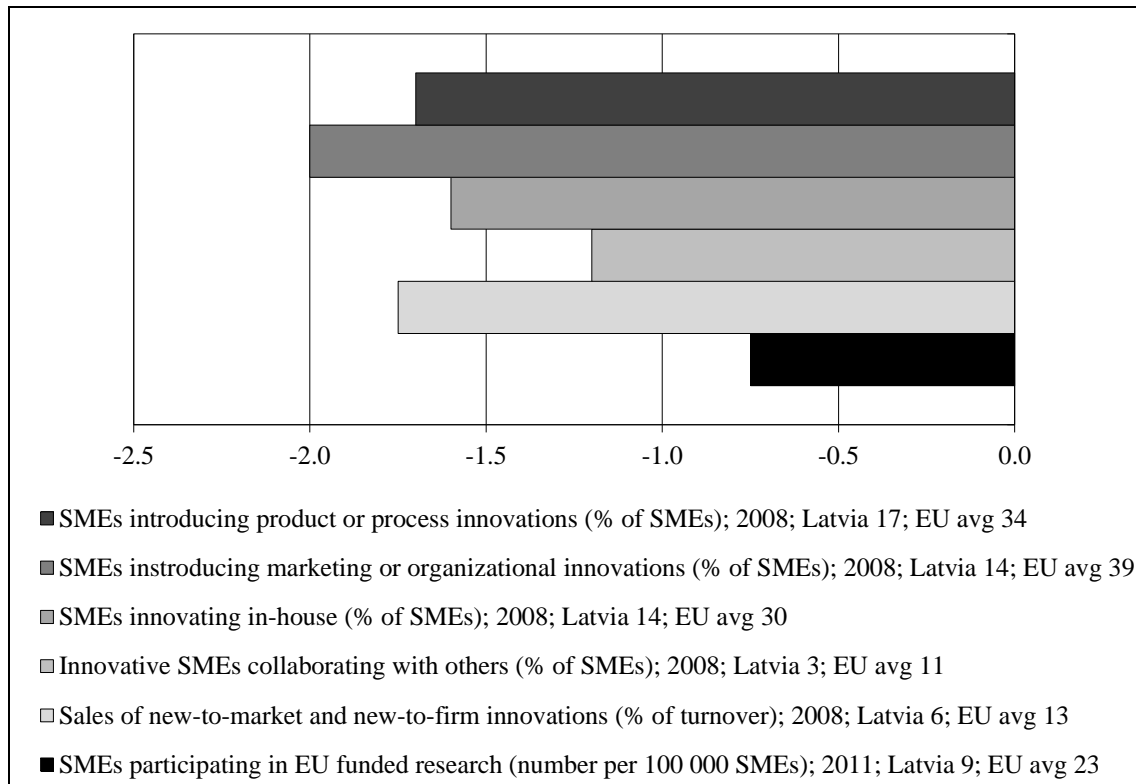*Source: Enterprise and Industry. SBA Fact Sheet 2012. Latvia.*

Latvian SMEs have particular difficulties in introducing innovations, in innovating in-house, and in getting innovative SMEs to cooperate (see Figure 2). The indicator for the participation of SMEs in EU funded research are also below the mean, but less markedly so. In 2011 the government adopted two main policy measures to improve the situation in this area. New regulations on the 'Development Programme of New Products and Technologies by Micro, Small and Medium Enterprises' (a sub-activity of the Action Programme 'Entrepreneurship and Innovation') were adopted by the Cabinet of Ministers. This effectively created the procedure for SMEs to participate in the development programme. Moreover, the

Cabinet of Ministers approved the regulations on 'High-Value Added Investments', another sub-activity of the same Action Programme 'Entrepreneurship and Innovation', which aims to attract investments with a view to boosting firms' competences, technologies and innovation capacity.

■ SMEs introducing product or process innovations (% of SMEs); 2008; Latvia 17; EU avg 34

■ SMEs instroducing marketing or organizational innovations (% of SMEs); 2008; Latvia 14; EU avg 39

■ SMEs innovating in-house (% of SMEs); 2008; Latvia 14; EU avg 30

☐ Innovative SMEs collaborating with others (% of SMEs); 2008; Latvia 3; EU avg 11

☐ Sales of new-to-market and new-to-firm innovations (% of turnover); 2008; Latvia 6; EU avg 13

■ SMEs participating in EU funded research (number per 100 000 SMEs); 2011; Latvia 9; EU avg 23

Source: Enterprise and Industry. SBA Fact Sheet 2012.Latvia.

Fig. 2. **Distance from the EU-average (measured in standard deviations, EU-average=0)**

The following four key structural challenges of the national Research, Technological Development and Innovation system of Latvia can be identified:

Unstable R&D funding and governance system – public funding for R&D is too dependent on EU structural funds, which is a wrong approach in a long-term perspective.

Limited innovative capacity of the enterprise sector – only a few of the existing industrial enterprises in Latvia prove to be internationally competitive in the high-tech area; Latvia has one of the lowest levels of innovation performance; the service sector dominates in Latvia and demonstrates low innovative capacity, while the industrial sector is too small to make a significant contribution in the national innovation performance.

Insufficient supply and sustainability of skilled labour force – the problem with the supply of qualified labour force; major outmigration of the Latvian population; overall lack of entrepreneurs as well as in technology-intensive branches.

Underdeveloped and weakly motivated collaborative practices – weak collaborative practices in the domains or domestic intersectoral knowledge/technology transfer, integration of universities and institutes, as well as science and technology cooperation. This challenge largely results from the above-

mentioned challenges related to the limited innovative capacity of the business enterprise sector and the insufficient supply and sustainability of skilled labour force that both limit the possibilities for collaboration. (Erawatch Country Reports 2011: Latvia.)

Europe 2020 Innovation Indicator

In 2010, the Europe 2020 strategy announced the development of an innovation indicator to complement the R&D intensity indicator. The innovation indicator should measure the capacity of countries economy to create high quality jobs in economic sectors that are promising for the future in terms of innovation, growth and employment (Summary of the Workshop).

The indicator should be representative of the economy and reactive to innovation policy changes. The indicator is supported by a marker that counts only employment in high-growth enterprises, instead of total employment in each economic sector as it is the case for the innovation indicator.

The high-growth enterprises in the economy represent a small proportion of the business population, nevertheless are considered promising for the creation of more jobs and innovation, so interest in high-growth enterprises is high among policy makers.

An important aspect of the indicator is that it should allow comparability on the global level. In Latvia, like in most European countries, innovative enterprises are defined based on the Community Innovation Survey (CIS), which implements the Oslo Manual guidelines. According to new methodology, the CIS could not be used to identify high-growth innovative enterprises for the innovation indicator for the following reasons: the CIS is a sample survey and does not cover all enterprises and all sectors of the business economy; the CIS data are not available on an annual basis but only every two years, so if the CIS were used to identify high-growth innovative enterprises, the indicator could not be updated annually (Summary of the Workshop).

A number of non-European countries do not carry out innovation surveys or do not use harmonized questionnaires so the problem on international comparability is still open. One more aspect here is that the results of the CIS are significantly affected by the way the survey is implemented in a country (e.g. compulsory or voluntary survey, web-based or paper survey etc.).

Doubtful aspect of the methodology on calculating the innovation indicator is the sector-specific coefficient. CIS variables quantify the actual level of innovation in a sector. Knowledge intensity informs about the innovation potential of the sector, as innovation is based on knowledge and requires highly qualified human resources. The weight of sectors' labour productivity is too high in calculation of Sector-specific coefficient, but in practice sectors' labour productivity is not the result of innovation only but of other factors too. Total Factor Productivity would be a better measure of competitiveness. But the problem here is that total factor productivity data at sectoral level does not exist. In author's point of view, applying the same sectoral coeficients to all countries seems to be in contradiction with "smart specialisation" – a country specialises where it has a comparative advantage.

In author's opinion the index contains too many elements and therefore it does not clearly identify the weak areas of economy, which would require additional government policy intervention. In author's view the indicator and marker suffer from the same drawbacks as composite indicators: they integrate many elements which interact together so that it becomes difficult to interpret and learn lessons for policy makers. Moreover, there could be some difficulties to set clear and measurable target values, like for other target indicators form the Europe 2020 strategy.

The concept of high-growth enterprises

Initially the concept of a high-growth enterprise seems to be simple; it is an enterprise, which grows at a rate which is high enough in comparison to the majority of enterprises. In practise there are a number of

practical issues when forming a criteria and definition of high-growth enterprise. In terms of distinguishing high-growth enterprises from others, two basic features are usually used: there should be a strong growth in size (usually measured as numbers of employees within the enterprise), and this growth should be over an intensive period (High Growth Enterprises. What Governments can do to make a difference?).

According to new methodology, data source for high-growth enterprises for calculating the Innovation Indicator is National Business Registers (based on EU Regulation). The definition of high-growth enterprises applied to be used for National Business Registers purposes is as follows: 'all enterprises with average annualised growth greater than 20% per annum, over a three year period should be considered as high-growth enterprises. Growth can be measured by the number of employees or by turnover.' Manual on Business Demography Statistics gives one more definition: 'all enterprises up to 5 years old with average annualised growth greater than 20% per annum, over a three year period, should be considered as gazelles.'(Eurostat − OECD Manual on Business Demography Statistics).

In author's view the above mentioned definitions do not take into account the differences in growth rates between industries. It is important, however, to measure growth relative to industry peers. An example comes from Spanish research on the link between innovation and employment change in Spain based on data for 1998-2000 (Jaumandreu, 2003). During this time of rapid growth in Spain's economy, manufacturing enterprises averaged sales growth of 10% while service enterprises averaged 12%. Also, recent research aimed at investigating the OECD's definition of high growth as it relates to italian firms points to the fact that an equal number of employees (for instance ten employees) has a different economic significance according to the sector of economic activity (Cella and Moorone, 2008). The employment average, which in Italy is below the threshold of ten employees for almost all economic activities, varies greatly from sector to sector.

Moreno and Casillas (Moreno and Casillas, 2007) provide an alternative to the OECD approach: they define high growth simply as a three-year growth rate of more than 100% above the sector median. This approach removes the difficulty of a variation of sector growth rates (High Growth Enterprises. What Governments can do to make a difference?).

The following are the parameters of the definition of high-growth enterprises to calculate marker: minimum size of enterprises is 10 employees, growth rate minimum threshold (annual average) is 10%, time period of observation for employment growth is 3 years. The 10% threshold for annual average growth is more adapted to the economic crisis and allows to cover a more significant part of the economy, remaining selective. Variables to be used are number of employees or number of persons employed; practically the number of employees is better as it is more widely available and comparable across European countries. Turnover and value-added could be a good alternative to identify high-growth enterprises, but were rejected to be included in the definition, because turnover is less comparable across sectors, value-added causes a number of data problem and of timeline to get the results. Moreover, the creation of jobs by enterprises in innovative sectors matters.

A size threshold of ten employees at the start of an observation period is set to avoid the small size class bias that the definition of high growth enterprises inevitably contains. The optimal threshold in terms of firm size at start, growth rate and growth period are selected to provide as detailed and as meaningful information as possible, and to maximise information that can be disclosed (e.g. taking into account confidentiality rules, to produce the indicators at as detailed an industry level as possible, and by standard size classes by employment criteria) (Summary of the Workshop).

In Latvia one more definition of high-growth enterprises exists. In 2012 Dienas Bizness in collaboration with Lursoft IT already for the twelfth year created the list of Latvian high-growth enterprises. In order to be included in the list of high-growth enterprises – Gazelles, an enterprise should meet the following criteria: continuous increase of turnover during last three years (2009-2011); turnover is more than 100 thousand LVL in 2009; equity capital is positive; during 2011 an enterprise was profitable. (Panākumi "Gazeles 2012" ceļ spārnos!) In author's view the quantitative criteria of 'continuous increase of turnover during last three years' should be identified. Moreover, author cannot

support the choice of turnover as criteria for high-growth enterprises as growth in turnover is less comparable across sectors.

Table 4

Number of small and medium-sized enterprises with 10 to 249 employees, 2010

Enterprise types	All enterprises	Gazelles	High-growth enterprises	Other enterprises
GEO Year	2010	2010	2010	2010
Lithuania	10 820	432	112	10 276
Latvia	9 154	136	906	8 112
Finland	18 336	156	806	17 374
Italy	213 975	1 388	6 996	205 591

Source: Statistics Explained.

The existence of several different definitions cause misunderstanding of the essence of the term high-growth enterprises, the significant research should be made in order to define optimal criteria for identification of high-growth enterprises.

A number of important findings about high-growth enterprises have emerged from research presented at the 2009 ISBE Conference: 'a few rapidly growing firms generate a large share of all net new jobs (this is particularly marked in recessionary periods when these firms continue to grow); high-growth enterprises or Gazelles can be of all sizes; newness is a more important factor than size in terms of rapid growth; high-growth enterprises and Gazelles are found in all industries. They are not over-represented in high technology industries. If anything, they are over-represented in services' (Implication for policy).
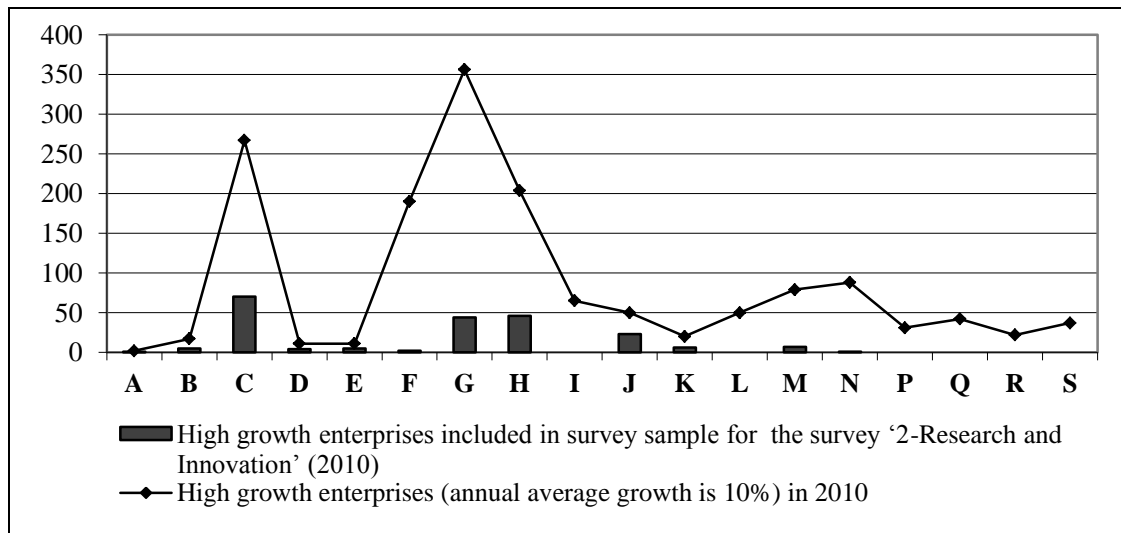
Source: Author's calculations based on unpublished CSB data.

Fig. 3.**Number of high-growth enterprises in Latvia with annual average growth at least 10%
and number of high-growth enterprises filled in the survey questionnaire '2-Research and
Innovation' by main kind of economic activity (NACE Rev.2), 2010**

In Latvia, high-growth enterprises represent a small percentage of the overall number of enterprises. The EU data show that in Latvia there is one of the smallest numbers of high-growth companies among the newly-established enterprises (see Table 4 – Gazelles and high-growth enterprises are calculated with accordance of OECD definition).

Author calculated number of high-growth enterprises according to the parameters of new methodology (minimum size of employees 10 employees, growth rate minimum threshold 10%). The results are presented in Fig. 3. Out of 1542 high-growth enterprises 214 enterprises were included in the survey sample for the survey '2-Research and Innovation' in 2010 that is only 13.9% of high-growth enterprises. In 2010 only 190 out of 214 high-growth enterprises submitted survey questionnaire '2-Research and Innovation'. Out of 190 enterprises responded to the survey, only 68 have introduced process or/and product or/and organisational or/and marketing innovations during the time period 2008-2010 (see Fig.4). We can conclude that Latvia should adjust the new principles of sampling methodology to assess the possibility of including the largest number of high-growth enterprises in the innovation survey sample.
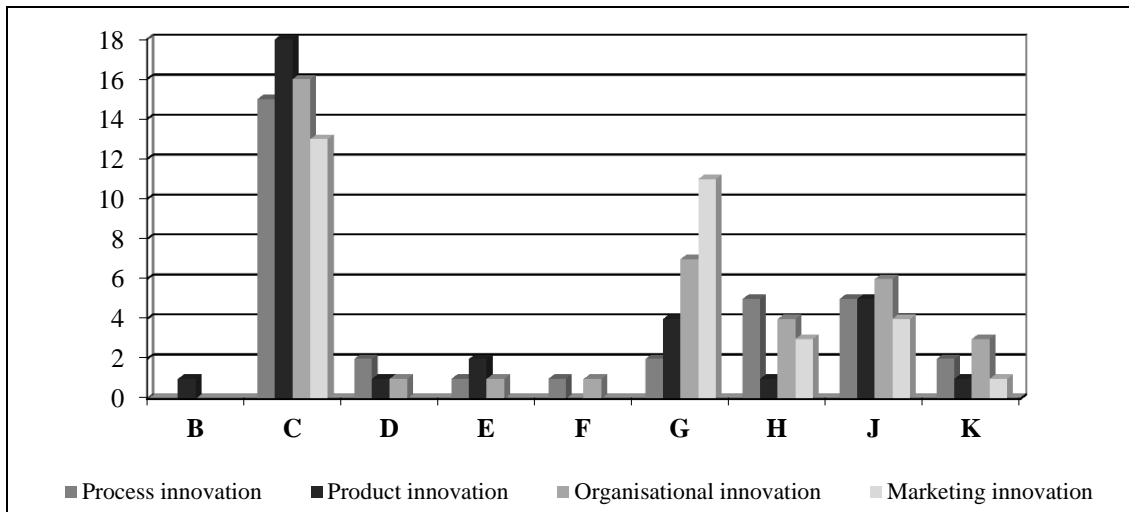
Source: Author's calculations based on unpublished CSB data

Fig. 4. **Number of high-growth enterprises in Latvia with annual average growth at least 10% that according to '2-Research and Innovation' results introduced Product, Process, Organisational or Marketing innovations during 2008-2010 by main kind of economic activity (NACE Rev.2)**

Author has no fundamental objection to the new approach, but some more test should be made on the frequency of proposed marker (if the marker is calculated and published annually or every third year); who is responsible for calculation of proposed indicator and marker for each country; tests should be made with criteria of identifying high-growth enterprises for the marker calculation (employment in 10 and more employees and 10% threshold for annual average growth).

Conclusions, proposals, recommendations

1. According to statistical data, Latvia has the lowest R&D intensity in the EU (0.6% of GDP in 2010). For Latvia R&D growth is targeted at 1.5% of GDP for 2020; this is significantly lower than in

Estonia (3%). Even if Latvia will be able to achieve its goal in 1.5%, performance of Latvia will be far below not only the EU average but even below the rate of Lithuania and Estonia.

2. In Latvia the crisis caused a major fall in the number of all size classes except micro-sized enterprises, which grew until 2010 and then levelled off at a much higher level than before the crisis. The recent reforms, which made it easier and less expensive to found and run a micro company, have undoubtedly played an important role in a strong increase in the number of new micro enterprises.

3. The weight of sectors' labour productivity is too high in calculation of Sector-specific coefficient, but in practice sectors' labour productivity is not the result of innovation only but of other factors too. Total Factor Productivity would be a better measure of competitiveness, but the problem is that total factor productivity data at sectoral level does not exist. Applying the same sectoral coeficients to all countries seems to be in contradiction with "smart specialisation" – a country specialises where it has a comparative advantage.

4. In Latvia, high-growth enterprises represent a small percentage of the overall number of enterprises. The EU data show that in Latvia there is one of the smallest numbers of high-growth companies among the newly-established enterprises.

5. The mentioned definition of high-growth enterprises for the calculation of marker do not take into account the differences in growth rates between industries. It is important, however, to measure growth relative to industry peers. The recent research shows that the employment average varies greatly from sector to sector.

6. Author has no fundamental objection to the new approach, but some more test should be made on the frequency of proposed marker (if the marker is calculated and published annually or every third year); who is responsible for calculation of proposed indicator and marker for each country; tests should be made with employment in 10 and more employees and 10% threshold for annual average growth.

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CHALLENGES OF THE SPIRAL METHODOLOGY
FOR WELL-BEING STUDIES[1]

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Abstract. Well-being is an ancient issue: all societies are trying to find the best possible solution for community well-being (Boje, T.P., 2000). The *SPIRAL* methodology recently developed by the experts from Council of Europe under supervision and inspiration of Samuel Thirion and approbated in different European municipalities is representing a subjective position in researching the well-being of society which answers to the question: "What is for you the well-being/ill-being?". As a direct result of the Council of Europe's social cohesion strategy in issues on society involvement preparation of proposals for decision making, the *SPIRAL* (*Societal Progress Indicators for the Responsibility of All*) methodology is different from other society participatory methodologies: it is entirely open and systematized.

The aim of the paper is to discuss the experience of practical applications and results of the *SPIRAL* methodology, explore advantages and challenges.

Research methods used: scientific literature studies, several stages of focus group discussions of 25 homogenous groups in Salaspils municipality, statistical data analysis, *SPIRAL* methodology.

The main results and findings of the paper – the *SPIRAL* methodology could be the common basis of fundamental values, for evaluation of society's progress towards improved capacity to ensure the well-being of all through the development of co-responsibility in society, for example, in municipality. It is extremely important to ensure the reliability of obtained results as the well-being indicators could be further used in design and preparation of development and social policies of the municipality. The well-being, including subjective well-being, should be measured not only in national level, but in the level of municipality as authorities of municipalities should promote the well-being of community.

Key words: *well-being, SPIRAL methodology, well-being indicators, co-responsibility*

JEL code: I38, H75, D78, D63, C88

Introduction

Well-being is the most relevant and right starting point to define indicators of impaction the level of living and societal progress. However the concept of well-being is not clearly measurable because it is not so simple to evaluate the level of living (Noordhoff F., 2008). Well-being indicators could be divided in two – the subjective and objective ones. Objective indicators can be found for some measurable components or factors of well-being as incomes, consumption, capital, investment, savings, stocks, import-export balance and other different economic aspects that are currently every countries and also individuals targets and main points in making strategies for future actions (Blackman T., 2001).

But most of the components of well-being cannot be measured directly by objective indicators and need subjective ones, built from the point of view of the persons themselves, which need specific methods to do so. So there is more and more indicators that social and economic science should develop and estimate, there is still factors which are not explained, however the influence is obvious (Digby A., 1998).

There had been made several researches to find out how subjective components of well-being has been evaluating (Diener E., 1999, Andrews F.M, 1976, Brunstein J.C., 1993). The research showed that there had been a mayor progress in understanding subjective well-being. For example in 70ies the happy person was considered well-paid, young, educated, religious and married person. In 90ies authors emphasized that the happy person is blesses with a positive temperament, tends to look on the bright side of the things, is living in an economically developed society, has social confidants, and possesses adequate resources for making progress toward valued goals. But as the progress in understanding well-being is remarkable, it is needed to find out what is being understood by well-being now, in 21[st]century.

In many countries there are used different approaches for citizen involvement in municipality decision – making and attention of researchers are paid to those issues (Akgul, 2012; Gregori, D. *et al*, 2012).

The idea of measuring community well-being is relatively new. It was developed during the 1980s and 1990s. It reflects the above mentioned international activities as well as grassroots efforts by business leaders, activists, local politicians and others to develop approaches that can gather information to inform local decision-making. The idea of community indicators of well-being reflects a change in focus from the "top down" imposition of what well-being, sustainability, quality of life, etc. *should* look like to a "bottom-up" approach that emphasizes democratic participation and empowerment in the development of locally significant understandings of well-being and its measurement (Gahin, Peterson, 2001). The movement towards measuring community well-being also reflects several other recent trends including 1) the devolvement of control for many programs to the local scale (e.g. social programs), 2) the need to measure Agenda 21 achievements, and 3) the recent emphasis on the need for better performance and accountability indicators (e.g. measuring the outcome of spending on social programs) (Murphy, 2010).

Indicators of community-well-being, sometimes called "benchmarks" or "vital signs", are now used extensively by nation-states, regional governments, urban and rural areas, and even neighbourhoods.19 The Community Indicators Consortium lists and provides links to community well-being projects from around the world, including sixteen from Canada alone (Frey, Shutzer, 2002). In the United States there are over two hundred municipalities, using some form of community well-being measurement (Christakopoulou et al, 2001). One of the earliest and ongoing examples of efforts to track well-being is Jacksonville, Florida's, Community Council Quality of Life indicator program. The council tracks one hundred indicators of well-being covering nine themes (Murphy, 2010). Other well known examples include Sustainable Seattle23 and Sustainable Calgary24. Thus the current state of knowledge about indicators is both in depth and extensive. What still remains challenging is how to "more effectively translate knowledge and commitment into action" in order to achieve the desired changes to community well-being (Ramos, Jones, 2005).

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The SPIRAL (*Societal Progress Indicators for the Responsibility of All*) methodology, recently developed by the experts from Council of Europe under supervision and inspiration of Samuel Thirion, is a way to define and measure well-being from the subjective point of view of the persons themselves. It is a common basis of fundamental values, for society's progress towards improved capacity to ensure the well-being of all, through the development of co-responsibility. Also this methodology to secure such progress jointly developed with inhabitants and other social stakeholders at local level, tying in with the regional, national, European and global levels. Involved in developing this methodology was a community of experimenters (governments and other local and regional players, companies, hospitals, schools, associations, NGOs, researchers, etc.), which expanded little by little in order to produce the methodology and make it available to as many people as possible (Council of Europe, 2008).

The SPIRAL methodology (in the sense of acronym – as spiral methodology is widely used in technical and engineering sciences, as well as medicine) was approbated in 8 different European municipalities within URBACT II programme project "TOGETHER for territories of co-responsibilities" – Salaspils (Latvia), Mulhouse (France), Braine-L'alleud (Belgium), Pergina (Italy), Kavala (Greece), Covilha (Portugal), Botkyrka (Sweden), Debica (Poland). After approbation in these cities there has been increased range of the cities where also this methodology was used (URBACT II Programme Manual, 2009).

As the well-being of society is the ancient issue – all societies are trying to find the best possible solution for community well – being and recently is being developed new approach to study it, it very important to analyze the process of evaluating well-being. The aim of the paper is to discuss the experience of practical applications and results of the *SPIRAL* methodology, explore advantages and challenges.

The main tasks of this research:
- to research the *SPIRAL* methodology;
- to undertake a critical analysis of the *SPIRAL* methodology;
- to identify the advantages and challenges of the methodology.

As this methodology is being used for evaluating the well-being of society in municipalities and the results of it in being used to make certain activities for development of the municipality, the findings of this research contribute to public administration for decision making.

The research question: if the *SPIRAL* methodology could be nominated as reliable research methodology for evaluating well-being in society?

Research methods used: scientific literature studies, several stages of focus group discussions of 25 homogenous groups in Salaspils municipality, statistical data analysis, *SPIRAL* methodology.

As the SPIRAL methodology is developed recently and actually is open to improvements, it is important to make a research for possible improvements.

For facilitation of research of *SPIRAL* methodology, the main study object would be research that was organized in one of the Municipality – Salaspils (Latvia) in 2011.

Research results and discussion

1. The research of SPIRAL methodology – the main aspects for practical application

In 2000 the Council of Europe adopted a Social Cohesion Strategy; it was revised in 2004, 2007 and 2010. It defines social cohesion as society's capacity to ensure the well-being of all its members, minimizing disparities and avoiding polarization, to manage differences and divisions, and to acquire the means of ensuring the social welfare of all its members. From 2002 to 2005 a first Methodological Guide

for Designing Concerted Social Cohesion Indicators was developed with the different services of the Council of Europe and various governments, laying down the conceptual and methodological groundwork of Social Cohesion. Following its publication in 2005, collaboration with the Congress of Local and Regional Authorities took place in the pilot town of Mulhouse and an increasing number of other towns. Several application have been have been carried out at local level in specific geographical areas (communities, neighborhoods, municipalities, regions) and institutions (businesses, schools, hospitals, public administrations, etc.). Now stakeholders from almost 20 countries are today taking part in using the SPIRAL methodology (New Strategy and …, 2010).

The *SPIRAL* methodology is organized:

a) **In the bottom-up approach**
  – a methodological reference framework with three cycles of eight phases, serving as benchmarks for conducting the processes. A "fast" first cycle (preparing the process with a focus on reducing poverty and better use of existing resources), an intermediate second cycle (mobilizing citizens and actors in an action plan of co-responsibility for the well-being of all) and a comprehensive third cycle (territories of co-responsibility project with well-being indicators).
  – Actions relating to co-responsibility for the well-being of all coming up in these processes can be:
    1) in the co-ordination of processes,
    2) in the management of resources,
    3) in the sustainable production of goods and services,
    4) in life paths, and
    5) in relations between different sections of society.

    These topics are chosen so as to promote exchanges between practitioners faced with the same questions and to capitalize on and transmit skills and knowledge (see "discussion topics").
  – databases of experiences in the field (processes, pilot co-responsibility activities) and their results: well-being criteria, indicators, survey results, etc.;
  – dissemination/extension methods (communication on SPIRAL, training, formation of a pool of volunteers, etc.)

b) **In the top-down approach**
  – systematized information on existing public policies enabling local players to find ways to ensure ownership/enhancement of these policies;
  – areas for debate and putting forward proposals to adapt policies to the needs emerging from local issues and key topics (Council of Europe, 2011).

The Municipalities more often had been organized the bottom-up approach. Further the Figure 1 is showing all process how the SPIRAL methodology has been implemented in territories (including Salaspils Municipality).

The first cycle is called "Emerging Territory of Co-responsibility, which is:
- creating and implementing the Coordination Group (CG) (Local Support Group in Urbact) with the local actors of the local area;
- appropriating collectively in the CG the objective of well-being of all through co-responsibility;
- drawing and realizing axis and first demonstrative/pilot actions through a mutually inclusive approach;
- empowering through participative co-evaluation of the actions;
- preparing the mobilization of all citizens and actors in the second cycle (defining homogeneous groups and inviting them to participate).

Result: Seeds of empowerment
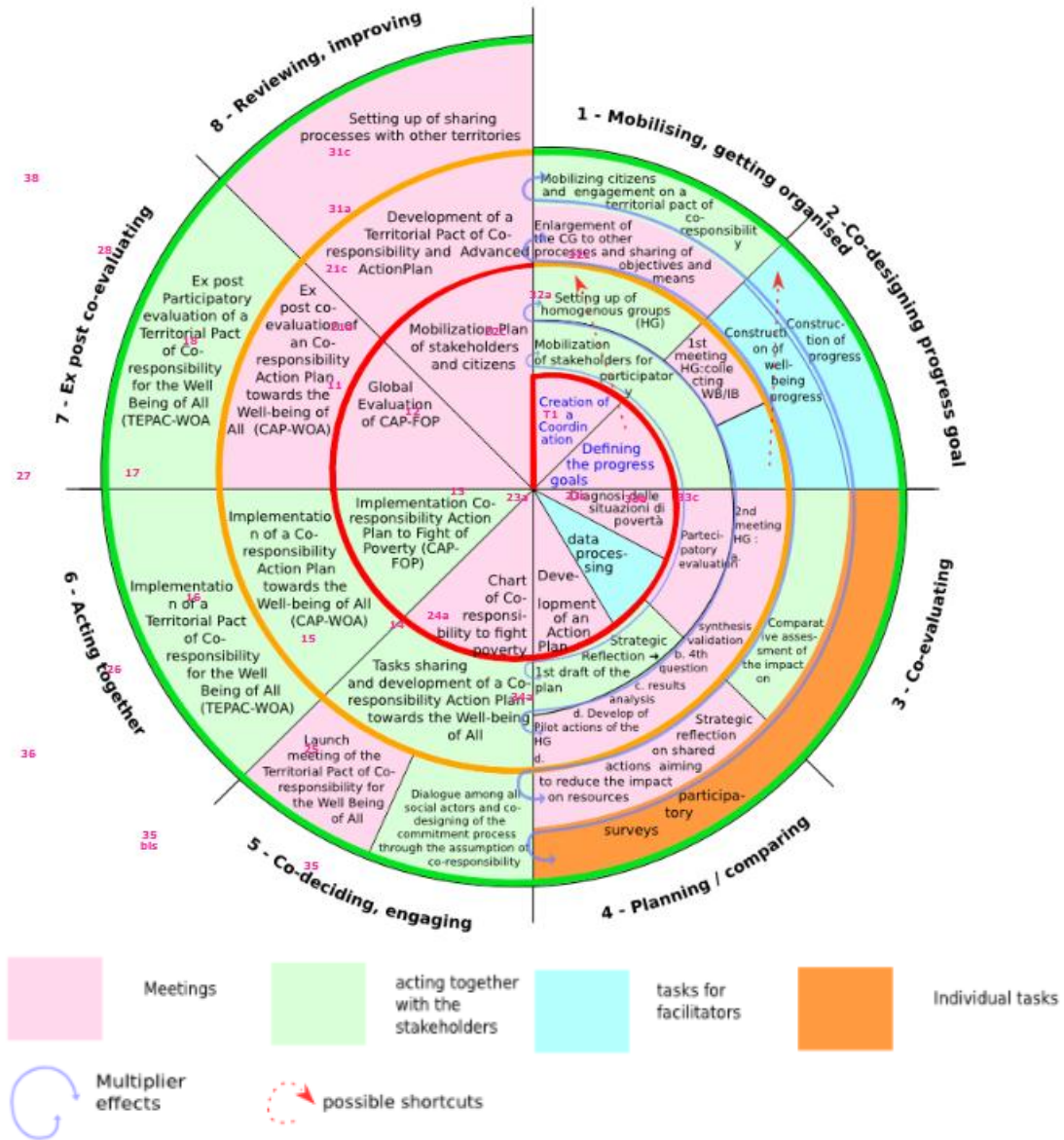
Source: Council of Europe, 2012 (contribution of JoëlObrecht)

Fig. 1. **The process of implementation the SPIRAL methodology in territories**

The second cycle is called "Upward Territory of Co-responsibility" which is:
- building with the citizens (in homogenous groups) a collective vision of the well-being of all as an objective;
- enlarging and multiplying participation in co-responsibility actions design and implementation;

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- empowering through integration of the actions in a shared action plan, its implementation and its participative co-evaluation;
- establishing a pact for an integrated territorial project of co-responsibility for the well-being of all (preparation of the third cycle).

Result: Real empowerment

The third cycle is called "Consolidating Territory of Co-responsibility", where is:

- building indicators of progress in well-being and progress in using resources for the well-being of all;
- inviting all the inhabitants and local actors (public and private) to sign the pact and to use the indicators of progress for their self-evaluation and their participation in the territorial project;
- building together and implementing the territorial project of co-responsibility for the well-being of all.

Result: Sustainable empowerment

In those 3 cycles are described all needed actions for organizing the SPIRAL methodology and goals.

2. The approbation of *SPIRAL* methodology in Salaspils Municipality

The research on well-being in Salaspils Municipality started in 2010 within URBACT II programme project "TOGETHER for territories of co-responsibility". The working group with experts from University of Latvia made scientific literature studies about well-being theory and practice and statistical data analysis about the municipality, its population, social and economic situations.

The main developer of project in Salaspils is head of Development Department in council of Salaspils Municipality. The process went directly to the second cycle of making homogenous groups. So it was important to constitute first the Coordination Group with different social groups, so all NGOs, pupil run organizations, associations and others was spoken. After that all population of municipality was invited to first meeting of presentation of project, to reach all identified society groups in municipality, there was list of NGOs, other different organization, associations, population was divided in age structure, in education structure, in employment structure, in place of living structure etc. Statistical data was also used to make this base of structure of municipality population. All people were invited through different communication channels, mobile phones, e-mails, and letters; there was also notice in local newspaper, cultural houses, social houses, schools, sport clubs etc.

Some of the groups that have participated in homogenous (focus) group work were:

- two scholar groups – "Student Council of Salaspils first high school" and "Student Council of Salaspils second high school" – it is so important because one group is from school with teaching in Latvian and another school is school with teaching in Russian, communication with scholars with different nationalities could be made;
- group named "School for moms with babies" represents the interests of new families and moms;
- several groups in which participants are people over 50/60 years, there are Russian- speaking groups and the Latvian- speaking groups;
- all other groups that were not mentioned respecting ethical issues.

The homogeneous group representatives in general reflect all Salaspils municipality society and includes different points of views and different scales of values, different material conditions but all they live in the same community and participation in homogenous group work is the possibility to find out the best solutions for all Salaspils municipality development.

As a result in Salaspils were created 25 homogenous groups which participate in URBACT II "Together for territories of co-responsibility" project 2010/2011 (The URBACT II Local …, 2009). In table 1 is showed the analysis of homogeneous groups in Salaspils Municipality.

Table 1

The Analysis of Homogeneous Groups in Salaspils Municipality

Society group	Homogeneous groups	Number of participants	Level of participation	Level of importance	Level of influence
Youth	The Student Council of Salaspils First High School; The Student Council of Salaspils Second High School	5	Medium	Medium	Low
Parents	School for mothers and babies; The Board of parents of Salaspils preschool education institutions; Society of large families in Salaspils „Martinsala"; Salaspils Women's Club "Spiganas"	8	High	High	Medium
Cultural/ sport/ religion workers	Russian song ensemble „ОТРАДА"; Middle age dance group „Usa" of Salaspils culture house „Rigava"; Education, culture and sport department in Salaspils region council; Sporta klubs „Egoisti**"; Lutheran church of Salaspils; The Roman Catholic Church in Salaspils	8	High	High	High
Science workers	Technical Universities of Riga Institute of Inorganic Chemistry, Universities of Latvia Institute of Physics and Institute of Biology	3	Low	Medium	Low

Society group	Homogeneous groups	Number of participants	Level of participation	Level of importance	Level of influence
Municipality workers	Salaspils Social service; The Union of Salaspils Municipality workers; Council of Salaspils region	3	High	High	High
Disabled people	The association of children and young people with disabilities in Salaspils "Zelta Atsledzina"; Society of disabled persons of Salaspils	3	High	Medium	High
Seniors	Society of Russians of Salaspils; The Board of Salaspils retired people**;** Club "Discovering Latvia" of society „ Salaspils' Pensioners Set"	3	High	Medium	Medium
Representatives from rural territories	Society „Partnership of Stopini and Salaspils"; Initiavive group of citizens of Dole island	2	High	High	High
Σ	25	35			

Source: author's construction based on observations during the meetings with homogeneous groups

Further would be described the process of data collection in Salaspils Municipality.

Data collection

First meeting: The aim of first meeting was to clarify what is well-being and ill-being for inhabitants of Salaspils plus what they are doing to improve well-being in their municipality. Each homogeneous group was asked to write down to sticky notes their responses. After each question group manager (from University of Latvia) read off all sticky notes with design to encourage discussions and grouped them on the large sheet of paper that was sticked to the board, for example, the most popular groups were "Infrastructure", "Education", "Health care" and so on. After meeting group managers used special software to input data.

Second meeting: The aim of second meeting was to present the results of first meeting and to find out what is the vision of well-being for future generations. Each group wrote down their answers and like the last time the group manager read off them and grouped. During the reading session everyone was welcome to comment answers. After meeting group managers continued input data in programme.

When all data for each homogeneous group were input in their own file, they were sent to one member of team of University of Latvia to combine all files in one to see common situation. The programme also formulated the well-being indicators, for example, programme described very bad, bad, medium, good and ideal situation for health, education and other indicators.

Third meeting: The aim of third meeting was to present the indicators and to formulate activities that will improve well-being situation in Salaspils municipality. Each of homogeneous group was asked to write down activities which particular group will put into effect. Then the group manager read off them and asked to choose 2 activities for this year and 2 activities for next year which they agree to put into effect. After groups were asked to write down activities that municipality should put into effect. After reading off all activities and discussions each group had to choose priorities that the municipality should do this year and next year.

Research results

The output that is of *SPIRAL* method (which data collects in excel in specially made functions) is indicators and those evaluations. The indicators divided in 8 main groups: 1. Access to means of living; 2. Living Environment; 3. Relations with Institutions; 4. Personal relations; 5. Social balance; 6. Personal balance; 7. Feelings of well-being/ ill-being; 8. Attitudes and initiatives (The URBACT Guide on …, 2010).

The collected criteria's in first and second meeting with homogenous groups are entered by research group in specially designed excel program and putted in indicator group according which group the criteria belongs to. Criteria used for grouping: condition; having; quality; sustainability (The URBACT Guide on …, 2010).

After performing the mentioned two steps (people written criteria grouping by indicator groups and their estimations) the output is table for every indicator, where the criteria is grouped as: very bad situation; bad situation; average situation; good situation; ideal situation (The URBACT II Guide to …, 2010).

The software designed in Council of Europe updates the results of homogenous group findings, the people work is to put in the people written criteria data, to allocate them in the right indicator group and to give estimates. After automatically output, the final report is written, it can be done for every homogenous group separately or for merged similar society groups or for all society together. The results of research in Salaspils Municipality are showed in Figure 2.
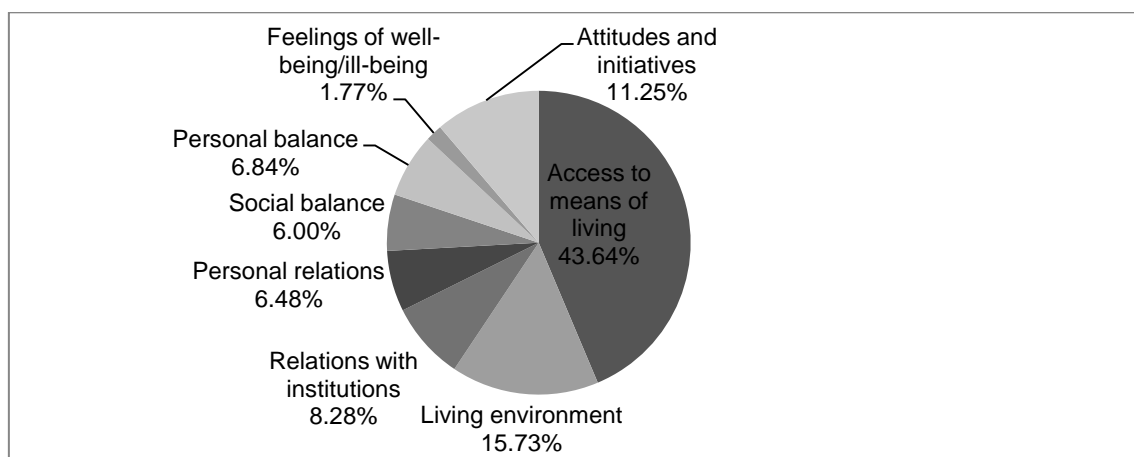
Source: Results of Salaspils 25 homogenous groups – results gained from 3 meetings September, 2010 until May 2011(from 2867 answers)

Fig. 2**. Indicators Synthesis of all homogeneous groups in Salaspils Municipality in 2011, %**

The results showed that for citizens also are very important subjetive well-being – factors like attitudes and initiatives, personal balance and personal relationship. Not only objective factors – like income, certain goods are determinant as were announced before reseach in municipality.

43.64% from all answers were included in "A" block – *Access to means of living*. The most popular indicators were: **Education/training** (249 answers), **Health** (234), **Employment/economic activities** (216) and **Leisure/culture/sports** (177).

The reason why *Education/training* indicator is so popular is due to the fact that in Salaspils there are just 2 schools and a lot of parents send their children to Riga (in a very close distance from Salaspils) because in capital of Latvia there are wider possibilities to get good education. But in the following years it is decided to build new school in Salaspils. Although there are different support from the municipality for out – school and free time activities (sport groups, dancing group, singing groups, etc.). Homogenous group representatives noticed that in Salaspils also adult persons do not have very many opportunities to improve their skills, education and spend free time in educational/cultural activities (circles, lifelong learning programs). A lot of representatives from the homogenous groups mentioned that medical care should be improved – this is pressing concern in Latvia, especially in rural territories. The same situation is with *Employment* – during the meeting the unemployment rate was 17% (average in Latvia). Also in Salaspils there are problems with visiting (not organizing) sports, culture events because municipality is very close to Riga where there are wide possibilities to spend free time. The biggest part of the Salaspils population just stay overnight in Salaspils but the active life is focused in processes in schools or work as well as free time activities in Riga (capital city of Latvia).

Second most popular block in Salaspils is B – *Living environment* with 15.73%. The most mentioned indicators were: **Basic infrastructures** (178 answers), **Environmental equilibrium** (67), **Facilities for physical security** (60).

There was often mentioned bad quality of roads (especially after winter), lack of proper sidewalks, bicycle paths, benches, and public toilets. Also citizens are not satisfied with environment – water bodies are polluted (especially river Daugava), due to the factory in Saulkalne (rural territory of Salaspils), Salaspils inhabitants are concerned about air pollution. Plus the waste collection issue is not solved. People are worried about physical security, there is not enough lightening.

Third most popular block is H – *Attitude and Initiatives* (11.25%). The most mentioned indicators were: **Private activities and initiatives** (122 answers), **Engagement in civic life** (62), **Responsibility** (46).

People in Salaspils showed that they want to participate in decision making to improve level of well-being. That's why they make different organizations to join forces.

Other blocks (*Relations with institutions, Personal relations, Social balance, Personal balance and Feelings of well-being/ill-being*) were mentioned rarely.

The Most Problematic Areas in Salaspils

Analysis of the indicators showed that people in Salaspils have two different groups of problems:
1. Problems that are common in Latvia,
2. Problems that apply to inhabitants of Salaspils.

In **first group** we can include like as: Access to means of living, Alimentation, Employment/economic activities, Basic infrastructure, Economic balance, Demographic balance.

Due to the economic crisis in whole Latvia access to means of living is major problem, there are not enough workplaces (it leads to emigration), there is great inequality between incomes. Also economic crisis exacerbated birth rates.

In **second group** (most characteristic problems in Salaspils) there are included such concerns like: Health, Personal development.

In Salaspils there is rather poor medical care – the doctors are not in sufficient amount, plus doctors' visits are unreasonably expensive. There are no pharmacies in sufficient numbers in rural territories, long waiting lists for visits to doctors.

Salaspils citizens often mentioned the unreasonable price of utilities, especially for heating. This problem is already in process of solving.

In rural territories of Salaspils Municipality aren't enough possibilities for qualitative free time activities. Salaspils provides wide possibilities for free time activities (theatre performances, concerts, hobby groups, etc.) but it is quite difficult to visit events from rural territories (transport issue, extra expenditures). The most concerned in it are families with children and retired persons

During the meetings there were some individual problems that have risen. For example, some groups (parents of large families, disable persons) mentioned that they need some place where they can meet and organize some events. In culture house "Rigava" interest groups can book place but they find it too expensive. Also understandable is fact that every group talks more about issues that are more relevant to their identity, for, example, disabled people about infrastructure and mobility, retired persons about more events for old people and organizing interest groups, pupils about free time spending etc. But the most important that thanks to the different homogenous groups that represents all society, all other society participants can be acquainted with problems of other social/interest groups in Salaspils and as a result they can talk about all problems that is common to all population in Salaspils, to evaluate the priorities and prepare proposals for decision making.

The obtained results were used in Development programme of Salaspils Municipality, in Action Plan to combat poverty, in working plans and other documents. Also in plan after around 5 years is to repeat the *SPIRAL* methodology to include new society members and to look if some changes are needed.

3. The main challenges and advantages of SPIRAL methodology

At first in analyzing process of the SPIRAL methodology the main advantages would be revealed.

1. The main advantage of the SPIRAL methodology by itself promotes Social cohesion which is main goal of Social Cohesion strategy of Council of Europe. In the research process is participating large amount of local actors who came together to improve the level of well-being.
2. The methodology by itself intends to include wide range of participants, for example, in Salaspils Municipality were involved 350 participants (population – 23 000).
3. It is developed integrated software "ESPOIR" which allows to systemize all qualitative data and demonstrate them, using charts and diagrams.
4. As qualitative data could be systemized, it is possible to repeat the research to see the dynamic development of certain indicators. But this is possible only if the research sample is representative and the methodology is not changed.
5. As co-responsibility approach and the SPIRAL methodology is quite new, Council of Europe ensures the trainings, tool-kit and the web page for using this methodology, creating of network of trainers across Europe who provides help to everyone who would like to introduce this approach in their community.
6. The methodology is open for developing – it is possible to improve it (including soft-were "ESPOIR"), add some certain criteria of well-being, etc.
7. During the application in Salaspils since 2010 several improvements have been introduced in SPIRAL methodology and Salaspils Coordination Group has participated actively in these improvements. Namely the definition of pilot actions by the homogeneous groups themselves in coming from Salaspils experience. The first and third cycles have been introduced during these last two years, that's the reason for which the process begun in Salaspils directly to homogeneous groups (second cycle), while the first cycle (identifying poverty situation and launching an action plan for poverty reduction) has been realized later. Today cities which are initiating SPIRAL are invited to start with the first cycle which is important to prepare well the Coordination Group and the mobilization of homogeneous groups citizens. Also building indicators and measuring them are done in the third cycle as presented before.

The main challenges of SPIRAL methodology are included in table below.

Table 2

The main challenges of the SPIRAL methodology

No	Challenge	Risk	Level of Risk	Activities to reduce risk
1.	Representa-tiveness of sample	If the aim is defined to research level of well-being of all society, the research sample must represent all society not only some part of it (like social risk categories)	High	• To define certain target group/ -s if the aim is to research the level of well-being of certain groups (youth, elderly people, etc.) • To prepare a social-economical research of research territory which would be the basis for forming the sample
2.	The subjection of under-standing criteria	In process of processing the data in soft-ware "ESPOIR", analyst can not understand the context of each answer and input it in wrong indicator	Medium	• Ensure that the person who collected the date also input them in soft-ware • Before processing the data, all analyst come together to discuss some answers and agree on common approach • During the meeting with respondents the manager of the group should promote discussion about every answer to make sure that there is consensus between respondent and group manager
3.	Systematic faults in input data	During the processing the data, there is possibility that some of the answers wouldn't be input or input in wrong indicator because of the large amount of input data	Medium	• To ensure that another analyst is checking the input of data, afterwards both are discussing some doubtful parts
4.	Risks – political, administrative	The is a risk that because of the political or administrative government change there wouldn't support for using the co-responsibility approach and wouldn't use the outputs of the research	Medium	• To ensure the participation of different political forces in the research • To prepare and realize systematic programme of activities to promote the co-responsibility approach • To involve different stakeholders in implementation the methodology
5.	Size of sample	During the research it is important to define the size of sample to ensure that the results are representative	High	• Using different statistical methods to evaluate needed size of sample

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No	Challenge	Risk	Level of Risk	Activities to reduce risk
6.	The monitoring of realization	After identifying certain activities to ensure that the main aim of research – improving well-being – would be achieved, it is need to ensure sustainability of the results	High	• To ensure that gained results are integrated in different development documents which are approved by government • To create work place or using existing which responsibility would be to ensure sustainability of results
7.	The professionalism of researchers	It is not defined who must implement the methodology – professional researchers or staff of Municipality, or members of NGOs	Medium	• If it is possible ensure that personal who is responsible for the implementation of the methodology are experienced professionals • In the trainings of the methodology should be participating not only developers of the methods but also different experts (for example, of quantitative and qualitative methods)

Source: authors' summary based on research made in Salaspils Municipality in 2011

As we can see in table 1, there are a lot of challenges the implementers of the SPIRAL methodology should face with. The proposed activities are defined based on different activities which were realized or proposed during the research in Salaspils Municipality held in 2011.

Conclusions, proposals, recommendations

1. In a context of economic crisis, the solutions that are needed cannot only be based on economic resources but should also take into account the citizens themselves for innovative solutions based on local needs. Academic research as well as practical research in Salaspils municipality has proved that great importance for decision making on municipality level has discussions in homogenous groups on understanding issues important for all in municipality. Discussions in homogenous or focus groups help to lead for preparation of joint plans for municipality development and society involvement and it makes need to think also about other interest and social groups in the municipality.

2. Meetings with homogeneous groups showed that there are particular subjective needs for each group and these needs should be respected, groups discussed problems together so every social group could be informed about situation in other groups that helped to range problems by priorities. During the meetings of homogenous groups became known main guidelines for Development Program of Salaspils. In this way municipality ensures that the most part of citizen needs will be taken into account and Municipality will develop those sectors where people are really interested in, not those sectors which are usually developed in municipalities.

3. One of the case that is obvious, we cannot evaluate the well-being in society without asking people questions about their own opinions – not only objective components of well-being are determinant. The subjective well-being must be researched also in the level of municipalities.

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4. For the last decade there has been developed a new methodology – the SPIRAL – for evaluating the well-being using subjective approach. The SPIRAL methodology is initiated by Council of Europe and it is one of the instruments in realizing Social Cohesion plan.
5. As the SPIRAL methodology could be realized using bottom-up and top-down approach, also there are fast, intermediate and comprehensive cycles of using it, plus there are prepared different instruments (methodological guide, tool-kit, webpage, etc.), it could be considered, that the methodology is developed for wide purposes and there is wide range applications.
6. In Salaspils Municipality in the process of realizing the SPIRAL methodology was involved the expert team from University of Latvia who provided the approbation of new methodology and also proposed many possible improvements.
7. The SPIRAL methodology could be nominated as reliable research methodology for evaluating well-being in society with condition of all mentioned challenged would be considered and activities to reduce risks would be undertaken. The most important challenge is to ensure the representativeness of sample and sustainability of gained results.
8. For development of the SPIRAL methodology for researching well-being of society it is needed to supplement the methodology with different quantitative methods for evaluating the size of sample, errors of assessment, prevent the multicorelation between different factors, etc. – those aspects would be researched in further papers.

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BUSINESS ENVIRONMENT FACTORS CONTRIBUTING TO THE DECISION ON THE LOCATION OF A FIRM IN LATVIA

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Regional development imbalances limit the potential gain of a national economy in general and give a negative impact on an international reputation of the state.

Defining the key elements for a business environment contributing to such differences is an ambiguous issue. Mostly researchers tend to focus on the resulting factors (GDP, economic activity, number of enterprises, etc.), not on the initial ones. According to this report the decision on the location of a firm is treated as a prime factor attributing to the level of the development of the specific region in Latvia if all other factors are believed to be constant in a moment of time.

The main purpose of this report is to go even deeper – namely, to make a research on a list of sub-factors of the business environment contributing to the decision on the location of a firm in Latvia. Different levels of regional competitiveness within a country, its ability to maintain high rates of economic growth and attract investors-those are the results of the specific composition of the business environment.

After statistic data analyze (regression and correlation analyze) and research (study of the literature, expert interview method) on the general elements of the business environment in the world and in Latvia, as well as research on competitiveness elements, this paper reveals some crucial aspects for an average decision on the location of a firm; characterizes the overall set-up and offers a list of suggestions to solve the problem of imbalances.

The scope of the issue of the business environment and its separate factors is broad and multifaceted; this paper presents a brief insight by the authors and the corresponding research is aimed to be continued.

Key words: *regions, business environment, firm location*

JEL code: R12

Introduction

Over the last two years Latvia has gain a lot of international interest as a "success story" after the deep recession caused by the financial and economic crisis that shocked the whole world. Nevertheless, the story is not as unequivocal as it may seem at the first sight. According to observations by the authors in the international media many economic and political experts have fiercely argued against the, so called, success. The explanation for such a dispersed range of views is quite simple: the classical understanding of "growth and development" (based on pure numbers- factors (GDP, productivity, export rate,

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innovations)) starts to lose its adherents. The key element of the public debates now more often is the overall state of welfare (sub factors – economic inclusion, income distribution, motivation, inner stability).

The objectives of the paper is to explore different approaches and methodologies of measuring competitiveness of a country and to discuss the adjustments needed to project those approaches and methodologies to a regional level within a country (in case of Latvia). This paper identifies factors for further research, which is in a scope of another paper.

From the classical point of view, the situation in Latvia is promising. Structural reforms have increased competitiveness of Latvia and facilitated integration with the world's economy. Reforms to business laws and regulations have substantially improved the investment climate. Since the late 1990s governments have held a regular dialogue with the private sector and international organizations to identify and implement ways to streamline business registration, improve the tax system and increase the efficiency of international trade, among many other such reforms (Doing Business, 2012).

The authors emphasize (see Table 1) that despite the prevalence of different technological adjustments, incredible mobility of information and relatively small territorial distances in Latvia, there is a permanent tendency that comparatively rich regions get richer and the poor tend to lag behind. On the other hand the aforenamed tendency is typical for whole world. Albeit, globally the poor are expanding in numbers while in Latvia the poor, low-middle class and middle class – all together are migrating away.

Table 1

Example of regional disparities

Indicator	Best	Weakest	Difference in times	Compared to previous period
Population change,% 2007-2012	Riga region -0.7	Latgale -6.7	9.6	No information
Population density People/km^2 (2012)	Riga region 104.6	Vidzeme 15.0	7	Increasing
GDP per capita (2010)	Riga region 10201	Latgale 3228	3.2	Increasing
Unemployment rate (2012)	Riga region 6.7	Latgale 15.2	2.3	Increasing

Source: Central Statistical Bureau of Latvia; Development of Regions in Latvia 2011 by Ministry of Environmental Protection and Regional Development (State Regional Development Agency)

Over the last decades, firm location has been a focus- study in field of economic geography (e.g. Krugman, 1991; Fujita et al., 1999; Baldwin et al., 2003). The main focus of economic geography is whether firms agglomerate or disperse as a result of the movement of labour.

Business environment components contributing to the decision on the location of a firm usually are quite constant, but the composition of the respective business environment is the one that varies significantly over countries and even regions within one country. The ambition is to treat the decision on the location of a firm more scrupulously; as some people start up and practice business where they actually live, but other ones may examine resources existing within specific area first and then choose location with a special intent.

Another aspect of respective decision making is the business industry a firm is going to perform in. In service industry, traditionally, firms can provide their services only in the markets in which they are located (this statement is related to business where physical presence is needed for both- service suppliers and service buyers). In this case two factors have significant effect on decision regarding firm location in the service industry. The first factor is market size. Markets with large populations attract more firms than those with small populations; this is because there is more demand in the former. At the same time,

however, large markets also experience severe competition among firms. The second factor is the strategic interaction among firms as a result of location choice. Subsequently, when each firm chooses its location, it must take into consideration the location of rival firms. This implies that location choices made by firms generate strategic interactions among them (Kurata, 2011).

Today improvements in information, communication, and logistics technology allow firms to serve many markets from a distance, spread discrete activities around the globe, and coordinate them in a global system (Porter and Rivkin, 2009).

Business may face a necessity to make a decision on a firm location even several times per business life circle. Fair enough to mention that this paper gives more intention to an initial decision (ID) than on a secondary decision (SD). Naturally, there is no motivation to change business location (incentive for SD) if such an action does not promise a certain rise in profits or some cost reduction for the firm.

Research results and discussion

Business environment competitiveness among regions within a country can be measured by the ease of doing business. On a general level it shall be possible to face business environment competitiveness within several regions of the same country the same way as if a private investor would assume an international competitiveness.

Table 2

Business environment indicator overall adjustment

Indicators determining ease of doing business	Projection to a national level	Additional comments
Starting a business	Possible	Even though the Procedures (4 procedures) are equal, there might be variation in time among regions. Assessment: taking into account the average level of legal income, the value of the cost and minimum capital differs from region to region.
Dealing with construction permits	Not required	Assumption
Getting electricity	Not required	Assumption
Registering property	Not required	Assumption
Getting credit	Possible	Assessment of possible differences in financial service infrastructure and creditworthiness of the business in regions
Protecting investors	Not required	Assumption
Paying taxes	Not required	Assumption
Trading across borders	Possible	Assessment of possible influences by the neighbouring countries
Enforcing contracts	Possible	Assessment of possible business culture and counterparty competence level differences
Resolving insolvency	Not required	Assumption
Employing workers	Possible	Assessment of labour cost and competence level differences

Source: author's assessment based on factorial framework by doing Business 2013

Several rating agencies (Rating and Investment Information Inc, Standart&Poor's, Fitch Ratings, etc.), indexes, reports work for an international investment location choice. Though, none of those undoubtedly considerable as universally bundled. Besides, what work well for an identification of the competitiveness of the country may not work the same way on the regional level. Therefore, the paper shall be continued by an attempt to make a projection of a world widely used approach to sum up business environment factors on a national level.

For instance, Doing Business does not measure the full range of factors, policies and institutions that affect the quality of the business environment in an economy or its national competitiveness. It does not capture aspects of security, the prevalence of bribery and corruption, market size, macroeconomic, the state of the financial system or the level of training and skills of the labour force, etc.

Nevertheless, Doing Business covers 11 areas of a company's life cycle through 11 specific sets of indicators (Doing Business, 2012); in Table 2 overall regional adjustment results are provided.

According to Table 2, 5 out of 11 indicators can be projected to a national level in order to discuss business environment factors contributing to decision on the location of a firm in Latvia. That is to say, the set of these identified indicators (if communicated in a systemically coordinated way) can form a brand new broader view of what is "SMART" business environment (see Figure 1).

Smart business regulations by Doing Business		Smart regional business environment guidelines
Streamlined – regulations that accomplish the desired outcome in the most efficient way	**S**	**Stimulating** (incentives to start a business and assistance)
Meaningful – regulations that have a easurable positive impact in facilitating interactions in the marketplace	**M**	**Mobile** (adequate labour cost and necessary competence)
Adaptable – regulations that adapt to changes in the environment	**A**	**Accessible** (information, finance, developed financial sector and its infrastructure)
Relevant – regulations that are proportionate to the problem they are designed to solve	**R**	**Rational** (in business planning and cooperation)
Transparent – accessible to anyone who needs to use them	**T**	**Transboundary** (size of the market and possibility to expand it)

Source: author's assessment based on SMART model by doing Business 2013

Fig. 1. **Smart regional business environment guidelines**

Analysing business environment factors and its possible total or partial projection to a national level is just one side of the "iceberg". Composition of business environment factors can be the same in two regions A and B, but somehow it doesn't guarantee the same level of development. Business environment shall not be analysed as a static space (or at least if not assumed so in purpose of research). Another crucial aspects is business environment factor dynamics (factor competitiveness) in terms of structure, development of individual parameters or even groups of parameters, etc., furthermore, all that in the context of political decisions. Measuring competitiveness puts another issue on the table, that is to say, highlights the need for a methodology.

For example, since 2005, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness Index (GCI), a comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness. Competitiveness is a set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be earned by an economy. The productivity level also determines the rates of

return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is one that is likely to sustain growth. The concept of competitiveness thus involves static and dynamic components. Although the productivity of a country determines its ability to sustain a high level of income, it is also one of the central determinants of its returns to investment, which is one of the key factors explaining an economy's growth potential (WEF, 2013). There are 12 pillars of competitiveness and 3 stages of economic development (global competitiveness index framework) as shown in Table 3.

Table 3

The global competitiveness index framework

Basic requirements subindex	Efficiency enhancers subindex	Innovation and sophistication factors subindex
Pillar 1. Institutions Pillar 2. Infrastructure Pillar 3. Macroeconomic environment Pillar 4. Health and primary education	Pillar 5. Higher education and training Pillar 6. Goods market efficiency Pillar7. Labor market efficiency Pillar 8. Financial market development Pillar 9. Technological readiness Pillar 10. Market size	Pillar 11. Business sophistication Pillar 12. Innovation
Key for **factor-driven** economies	Key for **efficiency-driven** economies	Key for **innovation-driven** economies

Source: WEF "Global competitiveness report 2012-2013"

To build up regional competitiveness it is important to stress pillars of the second column, mostly Pillar 7, Pillar 8. Efficiency pillars will contribute in both directions: social infrastructure and intelligent business models and innovation.

Discovered business environment factors shall be transformed into sub factors and statistically tested in order to set a model of decision on a firm location.

For example, in assessing financial market development (Pillar 8) as a sub factor, presence of a bank unit can be treated as an indicator for a regional competitiveness. Financial services are not available or available in a limited way in less developed areas of Latvia. People are not motivated or even afraid to use the latest products, computer software, electronic billing, and advanced payment. By the way people in less developed areas sometimes even cannot afford remote financial services (cost of equipment; internet coverage). In rural areas of Latvia, where different remote financial services are less available or scarcely used, it is common to use postal services or operations in cash.

Even though it appeared to be possible to make a supposed projection of an international approach to the national level, significant uncertainties still are persistent. Setting up a firm location model in respect of the regional development level, shall introduce an emotional factor of choice as well. That is to say, that the decision on a firm location will change in accordance with the emotional factor of the owner. The emotional factor shall be defined as a complex index (as a function from owner's income level, property, age, family status, risk aversion index, etc.). The emotional factor is supposed to influence the owner's total location decision utility negatively, in case previously mentioned index elements present bigger value than the gain from higher comfort from a firm location.

A group of firm location choices influenced by the emotional factors makes the business environment inclusive. That is to say: a choice of one person proves that the quality of the territory is appropriate for setting up business. Similarly as the mass effect works in stock markets, so called price (emotion value) of a region can be pushed or pulled by the originator. Even though such a rise in value can be "bubbled" at the first time, after all, it will turn to a real rise in regional competitiveness. Fair enough to mention that economically weaker regions on average tend to have smaller firms and bigger risk aversion. For instance,

in Latgale, which is considered to be the weakest among regions, share of small business is close to 90%. According to the local research by Silineviča the main obstacles influencing development badly are: increase in taxes, lack of current assets, lack of management skills, lack of project management skills, uncertainty in state policy (Silineviča, 2011).

Every location decision reflects into jobs, investments, tax revenues, and regional development. Therefore it is hard to say which is first: well developed and competitive business environment in the region motivates for a higher rate of endogenous activity or higher rate of endogenous activity makes business environment competitiveness. In this respect further investigation is needed.

When seeking to bring capital, jobs, and expertise into a region, policy makers resort to large tax breaks and cash incentives. In using subsidies as the primary strategy to attract a company's activities, policy makers "train" business leaders to think of locations as interchangeable, and they draw to their regions the companies that are least likely to put down deep roots. Local leaders should aim to attract businesses not by outbidding rival locations on tax subsidies but by offering a compelling value proposition, such as access to talent, technological knowledge, supporting institutions, or a local market that fits the firm's strategy and cannot be matched elsewhere. Incentives should focus on investments in local infrastructure, in workforce training, and in other assets that will be valuable to other firms and citizens even if particular companies relocate system (Porter and Rivkin, 2009). So far regional disbalance is obvious; see Table 4.

Table 4

Gross domestic product by statistical region 1999-2008, share (%)

Region	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Riga	55.3	55.4	54.5	57.7	56.1	58.1	57.3	55.3	54.4	54.1
Pieriga	10.1	10.2	10.3	10.1	10.1	9.7	11.1	13.1	12.3	12.7
Vidzeme	6.3	6.1	6.0	6.2	6.4	6.4	6.2	6.6	6.7	6.6
Kurzeme	12.5	13.1	12.6	11.2	11.9	11.9	10.7	10.3	10.3	10.4
Zemgale	7.5	7.3	7.1	6.9	7.2	6.5	7.0	7.2	8.0	7.6
Latgale	8.2	7.9	9.4	7.8	8.3	7.4	7.6	7.4	8.2	8.4

Source: Central Statistical Bureau of Latvia

As seen from the Table 4, since 1999 more than 65% to almost 70% of GDP has been produced in Riga and Pieriga regions, proving those to be the most active in economical sense. Densely populated central regions at the same time appear to be the biggest internal markets with greater capacity not only to investments and other positive impacts, but also to some negative aspects and risks. Risk aversion in economically active regions is much higher on the average, therefore more incentives to start business as well.

Companies can achieve practical use and benefits employing the concept of clusters, stimulating competitiveness, export and innovation capacity, that is to say, a cluster is a platform for interaction (Liela and Zeibote, 2010).

For a given output, amore risk-averse firm operating with an uncertain output transport rate will locate closer to the output market (Tan 2001).

Taking into account the territory and population, Latvia should not be going through radical structural differences of the economy; however, in spite of the low capacity of the national market, there is a significant qualitative disproportion in regional development. Theoretically, less developed regions are more attractive in attracting mobile investments, because of the higher profit expectations. In Latvia, later idea does not work because of the low domestic demand, especially after economic crisis and thus overall decrease in income as shown in Figure 2.
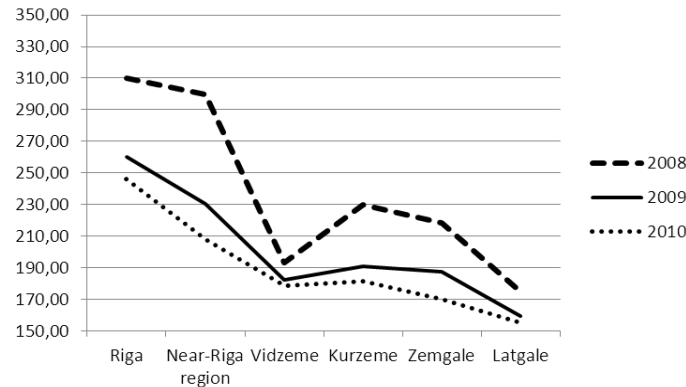
Source: Author's construction based on data by Central Statistical Bureau of Latvia.

Fig. 2. **Average monthly disposable income for one household member during 2008-2010 (Ls)**

The global crisis brought Latvia's economic growth to a halt. The growth, mostly driven by increased domestic demand and strengthen by foreign capital inflows, turned into a deep recession starting in 2008. The aforementioned drop in the average disposable income across the regions is directly related to the demand level within specific region. Emigration influences the demand level negatively as well. Clear enough, every customer is a value for business itself and business has to take the most of the location costs. Therefore, firm location is more important to producers than to customers. Firms tend to concentrate in larger regions, even though, an increase in the firms' concentration is unwanted for business, but it is welcomed by the consumers and the overall national economy.

It seems that regions that are in a better economical position will have both: because of the higher local income (savings to transform into investment) better capitalized firms (bigger firms, more sophisticated business) and higher endogenous activity to start business.
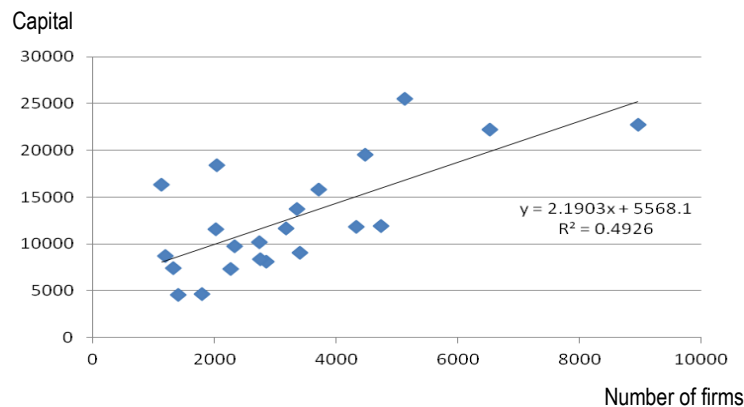

Fig. 3. **Average registered capital and number of firms**

As mentioned in the introduction of this paper, after an identification of the sub- factors, further statistical testing will take place (in a scope of further research). Nevertheless, a brief example of rational of statistical testing is presented below. In order to have an overall prove of the statement, statistical data

set was tested in a linear regression model. Data from 23 territorial units was used. An average registered firm capital considered as independent variable. The rationale behind this assumption is that the capital represents a part of income (surplus) that was transformed into business incentive. The number of registered firms is considered as a dependent variable. That is to explain, the endogenous activity (number of firms) grows, if income (surplus) is higher. The diagram is shown in Figure 3.

From Figure 3 it is concluded that there is a moderate positive correlation level between capital and number of firms. Unfortunately, from the overall analyse it is not possible to conclude the origin of the capital, thus it is still uncertain, who was the real decision maker (is there any influence from emotional factor, etc.).

More detailed individual business environment factor analyze in a systemic context is planned to be taken in nearest future.

To sum up the research and discussion part of this paper, any investor (local or foreign) assess the strengths, weaknesses, risks and gains of the territory before choosing it for setting up business (SWOT).

Conclusions, proposals, recommendations

In spite of the low capacity of the national market in Latvia, there is a significant qualitative disproportion in regional development.

Densely populated central regions at the same time appear to be the biggest internal markets with greater capacity not only to investments and other positive impacts, but also to some negative aspects and risks.

Regions that are in a better economical position will have both: because of the higher local income (savings to transform into investment) better capitalized firms (bigger firms, more sophisticated business) and higher endogenous activity to start business.

It appeared to be possible to make a supposed projection of an international approach to the national level. The decision on a firm location and competitiveness of this region works vice versa.

Setting up a decision model of a firm location in respect of the regional development level, shall introduce an emotional factor of choice as well index (as a function from owner's income level, property, age, family status, risk aversion index, etc.). The emotional factor is supposed to influence the owner's total location decision utility negatively, in case previously mentioned index elements present bigger value than the gain from higher comfort from a firm location.

Business may face a necessity to make a decision on a firm location even several times per business life circle. Setting up a decision model of a firm location, it is important to identify: is this a first or second location decision; the origin of capital; the business industry a firm is going to perform, etc.

The corresponding research is aimed to be continued.

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MACROECONOMIC POLICY REGIME IN LATVIA

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Abstract. This paper has a goal to apply the concept of macroeconomic policy regimes (MPRs) on the case of Latvia. The MPR of Latvia is assessed to find out if it has had a functional development or not. Functional MPRs are considered those that deliver sustainable economic growth, employment and a more equitable income distribution. A macroeconomic policy regime is a set of policies (foreign exchange policy, industrial policy, monetary policy, fiscal policy and wage policy), the financial system and institutions in which the economies are embedded. The observations and findings made so far point towards the direction of a dysfunctional development of the MPR in Latvia, causing great instability in the economic development, capital outflow and instability in the financial system. This paper provides an alternative model in which the foreign economic policy and industrial policy, with the help of the financial system which provides sufficient finance for the manufacturing sector, play the paramount role in reducing the current account imbalances; wage policy provides anchor for the price development; monetary policy provides stability in the financial system and fiscal policy cares about real stabilization, higher employment and more equal income distribution.

Key words: *macroeconomic regime, open economy policies and institutions, current account, industrial policy, Latvia*

JEL code: E02, E58, E61, E65, F41, F43

1. Introduction

This paper will analyse the functionality of the economic development in Latvia as a representative for emerging countries, candidates for a currency union, using a normative model based on the Post Keynesian view. Latvia is an interesting case for the reason that it is a small, open and net debtor country, candidate for entry in the European Monetary Union. The functionality will be assessed using the concept of a macroeconomic policy regime (MPR). Functional MPRs are considered those that bring sustainable economic growth in the long run, employment and more equitable income distribution. A macroeconomic policy regime is a set of policies (foreign exchange policy, industrial policy, monetary policy, fiscal policy and wage policy), the financial system and institutions in which the economies are embedded.

Due to a lack of continuous data and due to the fact that the concept of MPR is of a qualitative nature, the research methodology will mainly consist of statistical data analysis and descriptive analysis of the relevant macroeconomic policies and institutions which are part of the MPR applied to Latvia.

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In section two the contours of a MPR will be set. Moreover, all the elements of the latter will be addressed in detail. What follows is a sketch of a functional macroeconomic policy regime. In the third section the focus will be put on the Latvian economy and the development of its MPR, as well as assessment of the functionality of all the elements of the Latvian MPR on the basis of the functional macroeconomic regime drafted in the second section. In the last chapter conclusions will be presented.

2. Model of a functional macroeconomic policy regime

An important novelty of this paper is the application of the concept of MPR to Latvia. An MPR can be defined as a set of policies (monetary policy, fiscal policy, wage policy, foreign economic policy and industrial policy), the financial system and the institutional frameworks in which the economies are embedded. Institutions pave the way the policy instruments can be applied, and only when certain institutions are in place certain type of policies are possible. Six elements can be differentiated: monetary policy, fiscal policy, wage development/policy, foreign economic policy, industrial policy and the financial system.

Being that Latvia is a small, open economy and a net debtor country with particularly high debts in a foreign currency, the focus of the analysis will be put on foreign economic policy and industrial policy which play a very important role in improving competitiveness and in correcting current account imbalances. Foreign economic policy in this model has an objective of reducing the current account deficits and achieving a balance in the current account. Through reducing the income elasticity of imports and increasing exports, the country can increase its economic growth and accumulate foreign exchange reserves which are especially important defending the exchange rate pegs of the countries which are candidates for joining a currency (Thirlwall A.P., 1979). Thus, the current account balance-GDP ratio and the foreign exchange reserves-external debt ratio will be some of the indicators to assess the functionality of this element of MPR. Furthermore, foreign economic policy has an important task to manage the capital flows, as well as to prevent currency mismatch in the balance sheets of all economic participants. Hence, the indicator external debt-GDP ratio will supplement the assessment of the foreign economic policy. Against the background of rising economic growth and sectoral shift of production and employment from the manufacturing towards the service sector, especially in the emerging countries where the industrial capacity is not yet exhausted, industrial policy is intended to support particular industries and firms in the manufacturing sector that could increase the economic welfare of the whole country. Productivity in the manufacturing sector can be improved by government's spending on R&D, especially in the infant industries, in know-how and technology. The industrial policy will thus be given the tasks of supporting foreign economic policy, increasing productivity in the manufacturing sector, improving its competitiveness, terms of trade and net exports. Furthermore, the public investment in creating infrastructure for private investment is of crucial importance for the success of industrial policy. Public investment in R&D and public investment in relation to GDP will be used to prove the functionality of industrial policy. The financial system should on the one hand provide sufficient and affordable finance to the manufacturing sector particularly in support of firms that are engaged in R&D, technology advancements and/or to exporting firms. On the other hand, bank credits with speculative purposes (e.g. real estate credits) should be restricted. The financial system should also prevent creation of dollarization/euroization, which produces currency mismatches. Thus, foreign currency loans-total loans ratio and foreign currency deposits-total deposits ratios will be used as indicators to show the level of dollarization/euroization in the country. The ratio loans to the manufacturing sector relative to the total loans to the companies' sector will show the dynamics of the manufacturing sector and the potential for conducting industrial policy.

A certain rigidity of nominal wages is required for the reason that too high nominal wage increases (over medium-term productivity growth) could at least in a closed economy lead to inflation, while too low wage increases to deflation (Keynes, 1930). In an open economy, nominal wages have an impact on functional income distribution and furthermore, have an impact on the real exchange rate. Thus, a recommendation is to adopt a wage policy, whereby nominal wage increases will cover for the productivity trend in the medium run plus the inflation target (Hein E., Stockhammer E., 2011:130). This wage norm will be one of the indicators for checking the functionality of wage policy. The second one is the wage share, which is an indicator for the development in the functional income distribution, while the third one – growth of unit labour costs – shows the competitiveness of the domestic firms. Monetary policy is given the task of preventing panics in the banking system and provision of stability and low-cost financing in the financial system.[2] The real long and short-term interest rates relative to GDP and productivity growth will show us if the monetary policy was expansionary or restrictive and if it has been conducive for real investment or not. Fiscal policy should be responsible for real stabilisation in the economy, reducing income inequality and increasing employment (through direct job creation, training, etc).[3]Thus looking at the structural balance-GDP ratio relative to the output gap will give us an idea about the cyclicality of fiscal policy, while the Gini coefficient before and after tax will show us the effect of redistribution policies of the government.

Table 1

Solution for a functional macroeconomic policy regime

	Objectives	**Instruments**	**Institution in charge**	**Strategy**
Foreign economic policy	• Reduction of the current account deficit and achieving balanced current account; • Capital flow management; • Preventing currency mismatch.	• Foreign exchange intervention; • Capital controls; • Regulations to restrict the foreign currency exposure.	Central bank Government	• Supporting exports and reduction of income elasticity of imports; • Providing exchange rate anchor; • Stimulating FDI in manufacturing.
Industrial policy	• Reviving manufacturing; • Increasing competitiveness; • Increasing innovation capacity; • Improving terms of trade and the current account.	• Subsidies; • Policy loans; • Conditional provision of foreign currencies; • Regulations of entry/exit and capacity expansion in specific markets.	Government development banks	• Targeting specific sectors/ companies; • Provision of public infrastructure for private investment.
Financial	• Provision of low-	• Regulations of	Central bank	• Involvement of

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[2] The latter can be achieved through setting regulations that separate banks (and their activities) from non-banks.
[3] More detailed description of the different elements of a MPR and the theoretical basis for the latter can be found in Kazandziska M., 2013.

	Objectives	**Instruments**	**Institution in charge**	**Strategy**
system	cost finance for the private sector (manufacturing); • Securing stability in the financial system.	financial instruments. • Regulation and supervision of the financial actors.	Government	the central bank in the credit allocation of the banks.
Wage policy	• Preventing inflation/ deflation; • Stabilizing real exchange rates; • Maintaining a constant functional income distribution; • Securing a minimum income for the poorest.	• Wage negotiations at macroeconomic level; • Extension of collective agreements; • Minimum wages.	Social partners Government	• Wage norm; • Government support of higher trade union involvement in wage bargaining; • Wage coordination.
Monetary policy	• Provision of stability in the financial system; • Prevention of panics in the financial system; • Provision of low-cost financing.	• Interest rate; • Regulation measures for providing stability and finance in the financial system.	Central bank	• Maintaining low real interest rate.
Fiscal policy	• Stabilizing aggregate demand; • Reducing income inequality; • Supporting full employment.	• Public investment; • Public spending; • Taxation (progressive taxation, etc.); • Comprehensive welfare system.	Government	• Functional finance; • Anticyclical fiscal policy; • Automatic stabilizers.

3. Macroeconomic policy regime in the Baltic region – the case study of Latvia

In what follows the MPR of Latvia will be examined. The focus will be put on two periods: pre-crisis, or boom phase (1995-2007) and crisis, or bust phase (2008-2011). Firstly, the economic development and the contributions of elements of aggregate demand to growth will be analysed. Afterwards, I will provide examination and assessment of all the elements of MPR applied to Latvia separately.

3.1. Economic development

During the period 1995-2007 the Latvian economy experienced uninterrupted growth of nearly 6% (Ameco, 2012). The GDP growth during the former has been mainly affected by consumption (see Figure 1). The second place has been reserved for private investment. However, the relatively high growth was not supported by employment creation. In fact the employment rate was only 0.35% on average for the respective period. In 2008 the Latvian economy slid into recession which lasted until 2011. It was among the European countries, which were the hardest hit by the financial and economic crisis. Both the private consumption and investment fell sharply in 2008. At first the government responded with increased spending; however, already in 2009 under the pressure of the EU Commission, the former was forced to apply tight fiscal policy with very low level of government spending, which coupled with very large declines in private consumption and investment was a very important cause for reduction in the GDP growth of around 18% in 2009 (Figure 1). The positive contributions of net exports due to reduced imports were registered only in 2008 and 2009.
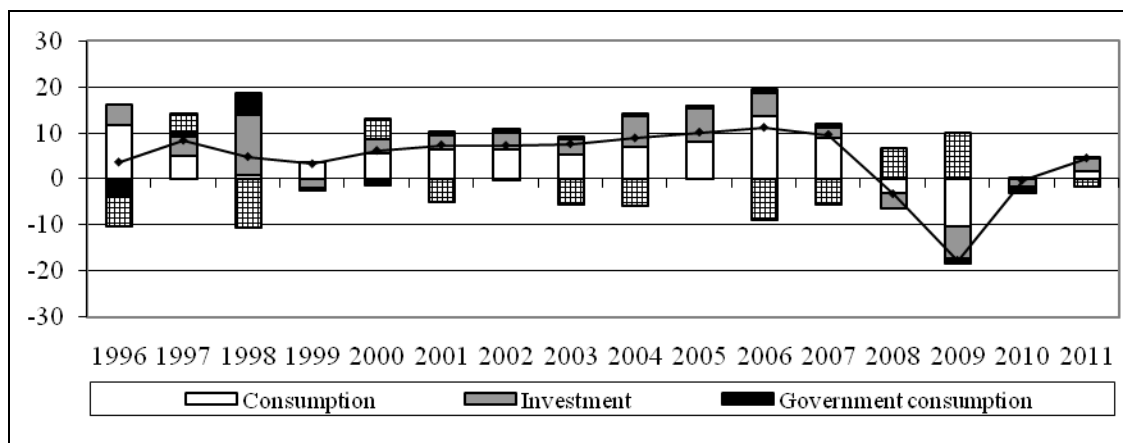
Source: author's calculation based on Ameco, 2012.

Fig. 1. **Contributions of components of aggregate demand to GDP growth**

3.2. Foreign economic policy

Latvia introduced a new currency already in 1992. In 1994 the currency was pegged to special drawing rights (SDR). The foreign economic policy has been strictly connected to maintaining the exchange rate peg within the limit of ±1% after Latvia entered the ERMII in 2005. The Bank of Latvia in a few occasions intervened in the foreign exchange market to defend the exchange rate. The decline in reserves can be spotted for the whole period (Table 2); the decline was especially pronounced in 2008 when the government wanted to prevent a devaluation of the Lat. The Latvian government was forced to ask for financial aid from IMF and the ECB to keep the exchange rate stable and to pay back the foreign debt (Onaran Ö., 2011:225).[4] The entry in the EU, as well as the process of deregulation of goods and financial markets caused high capital inflow, mainly in the form of interbank and intercompany credits.

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[4] The response of the EU in 2009 to provide financial assistance to Latvia was rather belated because the country has already in 2008 fallen in recession.

Credits create an automatic liability for the debtor; thus the level of external debt has significantly risen (Table 2). The second important source of finance is FDI; though, it remained low in comparison to other CEECs.

The capital flows have also created a deterioration of the current account balances by causing a much larger increase in imports over exports and by increasing the deficit in the income account[5] (Mencinger J., 2007). The current account deficit – GDP increased by 10% on average between 1995 and 2007 and was only reduced amidst the financial crisis due to reduction in imports.

Table 2

Foreign economic policy indicators, selected years

	1995	2000	2007	2008	2010	1995-07	2008-10
Current account balance/GDP (%)	-0.3	-4.9	-22.3	-13.1	5.5	-10.0	-3.8
External debt/GDP (%)	8.8	62.0	135.7	124.3	164.7	73.8	144.5
Reserves/external debt (%)	109.3	17.5	14.2	12.0	18.3	39.2	15.2

Source: Eurostat, 2012;Ameco, 2012

All in all, we can argue that the foreign economic policy has had a dysfunctional development, leading to overvalued currency, high euroization and increased vulnerability of the financial system.

3.3.Industrial policy

We need to look at the structure of the economy in order to find out more about its effect on the current account. In Latvia we can observe that manufacturing has had the slowest increase the value-added. At the same time, we can observe an increase in the value added, as well as capital flows towards the real estate, wholesale, retail trade, transport, accommodation sectors. This led to a creation of an asset price bubble.[6]Latvia is thus another example of a boom-bust cycle, which seems unsustainable in the long run (Onaran Ö., 2007).

One indicator that shows how active the government's involvement is in creating industrial policy is the government's spending on research and development. Latvia's government spent only 0.3% of GDP on R&D, which is lower than the EU-average (Eurostat, 2012).[7] A positive development can be seen when looking at the public investment-GDP ratio. In the bust period we see an increase in the latter compared to the boom phase (Table 3).

Table 3

Industrial policy indicators, selected years

	1995	2000	2007	2008	2010	1995-07	2008-10
Government spending on R&D/GDP (%)	...	...	0.3	0.3	0.2	0.3	0.2
Public investment /GDP (%)	1.91	1.34	5.69	4.86	3.72	2.38	4.29

Source: Eurostat 2012, author's calculation.

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[5] Through profit repatriation and increase in the interest liabilities connected to the credit flows.

[6] The stock prices increased by nearly 120 percentage points between the third quarter of 2000 and 2007 (author's calculation based on Eurostat 2012).

[7] In 2010 the Latvian government spent 0.16% on R&D in percent of GDP, while the EU members on average spent 0.76% (Eurostat 2012).

All in all, we can say that the industrial policy has been dysfunctional, because of having no clear objectives and strategy and because of the low spending of the government on R&D. The negative effects of the switch towards a growth based on the service, rather than the manufacturing sector can be firstly seen in the increasing current account deficits, as many branches in the service sector are non-tradable (primary and secondary education, child and elderly care, etc.) (Chang H.J., 1994:57-58).

3.4. Financial system

The deregulation of the financial market started already in the early 1990s with the elimination of the interest rate controls, credit ceilings and the most restrictions on international capital flows. The former paved the way for entry of foreign capital in the banking sector.[8]

In Latvia there has been an increase in the development of the financial system which can be confirmed by the availability of credits. As it can be seen from Table 4 high credit expansion can be particularly spotted beginning from 2004 onwards. The loans granted to the private sector have had a particularly impressive growth. Hence, the development of the financial balances of the private sector turned negative already in the mid 1990s (Figure 2). The deficits of the private sector had to be financed by capital inflows and hence, the creation of current account deficits. The spending of the government was only slightly higher than tax revenues,[9] approaching zero right before the start of the financial crisis (Figure 2).
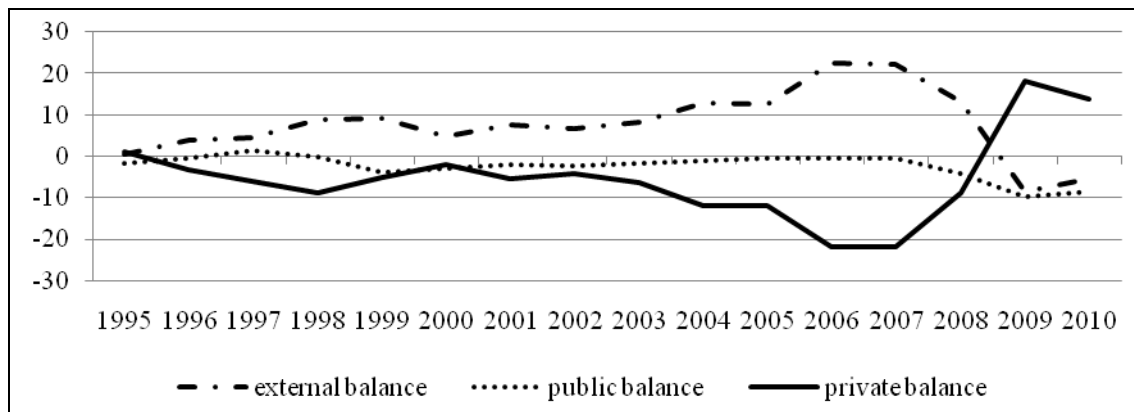
Source: author's calculation based on Eurostat, 2012.

Fig. 2. **Financial balances of the different sectors (% of GDP)**

As a result of the burst of the bubble in 2008, the balances of the private sector turned positive. Although most of the loans were granted to the companies' sector, the share of loans to households relative to the total loans has dramatically increased (especially mortgage loans).[10]

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[8] The share of foreign-owned banks in total banks increased from 9% in 1995 to 43% in 2006, and 62% in 2009 (Claessens S., van Horen N., 2012:30).

[9] In 2007 the budget balance to GDP was minus 0.35% (Ameco, 2012).

[10] In 2007 the mortgage loans to the households amounted to 34% of GDP (EBRD, 2009:186). Most of these loans were in a foreign currency, mainly denominated in euros.

Table 4

Financial indicators, selected years

	2000	2007	2008	2010	1995-07	2008-10
Total credit provided by the banking sector/GDP (%)	23.3	89.5	89.4	89.6	49.5	89.5
Loans to manufacturing sector/loans to the private sector (%)	...	13.3	14.0	5.9	13.8	10.0
Loans in foreign currency/total loans (%)	...	77.4	87.7	92.2	71.3	90.0
Deposits in foreign currency/total deposits (%)	...	42.6	47.7	53.3	40.5	50.5

Source: author's calculation based on Macroeconomic Development Reports of the Bank of Latvia of various years.

The overvalued exchange rate led to an increase in the demand for foreign currency; hence the increase in the foreign currency loans and deposits and the level of euroization (Table 4). The high foreign currency liabilities of the government and the households point towards a danger of a currency mismatch in their balance sheet as their revenues are mostly in a domestic currency. The large share of debt in a foreign currency exposes the debtors to the danger of devaluation.

The provision of company credit to the manufacturing sector has had a particularly strong decline (Table 4). Thus, although the financial system has marked a positive development in terms of higher credit allocation, it has overall had a dysfunctional development, as only a very small portion of the loans were actually used to support the manufacturing sector and potentially the correction of current account deficits.

3.5. Wage development/policy

Latvia's wage bargaining system, similarly to the Lithuanian and Estonian, shows characteristics of predominantly high decentralization, i.e. the wage negotiations take place mainly at the local, company level (Eurofond, 2011). The trade union density, as well as employer organization density has been low.[11] Furthermore, although there is a possibility for social partners to require an extension of the collective agreements for the whole sector, the collective bargaining coverage has remained very low (Eurofond, 2009).[12]

The area in which trade unions and employers' organizations have an important contribution is setting of the minimum wage within the framework of the Minimum Wage Law. For this purpose, the National Tripartite Commission was formed to support an open discussion about the minimum wage (Eurofond, 2009).

In Latvia on average for the period 1995-2007 we can see a higher growth of unit labour costs than in the Euro area, and thus, a loss of competitiveness on the side of Latvia (Table 5). Yet, between 2000 and 2002 the unit labour costs even marked a decline, as a result of wage increases below productivity.

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[11] The employer organization density (i.e. the share of employees employed in firms which are members of an employer association) was 30% in 2009 (Eurofond, 2009).

[12] Extension of collective agreements is possible if employers that sign the collective agreement employ at least 50% of the workers in the corresponding sector or produce 60% of the output in the latter (CesIfo, 2012).

Table 5

Competitiveness and wage policy indicators, selected years

	1995	2000	2007	2008	2010	1995-07	2008-10
Unit labour costs growth (Latvia) (%)	-1.9	-2.2	29.3	19.9	-9.5	7.9	1.3
Unit labour costs growth (Euro area) (%)	...	1.9	1.9	4.1	-0.4	1.9	2.3
Nominal wage growth (%)	8.8	7.4	35.1	15.7	-6.0	14.3	0.4
Productivity growth (%)	10.6	9.6	5.8	-4.2	3.5	6.4	-0.9
Actual inflation rate (%)	25.0	2.6	10.1	15.2	1.2	7.4	5.4
Inflation target (%)[1]	25.0	2.0	2.0	2.0	2.0	7.8	2.0
Medium term productivity growth (%)	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Nominal wage growth (%)	8.8	7.4	35.1	15.7	-6.0	19.1	4.9
Wage norm (%)[2]	29.7	6.7	6.7	6.7	6.7	12.5	6.7
Deviation of the wage norm (%)[3]	-20.9	0.7	28.4	9.0	-12.7	6.6	-1.8
Adjusted wage share/GDP (%)[4]	51.7	49.1	53.0	56.6	48.7	50.0	52.7

* Note: [1]The ECB's inflation target of 2% is taken as a target after 2000, when this level was reached. Before 2000, the actual inflation rate is taken to represent the inflation target. [2]Wage norm is calculated as the sum between productivity growth and the inflation target. [3]Deviation of the wage norm is the difference between the actual wage growth and the wage norm. [4]Adjusted wage share is calculated by dividing compensation per employee by GDP at factor cost per person employed.

In 2008 the government was forced to implement wage cuts in the public sector as a part of the austerity measures imposed by the EU Commission and the governments of the largest EU economies in order to reduce the budget deficit (Onaran Ö., 2011). What was achieved was not only wage cut in the public administration, but decline of wages in the private sector as well.[13]

As explained earlier, the wage norm for stability-oriented wage policy (that wage increases move in line with the productivity development in the medium run and the inflation target set by the central bank) will be the criterion for checking the functionality of the wage development/policy. Wage increases have been above the proposed wage norm on average for the period 1995-2007 (specifically after 2005), but below the norm during the crisis (Table 5). For the wage share, we cannot make a straightforward conclusion, as the data are available only for a relatively short time period when the cyclical variations are also present.

For the reason that the nominal wage increases developed over the wage norm (and thus increased the inflationary pressure) in the boom phase and increased below the wage norm (and created a deflationary pressure) during the crisis period, we can speak of a dysfunctional wage development.

3.6. Monetary policy

The intermediate target towards achieving the main objective of monetary policy (which is maintaining price level stability) is the exchange rate peg to the Euro. Hence, at the beginning of our analysis of this element, we can argue that the monetary policy of the central bank has been very much restricted by the attempts to keep the exchange rate within the ±1% margins.

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[13] The average wage declined by almost 13% in 2009 and 6% in 2010 (author's calculation based on Ameco, 2012).

Table 6

Monetary policy indicators, selected years

	2000	2007	2008	2010	1995-07	2008-10
Nominal refinancing interest rate	3.5	6.0	6.0	3.5	4.0	4.2
Convergence to the Euro area[1]	-1.2	2.0	3.5	2.5	0.9	2.9
RRIR minus GDP growth (%)[2]	-5.3	-13.7	-6.0	5.1	-10.7	-0.5
RLIR minus GDP growth (%)[3]	...	-13.8	-5.1	11.2	-14.3	3.0
RLIR minus productivity growth (%)	...	-10.0	-4.2	7.3	-11.5	1.6

* Note: [1]Convergence to the Euro area is calculated as the difference between the refinancing interest rate of the Bank of Latvia and the one of the ECB. [2] RRIR stands for real short term refinancing interest rate. [3] RLIR stands for real long-term interest rate.

Source: author's calculation based on Ameco, 2012.

In Table 6 we can see the development related to the monetary policy in Latvia. The nominal interest rate development until 2002 was closely connected to the interest rates of the ECB. In the years that followed the central bank was put in a dilemma to fight the inflationary development or prevent a further increase in capital flows. It increased the refinancing interest rate to fight the inflationary development, which on the other handled to ever-increasing capital inflows. On average, the real interest rate was negative during the boom period which was conducive for investment and credit-driven consumption. The negative real interest rates contributed even more to the creation of the bubble. That monetary policy during this period was expansionary is additionally proven by the fact that the difference between real short term interest rates and real GDP growth and real long-term interest rates and productivity growth was negative (Table 6). In 2009 and 2010 as a result of the decreasing inflation rate in 2009 and deflation in 2010, real interest rates turned positive, which curbed investment and prolonged the recessionary period.

For the reason that the monetary policy was too expansionary in boom and too restrictive in the bust period, we can argue that monetary policy has been dysfunctional.

3.7. Fiscal policy

Fiscal policy has been given the task of fulfilling the Maastricht criteria. Except in 1999, the budget deficit stayed below the 3% limit and the public debt/GDP was also below the 60% margin set by the Maastricht Treaty. However, due to the financial and economic crisis in 2008, there has been an increase in budget deficits relative to GDP over the 3% limit, which the government already in 2009 attempted to reduce in spite of the fact that the slowdown has not been overcome. In order to be able to assess if the fiscal policy was procyclical, we need to look at the structural budget deficit[14]. Figure 3 shows that in the periods 2005-2007 and 2009-2010 the fiscal policy was moving in a pro-cyclical direction. Therefore, we can say that the fiscal policy in these periods has been dysfunctional.

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[14] Structural budget deficit is cyclically adjusted budget deficit (Eurostat, 2012).
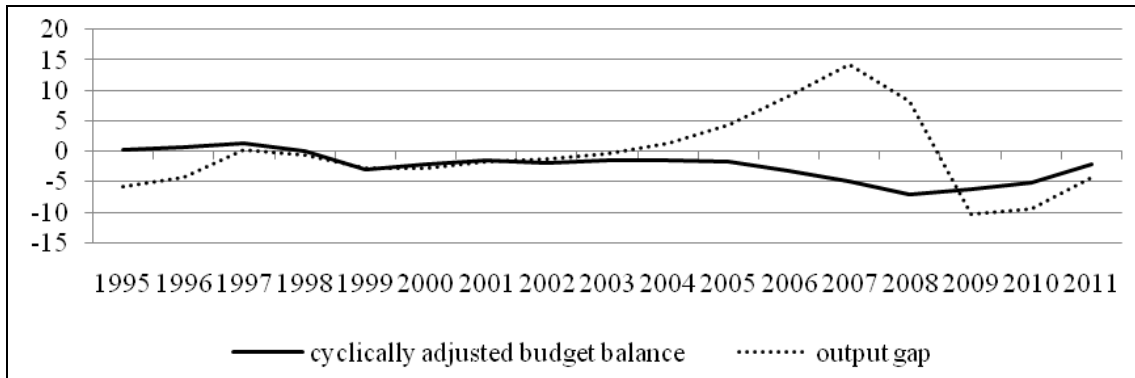
Source: Ameco, 2012.

Fig. 3. **Structural budget balance and output gap, 1995-2011**

As a response to the financial and economic crisis, the government of Latvia implemented a series of cuts in public spending including reduction in public sector wages. The VAT has been increased from 18% to 22% in 2012 (Ministry of Finance of the Republic of Latvia, MoF, 2012). The reduced VAT was increased from 5% to 12%. The government also stated that it is committed to keep the structural budget deficits below 0.5% of GDP in the coming years (The Government of Latvia, 2012:4). With regards to the Gini coefficient before and after taxes, due to the restricted data (only available for 2007), we cannot draw a straightforward conclusion. However, taking into account that in Latvia there is a flat tax rate for personal income we can argue that the redistributive policies have not been functional.

4. Conclusions

In this paper, the contours of a MPR for an emerging country, candidate for a currency union was sketched. Then on the basis of this normative model, the functionality of the MPR in Latvia was assessed. Starting in the mid 1990s Latvia experienced a boom period supported by high capital inflows especially in the real estate and financial intermediation sector. These inflows were due to several institutional changes which marked the way in which macroeconomic policies were to be applied. Firstly, the deregulation of goods and financial markets which was almost completed in the mid 1990s increased the presence of foreign banks and opened up the opportunities for companies to receive funding in the capital markets. Secondly, the process of accession in the EU in 2004 increased the confidence of foreign investors. However, these capital inflows caused an increase in current account deficits and even more importantly, the level of external debt, as most of them were in the form of credits. The macroeconomic policy mix applied in Latvia can be summarised along these lines: monetary policy has been constrained by the aim to keep the exchange rate peg to the euro within ±1% fluctuation margins and the high level of euroization and currency mismatch (especially of the household sector, non-exporting companies and the government). The current account deficits and open capital account made Latvia vulnerable to capital flows and the exchange rate was put under depreciation pressure amidst the financial crisis. Deregulated financial markets and expansionary monetary policy allowed for the creation of asset bubbles. Fiscal policy has been given passive role of meeting the Maastricht criteria. Wage and industrial policy have not been given any significant role. In a nutshell, the analysis of the elements of a macroeconomic policy regime provided in this paper points towards a dysfunctional development, leading to ever rising current account deficits, high euroization, overvalued currency and capital flow volatility.

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This paper thus suggests an alternative model in which the foreign economic policy plays a paramount role for reducing the external balances of the economy and achieving more sustainable economic growth based on exports of high value-added products and reduced income elasticity of imports. Moreover, foreign economic policy is given a role of capital management so to prevent high foreign currency exposure of the financial system. Providing a stable exchange rate anchor through intervention in the foreign exchange market is also an important part of foreign economic policy. The role of the industrial policy will be to support foreign economic policy by stimulating investment in R&D. Investment in R&D, especially in the infant industries and experimentation in know-how and technology is of great importance, thus the government's involvement (via subsidies, tax reliefs, patents, etc.) can stimulate creation of new and diversified knowledge, which is one of the main factors for sustainable growth in the emerging economies (Chang H.J., 1994:67-68). The financial system's main task is to provide sufficient, affordable finance for the manufacturing sector and securing stability in the financial system through defining conditions for bank's exposure to foreign capital, setting reserve requirements for different types of assets, and separating banks from other financial institutions. Labour market institutions also need to be considered. For the wage policy to be able to provide a stable wage anchor, wage coordination needs to be strengthened and the collective bargaining process, if necessary, needs to be supported by the government. In Latvia where collective bargaining is weak and the extension of collective agreements is possible only under very limited conditions and is rare, minimum wages policy should be applied (Herr H., Kazandziska M., 2011a).[15]

A more general recommendation for monetary policy would be to keep the long run real interest rates positive at a low level, with low, but positive nominal interest rates, at a given inflation rate maintained by the wage policy, so as to stabilize expectations, to promote investment and prevent the occurrence of speculative flows (Priewe J., Herr H., 2005:52). Fiscal policy should take care of real stabilisation of the economy, reducing income inequality and securing a high level of employment. In the emerging countries, the government needs to undertake large public investments in order to increase not only productivity and economic growth, but also to provide social programs to reduce poverty and the income inequality.

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[15] The minimum wage policy means that minimum wage should increase according to the wage norm (Herr/Kazandziska 2011a).

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AN EXPLORATORY STUDY OF THE ASSOCIATION OF PROJECT SUCCESS WITH PROJECT CHARACTERISTICS AND ORGANIZATION MATURITY

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Abstract: Project success has always been an important issue in project management research. There have been pervasive research studies on this topic as well as on exploration of factors affecting project success. The objective of this research study is to identify and ascertain which of the project's attributes affect project success. The study also recognizes the role of organization maturity in achieving the success. Data sample is collected through interviews and self administered questionnaires. Using a sample of 71 project managers and other higher management officials, correlation studies are done. The correlation is investigated between project characteristics and organization maturity with project success. The Pearson Bivariate Correlation method is used to test the significance of the correlation. In order to perform the correlation analysis the SPSS version 20 is used. The results revealed significant negative correlation between project success and higher risks. A negative relation is also found for the higher complexity level and long duration of the project. No significant relation is found between project success and project budget, technicality involved and prior knowledge of the potential risks. On the other hand the organizational maturity is found to have a significant positive relationship with project success.

This study identifies the importance of project related factors and organization maturity for achieving project success. It is suggested that the organizations should address the project related factors during the planning phase of their project. They should focus on reducing the following three things: a) the complexity involved in the project, b) the potential risks in the project and c) the overall duration of the project. It is also found that the standardization and optimization of the processes increase the maturity level of the organization which in turn increases their success.

Key words: *project success, project management, organization maturity*

JEL code: M10

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1. Introduction

Projects are temporary organizations and involve uncertainties. There is no one standard definition of project neither in literature nor in practice. PMI (PMBoK 2004) defines project as a "temporary endeavor undertaken to create a unique product, service, or result". Turner (1999) defined a project as "An endeavor in which human, material and financial resources are organized in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objective". Because projects are not exactly the same and no project use exactly the same approach, it is always challenging in every project to achieve success.

Success generally refers to the accomplishment of the tasks through an effective and efficient way. It is quite subjective and therefore can have a different meaning for different people. Freeman and Beale (1992) provide an interesting example in this context: "An architect may consider success in terms of aesthetic appearance, an engineer in terms of technical competence, an accountant in terms of dollars spent under budget, a human resources manager in terms of employee satisfaction. Chief executive officers rate their success in stock market." This nature of project success requires managers to use many measures of success. Lim and Muhammad (1999) clarified the scale of project success by providing two different points of view, macro-level success and micro-level success. Macro-level success is generally related to the end product. Usually the end users and other project beneficiaries come across the macro viewpoint of project success. Micro-level success is related to traditional iron triangle and considers, whether the project is completed on time, within allocated budget and according to the specifications. Other researchers (De wit 1988; Cooke-Davies 2002) presented the macro and micro point of views as project success and project management success respectively. Project success is measured against the overall objective of the project. Project management success is measured against cost, time and quality, which are widespread and traditional measures of performance. Baccarini (1999) shape this concept into product success and project management success. Product success deals with the effects of the projects final product and the objectives of the project.

Success or failure of a project depends on a number of factors. The study of project management literature reveals that factors influencing project success have been of great interest for researchers. Various studies covering different positive or negative aspects of influencing factors have been conducted by researchers, academicians, consultants and industry practitioners. The objectives of these studies were to find the ways to achieve higher project success rate and help project managers in accomplishing their tasks. The studies were done by targeting different types and size of projects. The focus of the present study is on project attributes like project complexity, project duration, project risks, project technicality and organization maturity. The study assesses the strength of the relationship between these variables and project success.

The main objectives of the study are outlined below:
1) To through light, on the importance of project characteristics and organization maturity for devising project management strategy.
2) To perform correlation study to identify and ascertain the nature and significance of the relationship of the project characteristics and organization maturity with project success.
3) To determine the role of project characteristics and organization maturity in achieving project success.

2. Project Characteristics

Factors which have the ability to influence the success are of prime importance for the researchers. The main motive behind that is to help project managers to accomplish project success, as discussed

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above. These are the critical success factors which can influence the performance of the projects. Project attributes constitute one of the essential dimensions which affects project performance (Belesi and Tukel 1996; Assaf and Al-Hejji 2006; Ozorhon et al. 2007; Khan and Spang 2011). Project characteristics have long been overlooked in the literature. In this study project characteristics e.g. project complexity, project duration, project risks, project technicalities and organization maturity are studied.

2.1. Project Complexity

Projects have different complexity levels and with the passage of time it is becoming more and more complex. This is mainly because of operational interdependencies, diversity of inputs and outputs, and different tasks to produce end product of a project (Baccarini 1996; Azim et al. 2010). In a globalized project environment, multidisciplinary and multicultural teams work together to accomplish project objectives. There is a need to manage unexpected consequences of the actions because of growing volatility and complexity. The new ways of planning, organizing, managing and executing project management methodologies are needed (Thomas and Mengal 2008). It is important to understand project complexity and its influence on project success. Task complexity (complexity of achieving certain task) is not the only reason of project complexity; the product of the project can itself be complex (Hanisch and Wald 2011). Simple projects with no technical proficiency prerequisite can be successfully completed with regular work force having lower technical skills. On the other hand, complex projects require excellent skills level and effective management. The normal systems developed for simple projects have been found to be inappropriate for complex projects (Morris and Hough 1987).

2.2. Project Duration

Tukel and Rome (1998) found that long duration projects have negative influence on project success. They found in their study that the projects with more than 100 activities are not completed on time. Penalties are usually imposed on the organizations if they fail to complete the project on time. For example, Airbus industry paid heavy penalties to the airlines, when they were not able to deliver their newly developed aircraft Airbus A-380 on time. This has not only affected the company in monetary terms but also damaged the goodwill of the company. Therefore it is important to consider the duration of the project especially where the completion on time is the main criterion to evaluate project success.

2.3. Project Risks

Risk is a function of the likelihood of something happening and the degree of losing which arises from a situation or activity. PMBoK defined risk as "an uncertain event or condition that, if it occurs, has a positive or negative effect on a project objective" (PMI, 2004). Project risk is any event that may possibly interfere with the successful completion of the project. Risks that is difficult to manage, likely to affect negatively in terms of cost, time, quality and performance (Anderson and Terp, 2006). Generally megaprojects involve a large number of interrelated activities, more stakeholders and more funds are invested and therefore it is expected that the amount of risk will be high. Risk management is considered as a very important area of project management. This is mainly because a project is temporary, unique, and involves uncertainties which expose it to large number of risks. Risk management is particularly important in the planning phase of a project (Zwikael and Ahn, 2010). The objective of risk management is to maximize the potential of success and minimize the probability of future losses (Anderson and Terp,

2006). Zwikael and Ahan (2010) found in their study, where the organizations pay little or no attention to project risk planning, the level of risk is negatively correlated to project success.

2.4. Project Technicality

Many organizations invest in technology to improve organizational performance and to gain competitive advantage (Anantatmula 2008). Projects with high technical specifications require exceptional technical competence and knowledge on complex issues. Innovative and urgent projects which are technically complex are very difficult to manage. They can only be managed successfully with provision of top management support, project manager authority and good communication (Lechler and Grace 2007). Technical knowledge can help in streamlining and standardizing project management processes. Organizations should develop technology systems to meet specific project technological needs.

3. Organization Maturity

Maturity models are used for assessment of the maturity level of an organization. Their origin can be found in the field of total quality management (Cooke-Davies, 2004). Oxford Advance Learner Dictionary (2011) defines maturity as "the quality of thinking and behaving in a sensible, adult manner" or "The state of being fully grown or developed". This implies that the mature organizations behave in a sensible way to deal with the difficulties. They are better placed in executing their project management processes compared to less mature organizations. Maturity models are widely accepted by the bodies of the project management knowledge (PMI, IPMA), however the evidence of the extent of use and impact of the models is very limited (Brooks and Clark 2009). Pricewaterhouse Coopers (2004) conducted a survey in 30 countries from 200 respondents. They concluded that the higher an organization's project management maturity is, the greater is the positive impact on overall project performance. Projects become more efficient and effective with the higher maturity levels in an organization. This eventually leads to project success. Higher maturity levels in an organization also provide a competitive advantage in the marketplace. The association of the project management maturity with the organization culture may lead to higher performance (Yazici 2009).

Project management maturity models offer a uniform approach for measuring the maturity level of an organization. They also offer guidelines for improvements (Wheatley, 2007). Project management maturity is a very important component of long term strategic planning. It helps to identify gaps in resources and quality. It also determines the ways to reduce these gaps (Kerzner, 2005). Maturity models provide an approach for continuous improvement in many areas of business (Brooks and Clark 2009). Other researchers (Grant & Pennypacker, 2006; Jugdev & Thomas, 2002; Mullaly, 2006) demonstrate their apprehension regarding a lack of evidence about project management maturity contribution towards organizational success. But there is no evidence that project management maturity provides a competitive advantage to the organization (Mullaly, 2006). These studies unveil the need for further research in project management maturity and exploring its relation with project success.

4. Research methodology

The quantitative method as a research approach is adopted. In order to investigate the influence of project characteristics and organizational maturity on project success, field survey study is conducted. Data is collected through self administered questionnaires and face to face interviews. The data is

analysed and results are compiled based on the responses from 71 project managers and other higher management officials.

Information about the project characteristics e.g. project duration, budget, technicality, complexity level, and risk level, is acquired directly from the respondents. To obtain information regarding the maturity level of the organization, Capability Maturity Model is used. Five levels of maturity i.e. "initiation", "repeatable", "defined", "managed" and "optimized" were introduced in the questionnaire with brief descriptions. The main purpose of presenting the description of the maturity levels is to provide guidance to the respondents in selecting relevant maturity level. Project success is measured by using the traditional criteria of time, cost and scope, because these have been widely recognized as the three primary goals of project success (Meng 2011). In addition, customer satisfaction (Dvir, 2005, Thomas and Fernandez, 2008) is used as success measure. Customer satisfaction is gaining appreciation by the researchers as an important criterion for measuring success. Average success is used as a fifth indicator to measure success, whereby the average success refers to the delivery of project on time, within budget, according to the specifications and customer satisfaction in the average over all projects (Lechler and Dvir 2010).

Most of the respondents were project managers (43%), department head (15%), functional managers (10%) and other top management officials (11%) in projects (see figure 1). The majority of the respondents were PMP certified (56%). Some hold other project management certification (8%). Almost 24% of the respondents had good knowledge of project management without any project management certification. Only about 11% of the respondents had little or no knowledge about project management (see figure 2).

| Fig. 1. **Management Position** | Fig. 2. **Project Management Knowledge** |
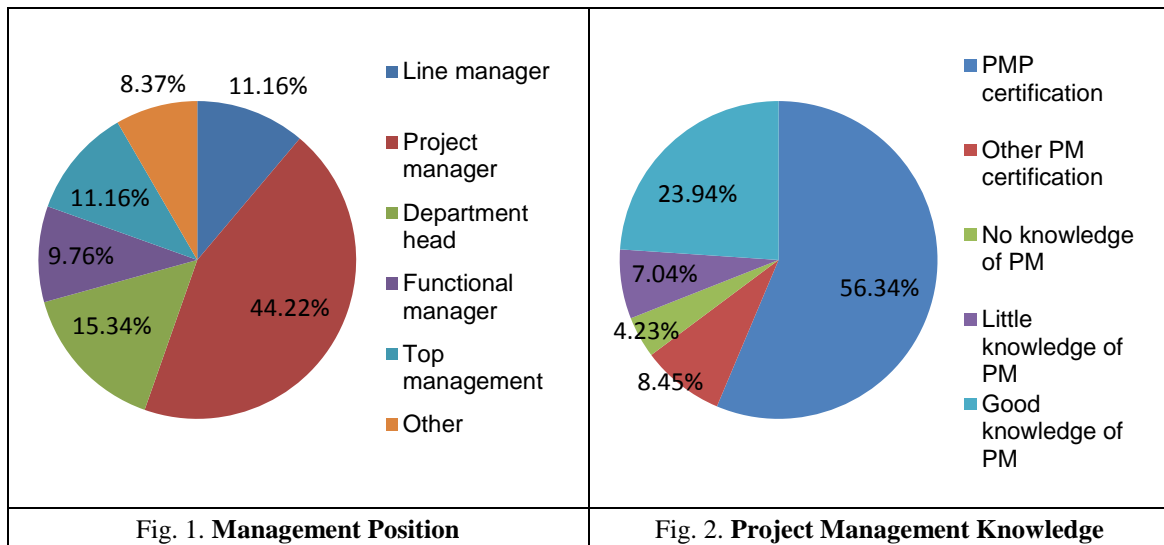
A correlation study was done to investigate the relation of project characteristics and organization maturity with project success. The Pearson Bivariate Correlation method is used to test the nature and significance of the relation. SPSS version 20 is used to perform the correlation analysis.

5. Research results and discussion

To summaries our findings, correlations among the project characteristics, organization maturity and project success are shown in the table 1. The pearson coefficient ranges from +0.486 to -0.376. These

findings highlight a significant negative relation between project duration and project success (correlation coefficient of -0.276 at significance level of 0.05). As discussed above, long duration projects generally involve a large number of activities. Most of these activities are interdependent which causes delay in the projects. Negative relation is also found between budget of a project and its success; however the relation is not significant (correlation coefficient of -0.075). Project complexity has also shown a significant negative relation with project success (correlation coefficient of -0.363 at significance level of 0.01). This means the higher the complexity level in a project is, the more difficult is to achieve success in the project. For example, consider the diversity in the stakeholder motivation and objectives. The alignment of the impetus and purpose of different project stakeholders with the common project goal is challenging. This leads to the complexity in the social context (Hanisch and Wald 2011) and causes difficulties for the project manager in achieving project success.

Table 1

Correlation matrix

		Success	Project duration	Project budget	Comple-xity level	Risk level	Technica-lity level	Risk know-ledge	Maturity level
Success	Pearson Correlation	1	-0.276*	-0.075	-0.363**	-0.376**	-0.104	0.147	0.486**
	Sig. (2-tailed)		0.020	0.537	0.002	0.001	0.388	0.222	0.000
Project duration	Pearson Correlation	-0.276*	1	0.258*	0.206	0.106	-0.136	-0.035	-0.109
	Sig. (2-tailed)	0.020		0.030	0.085	0.381	0.258	0.773	0.365
Project budget	Pearson Correlation	-0.075	0.258	1	0.087	-0.003	0.069	0.042	0.014
	Sig. (2-tailed)	0.537	0.030		0.472	0.978	0.569	0.730	0.909
Complexity level	Pearson Correlation	-0.363**	0.206	0.087	1	0.529**	0.368**	-0.311*	-0.382**
	Sig. (2-tailed)	0.002	0.085	0.472		0.000	0.002	0.008	0.001
Risk level	Pearson Correlation	-0.376**	0.106	-0.003	0.529**	1	0.229	-0.110	-0.464**
	Sig. (2-tailed)	0.001	0.381	0.978	0.000		0.054	0.360	0.000
Technicality level	Pearson Correlation	-0.104	-0.136	0.069	0.368**	0.229	1	-0.165	-0.367**
	Sig. (2-tailed)	0.388	0.258	0.569	0.002	0.054		-0.165	-0.002
Risk knowledge	Pearson Correlation	0.147	-0.035	0.042	-0.311**	-0.110	-0.165	1	0.206
	Sig. (2-tailed)	0.222	0.773	0.730	0.008	0.360	0.169		0.084
Maturity level	Pearson Correlation	0.486**	-0.109	0.014	-0.382**	-0.464**	-0.367**	0.206	1
	Sig. (2-tailed)	0.000	0.365	0.909	0.001	0.000	0.002	0.084	

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

The highest negative correlation is found between higher level of project risk and project success (correlation coefficient of -0.376 at significance level of 0.01). This indicates that effective risk management is one of the most important factors for achieving project success. Effective risk management employs a process to identify, evaluate, monitor, and finally control risks. In a recent study, Bakker et al. (2011) demonstrate that some of the project risk management actions may be able to decrease uncertainty. This is mainly because of the increased predictability of the stakeholder's behavior. Risk management planning efforts are effective only when the level of project risk is medium to high (Zwikael and Ahn 2010). Effective risk management can help to reduce the negative impact on project success. The results of the study also show that the prior knowledge of risk has a positive relation with project success (correlation coefficient of +0.147, not significant). The managers who have good knowledge about the nature of the anticipated potential risk will be able to manage it successfully. They will be able to utilize the available information regarding risk. However this is not always convincing.

Information regarding a particular risk does not automatically mean that this information is used for managing those risks (Kutsch and Hall 2005). Bakker et al. (2010) indicated that the knowledge of risks alone is not enough to contribute to project success. Technicalities involved in the project show no significant relationship with project success. The correlation coefficient found in the study expresses slightly negative relation with project success (correlation coefficient of -0.104).

Maturity level of an organization is found to have positive relationship with project success (correlation coefficient of +0.486 at significance level of 0.00). The finding is consistent and aligned with the results of Yazici (2009). Yazici found a significant relationship between project management maturity and business performance. He presented that the outcome of the higher maturity level is "savings" for the organization in terms of time, cost and quality. This provides competitive advantage to the organization and facilitates to increase the market share (Yazici, 2009). It is suggested that the organizations should continue investing in project management maturity to improve their maturity levels. Organizations with higher maturity levels execute advanced risk management planning therefore they are capable of dealing with the risks (Zwikael and Ahn 2010). Organizations should focus on achieving higher maturity level by consistently reviewing their existing processes. They should develop standardized processes to deal with the similar situation. They should continuously update and improve their processes to cope with the new situations. They should consistently improve their processes.

6. Conclusions and recommendations

The aim of this research is to examine and to investigate the correlation of project characteristics and organization maturity with project success. The amount and the significance of the relation are also studied. Findings of the study are aligned with the results of the previous research in this topic. The study recognizes that project characteristics influence the performance of a project. The study identifies the role of project characteristics and organization maturity for achieving project success. It is suggested that the organizations should consider project characteristics during the initiation or planning phase of their projects. Project management methodologies should be adapted based on the type, complexity and duration of the project. The organizations should reduce the project complexity by clarifying the objectives, separating the project into smaller parts and minimizing task interdependencies. They should reduce the potential risks in the projects by mitigating the risks and try to shorten the overall duration of the project in order to avoid uncertainties. The standardization and optimization of the project management processes increase the maturity level of the organization which in turn increases project success.

From a practical standpoint, the findings illuminate the areas which need special attention and support for successful completion of a project. The results have practical implications for the project managers especially when managing big, risky and complex project.

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INTERCULTURAL COMMUNICATION
IN TOURISM PRODUCT DISTRIBUTION

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Abstract. Successful management of any international tourism business enterprise involves integration of intercultural communication principles. Considering the complex character of tourism product distribution channels, tourism organizations often seek to find the most efficient ways to deliver proper information on their products to their end customers. Cultural and communication differences may cause disappointments and complaints if information is not delivered properly while such situations may seriously influence organization's ability to maintain its cooperation models with the existing partners and may influence organization's reputation, thus, reducing its competitiveness. Tourists, originating from 12 different world countries within the period of two summer tourism seasons, travelling on a multi-destination tour to the Baltic States had been questioned if the information they had been provided with before travelling – while booking the particular tour, corresponded to the program they had received during the tour and if the tour program purchased from their travel agent corresponded to the program they had received on-site. 1330 questionnaires have been analysed before making conclusions. The aim of the research was to identify consequences of communication, the impact of cultural differences on information distribution and how it could affect the management of an international tourism enterprise. The results have been analysed according to Hofstede's cultural dimensions model, identifying interaction between cultural dimensions and their expressions in information delivery and correspondence of the provided information and the received product. The paper analyses the results of the quantitative research that indicates the impact of cultural differences in a variety of ways and proposes further research opportunities.

Key words: *intercultural communication, tourism enterprises, management*
JEL code: L83

Introduction

In the context of management, communication subsists as interpersonal communication, composed by verbal communication and written communication, group and organizational communication which can be analyzed both, as vertical or horizontal communication. Vertical communication can be upward or downward, while horizontal communication is lateral communication between same level standing employees within an organization or between structures of an organization within the same organization

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(Griffin, 1990: 554; Gomez-Mejia, Balkin, 2002: 323-324). Structural transformation of organizations and emergence of new business organization forms, new interaction models between business organizations determine the importance of communication as a management task not only within an organization but between organizations, interacting in a global business environment. Information, deliverable from transmitter to receiver needs to be delivered properly to avoid loss of its meaning. Having multiple intermediaries involved it might become a challenging task. The importance of communication in management is not a recent subject. Historically, communication in the context of management has been analyzed as a tool to avert eventual conflicts between employers and employees or to determine common goals of the organization (Pigors, 1952: 508). Presently, with development of knowledge organizations and knowledge workers, communication has developed as a tool improving organization's performance, knowledge exchange processes and exchange of information processes between organization owners and the knowledge workers. Until late 60-ties of the 20th century, mostly vertical communication in formal and informal organizations was considered, as this type of communication described relations existing between employers and employees (Albaum, 1964: 24). Simply approaching, communication is about transmitter's interest to receive only feedback about successful delivery of the transmitted message (Haney, 1964: 128). Alternatively, in the context of management, interpersonal communication skills are among core competences in making successful deals (Knowles, 1958). Communication as interpersonal skill exists in different forms and levels and becomes apparent as communication between same level communicators, employers and employees, clients, suppliers and other external agents (Bardia, 2010: 28).

The importance of culture in management

Presently, communication is considered an important task for managers, emphasizing the impact of communication in achieving organization's goals. Communication is present in a list of organization management related activities, such as development of organization's culture, internal environment, as well as knowledge transition and sharing. It has certain importance in maintaining organization's competitiveness as a result of effective knowledge transfer into the organization from external sources and among members of organization itself (Davenport, Prusak, 1988:88). Knowledge transfer is a social process, where the essence of knowledge transfer is to achieve not only effective knowledge sharing system, but its transfer aiming at sharing deepened, rich and verbally not explicit knowledge (O'Dell, Hubert, 2011: 129). Knowledge organizations possess intellectual capital, encompassed in minds of their people. For those organizations, primary dealing with providing services to their customers, the non-material assets are of increasing importance and efficient employment of these assets occurs through communication (Denning, 2011: 152). Through communication organization seeks to formulate its vision, loyalty, teamwork, priority system, culture, decision-making, result evaluation and customer relations (Hamm, 2011: 183). For organizations working in the global business environment, information, knowledge and its transfer into the organization and within it, is more complex, because cultural differences require further attention. Knowledge of cultural differences often is considered a tool, supporting organization's ability to maintain competitive positions operating in the global business environment.

Although, most touristic activities could be local, internationalization of consumer and service production processes has turned touristic activities into international ones. It determines the need to explore tourism from the perspective of international business environment, which logically involves also intercultural discourse. Intercultural communication is an important dimension of guest-host relations (Scherle, Coles, 2008: 124-125). Although, intercultural communication as a part of strategy is a common

subject for organizations, the importance of this communication is developing as an increasingly important subject.

International tourism has been developing as the privilege of Western society for a number of decades adapting the existing tourism production and operation approaches to those societies. Present international tourism business situation with the increasing importance of the new and fast emerging markets urges to revise the classical approaches to tourism production, distribution and operation. This concerns also communication used to interact with existing and potential customers promoting and selling tourism product. Intercultural communication, as a part of seller – buyer interaction is developing as an important part of organization's system. It is more and more often used in improving the existing or in developing new marketing strategies; in analysing product distribution channels and in maintaining operational standards and their quality. Considering that tourism business environment is becoming more globalized, facing new market entries, new interactions between previously unknown cultures, management of tourism organizations cannot ignore these visible challenges. International tourism organizations are forced to operate in a completely new international tourism business environment, where traditional hosts meet new, previously not well known guests. For organizations operating in such dynamic and rapidly transforming environment it is important to distance from the past, often traditional and well known practices, making good use of the new opportunities (Rogers, 1993). It is often emphasized, that approach, integrating intercultural communication principles in the existing business strategies should be considered as issue of business survival (Paul, 1996). It is necessary to respect the presence of culturally different customers; tourism business organizations are not isolated from the contemporary realities of entire business environment.

The above mentioned conditions invite contemporary management, especially managers of international tourism business studies to look for interdisciplinary approaches, to develop new business organization models and management strategies. Although, there is no exclusive business management model based on the principles of intercultural communication, there are certain opportunities proposing integration of intercultural communication into business management. These are approaches respecting culture as a variable defining the limit of its influence. Even the word *culture* is used in many different ways and there is no unique system how to use it as a tool in business management and development, there are several approaches to it. These are theories, which provide unique opportunities for management studies. Among them, Hofstede's cultural dimensions model is used most often. Cultural dimensions show how societies differ from each other and at what score they differ. Most often five dimensions are used, even though, more dimensions are developed (Koopman, Den Hartog, Konrad, et. all, 1999, Jandt, 2009: 159). These dimensions are mostly used to describe the culture of particular countries, not all dimensions are used to make correlations with other subjects, including management. In 1980 Geert Hofstede (Geert Hofstede), in order to determine the value dimensions across cultures, conducted the study, which resulted in identifying the first cultural dimensions: individualism (the degree to which individuals are integrated into groups), masculinity (gender roles), power distance (the degree to which the less powerful members of organizations and institutions adopt and expect that power is distributed unequally) uncertainty avoidance (organization's tolerance of uncertainty and insecurity) and long-term orientation dimension (Hofstede, 1980; Minkov, Hofstede, 2011: 12; Jandt, 2009: 159). These dimensions are considered to be the basis for further studies analyzing the importance of cultural differences in social interactions between people or organizations. However, for specific research purposes, implementation of each particular dimension needs to be examined. For social process related studies individualism-collectivisms, uncertainty avoidance dimension, and power distance dimension can be considered the most flexible for further interpretation.

Individualism-collectivism cultural division can also be seen in psychological studies and analysis of individual treatment groups (Schwartz, 1988), determining that the individualistic alternative is collectivist. This division can be formulated stating that for collectivist cultures it is essential to assess the individual conduct of interaction with a group (Watkins, Liu, 1996). Individualist and collectivist

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cultures also differ in their approaches to expressed emotions towards a certain situation, an event, a happening or even some kind of service and the service provider, which allows the service industries to use this when analyzing various interactions. Customers, originating from individualist cultures pay more attention to individual preferences and needs, while, for the customers from collectivist cultures, group expectations and needs are taken into account, and these cultures consider inner emotions and subjective feelings which is different in individualist cultures where emotions tell about the reality of change (Mesquita, 2001).

Also, uncertainty avoidance dimension allows understanding different cultures as the uncertainty avoidance dimension score expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. These differences are characterized by avoidance of unspecified points of importance of the structure. For some people the unknown cultures pose a threat, as opposed to others characterized by low avoidance of uncertainty and the unknown who are willing to take more risks and experience (Litvin, Crotss, Hefner, 2004: 30). And finally, power distance dimension refers to the way how subordinates perceive what superiors deliver and how they form interpersonal relationship.

As culture is a statist itself and cannot be used directly to explain the phenomenon, relations between individuals, societies or groups, codification is needed. Codification of culture is as a prerequisite for realizing any type of research, aiming at measuring cultural significance. It is a condition for any interdisciplinary research where culture is considered a variable. Through culture individuals and societies create order of believes, values, norms and attitudes, categorize them into good or bad, right or wrong etc. (Hofstede, 1989). Hofstede's contribution, applying certain structure to cultures, is essential for analyzing the international business environment and exploring communication and different forms of social interaction between individuals and groups. Among other approaches, Hofstede doctrine has five major advantages (Minkov, Hofstede, 2011). First, cultural dimensions have been the first universal approach to measuring and analyzing differences between two or more communities, nations or ethnic groups, secondly, cultural dimension variables and scores allow correlations between nations rather than individuals or organizations, thus assigning versatile application opportunities to this model, thirdly, they identify the key issues typical for all organizations, fourthly, they are steady, confirmed by repeated researches and indicating no major variations over the period of more than 30 years. Finally, using cultural dimensions to explore and analyze culture allows us to draw conclusions about organizational or society behavior, management philosophy and general practices.

However, certain criticism is present and it identifies weaknesses of the model, supported by ongoing globalization processes and global migration and the increasing mixture of societies in general. Besides, the model is often criticized considering that only the information technology industry analysis has been considered, and based on that, general conclusion on societies is drawn (Reisinger, 2009). Also methodology has been questioned, as it is based on the assumption of each examined country as a geographical entity, rather than national bodies, excluding the presence of subcultures (Orr, Hauser, 2008; Reisinger, 2009). However, also critics indicate that cultural dimensions model is the most ambitious and extensive model available to use for intercultural studies. This is also a unique model to be used for tourist behavior studies and for analyzing the international character of tourism in general (Manrai, 2011). Also, branding and advertisement studies analyzing customer relations and applicable models in different societies consider this to be the most appropriate approach for defining and exploring cultural differences and their impact on their activities (de Mooji, Hofstede, 2010: 86).

Several authors point out that cultural differences in the tourism sector and tourism organization management are particularly important considering the character of tourism product – it is intangible and consists of a wide range of services while decisions regarding purchase and consumption are determined by cultural differences. Therefore, applying cultural dimensions model, it is possible to analyze the tourist behavior prior to travel purchase and consumption, during the tourism product consumption and after the consumption period (Manrai, Manrai, 2011: 25). It can be used as a tool for market research, exploring

information seeking behavior, travel planning, travel mode choice and other elements (Litvin, Crotto, Hefner, 2004: 33-35).

Hofstede's cultural dimensions are dynamic in their nature, as they allow using already defined dimensions supplemented by additional parts, to understand different social phenomenon in the globally changing world as well as relations of individuals and society. These dimensions are not static and they are adjusted and updated, considering the factors affecting cultural transformations and the emerging new issues, actual for societies or individuals interacting in the structures forming society (Reisinger, 2009, Geert Hofstede: hofstede.com). First edition of "Culture and Organization", which is the original source of the culture dimensions model, describes and uses only four dimensions, while the current, updated model, as introduced in 2010, is supplemented by already sixth dimension of indulgence / restraint (devotion / abstinence dimension). According to the researchers, most of the cultural differences, the dynamic nature of the subject of continuing research and virtually any existing model can be further extended, or adapted for specific goals.

Research Results and Discussion

As most incoming tour operators are working with increasing number of different markets representing diversity of cultural backgrounds, they seek to find a system allowing structuring their sales and marketing activities. The management model based on cultural differences would allow organizations to develop reduced number of communication and marketing strategies, at the same time, increasing the number of target markets, using the knowledge of the existing, already developed markets. However, considering complexity of cultural dimensions and the lack of a universal model for performing interpretations of cultural dimensions, the author proposed experimental research model, aiming at identifying the ability to develop it.

Research was carried out during two summer tourism seasons – in 2011 and 2012. All the respondents were participants of guaranteed departure tours in The Baltic States, operated by a tour company. All respondents were customers of the same company and were participants of tours, operated in all three Baltic Countries by the same tour operator, having direct contracting to all contracted suppliers. All respondents had not purchased the product directly from the tour operator, but at their local agencies or from international or foreign tour operators, purchasing products from the local incoming tour operator. Majority of clients had purchased their travel packages through classical tourism product distribution chain, with at least three intermediaries involved between the local incoming tour operator and their travel agencies. This allows understanding and examining the inbound tour operator's ability to efficiently distribute the product and to deliver all information about the product, its contents and organizational aspects to the end customer of their product. Considering the fact that the inbound tour operator has no direct communication with the end customers before their arrival to destination, efficient communication between the inbound operator and their customers is vital, assuring that information about the product is delivered properly to the agency selling the product to the end customers. There are further peculiarities of the product, which define importance of communication and unambiguous information delivery – all the tours are operated by bilingual tour escorts, speaking either English and German or Italian and Spanish; a list of optional excursions which can be ordered either in advance or on the spot – directly from the tour leader, is offered; fixed time is given for welcome meeting with the tour leader on the day of arrival and it is explained how to act in case of any emergency of service failure. When creating the product, the inbound tour operator has emphasized the international character of the product, thus reducing the risk of dissatisfaction due to the same fact.

All questionnaires were distributed to the end customers of the product in personalized welcome packages at the start of the tour, then, the tour leaders reminded their guests to return them at the end of

the tour, submitting them directly to customers, leaving at the reception of the last hotel of the program, sending them directly to the office by e-mail or fax. All questionnaires had been produced in 5 languages – English, German, Spanish, Italian and French, corresponding to the client structure and the languages in which tours were conducted. In total, 4662 questionnaires were distributed during the summer tourism seasons of 2011 and 2012. Considering that the product had been evaluated by members originating from 28 different countries, the research has been continued for two seasons to assure the proper representation of major markets, where the product is sold (European markets including Germany, the United Kingdom, Italy, Spain, Switzerland and overseas markets including Australia, the United States of America and South American countries, including Argentina, Brazil and Mexico). It has been noted, that there have not been remarkable customer changes of the selected inbound tour operator which has allowed us to assume that the product distribution conceptually has remained same during these years. Totally, 602 questionnaires in 2011 and 730 in 2012 have been collected from representatives of 27 different countries. However, for further analysis only the countries represented by at least 31 questionnaires were chosen. This was the major limitation as all the studies dealing with cultural differences require a rather high number of different questionnaires to be able to analyze an issue within the discourse of cultural differences. And this has been another reason, why collection of questionnaires was realized during two summer tourism seasons. Each particular country and the total number of the end customers from countries subjected to further analysis were taken into consideration. Table 1 offers figures on the end customers by the country of origin and the collected questionnaires.

Table 1

Summary of End Customers and Questionnaires

Country	Total number of end customers	From total (in %)	Collected questionnaires (total 2011-2012)	From total (in %)	STDEV	VARIATION
Germany	1134	24.32	354	26.62	1.62	2.63
Italy	602	12.91	211	15.86	2.09	4.36
Brazil	590	12.66	116	8.72	2.78	7.74
Spain	443	9.50	157	11.80	1.63	2.65
Australia	413	8.86	112	8.42	0.31	0.10
Others	326	6.99	82	6.17	0.58	0.34
The Netherlands	232	4.98	55	4.14	0.59	0.35
The United Kingdom	226	4.85	48	3.61	0.88	0.77
Argentina	195	4.18	39	2.93	0.88	0.78
USA	134	2.87	45	3.38	0.36	0.13
Portugal	133	2.85	52	3.91	0.75	0.56
Belgium	121	2.60	31	2.26	0.24	0.06
Switzerland	113	2.42	31	2.18	0.17	0.03
Total	**4662**		**1330**			

Source: author's construction based on the research data

All the guests were asked two questions regarding information about the tour. The first, "Did the information provided by your travel agent before the tour correspond to the service received during the tour?" and the second, "Did the tour program in your travel agent's catalogue/web site (where the tour

was booked) correspond to the program received?" These were used as introductory questions in the selected inbound operator's quality questionnaire. Other questions asked within the same questionnaire were dedicated to quality evolution of the tour, where the guests had participated. All the guests were asked to name their country of origin where the tour had been purchased. Guests were also asked to indicate their gender, however, it turned out that most couples filled out only one questionnaire; therefore, it was decided during the questionnaire evaluation process to consider this as one respondent and not to consider the gender. Besides, as the primary aim of the research was to analyze cultural differences and their reflection in tourism to be able to draw conclusions concerning tourism organization's (in this case, inbound tour operator's) management, gender information was not considered to be crucial. As the questions asking to asses correspondence of the received services to what had been promised can be considered as outcome of intercultural communication between different cultures, in this case – the inbound tour operator based in Latvia and the end customers, purchasing the guaranteed departure tours from agents in 12 different countries, certain comparisons and analysis can be carried out. For this reason, Hofstede cultural dimensions have been taken as basis to draw conclusions and give assessment on interaction between different cultures, in particular – what level of information about the tour and its details has reached the end customers and what correlations can be drawn, considering representation of different cultures.

Table 2

Hofstede Dimension Scores of the Selected Countries

Country	PDI	IDV	MAS	UAI	LTO
Germany	35	67	66	65	31
Italy	50	76	70	75	34
Brazil	69	38	49	76	65
Spain	57	51	42	86	19
Australia	36	90	61	51	31
The Netherlands	38	80	14	53	44
The United Kingdom	35	89	66	35	25
Argentina	49	46	56	86	N/A
USA	40	91	62	46	29
Portugal	63	27	31	104	30
Belgium	65	75	54	94	38
Switzerland	34	68	70	58	40

PDI – power distance; IDV – individualism/collectivism dimension; MAS – masculinity/femininity dimension; UAI – uncertainty avoidance; LTO – long term orientation
Source: author's construction based on Hofstede cultural dimensions score (available on http://geert-hofstede.com/dimensions.html)

Considering the character of all the dimensions, only 3 were subjected for further analysis – individualism/collectivism, uncertainty avoidance and long term orientation, as these were comparable to the objectives of the research.

Results of the quantitative survey have been summarized. The average score provided by respondents to each of the two questions, according to Likert scale was between 1 (lowest) and 5 (highest), where 1 would mean that the information provided by travel agents before the tour did not correspond at all to the services received during the tour, which would mean that communication between the inbound tour operator and the travel agencies selling the product to end customers had been completely unsuccessful; while 5 would mean that the information provided corresponded completely and the communication

could be evaluated as successful. Similar interpretation of results was applied also to the other question, where 1 meant that the provided program did not correspond and that allowed to assume that the program had been adjusted for sales and marketing purposes using wrong interpretation resulting in discrepancies. Summary of results is provided in Table 3.

Table 3

Average Evaluation of the Respondents' Answers

Country	Average question 1	Country	Average question 2
Argentina	3.17	Italy	3.73
Italy	3.68	Argentina	3.80
Germany	3.87	Belgium	3.82
Average	3.75	**Average**	3.92
Australia	4.02	Switzerland	4.04
Spain	4.02	The Netherlands	4.07
The Netherlands	4.06	Germany	4.07
Belgium	4.07	Spain	4.11
USA	4.15	USA	4.15
The United Kingdom	4.25	Australia	4.15
Portugal	4.35	The United Kingdom	4.25
Brazil	4.35	Portugal	4.29
Switzerland	4.42	Brazil	4.52

Source: author's construction based on research data

Although, the received results as well as the average score of answers to both questions were similar, it still gave us certain possibilities to make certain conclusions. Looking from the perspective of cultural dimensions, the results showed that countries with high score of individualism (Australia, the United Kingdom and USA), on the average, had comparably high score of information correspondence and very high information correspondence. At the same time, countries with low score of individualism (Brazil, Portugal and Spain) were also similar in their evaluation, although, Spain, to some extent, differed from other countries. Special attention should be paid to Argentina, which, seeming similar to countries like Spain, Portugal and Brazil, in the answers to both questions demonstrated remarkable differences. Portugal and Brazil, both being low individualism score countries demonstrated high overall level. Even though, Germany and Switzerland had similar score of individualism and could be considered similar, the answers to the first question indicated remarkable differences, as the Swiss customers had given the highest points when answering the question on information correspondence to the received services. This made us conclude that Swiss companies had closer communication to their clients, assuring that all information was well explained.

Analysing uncertainty avoidance cultural dimension score it appeared, that countries with highest uncertainty avoidance score like Portugal and Belgium demonstrated different average scores of answers to both questions – as in both cases, the provided information had been evaluated relatively highly, while the program correspondence had been evaluated in different ways – high average score given by Portugal and below the average – by Belgium. Countries with generally lower uncertainty avoidance gave higher scores to both questions, allowing us to conclude that in communication with countries with lower uncertainty avoidance the risks connected with proper information transfer are minimal. Guests originating from the United Kingdom and USA represented low uncertainty avoidance score which could

be interpreted as readiness to accept and experience previously unknown things and the average scores given by them to both questions were among the highest.

Summarizing, it has turned out that the highest score to the delivered information was given by the guests originating from countries with low individualism score, high uncertainty avoidance score and low long term orientation score. It can be associated with the fact, that the guests originating from these countries have high impact on the group information availability (their decision to purchase a travel is affected by other travellers, who have already experienced the selected destination or product type), they tend to understand all the specific details of the program and are more open to new experiences. On the other hand, the lowest score to both questions was provided by guests originating from countries with moderately high individualism score, moderately high uncertainty avoidance score and comparably low long term orientation score.

From the perspective of countries and summarizing the results, it can be concluded that countries with high score of individualism cultural dimension have evaluated higher information correspondence to reality, allowing to conclude that they pay more attention to details and avoid unexpected surprises during the tour, as they rely more on the received information, based on their own questions and communication with their travel agents. There are minor differences between the United Kingdom and USA which are countries with similar cultural dimension score, which is not the case with Brazil and Portugal, which, being similar on the average, when giving evaluations, demonstrated certain differences in cultural dimension scores. Switzerland and Germany demonstrated discussable results, as being similar – moderately high individualism cultural dimension score countries, they demonstrated rather different results when assessing the information provided by travel agents. The highest score was given by Switzerland and slightly below the average by Germany. At the same time, the program correspondence was rated less positively by Swiss respondents, while Germans improved their average evaluation score.

The results also indicate the importance to consider other factors when integrating intercultural communication into management of a tourism organization. It is obvious, that such factors as organization's human resources, communication and interaction skills play a certain role in information distribution between tourism product Producer Company and the end customers of tourism products. At the same time, it shows certain principles of clustering different cultures. This knowledge can be used to improve organization's communication during product distribution.

Finally, the data of respondents from countries with the highest number of questionnaires received have been correlated to all Hofstede cultural dimensions in order to identify the presence of further research options. The results have been summarized in Table 4.

Table 4

Correlation between 5 Hofstede Cultural Dimensions and Highest Representation Countries

Country	PDI	IDV	MAS	UAI	LTO
Germany	35	67	66	65	31
Italy	50	76	70	75	34
Brazil	69	38	49	76	65
Spain	57	51	42	86	19
Australia	36	90	61	51	31
CORREL Q1	0.599	-0.654	-0.720	-0.009	0.652
CORREL Q2	0.477	-0.616	-0.639	-0.009	0.648

PDI – power distance; IDV – individualism/collectivism dimension; MAS – masculinity/femininity dimension; UAI – uncertainty avoidance; LTO – long term orientation

Source: author's construction based on Hofstede cultural dimensions score (available on http://geert-hofstede.com/dimensions.html) and research data.

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This correlation demonstrated different results from what had been previously considered to be the right approach to analysing the issue as they demonstrated clearly that cultural dimensions with the highest correlation were power distance and long-term orientation. This meant that the end customers originating from countries with higher power distance were more relying on information provided by their travel agents and expressed higher commitment to organized group tours, than those with lower power distance cultural dimension score. Correlation showed also comparably strong correlation between the average answer to both questions and the long term orientation cultural dimension, stating that countries with higher score of long term orientation tended to evaluate higher correspondence of information and program to what had been promised when purchasing the services. This allows concluding that guests originating from these markets most probably arrive better prepared in terms of gathering information and checking details prior to the tour.

Conclusions, Proposals, Recommendations

First of all, even partly considering the experimental character of this research, it can be concluded that certain elements of tourism business organization management can be explained and observed using the existing intercultural communication models and that there is variety of approaches to that. On the other hand, comprehensive analysis and comparison of different cultures and their impact on certain cultural aspects, requires relatively high number of respondents to assure the presence of comparable data. There is also one major limitation. Making analysis of intercultural communication, taking an organization in Latvia, one comes across the major obstacle – Latvia has not been analyzed within the frame of Hofstede cultural dimensions model. Although, an alternative model – GLOBE (Javadin, Dorfman, de Luque, J.House, 2006; Koopman, Hartog, Konrad et.all, 1999), identifies cultural dimension scores in Latvia, it is important to note that the main purpose of the GLOBE model is to concentrate on leadership and cultural differences of leadership, paying less attention to cultural differences of societies or certain social groups. At the same time, considering that any type of cultural interaction needs to be examined from the perspective of interaction between at least two cultures, the achieved results should be explored considering the country where the inbound operator is located and from where the intercultural communication originates.

This particular research demonstrates that countries, when it comes to analysing the impact of culture in specific aspects of operation or management, cannot be grouped and observed, based on their geographical location. Although, there are certain similarities for countries from the same region, cultures differ in various, more complex aspects. Understanding the tourism product related information perception by end customers with different cultural backgrounds can facilitate tour operator's communication with its clients, thus, rising efficiency of communication. Clear understanding of the existing customers and markets may also facilitate understanding of new but similar markets and help to analyse their cultural profiles using Hofstede's cultural dimensions. Performed correlation between Hofstede dimension scores and information correspondence and program correspondence indicated on correlation between power distance dimension and long term orientation dimension. Correlation results between long term dimension scores and evaluation scores confirm author's presumption of interaction between cultural dimensions and perception of information. Thus, for cultures with lower long term orientation score tourism organizations should devote more attention to ways and forms information about their products and services is provided.

Besides, the results and the possible discrepancies when analysing the results, serve as indicators of further researches in this field which should be continued assuring higher number of respondents

from different counties. At the same time, considering that this research has been carried out to identify the possibilities of applying the observed cultural dimensions, the results are found to be satisfactory. It can be concluded that a tourism business organization's product development and promotion would be more successful after integrating the core principles of cultural differences into its marketing and sales strategies. Besides, proper delivery of information and substantial perception of information is directly linked to the overall customer satisfaction, thus, raising the operational success and, eventually, the profitability of the company.

At the same time lack of direct similarities between answers provided by similar cultures (considering similarities of Hofstede dimensions), emphasized need to consider communication between travel agency and clients where product has been purchased, as the way tourists have been treated at their agencies may have direct impact on answers provided at the destination.

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CHARACTERISTICS FOR THE BEHAVIOUR
OF SOCIAL NETWORKS USERS IN GERMANY

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Abstract. Against the background of a comprehensive milieu analyses of Internet users, which were performed between 09/01/2012 and 09/18/2012, factors and correlations between the usage of traditional media, Internet services and social networks within the German market were analysed. It was possible to use 1,607 completed questionnaires, filled in by German users of social networks, for the analysis. The gathered information was applied to test several sub-hypotheses. These were formed to support the main hypotheses which, in turn, were created to research the transfer of existing descriptions of lifeworlds onto Internet users and to investigate how these descriptions can be extended to characterise the online environment. The analysis displays for the actual frame group that several sub-hypotheses relating to the sector of gender specific media consumption, differences between using the internet on a mobile device or a computer, usage of specific functions in combination with mobile Internet, the specific characteristics of social network users for people with business approaches, as also the transfer of offline hobbies into the Internet could be evaluated. For the analysis, the methods of exploratory factor and correlation analyses were used to support and confirm the hypotheses.

These results established the fundamentals for an upcoming comparison, performed on the basis of the existing lifeworlds, which is intended to support the hypotheses in the main research of the doctoral thesis, and to transfer existing milieu theory approaches from the real world into social networks.

Key words: *social networks, user behaviour, brand preference, consumer segments, economic sociology*
JEL code: M310

Introduction

At the present time, the Internet has become a pillar as communication medium in the Marketing mix. With growing opportunities in the sector of customer acquisition, customer loyalty and social media, it is becoming more and more important to understand customer groups and their usage of the Internet in detail. Because of this, it has become increasingly important for companies and their marketing departments to understand the various customer groups found on the Internet, and realise the similarities between them and the behaviour of real life customers and interested parties, that is, if compared to the interaction within the society and the traditional media. The background of the research is comprised of the sociological principles of lifeworlds. It is investigated whether these lifeworlds can be transferred to

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social networks, more specifically, to virtual groups of people. This is done in order to confirm the possibility of applying these essential sociological principles also for the investigation of the Internet industry, thus providing basic principles for a segmentation of Internet users.

According to (Bourdieu, 1980, p. 183), the society consists of accumulations which can only be represented by short-lived and mechanical states of equilibrium. (Schulze, 1992, pp. 176-197) supports this approach of stipulating and choosing relationships on the basis of the character and shape. The term 'social milieu' (Becker, Becker and Ruhland, 1992, p. 80) combines groups of people who are similar in terms of their outlook on life and life style. Consequently, the group has the same living environment (Hradil, 2006, pp. 87-125). The term 'social milieu' (Hradil, 2006, pp. 278-284) denotes a grouping of people that have a similar mentality and often a common 'factual context' (region, district, professional life, etc.). (Flaig, Meyer and Ueltzhöffer, 1994, pp. 109; 124) shows similar characteristics of the description of the living environment, in the context of the living motives as those described by Bourdieu. The most commonly used form of defining the strata and the social environment (Flaig, Meyer and Ueltzhöffer, 1994, p. 55) is the so called Sinus representation (Sinus-Darstellung). The basis for the frequently used Sinus-milieus (Schulze, 1992, p. 391) was set by (Hradil, 1987, p. 131). It contains and broadens the approach by Bourdieu (Vester et al., 1993, pp. 40-41). (Vester et al., 1993, p. 195) points out that the Sinus-milieu (Flaig, Meyer and Ueltzhöffer, 1994, p. 59) is not defined by socio-economic characteristic, but by criteria of one's lifestyle and value orientation. This information is and can be used to differentiate populations and to study people's preferences (Sinus Institute, 2011; Sigma Institute, 2011). The investigation can also take place on a time background, thus grasping the changes in the society. Among other things, this approach is used to describe the political socialization (Vester et al., 1993, pp. 329-354), whereby seven types of sociation for the Federal Republic of Germany can be distinguished, based on the Sinus-Milieus and age structure (Vester et al., 1993, p. 355). This approach has also been used to research Internet users in Germany and Great Britain (Lichy, 2011, pp. 470-475), and differences in the online communication behaviour can be observed. The social differentiation, that is, the connection between personal preferences, the social position and the benefits from the use of the Internet and social networks, has so far not been investigated in the Federal Republic of Germany. As concerns the unresolved issues regarding 'social media' and 'social networks', it is obvious that the foundations of the social structure analysis lie in the market segmentation of Internet and social network users. An estimate of the number of users of a population can be obtained from the approach of social structure analysis. The population can be analysed in terms of certain forms or market segments. Hence, more detailed properties of the development of social networks, web applications, social media activities or customer group analyses can be deduced. In order to confirm the theoretical fundamentals the following (primary) hypothesis has been proposed:

H: The consideration of a participant's lifeworld leads to more reliable results than analysing the sample without taking lifeworlds into account.

This primary hypothesis is supported by various sub-hypotheses which are based, first of all, on qualitatively described results, and second of all, on pure explorative descriptions and approaches which can be validated. This is done in order to support the triangulation of the research methods. For this purpose, three supporting hypotheses have been proposed.

Ha: The selected lifeworlds reveal characteristics, relating to their consumption preferences, which can be described as typical for the respective lifeworld.

Hb: The lifeworlds show characteristics, relating to the use of the Internet, which can be described as typical for the respective lifeworld.

Hc: In a direct comparison of the milieus, the selected lifeworlds reveal significant changes in the results of the SH1-SH10.

In order to confirm the theoretical model, the results of Ha-Hc are tested on a quantitative basis, with an emphasis on the use of explorative methods. Since this is a fundamental research, this methodological approach was chosen. In order to carry out the subsequent analysis, a questionnaire was developed on the theoretical principles (defined) by Pierre Bourdieu, and its usability was, at first, investigated by means of action research, in the form of qualitative interviews. Afterwards, the survey was adjusted to the contemporary period and patterns of internet use. This was achieved within the framework of qualitative workshops, group and brainstorming discussions, as well as by means of a qualitative association survey, which allowed, due to the high number of participants, the performing of a quantitative analysis of the frequencies of qualitative entries. In addition, a quantitative survey was conducted, on the basis of prior qualitative research, to determine the influencing variables of online surveys. Finally, pre-tests of the questionnaire were performed, using small groups, in order to arrive at comprehension questions. The pre-tests also allowed maintaining the bounce and error rate as low as possible, and increasing the number of completed questionnaires. This was done in order to ensure a number of completed questionnaires necessary for a substantial quantitative analysis. The later analysis of SH1-SH10 is performed on the basis of correlation and factor analyses, while the emphasis in this paper falls on ten of the eight possible investigations.

There are different approaches for the calculation of correlation coefficients. The rank correlation coefficient by Spearman (Schira, 2005, p. 95) is used for ordinally scaled data; the Product Moment Correlation Coefficient by Pearson (Schira, 2005, p. 94) and Bravais-Pearson (Mayer, 1989, p. 93) is used for metrically scaled data. According to (Cohen, 1988, p. 82) correlations at r = .10 are regarded as insignificant, from r = .30 as medium and from r = .50 as large. (Bühner/Zielger, 2009, pp. 613-614) refer also to the effect size, according to Cohen and (Eid, Gollwitzer and Schmitt, 2011, p. 508). The results of the correlation analysis form the basis of the factor analysis. Factor analysis is derived from the beginnings of correlation analysis in the field of psychology (Pawlik, 1971, p. 21). The first factor model was developed by (Spearman, 1904, pp. 256-278). The currently used methods are the principal component model (Pawlik, 1971, p. 58), which was introduced Harold Hotelling in 1933, and the major axis model, also developed by Hotelling. These methods are based on prior calculations of correlation analysis (Pearson, 1901, pp. 559-572). Various methods are used for the calculation of the exploratory factor analysis (Bühner, 2011, p. 298). For the scope of factor analysis, (Köhler, 2004, p. 99) indicates that the sample size should be 5 times larger than the number of variables in the survey. (Bühner, 2011, pp. 325-326) recommends using at least 500 data sets, and at least 1000 for a likelihood ratio test. Various recommendations are made for the loading of various factors. (Backhaus, Erichson and Weiber, 2011, p. 362) suggests that a high loading starts from > 0.5. (Bagozzi/Baumgartner, 1994, p. 402) see the factor loading of 0.4 as a threshold starting from which the loadings can be taken into consideration. Thus, factor loadings depend on the sample; as concerns samples with an N under 70, only the factor loadings over 0.65 should be considered. (Köhler, 2004, p. 98) regards 0.3 as the limit of the factor loading and points out that the significance at this level is only 10%. Based on his literature review, (Schuhmacher, 2006, p. 98) states that a factor loading of 0.3-0.4 means minimum statistical significance, a range from 0.4-0.5 implies low significance and 0.5-1 indicates strong statistical significance. According to (Bühner, 2011, p. 371), factor loadings starting from 0.30 or 0.20 are of practical significance. Additionally, the significance of loadings, whether strong or low, depends on the sample size. (Bühner, 2011, pp. 370-371) states that at N=400 the r > 0.129, at N = 600 the r > 0.105, at N = 800 the r > 0.091 and at N = 1.000 the r is significant by > 0.081. This may also influence the choice and number of the factors. (Reinboth, 2007, p. 37) states that there are no rules as to how the number of factors should be correctly defined. The factors with a low significance should be removed within the model and, at this point the experience of the user is of importance. Additionally, it is important to take into consideration that the unrotated solutions are, as a rule, not open to interpretation (Kopp/Lois, 2009, pp. 15-17). The Kaiser-Meyer-Olkin measure (KMO), which indicates whether variables can even be explained by factors, must be

investigated (Backhaus, Erichson and Weiber, 2011, p. 343; Bühner, 2011, p. 347), as well as the Barlett-Test (Reinboth, 2006, pp. 125-126; Backhaus, Erichson and Weiber, 2011, pp. 341-342).

The evaluated data of ISS2012 confirm that the respondents are private Internet users with a personal Internet connection and a place of residence in the Federal Republic of Germany. Thus, the Internet users are characterised by a set of demographic data (such as 892 female and 715 male participants; the average year of birth: 1983, median: 1987, mode: 1991; Internet since average: 2000 median: 2001; 431 of the 1,607 participants did not have mobile Internet access). The data in this respect, as well as regarding the family status, matches the number of persons living in a household. The average number of persons per household is 2.62, with a median/mode of 2 people. Fundamentally, higher education entrance qualification is mentioned most often. The number of times higher education entrance qualification (Abitur) is mentioned is almost the same as the number of entries containing the status of student. The income group of under 10,000 € is indicated as the mode which can be associated with the high number of students and pupils. The median shows the exact average income level of 35,000 - 44,999€. A comparison of the main demographic and Internet usage data, as well as a review of findings described in other studies, it seems that the population obtained is not a perfect representation of the basic population. But it must also be considered what features characterise a sample if certain sets of features are not available, or there is the question of representativeness: 'This question to which there is no answer, shows that it is essentially meaningless to speak about a "representative" sample. Variations of the sample distribution are not an exception, but rather the rule' (Stier, 1999, p. 159). Deviations must, therefore, be expected. Random samples allow, however, drawing representative conclusions. It must also be taken into consideration that statements on representative surveys or representative samples have no precisely defined quality criteria (Esser, Hill and Schnell, 1992, pp. 314-315) and that this information represents a random sample for a later evaluation of predefined customer segments, based on lifeworlds. In general, it can be stated that a complete sample group consisting mostly of young and active Internet users has successfully been obtained. Other sectors of the society have been reached and covered as well. Therefore, the sample is ideal for demonstrating the possibilities of analysing the lifeworlds of the Internet users as well. An examination of the sub-hypotheses should provide new and significant information on the general behaviour of social network users, as well as confirm existing assumptions. With this information, significant basements foundations for the usage of social networks are set, including information which can be used for product development approaches in the sector of mobile and Internet communities in the context of Web 2.0, including the ability to understand customers in greater detail for marketing approaches. The investigated hypotheses provide a good basis, first of all, for the testing of the hypotheses from the preliminary research, and, second of all, for the subsequent confirmation of Hc. The investigate hypotheses also support Ha and Hb, during a milieu comparison, by means of continuing descriptive investigation and evaluation, thus confirming the primary hypothesis at least qualitatively, but with quantitative elements.

Research results and discussion

Based on the collected data, the following section contains an examination of SH1-SH8 from the main research on user behaviour in social networks. The sub-hypotheses are analysed in order to determine their validity. They are used to further examine different lifeworlds with the aim of supporting the main hypotheses. The analysis is performed on the basis of the outlined theoretical fundamentals. Based on the particular scale type, the methods used for correlation analysis are product-moment correlation (PMC) by Pearson and Spearman's rank correlation coefficient (SRCC). As concerns factor analysis, it was carried out with a rotation, namely, the varimax rotation (Kaiser, 1958, pp. 187-200). The anti-images were taken into consideration as well. In addition, principal axis factor analysis was used as a basis for the factor

analysis. The KMO of the respective area of analysis is indicated for each EFA. All results display a two-tailed significance level of 0.01 (Stier, 1999, pp. 245-246). The sub-hypotheses with the respective additional sub-hypotheses are studied in an ascending order. A closing statement as to whether the sub-hypothesis can be regarded as confirmed is provided.

SH1: An increasing household income has a positive and significant impact on the living environment of the participant. SH1a: There is a significant correlation of at least ρ > -0.3 between the household income and the time when an Internet connection is installed in the household. The SRCC shows a value of -.306 between the variables of household income and the beginning of Internet use. This means that the higher the gross income of a household, the sooner it started using the Internet. SH1a can be considered as confirmed. *SH1b: There is a significant correlation of at least ρ > +0.3 between the household income and its residential environment.* An SRCC of +.401 exists between the variables of household income and the residential environment. This means that the size and independence of the living environment increase with household income. SH1b can be considered as confirmed. *SH1c: There is a significant correlation of at least ρ > +0.3 between the household income of the participant and his educational qualification.* The SRCC shows a value of +.299 between the variables of household income and the educational qualification. It can be assumed that a higher educational qualification leads to a higher household income, and a higher household income allows achieving a higher educational qualification. Unfortunately, SH1c cannot be considered as confirmed. SH1 can be considered as confirmed, provided that SH1c tends to be considered as confirmed as well. A significant SRCC value of +.352 can be observed between household income and car ownership, while a high negative SRCC value of -.112 exists between household income and the wish to own an car. There is also an SRCC of +.316 between household income and the owning a dishwasher. A rising household income seems to lead to a more positive social environment, provided that it includes property, education, a better living environment, as well as technical facilities. Additionally, there is an SRCC of +.147 is between the household income and gender. In this case it means that an increasing household income correlates with the male gender with a value of +.147.

SH2: There is a significant and positive correlation between particular media content and gender. SH2a: There is a significant correlation of at least ρ > +0.3 between the female participants and consumption of romantic films. A PMC/SRCC of +.458 can be observed between the gender of the participant and the preference for romance films. The calculated value indicates a correlation of +.458 between the female gender and romance films. Although the level of +.5 was not reached, this correlation is very high. SH2a can be considered as confirmed. *SH2b: There is a significant correlation of at least ρ > +0.3 between the male participants and consumption of action films.* A PMC/SRCC of +.342 can be detected between participants of the male gender and the preference for action films. The sub-hypothesis can be considered as confirmed. In addition, it is worth mentioning in this context that the male gender and the preference for war films, which tend to contain action, correlate with a value of +.223 (PMC/SRCC). SH2b can be considered as confirmed. *SH2c: There is a significant correlation of at least ρ > +0.3 between the male participants and consumption of TV content relating to sports.* There is a PMC/SRCC of +.331 between the male participants and the preference for TV content relating to sports. It is additionally revealed that there is a PMC/SRCC +.255 between the broadcaster Sport1, which focuses on sports, and the male gender. This correlation is the highest between the male gender and a certain TV station, which supports the assumption that sports, is watched more by men. SH2c can be considered as confirmed. *SH2d: There is a significant correlation of at least ρ > +0.3 between the female participants and consumption of romantic literature.* There is a PMC/SRCC of +.387 between the female participants and the preference for romance literature. This confirms the assumptions that romance literature, as well as romance films, are usually enjoyed by women. SH2d can be considered as confirmed. Basically, the various sub-hypotheses of SH2 indicate that certain types of content show a tendency towards a specific gender, regardless of the medium. The differentiation between the genders is shown also by other types of content. As concerns female participants, there is a PMC/SRCC of +.191 with drama films and +.212 with literature belonging to the drama genre. The situation is similar with detective

stories which have a correlation of +.189 with female participants. As regards TV content, there is a PMC/SRCC of +.172 between the female participants and cooking shows, +.187 with soap operas and +.190 with TV films. As concerns literature, higher correlations can be observed for the male gender. There is a correlation of +.173 between male participants and comic books, +.181 with science fiction, +.208 with scientific journals and +.247 with trade magazines. By definition, trade magazines do not have to be scientific. These can also be specialised magazines about hobbies, such as cars, business and crafts. As concerns films, science fiction has a correlation of +.261 with the male gender. Regarding other demographic data, none of the variables of the residence, marital status, level of education, household income, or family status have a more significant impact on the media consumption as gender. None of the mentioned variables has a correlation exceeding +/-.1. SH2 can be considered as confirmed.

SH3: There is a highly significant correlation of at least ρ > +0.5 between the duration of Internet use during the week and at the weekend. In the following, the values refer first to a population of n=1,607, including all the participants, and a population of n=1,177, including the participants who indicated the availability of mobile Internet in advance. *SH3a: There is a highly significant correlation of at least ρ > +0.5 between the duration of using the Internet on a desktop computer during the week and at the weekend.* There is a highly significance SRCC value of -.724/-.745 between using the Internet on a desktop computer during the week and at the weekend. SH3a can be considered as confirmed. *SH3b: There is a highly significant correlation of at least ρ > +0.5 between the duration of using the Internet on a mobile device during the week and at the weekend.* There is an SRCC of +.864/+.776 between using the Internet on mobile device during the week and at the weekend. SH3b can be considered as confirmed. *SH3c: There is no correlation of at least ρ > +0.3 between the duration of using the Internet on a desktop computer or a mobile device.* There is an SRCC of -.051/+.045 between using the Internet on a desktop computer during the week and a mobile device during the week. There is an SRCC of -.068/-.001 between using the Internet on a desktop computer during the week and using the Internet on a mobile device at the weekend. There is an SRCC of -.061/+.011 between using the Internet on a desktop computer at the weekend and using the Internet on a mobile device during the week. There is an SRCC of -.030/+.139 between using the Internet on a desktop computer at the weekend and using the Internet on a mobile device at the weekend. In addition, there is no significance of the measurements, or a significance of the level of 0.01. Sub-hypothesis SH3c can, therefore, be considered as confirmed, since the correlation with the other values is low. SH3 can be considered as confirmed.

SH4: There is a positive and significant correlation between the duration of using the Internet on a mobile device and the use of certain functions within social networks. SH4a: There is a significant correlation of at least ρ > +0.3 between the time spent online from a mobile device and the intensity of uploading pictures. There is an SRCC of +.280 between uploading of pictures and using the Internet on a mobile device during the week. There is an SRCC of +.256 between tagging friends in messages and using the Internet on a mobile device at the weekend. SH4a can be considered as unconfirmed. *SH4b: There is a significant correlation of at least ρ > +0.3 between the time spent online from a mobile device and the intensity of tagging friends in pictures.* There is an SRCC of +.232 between tagging friends in pictures and using the Internet on a mobile device during the week. There is an SRCC of +.211 between tagging friends in messages and using the Internet on a mobile device at the weekend. Therefore, SH4b can be considered as unconfirmed. *SH4c: There is a significant correlation of at least ρ > +0.3 between the time spent online from a mobile device and the intensity of tagging friends in messages.* There is an SRCC of +.262 between tagging friends in messages and using the Internet on a mobile device during the week. There is an SRCC of +.241 between tagging friends in messages and using the Internet on a mobile device at the weekend. Therefore, SH4c can be considered as unconfirmed. *SH4d: There is a significant correlation of at least ρ > +0.3 between the time spent online from a mobile device and the intensity of using the location function.* There is an SRCC of +.347 between the use of the location function and using the Internet during the week. There is an SRCC of +.346 between using the location function and using the Internet at the weekend. SH4d can be considered as confirmed. *SH4e: A significant factor can be*

defined for the functions of SH4a-SH4d. The factor analysis (KMO, 910; Sig by Barlett, 000) shows a factor of 4, which is composed of the mentioned functions with the appropriate loading. In detail, the factor consists of the functions: tagging friends in pictures with a loading of +.692, tagging friends in messages with a loading of +.684, sharing one's location with a loading of +.430 and uploading images with a loading of +.508. These are followed, by posting status messages with +.329 and, among others, the social network WhatsApp with +.234. The network WhatsApp fits in this overview as a network which has no connection to the Internet as it is used on a desktop computer. This connection is supported by the factor of 5 of the analysis. Due to this factor, SH4d can be considered as confirmed. It was possible to confirm only two of the five sub-hypotheses. It can therefore be debated about whether there is a connection between the mobile Internet and the usage of certain functions, which is why SH4 is not considered as confirmed. In this case, further research would be necessary, since the connection can be different even when viewing certain target groups. The correlation between the mentioned functions and the mobile Internet is much more significant than between the functions and using the Internet on a desktop computer. There are significant correlations between the functions themselves which suggest that the use of certain functions depends on the use of others. This is also evident in SH4e which generated a matching factor; however, due to the different scaling in the factor analysis, the time spent online has not been evaluated.

SH5: There is a significant correlation between social networks and the intensity of their use. SH5a: There is a significant correlation of at least $\rho > +0.3$ between social networks with the same user layers. The examination of the correlations showed an insignificant value of $\rho > +0.3$ for the networks G+, HI5, ICQ Jappy, Kwick, Stay Friends, Wer-kennt-Wenn, WhatsApp and YouTube. These are mostly networks, which, either, have been fighting with a constant loss of users in 2011 and 2012, or fulfil simple chat service functions, thus operating on a sub-area of social networks, or as part of the Google network. As concerns other networks, there is a PMC of +.338 between MySpace and MSN Live: two networks which have suffered a substantial loss of users in the past. It is conspicuous in this context that there is also a correlation of +.332 between the intensity of use of the VZ Netzwerke and that of MySpace. There is a PMC of +.511 between the social networks in the sector of business networks, which will be discussed in detail later. One of them, Xing, also correlates with Flickr (+.318) and 4SQ (+.318). Apart from that, there are significant connections between the networks.

Table 1

Correlation matrix for the intensity of the use of social networks

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Flickr (1)	1	+.385	+.406	+.420	+.372	+.353	+.282	+.363
4SQ (2)	+.385	1	+.408	+.276	+.419	+.400	+.267	+.431
Instagram (3)	+.406	+.408	1	+.314	+.245	+.361	+.329	+.373
LastFM (4)	+.420	+.276	+.314	1	+.247	+.295	+.355	+.280
LinkedIn (5)	+.372	+.419	+.245	+.247	1	+.390	+.208	+.338
Pinterest (6)	+.353	+.400	+.361	+.295	+.390	1	+.317	+.297
Spotify (7)	+.282	+.267	+.329	+.355	+.208	+.317	1	+.232
Twitter (8)	+.363	+.431	+.373	+.280	+.338	+.297	+.232	1

Source: author's calculations based on the information gathered from the ISS2012

This evaluation gives a very different result; there is a strong connection between particular networks of the English-speaking world, which have different target audiences. Regardless, SH5a can be considered as confirmed. *SH5b: Significant factors consisting of social networks can be defined.* The factor analysis (KMO .915; Sig. by Bartlett .000) shows three factors consisting mainly of social

networks, from the survey questions focusing on the use of the Internet. Factor 2 is most interesting, as it mainly includes English-language networks, each of which occupies a market niche. The first factor contains mainly niche networks and is led by certain new networks which focus on special users groups or web functions. This factor has a loading of +.625 for 4SQ, followed by Instagram with +.597, Flickr with +.572, Pinterest with +.557, LinkedIn with +.541, LastFM with +.477, Twitter with +.474, Spotify with +.428, and Xing with +.412. In addition, this factor is one of the few with a strong negative loading of -.041 for chatting, of -.063 for tagging friends in pictures and -.137 for playing games on social networks. Afterwards, the analysis shows an additional factor, factor 7, which consists mostly of older networks or networks which are not evident in the correlation analysis. The factor for MSN Live has a loading of +.535, followed by +.470 for ICQ. +467 for MySpace, +.441 for Jappy, +.406 for VZ Netzwerken, +.325 for Kwick and +.306 for YouTube. In addition to this, there is the peculiar factor 12 with a positive range and the value +.497 for Stayfriends, +.312 for Wer-kennt-wen and +.307 for VZ Netzwerken. In contrast, there appears a very interesting range of factors with negative loadings. Here, WhatsApp has a loading of -.112, Spotify has -.140, the use of social networks for chatting has -.190 and YouTube has a negative loading of -.225. This shows the distinctiveness of the factor, as well as perhaps of the other niche networks that differ significantly from the very modern and new networks Spotify and WhatsApp. SH5b can be considered as confirmed. Both SH5 sub-hypotheses can be considered as confirmed. Therefore, SH5 can be considered as confirmed.

SH6: There is a significant correlation between the intensity of using business networks, specific users and the factors motivating them to use business networks. SH6a: There is a significant correlation of at least ρ > +0.3 between the intensity of using business networks and the motivation to find business partners and customers. Both networks (Xing and LinkedIn) have a PMC which exceeds +.3. There is a PMC of +.372 between LinkedIn and the motivation to search for customers and business partners. There is a high PMC of +.434 between Xing and the motivation to search for customers and business partners. Therefore, SH6a can be considered as confirmed. *SH6b: There is a significant correlation of at least ρ > +0.3 between the intensity of using business networks and the motivation to search for jobs using social networks.* In general, however, job search is associated with the intensity of using the two networks (LinkedIn and Xing). There is a correlation of +.268 between LinkedIn and job search, and +.305 between Xing and job search. Due to the fact that both networks are very similar and no such correlations can be seen for other networks, it is assumed that career change is a motivational factor for using Xing and LinkedIn. SH6b is formally regarded as unconfirmed. Nevertheless, a notable correlation exists; especially Xing exceeds the significant limit. *SH6c: There is a significant correlation of at least ρ > +0.3 between the motivation to find business partners and customers and to search for jobs using social networks.* There is a PMC of +.470 between both motivations. SH6c can be considered as confirmed. *SH6d: There is a significant correlation of at least ρ > +0.3 between the motivation to find business partners and customers and to establish contacts within social networks.* There is a PMC of +.368 between both motivations. Establishing contacts in social networks has a PMC of +.199 for LinkedIn and +.220 for Xing. Therefore, SH6d can be considered as confirmed. *SH6e: A significant factor can be defined for the functions of SH6a-SH6d.* Factor No 5, provided by factor analysis (KMO .915; Sig by Barlett .000) is led by the search for business partners with a loading of +.668, and followed by the use of networks for job search with +.608, the intensity of using of Xing with +537, LinkedIn with +454, and the intention to establish contacts with +.412. Therefore, SH6e can be considered as confirmed. *SH6f: There is a significant correlation of at least ρ > +0.3 between the intensity of using business networks and the educational qualification of the user.* There is an SRCC of +.324 between LinkedIn and the educational qualification of the participant. There is an SRCC of +.409 between Xing and the educational qualification of the participant. SH6f can be considered as confirmed. *SH6g: There is a significant correlation of at least ρ > +0.3 between Xing and LinkedIn.* There is a highly significant PMC of +.559 between the intensity of the use of both business networks Xing and LinkedIn. SH6g can be considered as confirmed. UH6a-UH6g indicates a very specific situation regarding the users of business networks. As

already determined during the interviews, business networks are used in order to make career changes and create new opportunities. In addition, it is confirmed that the level of education is of importance when speaking about the use of these networks. SH6b was not confirmed, but it shows a clear trend for the German market. This raises the question of how similar the significance of LinkedIn and Xing is. Based on the measured significance, a high similarity can be expected. It can be expected that here by a speciality for German users exists, which focusses the usage of those networks more work related as users with a more international mind. The rest of the sub-hypotheses were confirmed. Based on the intensity of the variables LinkedIn/Xing, establishing contacts, household income, job search, search for business partners, regression analysis (Stier, 1999, pp. 248-250) shows an R value of .454 for the calculation of Xing and a value of .352 for the calculation of LinkedIn. This also strengthens the link between these variables and points to certain characteristics of the user layer of business networks. Therefore, SH6 can be regarded as confirmed if the hypothesis focusses on the German market of business networks only. For an international approach the SH6 cannot be considered as confirmed.

SH7: There is a significant correlation between the intensity of using the Internet for political discussions and the intensity of using communication functions. SH7a: There is a significant correlation of at least $\rho > +0.3$ between the motivation to hold discussions relating to politics and the intensity to leave comments. There are positive PMC values between the motivation to discuss political issues and posting comments. However, the correlation for the commenting of content has only a PMC of +.294 and making comments in general has the value of +.238. In addition, discussing events shows a PMC of +.249. None of the points has a correlation value of +0.300. Consequently, SH7a is regarded as unconfirmed. A general tendency appears nonetheless, that the intensity of holding political discussions is related to openness and intensity of making comments in general. *SH7b: There is a significant correlation of at least $\rho > +0.3$ between the motivation to hold political discussions and to exchange opinions.* There is a PMC of +.442 for the intensity of the motivation to exchange opinions. In addition, the motivation to discuss political issues correlates with the intensity of discussing events with +.617 and discussing TV content with +.329. SH7b can be considered as confirmed. *SH7c: There is a significant correlation of at least $\rho > +0.3$ between the motivation to hold discussions relating to politics and to share web-sites within social networks.* There is a PMC of +.315 between the motivation to discuss political content and the intensity to share websites on social networks. Therefore, SH7c can be considered as confirmed. Additionally, further noteworthy PMCs have appeared. The motivation to discuss content relating to politics correlates with the intensity to share content among people with a value of +.259, with the intensity of sharing videos in social networks with a value of +.258, and with using social networks to exchange content with a value of +.314. It also seemed striking during the investigation that the motivation to discuss content relating to politics correlates significantly with the intensity of creating content with a value of +.327. Furthermore, there is a PMC of +.239 with the intensity of using blogs, which is the highest correlation value for blogs, as well as the strongest correlation between the Internet services. *SH7d: A significant factor can be defined for the functions of SH7a-SH7c.* Factor analysis (KMO .914; Sig. by Barlett .000) indicates a factor, led by the motivation to discuss the daily events with a loading of +.688, and followed by discussing politics with a loading of +632, discussing TV content with +.457 and exchanging opinions with +.386. SH7d can be considered as confirmed. Formally, SH7 cannot be considered as confirmed, since SH7a was not confirmed. SH7 basically shows that politically active people, who share content related to politics, are generally of communicative nature and share other types of content as well, but in general SH7 is regarded as unconfirmed.

SH8: There is a significant correlation of at least $\rho > +0.3$ between the user's degree of interest in listening to music as a leisure activity and the intensity of taking part in online services which offer music. As concerns leisure activities, listening to music and listening to music on the Internet has a PMC of +.486. In addition, leisure activities correlate with watching videos on the Internet with a value of +.294. There is a highly significant correlation of +.509 between listening to music on the Internet and watching

videos on the Internet. The strong correlation might have the explanation that people consume music in the form of music videos. In addition, there is a correlation of +.300 between listening to music on the Internet and consuming TV content on the Internet. There is no such connection between leisure activities and watching television. It is interesting that the above points of leisure activities and the use of Internet functions have a negative correlation with spending time with the family as a leisure activity. Basically, SH8 shows that one's hobbies can be transferred to the Internet. Therefore, SH8 can be considered as confirmed.

Conclusions, proposals and recommendations

The results of the analyses display a positive trend. In general, it is evident that the findings of the preliminary research can be proved. The results also made it possible to gather a large number of online and offline behaviours, and to make specific assertions concerning the examined user layer. In addition to the discussed SHs, two additional SH, related to Facebook usage, usage of security settings and music consumption, could be confirmed. The results must be viewed, however, against the validity of the sample.

In particular, the sub-hypotheses reveal quite a homogeneous trend. SH1 partly demonstrates the influence of the salary on the quality of life, while SH1c is barely unconfirmed (by .001). This was also evident in the verification of SH2 along with SH2a, SH2b, SH2c and SH2d which were confirmed. As regards demographic data, there is a question of whether these fundamental statements also prove a layer overlap, so that it can be used as a confirmation of the main hypotheses. The SH3, along with SH3a, SH3b and SH3c, was confirmed completely. It also raises the question of how the intensity changes in different lifeworlds. As concerns SH4, SH4a, SH4b and SH4b, these were not confirmed to the required extent; however, the factor established in SH4e contains components which previously did not exceed the threshold value. SH5a and SH5b provide an interesting representation of the differentiated market of niche networks. It needs to be further investigated if there are groups of people who are usually present, more specifically, how the user structure would differ under specific circumstances. This includes the obtained factors which partly show interesting negative loadings and give a significant summary of dying networks. SH6, which is mostly based on the preliminary research, can be seen as partly confirmed. The sub-hypotheses SH6a, SH6b, SH6c and SH6d show am interesting situation. SH6b does not reach the value of +0.3 for LinkedIn, which begs the question if this could be regarded as a satisfactory level. The validity of the hypotheses and the determined connections can also be confirmed by a factor in SH6e, which has also demonstrated a connection of SH6f. As regards SH6, it can be viewed as confirmed, as mentioned, for Germany, but not in an international context. It would be interesting, in general, to see if the values shift in a different age or lifeworlds setting, or the data on the users is universal. During further analysis, additional information can be gathered especially from this research question. SH7 was not confirmed, based on the results for SH7a. SH7b, SH7c and SH7d were confirmed and support with this the tendency of SH7a; further research is necessary in order to obtain more precise results. It would have to be investigated separately if people who mainly communicate online would rather discuss politics, or people who discuss politics mainly communicate online. This begs the question about the type of interaction this illustrates. Such an investigation is not, however, the focus of this paper and is not a supporting factor for the main hypotheses, which research in the direction for differences in user segmentations. The confirmed SH8 shows an example that it is possible to transfer certain types of leisure activities to the Internet. The example with the consumption of music suggests that primarily passive hobbies can undergo such a transfer. This could be investigated in a separate elaboration. The sub-hypotheses show that it was possible to provide meaningful substantiation for the experiences, assumptions, and observations

discussed in preliminary research. The analysis showed that it was not possible to confirm some of the sub-hypotheses to the desired extent, for example, for SH7a. It must be investigated, as part of the continuing verification of the main hypotheses, if they showed more significant values, based on the obtained sample, if the different lifeworlds were taken into account.

Owing to significant correlation levels and loadings of factor analysis, the results of this study raise additional expectations which require further research and may possibly lead to further results. This includes, among others, SH4 which could provide different results through the investigation of other user groups. There is a strong emphasis in the present paper on young participants. This raises the question if the hypotheses would exist in differentiated lifeworlds or there would be shifts. In light of SH1 and SH7, the results allow expressing the first general recommendations. If there is a correlation between the availability of financial means and the ability to use the Internet, as demonstrated by SH1, Internet access should be granted to people in order to avoid discrimination caused by a lack of finances. Moreover, SH7 shows, with certain significance, that people use the Internet to discuss issues related to politics. This can be important for a country to maintain democracy and provide its people with the opportunity for open discussion. There should be a political demand, proved by statistical data, for a free, government-guaranteed Internet access, and no restrictions should be imposed on it. As concerns the degree to which a state needs to protect itself and its citizens, a generally free access to the Internet, in view of a democratic society, should not be limited.

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INTEREST RATE IMPLIED VOLATILITY AND CONSUMER SENTIMENT

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Abstract. In this paper we examine the information content of interest rate volatility for explaining the economic agents' expectations on the business cycle as measured by consumer confidence indicators. The volatility measure is the one-year implied volatility of caps and floors. We find that implied volatility adds significantly to the yield spread and the change in the short-term interest rate in explaining consumer sentiment before and during the current financial crisis in the U.S. and Germany. Moreover, implied volatility outperforms realized volatility in all of the cases.

Key words: *consumer sentiment; expectations; term structure of interest rates; implied interest rate volatility*

JEL code: E32, E43

Introduction

There is a lot of literature concerning the ability of financial variables to predict business cycle. Kessel (1965) showed evidence, for the first time, on the procyclical behaviour of the yield spreads between nine-to twelve-month government securities and Treasury bills in the U.S. for the period from 1942 to 1953. Since the late eighties, consistent empirical evidence on the predictive power of the yield spread can be found for different countries and time periods.[2] See, for instance, Estrella and Hardouvelis (1991) for evidence in the U.S. over the period 1955-1988; Davis and Fagan (1997) for the E.U. countries from various 1970s up to 1992; Estrella and Mishkin (1997) for the U.S., the U.K., Germany, France, and Italy, covering the period from 1973 to 1995; Kozicki (1997) for the G-7, Australia, Sweden, and Switzerland from 1970 up to 1996; or, more recently, Duarte *et al.* (2005) for the Euro area over the period 1970-2000.[3]

Harvey (1988) provides a theoretical model based on the CCAPM that establishes a positive linear relationship between expected real yield spreads and expected consumption growth. The underlying idea behind this model can be described as follows. If investors expect an economic downturn, they will tend to reduce current consumption in order to invest in long-term bonds that will provide an extra income in the bad times. This practice then will raise the price of long-term bonds and reduce the corresponding long rate, whereas the sale of short-term bonds will push short rates up. As a result, the yield curve will flatten.

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[2] The most commonly used spread in the literature is the one computed as the difference between the yield on a ten-year government security and the yield on a three-month security.

[3] See also Wheelock and Wohar (2009) for a review of the most recent research on the usefulness of the term spread for predicting changes in economic activity. According to the authors, many studies find that the spread predicts output growth and recessions up to one year in advance, although several also find that its usefulness varies across countries and over time.

Harvey (1988) tests this model on U.S. data from 1953-1987 and finds that the short end of the real term structure of interest rates is significant for predicting consumption growth from quarter $t+1$ to quarters $t+3$ and $t+4$, mainly since 1972. Furthermore, he finds that the model outperforms both in sample and out-of-sample alternative models based on lagged consumption growth or lagged real stock returns as explanatory variables.

Results in Harvey (1988) show that the short-term expected real rate does not contribute significantly to the explanatory power of the model, thus Harvey (1989) extends the analysis in Harvey (1988) by using a simplified version of his model in which the only explanatory variable is the spread, with the expected real short-term rate contained in the intercept. In addition, some other changes are introduced into the model. In particular, the U.S. real GNP annualized growth from quarter $t+1$ to quarter $t+5$ is used as a proxy of expected consumption, and the real yield spread is also replaced by the nominal spread, where the long-term rates are the five- and ten-year yields instead of the yield of a bond with five quarters to maturity. He finds that the spread alone is able to explain more than 30 per cent of the variation in economic growth. The simplified version of the model is also tested for the G-7 countries over the period 1970-1989 by Harvey (1991), where the most favorable empirical evidence on the predictive power of the yield spread is reported for Canada, Germany, and Italy, in addition to the U.S.

Another branch of the literature (see Davis and Henry, 1994; Davis and Fagan, 1997; Dueker, 1997; Dotsey, 1998; and Hamilton and Kim, 2002, among others) attributes the ability of the yield spread to forecast economic activity to monetary policy actions. The argument runs as follows. A contraction of monetary policy causes short-term interest rates to rise; however, market participants will probably expect future short-term rates to be lower than current short-term rates once economic growth slows or inflation decreases. As a result, according to the expectations theory of the term structure, long-term rates will rise less than short-term rates and, hence, the slope of the yield curve will drop. Monetary policy tightening will bring about a future decline in investment and, consequently, an economic deceleration. Thus, the yield spread falls in advance of an economic slowdown and vice versa.[4]

The monetary policy explanation has been repeatedly tested in the literature by regressing real economic growth from time t to time $t+N$, on both the yield spread observed at time t and a new variable representing the current stance of monetary policy. That is,

Based on this regression equation, Estrella and Hardouvelis (1991) find that the yield spread (computed as the difference between yields on ten- and three-month Treasury securities) alone is able to explain more than 30 percent of the cumulative change in real GNP from three- to eight-quarter horizons, and that it continues to be statistically significant when the real (nominal) federal funds rate or the three-month Treasury bill rate are also significantly included into the equation as explanatory variables. That is, the spread appears to contain information for future economic growth over and above that provided by variables that reflect the stance of monetary policy.[5] Plosser and Rouwenhorst (1994), Estrella and Mishkin (1997), Moersch (1996), Kozicki (1997), Dotsey (1998), and Hamilton and Kim (2002) confirm these results and extend the evidence to other countries.

Thus, the joint forecasting ability of the yield spread and short-term interest rates on economic growth has been consistently tested in the financial literature for different countries. Concerning interest rate volatility, we are aware of only a few studies that address the information content of interest rate volatility for predicting economic activity.

Andreou *et al.* (2000) analyze the behavior of certain financial variables and their volatilities over the business cycle in the U.S., the U.K., and Germany from 1970 up to 1998. Volatilities are calculated as the square of the first difference of the series. They find that the volatility in the term structure appears to be

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[4] Nevertheless, according to Wheelock and Wohar (2009), this argument has been usually stated with little underlying theory.
[5] According to Beranke and Blinder (1992), short-term rates can be considered good indicators of monetary policy actions.

procyclical and to lead industrial production growth in the U.K., whereas the volatility of real short- and long-term rates appears to have countercyclical and leading indicator properties in Germany.[6] However, interest rate volatility does not seem to lead economic activity in the U.S.

Annaert et *al.* (2001) analyze the extra information content of short-term interest rate and stock return volatility over two traditional leading indicators of the business cycle: the yield spread and stock returns. Volatility estimates of short-term interest rates as constructed as mean absolute deviations, over a one-month interval, of daily changes in three-month interest rates. Results in this study show that interest rate volatility adds significantly to the yield spread and real stock returns to forecast the probability of future recessions up to twelve months in advance in the U.S., Germany, and Japan for a sample starting at different 1960s and ending at 2000. As expected, higher interest rate volatility increases the probability of entering a recession. However, the sign and the statistical significance of stock return volatility differ between countries.

More recently, Fornari and Mele (2009) analyze the single and in blocks forecasting power on industrial production growth of a wide set of macroeconomic and financial variables and their volatilities (including the yield spread) in the U.S. for the period 1957-2008. They obtain that in-sample forecasts of up to two-year growth in industrial production based on the volatility of the spread between the ten-year government bond yield and the three-month Treasury bill rate outperform forecasts based on stock market volatility. Volatility is defined as a moving average of past absolute returns.

As stressed, all these studies use volatility estimates based on historical data. So far, we are not aware of any study that analyzes the forecasting performance of, according to Annaert *et al.* (2001), the most forward-looking volatility estimate: the volatility implied from interest rate options. We build on this issue by analyzing the information content of interest rate volatility for explaining economic agents' expectations regarding the future state of economy.

Data

The study is performed on U.S. and Germany data from January 1995 to July 2011. Next we describe the four variables involved in our empirical model: the consumer confidence index (CCI), the yield spread, the change in the three-month interest rate, and the one-year implied volatility. Then we analyze the statistical properties of the series.

In order to measure expectations about future economic activity, we employ the Conference Board CCI for the U.S. and the Icon CCI for Germany. Data have been obtained from Reuters.

The link between consumer confidence and spending can be found in the work by Katona (1968). The author states that consumer spending is a function both of ability to buy and willingness to buy. While the ability to buy is mainly a function of disposable income, the willingness to buy depends primarily on attitudes and expectations about personal finances and the economy as a whole. And this is specifically what questions included in these two indices cover.

In addition, according to Curtis (2007), consumer spending accounts for one-half to two-thirds of all spending in market-based economies, and hence even small changes in household spending can have a major impact on the economy. Empirical evidence in this study for an extensive group of countries shows that consumer confidence in Germany and the U.S. (based on the same questionnaires that we use in this paper) Granger causes changes in more than 50% of the economic variables included in the analysis.[7]

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[6] See also Sun (2005) and Gerlach *et al.* (2006) for further evidence on the countercyclical properties of the volatility of short-term interest rates (Treasury bill rates and interbank rates) and bond returns, respectively.
[7] These variables are the unemployment rate, inflation rate, interest rates, personal income, GDP, total personal consumption, retail sales, expenditures for durables, and vehicle registrations.

The Conference Board CCI is closely followed by financial markets and business community and so it is treated by financial press as an important piece of economic information. It is constructed on the basis of a monthly household survey of consumers' perceptions of current business and employment conditions, and their expectations over the next six months concerning business situation, employment, as well as their total family income.[8] The index is benchmarked to 1985 = 100. Thus, values greater than 100 indicate above-average consumer confidence and vice-versa.

Questionnaires used to obtain the monthly value of the index are mailed to sample households at the end of the previous month, and responses flow in throughout the survey month. Responses received up to approximately the eighteenth of the month are used for the preliminary estimates of the index, which the Conference Board releases on the last Tuesday of the survey month. Final estimates for the month based on all the responses received are released with the next month's preliminary figures and are not subject to further revision. So we use final estimates of the index in our study.

The Icon CCI is based on the German consumers' responses to the E.U. harmonized consumer survey elaborated by the European Commission.[9] However, we prefer this index instead of the one published by the European Commission since the former is scaled to have a long-term mean of 100. In this way, values above 100 indicate that optimistic consumer estimates outweigh the pessimistic ones, while values below 100 indicate the opposite.

Specifically, consumers are asked about their expectations of change in the financial position of their households, the general economic situation and employment, as well as their saving possibilities over the next 12 months.[10]

Surveys responses are normally collected in the first half of the month and transmitted to the European Commission services around one week before the end of the month. Based on the results of the surveys, the Icon CCI is then released in the first calendar week after the end of the month that is reported about.

A usual dilemma that academics have to face when working with indicators of consumer sentiment is whether to focus on index-level or monthly changes. The decision must depend basically on the time frame of the questions included into the consumer surveys. In this case, both consumer confidence indices ask about changes in the near-future, suggesting that the indices are measures of change in sentiment (see Matsusaka and Sbordone (1995)). Given this and the fact that both indices are scaled to have a long-term mean of 100, we use data in levels.

As for interest rates, we collect daily data on three- and 12-month yields on U.S. Treasury securities, and three- and 12-month interbank interest rates from the Bundesbank. Given that the Conference Board CCI and the Icon CCI cover expectations over the next six and 12 months, respectively, the 12-month interest rate is selected to represent the long-term rate.[11]

In order to obtain the monthly data on interest rates, we proceed in two different ways depending on the collection period of the survey responses used to estimate the values of the consumer confidence indices. This way, since the final monthly data of the Conference Board CCI are based on responses received during the whole month, the monthly interest rate data for the U.S. are the average of the daily data corresponding to the month of reference. However, in regard to German interest rates, given that surveys responses used to estimate the Icon CCI are collected in the first half of the month the index is

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[8] See technical notes on the consumer confidence survey available at the website of the Conference Board for further details.

[9] See "Joint Harmonised E.U. Programme of Business and Consumer Surveys (12.10.2006)" and "The Joint Harmonised E.U. Programme of Business and Consumer Surveys. User Guide 2007" for a complete description of the survey (questionnaires, timetable, use of information…). Further information about the Icon CCI can be found at http://icon-added-value-source.com/.

[10] Thus, it must be highlighted that consumers are not surveyed on the future development of any financial market variable in any case.

[11] This is in accordance to Plosser and Rouwenhorst (1994), who match the maturity of long-term rates to the forecast horizon of growth rates of industrial production.

reported about, the monthly data on interest rates are the average of daily data collected from the second fortnight of the prior month up to the first fortnight of the month of reference.

The yield spreads for both countries are then just obtained as the difference between the monthly continuously compounded annualized 12- and three-month interest rates. As usual in the literature on the predictive power of the yield spread, we also use a monetary policy variable: the monthly change in the three-month interest rate.[12]

So, the first monthly average data on interest rates for Germany is computed from daily data corresponding to the period from the second fortnight of January 1995 up to the first fortnight of February 1995. Thus, the first data on the change in the three-month interest rate for Germany is obtained as the difference between the monthly average data corresponding to the period from the second fortnight of February 1995 up to the first fortnight of March 1995 and the monthly average data corresponding to the period from the second fortnight of January 1995 up to the first fortnight of February 1995. Thus, the first data on CCI in our study is March 1995 for both countries.

With respect to interest rate volatility, most papers first need to deal with the problem of its estimation since it is a non-observable variable. However, in this study we use implied volatilities from the cap (floor) market with a twofold purpose. First, data can be directly obtained from the market, and second, this is a forward-looking measure of interest rate volatility.

In particular, we collect daily volatility (bid close) quotes of at-the-money (ATM) one-year caps and floors for the U.S. and the Euro area from Reuters.[13] It is important to point out that these implied volatilities are used to obtain the prices of caps and floors by applying the well-known Black pricing formula. According to the Libor Market Model (LMM), the use of this pricing formula can be justified under the assumption that forward interest rates follow a lognormal stochastic process. Then, volatilities implied from caps and floors can be considered some sort of average of the instantaneous volatility of the logarithm of the forward rates up to me maturity of the contracts.[14] So these volatilities are forward-looking. This way, the one-year implied volatility represents the market estimation of the volatility of three-month forward interest rates over the next year.[15]

With respect to the estimation of the monthly average data on volatility from daily data, we proceed in a similar way as for interest rates for the U.S. and Germany. Thus, we use interest rate and volatility data that are available around one month before the CCI is published in the case of the U.S., and around three months before in the case of Germany.

In the U.S., the average level of consumer confidence remained just below the neutral 100 mark over the whole period. However, as suggested by the standard deviation, it was remarkably variable not only across the entire sample but also within the two subperiods. Thus, the differences in the index level before and during the crisis are noticeable: the mean of the index values dropped from 110.16 to 58.66. It is not the case for Germany, where consumer confidence stayed on average around 92 over the two subperiods. The yield spread between the 12- and the three-month interest rates was three times higher during the crisis period than before in Germany, and nearly 50 percent higher in the U.S. Statistics also show that the monthly difference in the three-month interest rate series was more stable in both countries before the crisis burst out. The average implied volatility level and its standard deviation were greater in the U.S. than in the Eurozone throughout the sample period and in both subperiods. Moreover, as expected, interest rate volatility was noticeably higher during the crisis period than before in the U.S. and Germany: more than 3.5 and two times higher, respectively. The autocorrelations show that consumer confidence indices and implied volatilities are the most persistent series in both countries.

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[12] Dotsey (1998) and Hamilton and Kim (2002), for instance, use the change in the Federal funds rate as a measure of changes in monetary policy.

[13] Quotations for countries that belong to the Euro area are just provided for the whole of the Eurozone.

[14] See, for instance, Brigo and Mercurio (2001) for a comprehensive overview of caps (floors) valuation within the LMM framework.

[15] Caps and floors with terms to maturity of one year from the U.S. and Euro area markets have a three-month tenor.

In order to obtain an appropriate specification of our regression equations, that will be tested over the pre-crisis and the crisis periods, we further investigate the stationarity of the series over both subperiods by conducting the KPSS (Kwiatkowski-Phillips-Schmidt-Shin) stationarity test (specified with and without a time trend).[16] The null hypothesis of stationarity is accepted at the 1% level for both specifications of the test for the four series in both countries over the first period. From the KPSS test performed over the second period, the null hypothesis is also accepted in all the cases, with the possible exception of the implied volatility for the U.S. where the evidence is mixed. Nonetheless, results from the test should again be considered with caution due to the well-known limited power of stationarity and unit root tests when conducted on small size samples.

The information content of interest rate volatility on economic agents' expectations

Figures 1 through 6 show CCI against the yield spread (*spread*), the change in the three-month interest rate (*ΔR*), and the one-year implied volatility (*ivol*) for the U.S. and Germany, respectively, for the overall period. In addition, Table 1 shows the linear correlation coefficients between CCI and the explanatory variables the index will be regressed on, for both countries and for the two subperiods we divide the sample into. Results show that there exists a positive relationship between the German CCI and the yield spread, but this is weaker since the beginning of the crisis. Unexpectedly, we obtain the opposite sign for the U.S. before and during the crisis, where the linear fitting releases a correlation coefficient of -0.54. CCI and the change in the three-month interest rate are positively correlated in Germany. In addition, the relationship is particularly strong during the crisis period: the correlation coefficient is 0.61. In the case of the U.S., we observe that after the burst of the crisis, the relationship between these two variables has inverted. Unlike correlation coefficients between CCI and the previous two variables, linear fitting results obtained for the one-year implied volatility are robust between countries: there exists a strong negative correlation between consumer confidence and volatility during the pre-crisis and crisis periods.
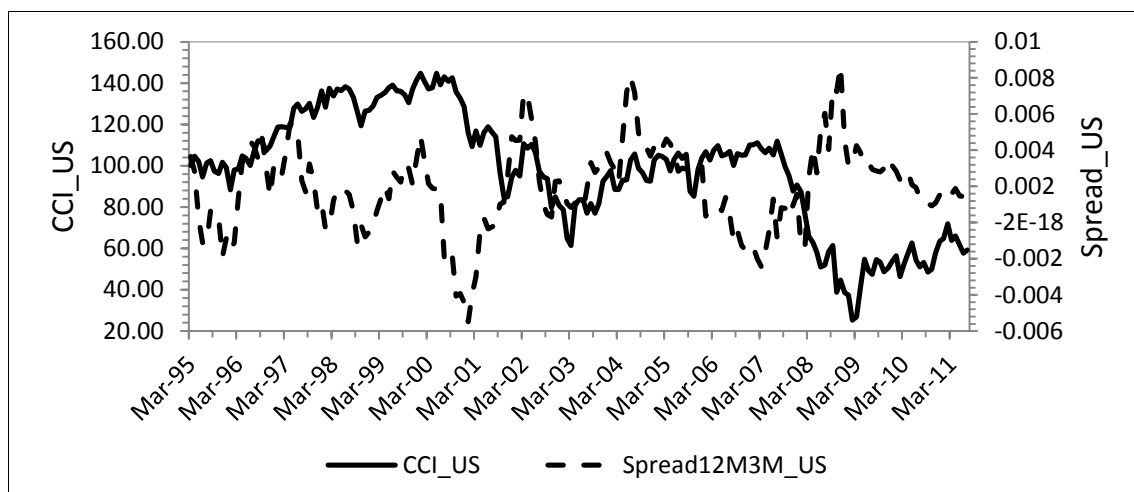

Fig. 1. **The Conference Board CCI for the U.S. (line) and the yield spread between the 12- and three-month interest rates (dash)**

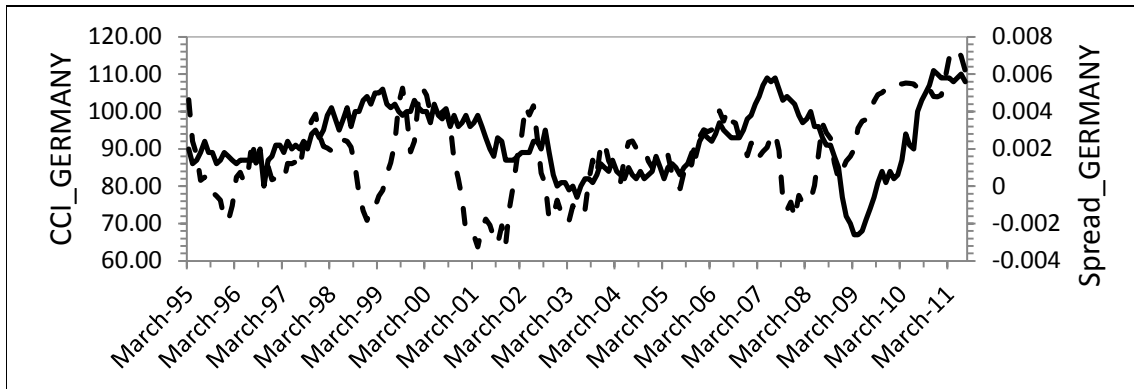[16] Results will be provided upon request.

Fig. 2. **The Icon CCI for Germany (line) and the yield spread
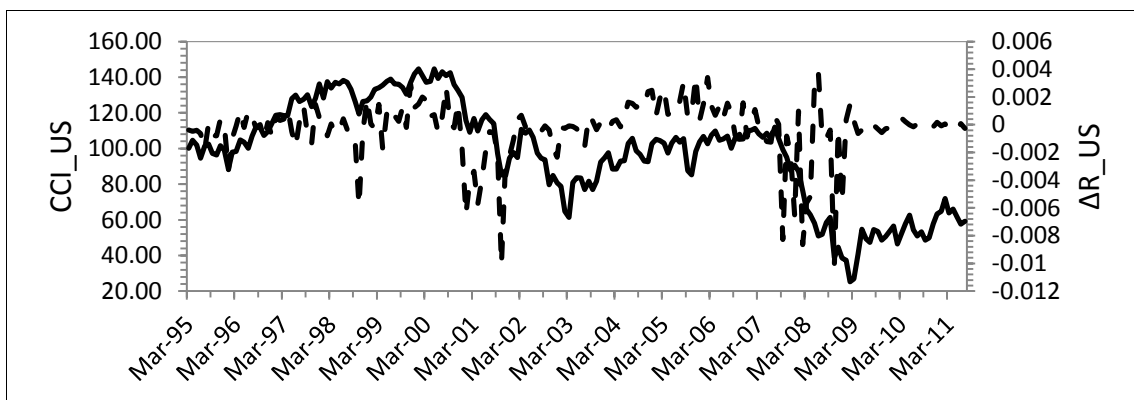between the 12- and three-month interest rates (dash)**

Fig. 3. **The Conference Board CCI for the U.S. (line) and the change
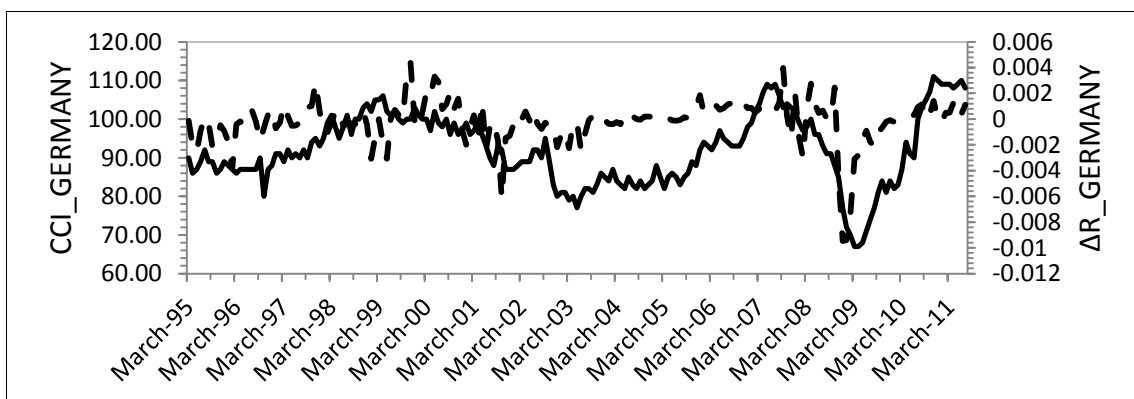in the three-month interest rate (dash)**

Fig. 4. **The Icon CCI for Germany (line) and the change
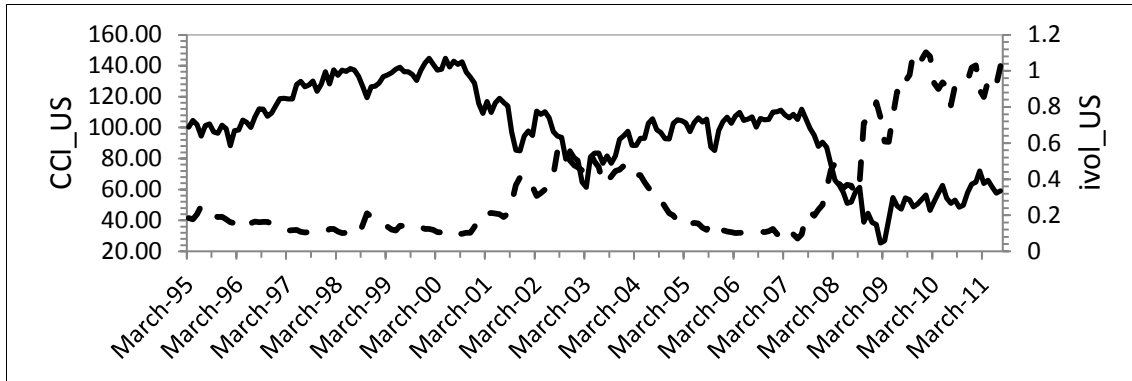in the three-month interest rate (dash)**

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Fig. 5. **The Conference Board CCI for the U.S. (line)
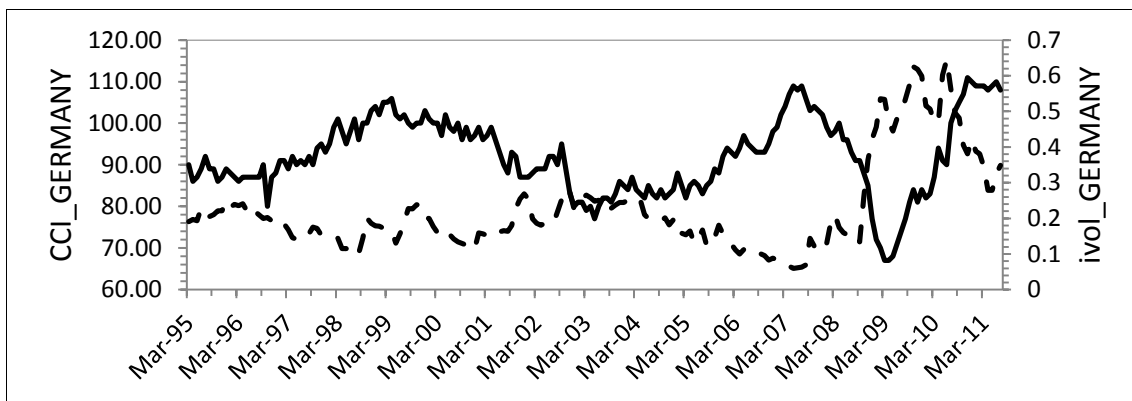and the one-year implied volatility (dash)**

Fig. 6. **The Icon CCI for Germany (line)
and the one-year implied volatility (dash)**

Table 1

Linear correlation coefficients between CCI and the explanatory variables[a]

	spread	ΔR	ivol
United States			
Pre-crisis period (1995:03-2007:07)	-0.15	0.14	-0.69
Crisis period (2007:08-2011:07)	-0.54	-0.26	-0.53
Germany			
Pre-crisis period (1995:03-2007:07)	0.26	0.25	-0.59
Crisis period (2007:08-2011:07)	0.11	0.61	-0.48

[a] *Spread* is the difference between the 12-and three-month interest rates; *ΔR* represents the change in the three-month interest rate; and *ivol* stands for the one-year implied volatility.

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Next, we estimate the first basic regression equation:

$$CCI_t / 100 = \beta_0 + \beta_1(R_t^{(12)} - R_t^{(3)}) + \beta_2 \Delta R_t^{(3)} + \varepsilon_t, \tag{1}$$

where CCI_t is the Consumer Confidence Index for month t; $R_t^{(12)}$ and $R_t^{(3)}$ are the monthly average data on the 12- and three-month interest rates, respectively, obtained as described in the previous section; and $\Delta R_t^{(3)}$ represents the monthly change in the three-month interest rate.

Table 2

OLS regression results based on Equation [3][a]

$CCI_t / 100 = \beta_0 + \beta_1(R_t^{(12)} - R_t^{(3)}) + \beta_2 \Delta R_t^{(3)} + \varepsilon_t$			
	β_0	β_1	β_2	$\overline{R^2}$
United States			
Pre-crisis period (1995:03-2007:07)	1.11** (0.12)	-9.93 (10.78)	22.64 (14.34)	0.04
Crisis period (2007:08-2011:07)	0.71** (0.02)	-51.25** (7.29)	-20.35** (6.66)	0.45
Germany			
Pre-crisis period (1995:03-2007:07)	0.90** (0.05)	9.77 (6.25)	8.32 (5.38)	0.07
Crisis period (2007:08-2011:07)	0.90** (0.05)	6.04** (0.48)	31.49** (0.11)	0.34

[a] Inside the parentheses are standard errors computed using the Newey and West (1987) correction for autocorrelation and heteroskedasticity. One asterisk denotes statistical significance at the 5% significance level. Two asterisks denote statistical significance at the 1% significance level. $\overline{R_2}$ is the adjusted coefficient of determination.

OLS regressions results based on Equation [3] for the U.S. and Germany over the pre-crisis and crisis periods are depicted in Table 2. Given the possible correlation between the explanatory variables, the change in the short-term interest rate is orthogonalized. In addition, since the Conference Board CCI measures expectations over the next six months and the Icon CCI does over the next 12 months, we consider that there exists overlap in the dependent variables of five and 11 months, respectively. Overlapping does not affect the consistency of the OLS regressions coefficients but does affect the consistency of the OLS standard errors. Thus, standard errors are corrected by using the Newey and West (1987) method of adjustment, including five lags in regressions for the U.S. and 11 lags in the case of Germany.

We find that the coefficients on the yield spread and the monetary policy variable are not different from zero at usual levels of significance during the pre-crisis period in both countries. Thus, the explanatory power of these regressions is low. However, the yield spread and the change in the three-month interest rate significantly help explain CCI during the crisis period. Particularly, both variables jointly are able to explain a striking 45 percent of the variation in CCI in the U.S., and more than 30 percent in Germany. In addition, as expected from the linear correlation analysis, we obtain that the coefficients on the yield spread and the short-term interest rate have opposite signs in these two countries: negative in the U.S. and positive in Germany.

Thus, two conclusions can be drawn from this analysis. One the one hand, we find that the yield spread coefficient remains significant for explaining consumer confidence when a monetary policy measure is also included in the regression. This suggests that information contained in the spread is not only a consequence of its link with monetary policy, but that it also reflects general economic conditions independent of monetary policy actions. This in line with previous empirical evidence provided in different papers in which the dependent variable is some measure of output growth. On the other hand,

results in this study suggest that these two variables significantly help capture consumer expectations only during the crisis period, although the sign of the coefficients is not robust between countries.

In the second basic regression equation we regress CCI for month t, CCI_t, on the monthly average data of one-year implied volatility, $ivol_t$,:

$$CCI_t/100 = \gamma_0 + \gamma_1 ivol_t + \varepsilon_t,\tag{2}$$

Regression results on the information content of implied volatility for explaining consumer confidence are provided in Table 3.

Table 3

OLS regression results based on Equation [4][a]

$CCI_t/100 = \gamma_0 + \gamma_1 ivol_t + \varepsilon_t$			
	γ_0	γ_1	$\overline{R}^2$
United States			
Pre-crisis period (1995:03-2007:07)	1.31[**] (0.20)	-0.99[*] (0.49)	0.48
Crisis period (2007:08-2011:07)	0.81[**] (0.06)	-0.31[**] (0.06)	0.26
Germany			
Pre-crisis period (1995:03-2007:07)	1.06[**] (0.03)	-0.83[**] (0.15)	0.35
Crisis period (2007:08-2011:07)	1.07[**] (0.01)	-0.39[**] (0.05)	0.22

[a] Inside the parentheses are standard errors computed using the Newey and West (1987) correction for autocorrelation and heteroskedasticity. One asterisk denotes statistical significance at the 5% significance level. Two asterisks denote statistical significance at the 1% significance level. $\overline{R}_2$ is the adjusted coefficient of determination.

In this case, we find that the coefficients on the implied interest rate volatility are negative and significant before and during the crisis in the two countries. That is, results suggest that volatility is a robust variable in explaining economic agents' expectations on the future state of the economy. In particular, implied volatility alone helps explain 35 percent of the variation in CCI before the crisis, and 22 percent during the crisis period in Germany. Results are more favorable for the U.S., especially before the crisis, where implied volatility alone is able to explain nearly an outstanding 50 percent of the variation in CCI.

At this point, we have obtained that the yield spread and the change in the three-month interest rate are useful for explaining consumer confidence after July 2007, and that implied volatility contains significant information on consumers' expectations during the two subperiods considered. Thus, we expect that volatility adds significantly to the yield spread and the change in the three-month interest rate for explaining consumer sentiment before the crisis. The most interest point that we want to check is whether uncertainty on the future development of interest rates also provides significant additional information beyond that contained in the previous two variables during the crisis periods. In addition, we want to investigate further whether implied volatility significantly outperforms a volatility measure based on historical data of interest rates.

Thus, the basic regression model depicted in Equation [3] is augmented by including the one-year implied volatility. That is, we estimate the following equation:

$$CCI_t/100 = \beta_0 + \beta_1(R_t^{(12)} - R_t^{(3)}) + \beta_2 \Delta R_t^{(3)} + \beta_3 ivol_t + \varepsilon_t,\tag{3}$$

where CCI_t, $R_t^{(12)}$, $R_t^{(3)}$, $\Delta R_t^{(3)}$, and $ivol_t$ are defined as before. In this case, in addition to the three-month interest rate, the implied volatility variable is also orthogonalized.

Results for the augmented regression equation in [5] are depicted in Table 4. As expected, implied volatility noticeably increases the in-sample forecasting accuracy obtained from Equation [3] before the crisis in both countries, but the adjusted R^2s are the same obtained when CCI is regressed only on implied volatility. The second part of the sample offers the most appealing results. They show that implied interest rate volatility lets enhance the explanatory power of the model including only the spread and the change in the short-term interest rate as explanatory variables in a 42 percent and a 58 percent for the U.S. and Germany, respectively. Particularly, the augmented model is able to explain a remarkable 64 percent of the variation in CCI for the U.S., and a 54 percent in the case of Germany.

Table 4

OLS regression results based on Equation [5].[a]

$CCI_t/100 = \beta_0 + \beta_1(R_t^{(12)} - R_t^{(3)}) + \beta_2\Delta R_t^{(3)} + \beta_3 ivol_t + \varepsilon_t$						
	β_0	β_1	β_2	β_3	$\overline{R^2}$	$\overline{R^2}^{[5]}/\overline{R^2}^{[3]}$
United States						
Pre-crisis period (1995:03-2007:07)	1.11[**] (0.09)	-9.93 (9.83)	22.64 (24.45)	-1.01[**] (0.34)	0.47	11.75
Crisis period (2007:08-2011:07)	0.71[**] (0.02)	-51.25[**] (3.67)	-20.35[**] (4.55)	-0.26[**] (0.03)	0.64	1.42
Germany						
Pre-crisis period (1995:03-2007:07)	0.90[**] (0.02)	9.77[**] (2.91)	8.32[**] (2.67)	-0.80[**] (0.18)	0.34	4.85
Crisis period (2007:08-2011:07)	0.90[**] (0.02)	6.04[*] (8.47)	31.49[**] (7.90)	-0.52[*] (0.20)	0.54	1.58

[a] Inside the parentheses are standard errors computed using the Newey and West (1987) correction for autocorrelation and heteroskedasticity. One asterisk denotes statistical significance at the 5% significance level. Two asterisks denote statistical significance at the 1% significance level. $\overline{R_2}$ is the adjusted coefficient of determination; and $\overline{R^2}^{[5]}/\overline{R^2}^{[3]}$ stands for the quotient between the adjusted coefficients of determination obtained from regressions based on Equation [5] and the adjusted coefficients of determination obtained from regressions based on Equation [3].

Finally, in order to compare the explanatory ability of implied interest rate volatility to that of the realized volatility, we also estimate the following model:

$$CCI_t/100 = \beta_0 + \beta_1(R_t^{(12)} - R_t^{(3)}) + \beta_2\Delta R_t^{(3)} + \beta_3 hvol_t + \varepsilon_t,$$

(4)

where CCI_t, $R_t^{(12)}$, $R_t^{(3)}$, $\Delta R_t^{(3)}$ are defined as in Equations [3] and [4]; and $hvol_t$ stands for the historical volatility constructed as mean absolute deviations, over a one month interval, of daily logarithmic changes in the one-year interest rate[17]. Similar to Equation [5], the change in the three-month interest rate and the historical volatility are orthogonalized.

Table 5 reports the results. We find that historical volatility is negative and significant at usual levels of significance, except for the crisis period in Germany. Favorable to our expectations, we obtain that the in-sample forecasting ability of the model including the implied volatility outperforms the model including the historical volatility measure in all the cases. The explanatory power of the model including the implied volatility within the pre-crisis period is 42 percent higher than that of the model including the

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[17] This is also the volatility measure employed in the work by Annaert et al. (2001). Poon and Granger (2003) provide an extensive review on the forecasting performance of various volatility measures and find that after implied volatility, the historical volatility provides the second best forecasting.

historical volatility for the U.S., and 36 percent higher in the case of Germany. For the crisis period, adjusted R^2s from regressions based on Equation [5] for Germany and the U.S. are 63 and 33 percent, respectively, greater than those based on Equation [6].

Table 5

OLS regression results based on Equation [6][a]

$CCI_t/100 = \beta_0 + \beta_1(R_t^{(12)} - R_t^{(3)}) + \beta_2\Delta R_t^{(3)} + \beta_3 hvol_t + \varepsilon_t$						
	β_0	β_1	β_2	β_3	$\overline{R^2}$	$\overline{R^2}^{[5]}/\overline{R^2}^{[6]}$
United States						
Pre-crisis period (1995:03-2007:07)	1.11** (0.10)	-9.93 (10.48)	22.64 (18.16)	-14.33** (4.93)	0.33	1.42
Crisis period (2007:08-2011:07)	0.71** (0.03)	-51.25** (6.81)	-20.35** (3.28)	-2.74* (1.09)	0.48	1.33
Germany						
Pre-crisis period (1995:03-2007:07)	0.90** (0.00)	9.77** (2.60)	8.32 (4.79)	-11.83** (1.92)	0.25	1.36
Crisis period (2007:08-2011:07)	0.90** (0.03)	6.04 (30.50)	31.49** (9.37)	2.06 (9.63)	0.33	1.63

[a] Inside the parentheses are standard errors computed using the Newey and West (1987) correction for autocorrelation and heteroskedasticity. One asterisk denotes statistical significance at the 5% significance level. Two asterisks denote statistical significance at the 1% significance level. $\overline{R_2}$ is the adjusted coefficient of determination; and $\overline{R^2}^{[5]}/\overline{R^2}^{[6]}$ stands for the quotient between the adjusted coefficients of determination obtained from regressions based on Equation [5] and the adjusted coefficients of determination obtained from regressions based on Equation [6].

Thus, overall, results from this study suggest that implied volatility contains extra information for capturing consumer sentiment not already embodied in two traditional leading economic indicators of the business cycle: the yield spread and a variable that reflects the stance of monetary policy. In addition, these results are robust to the inclusion of the period associated to the current financial crisis. Given that we use interest rate and volatility data that are available at least three months before the consumer confidence indices are published, we are able to explain in advance an important percentage of the variability of the indices. Concerning the most suitable volatility measure for capturing uncertainty on interest rates, the results we obtain are quite concluding. As expected, a forward-looking measure of volatility is able to explain a greater percentage of the variation in CCI than a volatility measure based on historical data of interest rates.

Conclusions

Since the late eighties, many papers have shown consistent empirical evidence on the usefulness of the slope of the term structure of interest rates (the yield spread) for predicting economic growth. Moreover, expectations are the foundation of the most widespread explanations on this forecasting ability. In this paper we want to implicitly check the hypothesis on the information content of financial variables for explaining economic agents' expectations by using another variable in addition to the yield spread: the interest rate variable. In particular, we analyze the ability of interest rate volatility to capture economic agents' expectations regarding future economic activity, and whether it provides extra information content over the yield spread.

For this purpose we must decide how to measure expectations and volatility. For the first issue we employ consumer confidence indicators which contain consumers' expectations over the near-future (six or twelve months) concerning micro- and macro-economic aspects over which they have no control. Concerning the second non-observable variable, we suggest using a forward-looking measure of volatility not based on historical data of interest rates. This is the volatility implied from the market prices of caps and floors according to the Black-pricing formula. Thus, it can be understood as an estimation of the average future volatilities of a set of forward interest rates with consecutive terms to maturity up to the expiration date of the contracts. That is, it reflects the market consensus on the uncertainty regarding the future development of one of the most important financial variables: interest rates.

Outcomes from this study suggest that implied volatility is a robust variable for explaining consumer sentiment before and during the crisis both in Germany and the U.S. As expected, there exists a significant negative relationship between consumer sentiment and interest rate volatility. In addition, we find that implied volatility can add significant explanatory power to the yield spread in order to explain economic agents' expectations of future economic growth. Moreover, the in-sample forecasting accuracy of the model including the implied volatility as the volatility measure is always greater than that obtained when a realized volatility measure is used instead. Thus, it seems to support the extra information content of a forward-looking measure of volatility on economic agents' expectations.

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