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In 2011, the Editorial Board received more than 40 papers, which were peer-reviewed (anonymously) by 2 subject experts (in some cases - 3) from 7 higher education institutions. As a result, more than 60% of papers were accepted for publication in the Journal of Business Management.
FOREWORD

Journal of Business Management, issue No.4, mostly consists of papers (reports), which were presented during the International Scientific Conference “Changes in Global Economic Landscape – in Search for New Business Philosophy” that took place in Riga International School of Economics and Business Administration on 28 and 29 April 2011.

Representatives of 12 countries – Austria, Finland, Estonia, Cyprus, Poland, Hungary, Portugal, Germany, Italy, United Kingdom, Latvia, and Greece – participated in the conference.

Main findings of the International Scientific Conference were as follows (scientific articles published in this issue reflect most of these findings):

1. The global economy’s centres of gravity are shifting (towards east mainly, e.g. China, India, etc.). The shift of economic centres of gravity is tied with fundamental and long-term collisions (as history shows). Therefore, uncertainty in business increases, and it is the long-lasting period.
2. The model of economic development based on demand stimulation (in a form of crediting) does no longer work. The time has come to pay off (or write off?) loans received earlier. The consumption society cannot be sustainable.
3. Talents and technologies determine business achievements (especially in case of rapid changes in the world economy).
4. A long-term business is becoming the one, which is concerned with satisfying primary needs of people (e.g. food industry), as well as high technologies.
5. More close regional collaboration can positively influence the situation both on the country and business levels (including introduction of single currency).
6. Constant concentration on short-term goals does not allow achieving long-term goals, including the investment-related ones.

A number of points for discussion arose, for instance:

1. Why improvement of macroeconomic indicators in Latvia does not influence its people?
   a) It requires time.
   “Slight growth and profit in the banking sector are anticipated only in the end of 2011”.
   “Stable investments are required”.
   “Salaries are below the productivity level, they can increase only in the mid-term, from now to 2014” (Andris Vilks).
   b) “The macroeconomic indicators do not fully reflect the real microeconomic situation” (V.Kozlinskis).

2. The anticipated role of immigration
   In the short- and mid-term regulating immigration can bring positive impact, although the basic long-term solution is to improve the demographic situation (e.g. Canada’s experience of 3-children families) (Greg McDonalds).
   The regulated immigration can attract highly qualified workforce, holders of capital, scientists.

3. Some bright quotes:
   Massimo Merlino: “2T (talents and technologies) is the only strategy that can take out from the crisis. Intercultural research in this area is required”.
   Signe Enkuzena: “The world’s leading economies proved that an effective human resource training system is one of the business development cornerstones... Employees also admit that learning and improvement of skills enhance professionalism”.
   Kari Liuhto: “The single currency fosters development of regional business and tourism”.
   “The united investment agency of the Baltic region could attract foreign investments, foster inflow of capital, promote economic growth and more intensive competition among enterprises”.

3
Artis Pabriks: “Since the Baltic countries (Latvia, Lithuania, Estonia) joined the EU following the Northern neighbours, the need for mutual collaboration and integration have become very salient. However, there are differences between the Northern and Baltic countries – the Northern Countries are among the most successful and competitive in the world, while the Baltics fight for extra resources to support the social sector. One of the options for the Baltics is to learn from experience of the Northern neighbours”.

Jānis Zvīgulis: “The Latvian and global experience shows that not all investments are suitable for the development of Latvian economy. The strategically defined and appropriate investments are necessary, but not the doubtful ones. A lot of countries, including Latvia, define its attitude towards investments – how to increase the desired investments, especially, when the flow of funds decreases significantly”.

Head of the Editorial Board
Vulfs Kozlinskis
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THE CRISIS IMPACT ON HUMAN CAPITAL FORMATION IN POLAND

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Abstract
Human capital, defined as a knowledge resource, know-how, skills and motivation cumulated in production age society, becomes a fundamental factor in competition of a country and determines the creation of an information society. The purpose of this article is to scrutinise the state of human capital in Poland comparing to the situation in other European Union’s countries and to evaluate a possibility of human capital formation after the crisis reality. The problem is very complex, that is why the article describes how the crisis influences the migration decisions of the Polish people. Departures and arrivals from migration directly affect situation on the labour market and have impact on conditions of human resources. The methodology in the paper is based on desktop research and general statistics with multidimensional comparative analysis methods used as a taxonomic synthetic measure.

The main finding of the paper is that there is a strong divergence between human capital formations in Poland, countries recently engaged (UE11) and other Western European countries (UE15). It is difficult to notice one-way influence of the economic crisis on human capital formation. In Poland during the crisis period migration was inhibited on one hand, but on the other, the quantity of young people with tertiary education from agglomeration leaving Poland increased. The article represents distinctive scientific research, which could be used in formation of labour market and migration policies in Poland.

Keywords: crisis, human capital, migration, brain drain.

Introduction
One of the main features of contemporary economies is usage of human resource. The principal condition in creation of a knowledge-based economy is the relevant quantity and quality of human capital. The essence of human capital has to be analysed in two areas. The first involves human capital formation in the economic growth models. It is associated with endogenous model growth by P. Romer and R. J. Lucas. The second area consists of treating human capital as an element of intellectual capital, which forms a part of a firm’s calculated value in the business market place. A company’s success is dependent on constant creation of not only traditional potential, but also non-traditional, as well as on human capital. The most important resource of the company is its employees, who possess skills to create new products and technologies. Knowledge, experience and precise skills of the employees create the human capital and all expenses have to be viewed as an investment that will bring measurable advantages in the future (Biegańska, 2007). Human capital is a fundamental element of competitiveness on macroeconomic and microeconomic scales. During the economic crisis the above-mentioned matters get particular meaning, although the analysis does not show an equivocal state. From one point of view, during the recent recession period, the emphasis is placed on the ‘stress to limit an investment’, connected with human resources. Further than this, the situation on the labour market strongly depreciates resources cumulated in the human capital. On the other hand, the crisis cannot be a pretext to limit fundamentals of long term development, especially in Poland where the problem of human capital development is linked with several paradoxes, which will have a significant influence in the development of the Polish economy in future.

In accordance with the view stated above, the present article is an attempt to evaluate the human capital condition in Poland between the years 2002-2009. The main results and conclusions are summarised in this article.

Research methodology
The research aim
The aim of the research is to evaluate the human capital condition in Poland between the years 2002-2009 against European Union’s countries. The gathered information shows possibilities of its development in future. Especially, the article analyses how the economic crisis affects human capital formation. The crisis impact is shown by the migration process in Poland, which is very important for human capital formation. The paper’s objective is to answer the question, if the economic crisis stopped human capital outflow from Poland or not.
Methodology

The evaluation of human capital is not an easy task. In the first step, it is required to specify determinants, which are treated in various manners in the literature. It mainly stems from the definition and capacity of the human capital. Most often, human capital is defined as a resource of knowledge, skills, health and vital energy cumulated in society. Human capital can be interpreted in a somewhat narrow or broader meaning. In the narrow meaning, investment in human capital is linked with investment on education, including investment on research and job development according to the learning-by-doing process. In the broader meaning, human capital is also contacted with other investments, which determine the characteristic quality of human resources, such as: investment in health, protection of the environment and culture (Becker, 1975). In this article, five areas were taken into account, which impact on the formation of human capital in Poland. These are: demography, education, research and development, health protection and job market. The human capital is defined as follows: “accumulated resource of knowledge, qualification, skills and readiness to increase the economic potential by the owners – readiness to start working” (Marciniak, 2010). To analyse the human capital, one of the comparative, multidimensional method was used: taxonomic synthetic measure Z. Hellwiga. This method provides a possibility to study particular effects in an aggregated way using a large quantity of diagnostic data simultaneously. The method orders objects (countries, group of countries) linearly based on the synthetic measurement instrument (taxonomic development measurement – TMR) (Hellwig, 1968). The first step of the research is elimination of a different range of variable variation and ranking change in a process of standardisation in accordance with the following formula:

\[ z_{ij} = \frac{x_{ij} - \bar{x}}{S_i}, \]

where:
- \( x_{ij} \) – j characteristic; \( i \) – of the object
- \( S_i \) – standard deviation

The next step is to create a standard of evolution taking variables according to the following rule:

In the next step it is necessary to determine a distance between the observed unit and the rule of development. It is possible to measure this distance (Euklides) according to the following formula:

\[ d_{oe} = \sqrt{\sum_{j=1}^{m} (z_{ij} - z_{e})^2} \]

The last element of this method is determination of taxonomic development measurement according to the following formula:

The analysis of human capital in Poland is compared with the EU countries divided into two groups: “old” countries – members of European Union before 2004 (UE15) and “new” countries – engaged in UE after 2004 without Poland (UE11). Period of the analysis is 2002-2009. In some cases, due to the lack of data, a selected time period of 2001-2008 was taken and analysed. While selecting variable, the most important criteria were: content, formal and technical. The variable selection is not definitive and represent a proposition of factors that determine development of human capital. Finally, the following data was taken into account:

- X1 – Crude rate of net migration plus adjustment (per 1000 persons)
- X2 – Old dependency ratio (population 65 and over to population 15 to 64 years - %)
X3 – Participation in education and training people from 25 to 64 years (%)
X4 – Student mobility (%) (2001 – 2008)
X5 – Persons with tertiary education attainment (%)
X6 – Students at ISCED level 5-6 - as % of all pupils and students (2001 – 2008)
X7 – R&D expenditure (GERD) (public % GDP)
X8 – R&D expenditure (GERD) (private % GDP)
X9 – Level of Internet access of households (%)
X10 – Mathematics, science and technology enrolments and graduates (%) (2001 – 2008)
X12 – Unemployment rates of population with tertiary education - levels 5-6 (ISCED 1997)
X13 – Health care expenditure total (% GDP).

Research results
Research results are divided in two groups, which are entitled:

- Human capital formation in Poland against EU countries
- Human capital formation and migration process in Poland.

Human capital formation in Poland against EU countries
For the analysis of Figure 1, which shows the value of taxonomic synthetic measure of the human capital formation in Poland against European Union, a simplification should be indicated because of averaging values for UE15 and UE11. The analysis of situation in each country independently would certainly give more informative details; this is due to the fact that the human capital is strongly diversified in the European countries.

![Figure 1. The value of taxonomic synthetic measure of the human capital in Poland against European Union](source)

Some results can be derived from Figure 1. Firstly, there is a strong divergence between synthetic measurements of the human capital in Poland, countries recently engaged (UE11) and other Western European countries (UE15). In Poland's case, the measured values are twice as low as those comparing to UE11 and three times as low the other residual countries. Secondly, during the analysed period a relative reduction of synthetic measure value of the human capital both in Poland and in residual two groups was noted. It is important to add that the most significant value deduction took place for UE15 (0.64 – 0.46) and UE11 (0.36 – 0.21). In Poland the index was maintained in group 0.16 – 0.14. In addition in both analysed groups of the European Union a decrease of synthetic measure value occurred in the last two years. In Poland between 2007-2008 a decrease of synthetic measure value of human capital by 0.02 and in the last analysed year an important increase took place.
To answer the question about the divergence between Poland and the rest of UE countries, especially UE15, we have to point out, that it is not caused by every determinants of human capital which were taken into consideration, but only had a very deep impact on some of them. For example, it could be induced by migrations of Polish people, particularly after accession to European Union. The number of people staying abroad doubled between 2004 and 2006 and the dynamics of it was closer to the half of that number in 2008 (Kaczmarczyk, 2010). What is more, this significant divergence is connected with research and development area. The R&D index financed by the private sector for European Union is 1.25% GDP during the overall period, in EU11 countries – 0.31% GDP and in Poland 0.18% GDP. In addition lower percentage of mathematics, science and technology graduates and employment in technology and knowledge-intensive sectors about 1p.p. In relation with EU countries, there are about two times less adult participation in education and training in Poland. In 2009, in EU15 there was 10,8% of people between the age group of 24 – 64 years, and in Poland the value was about 50% lower. However, a completely different situation appears in the educational area. The data concerning education at tertiary ISCED level 5-6 shows a positive trend. From the beginning of ’90 we can observe a very dynamic development of tertiary education in Poland. As a result, in 2009 Poland was on the second position in European Union, after United Kingdom, taking under consideration the number of students. On average, every fourth person in the age range 19 – 24 is studying on master’s or PhD level. In EU15 this index reached about 20% lower value, and in the rest of the EU countries (UE11) is comparable to the Polish level. This data is from the last year’s analysis. It undoubtedly gives the evidence of quantitative success, but in confrontation with the labour market it shows some of the paradoxes of human capital formation in Poland.

A large percentage of educated people have difficulties in finding a job in Poland. The average unemployment rate amounted to 4.86% between 2002 and 2009. This situation indicates considerable development of quantitative resources, educated people, and at the same time misaligned structure and quality with the labour market needs. From 2004 to 2008, we can observe a downward trend, but it is difficult to assess, if it was influenced by migration of qualified people connected with opening of the European labour market. It would mean that after accession, migration also has specific consequences, including the so-called “brain drain” scenario. This difference between the numbers of educated people and labour market, shows structural problems connected with human capital formation. First of all, it is attributed to the fast quantitative progress without thinking about quality of this capital and adjustment to the demands of knowledge based economy. Finally it caused depreciation of human capital and the new area of social disparities (Woźniak, 2005).

Another very important issue is to point out factors, which could affect reduction of synthetic measure value in 2002 – 2009 including the one that could appear as a result of the crisis. Taking under consideration the overall period of scrutiny, it shows a deep influence on the demographic situation expressed in the decreasing percentage of people in a productive age and an increasing percentage of people in after-productive age. It fundamentally expands the old dependency ratio. At the beginning of the analysed period, the index is about 10 p.p. less in Poland, but at the end of this period this difference is 7 p.p. This implies that in Poland we can observe a similar trend. More diagnostic variables, including a component of
taxonomical development measure (stimulants) kept the same position in EU15, which caused a relative reduction of aggregated measure in relation with other countries. The increased dynamics kept only variables connected with research and development: R&D expenditure and usage the Internet. The most interesting periods for analysis are the last two years. In this period we can observe a reduction of synthetic measure value of human capital for the group of countries EU11 and EU15 and an increase of this value for Poland. To determine the reasons, which caused the situation we have to point out and analyse the demographic issues. The problem of aging society in Europe in the last two years did not especially escalate, but during the overall period the trend was developing more intensively. Migration could have had a much deeper impact, if not for the somewhat forced re-migration decision as the crisis result. The macroeconomic situation in Western Europe, where most of the countries are typical migrants’ destination, caused the migration index to reduce in the last year of analysis about 50% in relation to the first year. It also had a reflection on the Polish migrant’s situation. For Poland, when looking at the overall analysed period there is a negative crude net migration index, considerable intense after 2004. From 2008 the difference between outflow and inflow of people in Poland is very evidently decreased, and that is why the migration index in 2009 amounts to zero. Next issue relate to public expenditure. In the last three years of research the value of expenditure decreased both on health care, and research and development, for EU11 and EU15. In Poland we can remark on quite an opposite situation. In addition, the years under the crisis were impacted by labour market’s problems as well. For EU11 and EU15 the unemployment rate of people with tertiary education increased, especially in 2009 achieving 4.08% for EU15 and 4.13% for EU11. In Poland during the years 2007 – 2008 the index reached the lowest value comparing to the overall period. It was 3.1% but in the last year the unemployment rate started to rise. The same situation took place in technology and knowledge-intensive sectors. In the years 2001 – 2007 employment in this sector had increased with 0.3 p.p. It was also quite dynamic, but in 2008 it decreased to a level of 3%. Particular consideration has to be put on education in Poland. The percentage of highly educated people is increasing at a fast rate. The dynamics of this trend found in the analysed period was two times as high as compared to the rest of the countries. The number of tertiary graduated people doubled in 2009 in relation to 2002 and the numbers of students had growth by about 7 p.p. This signifies a dramatic progress comparing to the EU15 countries, where this index had shown a growth of about 1 p.p.

To evaluate the crisis impact on the human capital formation in Poland against European Union countries is very difficult and challenging. At the beginning the difficulty appears when we want to describe time – frame of the crisis. It is hard to say when it started and finished for the certain countries or point the time when the crisis penetrated into the economy. What is more, in spite of the fact that the crisis had a global dimension, it is difficult to assess how deep it influenced individual countries and whether we should use the term “crisis” in Poland’s case or maybe only “slowdown in growth”. We can assume also that macroeconomic situation influences each sphere of our life with delay and only in the next few years we will be able to unequivocally evaluate the crisis impact on the human capital formation in Poland.

![Figure 3. % GDP per capita growth](source: Eurostat data)

Despite any doubts, according to the concerned figure increase of the GDP per capita in 2002 – 2009, a particular evaluation was performed on the last two years analysed, 2008-2009. In case of the UE15
countries, it is difficult to notice a bad influence of the economic crisis on human capital formation in those countries. The synthetic measurement value decreased from 2002 and the crisis had neither multiplied, nor decreased the trend. It is possible to say that the direct cause of that decrease is not the economic situation, but other more complex problems linked with demography. In the UE11 countries in 2008-2009, a sharp decrease of synthetic measure of the human capital can be noticed, which is undoubtedly linked with the economic crisis. As a consequence, in the last years the continual education part decreased in production age, the public expenses into research and development were decreased again causing a reduction of employment in the high-tech sector and an increase of unemployment of people with higher education. Those countries wrestle with demographic problems. In relation to these two groups of countries specified, it is important to stress once again a huge generalisation cause by averaging of synthetic measurement values of the human capital. Consideration of each country separately would show an important diversification of the situation in the EU; however it is not the major purpose or intent of this article. In Poland, during the last two years of the analysed period an increase of the value of the synthetic measure is noticeable when comparing it to the previous years. It was mainly caused by termination of emigration from Poland, constant increase of the students and people with a higher education, a relatively small increase of unemployment and unchanged value of residual variables.

Human capital formation and migration process in Poland

The economic situation in Poland during the last years becomes a secondary matter, when we want to analyse the scale of migration from Poland and the eventual re-emigration. When considering these factors, they show that the economic situation of European Union is the main reason for migration. The Poles are one of the most mobile nations in Europe. The mobility was linked with the transformations that took place in the environment. Consequently, it is justified to undertake a study of the influence of economic crisis on the migration of human resources being abroad and their return to Poland. It has an unquestionable influence on formation of human capital in Poland (Kaczmarczyk, 2010). A significant date from this point of view is the moment, when Poland joined the European Union, because for migration it meant elimination of the majority of barriers for the European Unions’ job market. Even if only three countries completely opened their job markets (Ireland, Sweden, Great Britain) without any period of transition, the quantity of people abroad increased (in r 2004 – 1 million people, in 2007 – 2,270 million people). That migration was characterised not only by the scale of people leaving Poland but also by the migrants’ profile.

Table 1

<table>
<thead>
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<tbody>
<tr>
<td>Education:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- tertiary</td>
<td>16,9</td>
<td>20,0</td>
</tr>
<tr>
<td>- secondary</td>
<td>37,7</td>
<td>37,3</td>
</tr>
<tr>
<td>- practiced profession</td>
<td>37,2</td>
<td>35,7</td>
</tr>
<tr>
<td>- elementary</td>
<td>8,2</td>
<td>7,0</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- below 24</td>
<td>19,9</td>
<td>28,7</td>
</tr>
<tr>
<td>- 25 – 34</td>
<td>36,8</td>
<td>32,9</td>
</tr>
<tr>
<td>- 35 - 44</td>
<td>21,9</td>
<td>21,5</td>
</tr>
<tr>
<td>- 45 – 59</td>
<td>20,6</td>
<td>15,9</td>
</tr>
<tr>
<td>- 60 – 64</td>
<td>0,7</td>
<td>0,8</td>
</tr>
<tr>
<td>Resident town:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- cities 500 000 and more</td>
<td>5,4</td>
<td>12,9</td>
</tr>
<tr>
<td>- cities 200 000 – 500 000</td>
<td>11,3</td>
<td>11,0</td>
</tr>
<tr>
<td>- cities 100 000 – 200 000</td>
<td>5,4</td>
<td>6,5</td>
</tr>
<tr>
<td>- cities 20 000 – 100 000</td>
<td>17,6</td>
<td>16,1</td>
</tr>
<tr>
<td>- cities less than 20 000</td>
<td>14,3</td>
<td>16,8</td>
</tr>
<tr>
<td>- villages</td>
<td>45,9</td>
<td>36,8</td>
</tr>
</tbody>
</table>

Comparing to the migration that took place before the EU access, people migrating after 2004 were much younger. More than 50% were below 40 years old. The majority of this group had not had any familial obligations, thus the period of staying abroad prolonged and caused a relatively small transfer of savings to Poland.

The second difference concerned education of emigrants. People leaving Poland after 2004, were better educated and had a better knowledge of foreign languages. Young people did not have any time limit of the stay period (Jończy, 2009). Starting from 2008, there was a small decrease of Polish emigrants, which was linked to the economic crisis. In 2009, the quantity of people going abroad continued to decrease and in parallel re-emigration increased (Informacja o rozmiarach, 2010).

It is estimated that in 2009 about 1 870 000 citizens of our country were abroad and it is 340 000 people less than in 2008. Although the migration decreased, the quantity of young people with tertiary education from agglomerations simultaneously increased. In total, to the end of 2009, almost 60% of all emigrants were people with secondary education. What is more, even if data from the last years shows a falling tendency, it is still more of a higher value than at the beginning of Poland’s access to the European Union and exceeds the quantity of born children during this period in Poland. Consequently, the author points out to the thesis that the economic crisis inhibited the outflow of Polish workforce, but more importantly, thanks to this situation, it became clear that the migration strategies in Poland will have an important impact on human capital creation in Poland in future. That transparency of the migration in Poland will probably stop such a potentially huge migration, but it will still raise some concerns related to the majority of educated and young people in Poland and elsewhere in Europe. The following points can confirm the thesis:

- Labour market - even during the economic crisis the foreign labour markets were more attractive than domestic. Often departures from Great Britain or Ireland did not mean returns to Poland but only the choice of another foreign country. It was caused by the lack of support plan for people that come back to the country (incorporation in domestic labour market).

- Mentality - new emigration wave from Poland did not happen only because of the economic reasons; it was often linked with other motivators: culture knowledge, foreign language, acquisition of professional experience, education. The research by Deloitte and Human Resource Department of SGH found out that the willingness to leave Poland decelerates among almost 60% of students and only one per five decides to stay in Poland (Pierwsze kroki, 2011).

- Structural problem – because there are no other researches in the labour market connecting business and education environment, it is very difficult to adjust demand and supply in the labour market. We can observe striving for higher education level without analysing wider context. That is why there is a large percentage of people with tertiary education, but with no chances to find a job. It can be a risk that the people decide to leave Poland, because they will be demanded in the EU countries and we will lose qualified and educated human capital for the benefit of other countries. People with higher qualification have been found to be the most mobile ones.

- Push – pull factors – demographic problems of Europe indicate that these countries will need more and more employees from the Middle East Europe. Migration decisions in Poland can be supported not only by the negative factors connected with unemployment, but also be the attractive appeal of the destination countries. Referring to the classical migration theory, we can point out push and pull factors of migration process, and deep connections between them in contemporary Poland (Babiński, 2009).

![Figure 4. Emigration for temporary stay in 2004-2009 (in thousands).](image)

Source: GUS data
Out of the factors mentioned above, the main danger is connected with maladjustment education structure of young people in Poland and the change in available job structures. The job preferences of young people are not adjusted to the level of economic development in Poland. We can call it “excess qualifications” in relation to possibility of using them. This situation can cause double implications for human capital formation. It is called “brain drain” and “brain waist”. Firstly, when an educated person cannot get work in his/her profession and is pushed to undertake a job below his/her qualification level, it is easier for him/her to make a decision to migrate, because this kind of job is better paid for abroad then in Poland. The process of “brain waist” suggests that the achieved competences and skills will be forgotten and become invalid. Secondly, it is obvious that we are under pressure from the Western Europe, which tries to attract high-skilled employees from Poland. As an example we can point the labour market in Germany and Austria, which from is open for Polish employees from the 1st of May. Although we had to wait for the possibility to work there, people with tertiary education could pass through the shortened procedure of work permission since 2009. It is currently evaluated in order to save the dynamics of economic development in Germany, where the labour market will demand about 300-400 thousands of immigrants. First of all employees with tertiary education, such as engineers and IT specialists, are demanded (Kafarska, 2011).

Looking at the demographic forecast, we can deduce that this problem will influence even more of the European countries.

Conclusions

The scrutiny of the human capital in Poland against European Union countries showed that there is deep divergence between Poland and other member countries of the EU. Despite the fact that in the EU15 the consecutive regression in synthetic measure of human capital, which was used in the analysis, was found, up to the end of 2009 the divergence was still marked. The most essential things, which have to be improved in the human capital formation in Poland, are: re-emigration of young people, research and development area and adult participation in education and training. The evaluation of the global crisis impact on human capital formation in Poland was reduced to the migration process analysis. Although migration during the crisis period decreased, the quantity of young people with tertiary education from agglomerations simultaneously increased. What is more, even if data from the last years shows a downward tendency, it is still more of a higher value than at the beginning of Polish access to the European Union and exceeds the quantity of born children during this period in Poland. The increasing number of educated people, maladjustment of the education structure of young people, change in the available job structures and pressure from the Western countries can all be the causes of the process, which is referred to “brain drain” in the literature. It will have a significant impact on the human capital formation in Poland primarily for employers and then for the Polish economy and competitiveness.

References:
TALENTS AND TECHNOLOGY: A MODEL FOR POLICY MAKERS

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Abstract
The paper presents a model representing the possible interaction between two critical variables of a competitive strategy: talents management and technology innovation. These two research fields generally are dealt with separately because the two culture and experiences are very far, so a lot of books are dealing with talents management policies and tools and other interesting books talk about technology innovation processes.

The aim of this research is to develop a simple conceptual framework (model) that could help policy makers in the firms or in the government of a country to deep understand and manage different situations combining abundance or scarcity in talents and in applied technologies, in order to plan adequate interventions to improve a successful strategy for present high level of world competition among firms and among countries.

The research is based mainly on the author’s experience of 45 years of working and teaching in firms and Universities, and characterises just as offering a platform from which many young people could fly to explore with humility and curiosity the complex problems of economic growth at micro and macro level.

Keywords: talents, technology, innovation processes, strategy, talents management, technology management.

1. Introduction
More and more, after three years of the world financial and economic crisis, competitive strategies at a firm’s level or at countries’ level are focused on human capital and technology innovation management. Traditional components of top management culture during growth years have been marketing and financial, being not sufficient to develop long-term policies to compete and survive. Of course they remain very important, but policy makers have not been sufficiently educated to manage technology revolution and motivated talents scarcity, growing also in very populated countries like China and USA. Consulting to firms or to local and central public administrations, you find a diffused paralysis in decisional processes, when talking about technology and a boring attitude, when talking about human resources, whose management tools are well-known, but very rarely applied correctly. These two management areas are then looked at separately, not approached in an integrated way: change management techniques and culture, booming in the 90ties, are very often forgotten to save costs in innovation processes, which are so clearly not functioning because of people’s resistance to change.

These experiences were so frequent in my managerial teaching and projects consulting, which encouraged me to formulate some ideas for a cross fertilisation of the two managerial fields, in order to give simple tools to policy makers to understand these problems better and for formulating correct competitive strategy. These considerations and reflections can be very useful not only at a firm’s level, but also at countries’ level, because competition is present among firms in the international marketplace and among national systems in the world arena. Notwithstanding the long-term development policies should be proper for good political governance; more and more political people become short-term oriented from the electoral cycle and forget capabilities to think about future growth.

To present my findings and ideas I confronted myself with most recent literature in the two fields, also trying to come out with a mixed approach, as can be seen from the list of references. But the model I offer, especially to young professionals and researchers, has come out of experiences and discussions on the issue. It is conceptually synthetic and simple to teach and understand, however, it needs a lot of measurements/indicators for positioning correctly firms or countries in it. Following positioning of cases, the model prescribes more adequate strategies to move towards a better competitive positioning in the future.

Obviously I will be very happy, if from now on a lot of brilliant researchers can develop more systematic and integrated approach to these two variables, reducing the emphasis on psychological approach in talent management in favour of more solid scientific knowledge to be diffused at every management level, not leaving technology management only to specialised technicians, indifferent to people’s problems in change processes. I come from a country with a very conservative university humanistic culture, where scientific
culture is considered not as open and universal as historical or philosophical ones. But my experience shows that this dualism remains also in other context, even in more empirical Anglo-Saxon cultures.

The aim of this research is to develop a simple conceptual framework (model) that could help policy makers in firms or in countries’ governments to deeply understand and manage different situations combining abundance or scarcity in talents and in applied technologies, in order to plan adequate interventions to improve a successful strategy to meet the high level of competition at present among firms and countries.

The research is based mainly on the author’s 45-year experience of working and teaching in firms and universities, and suggests the platform, using which many young people could explore complex problems of economic growth at micro- and macro-levels with humility and curiosity.

2. Two competitive weapons

Talents and Technology are the 2T weapons for competition in the globalised world, particularly after financial crisis of 2007/2008. Both variables are critical in the firms and countries.

Talents management is a very difficult task for policy makers. To identify, recruit, keep motivated, retain, plan careers, compensate, exploit potential aligning with business strategy are the main steps for a Human Resource manager in a firm. On the country level, to plan talents needed for the future, to align quantity and quality of talents with economic strategy and international positioning, to develop adequate educational policies, to assure quality employment and work regulations and incentives, to plan the flows of immigrations according to talent gaps are among the most critical factors of savvy governance.

Obviously, a set of indicators is necessary to measure and benchmark the status of talents in a company or in with other cases. At the firm level:

- accurate skill inventories should be built and updated,
- job design and performance measurement system implemented,
- career and compensation planning benchmarked with HR market available.

Aggregate data should be available from various sources at the country level regarding:

- workforce breakdown by educational curricula,
- unemployment structure,
- in- and outflows of talented people,
- work contracts incentives criteria.

Technology innovation is also a very critical variable: at a firm’s level it is the source of surviving and developing of any business in a high competitive environment. At the country level it is the only strategic way to keep and improve the economic and social positioning obtained through history. Technological innovation processes should be carefully studied and implemented throughout any organisation to assure a continual flow of new ideas, experimentations, industrialisation and new products marketing. On the country level, R&D policies and investments should be monitored and facilitated through adequate fiscal interventions and public/private initiatives of coordination, to assure the right positioning in the international technological competition.

Again, a set of indicators should be implemented to monitor and benchmark the technology status in a firm or country. At the firm level, the following indicators should be available:

- annual ratio of new products from the total number of products,
- investments in new processes from total investments, number of international patents, R&D costs on sales,
- number of researchers from total number of personnel,
- contracting out of research,
- all other technical data comparable with other companies of the same industry.

At the country level, the following measures should be monitored:

- R&D investments in GDP,
- number of researchers in public and private structures per inhabitant,
- university spin-off number,
- start-ups per year from total number of firms,
- breakdown of firms by technology level,
- breakdown of export and import by technology level.

The two variables are mutually correlated, because technology innovation is created and sustained by talented resources, and talents are attracted from an innovative environment. First of all, is necessary to determine the starting position of an organisation or country, regarding the talents and technology aspects.
Then to build policies to keep on and possibly improve that position. In order to help policy makers, a simple model can be built, drawing the two variables along two axes as shown on Figure 1.

<table>
<thead>
<tr>
<th>Talents/Availability</th>
<th>Technology/Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Talents - Low Technology</td>
<td>WOLVES</td>
</tr>
<tr>
<td>High Talents - High Technology</td>
<td>LIONS</td>
</tr>
<tr>
<td>Low Talents - Low Technology</td>
<td>TURTLES</td>
</tr>
<tr>
<td>Low Talents - High Technology</td>
<td>CHICKENS</td>
</tr>
</tbody>
</table>

**Figure 1. Positioning Model**

Source: worked out by the author

### 3. Introducing the model

Starting from the left of the matrix, first of all we find an area, which we can consider a starting point of our analysis: in this quadrant a firm or a country is poor in terms of talents and utilising traditional, not advanced, technologies. This area has been named TURTLES, stressing the slow movements of these animals, which are intelligent and living long lives, but in protected environments not as competitive as the modern world requires. Nowadays firms or countries remaining in this quadrant have no possibilities of surviving in the long-term. Generally the most traditional industries are present in this area, e.g. furniture, shoes, textiles, simple mechanics, and countries yet having short history of economic development. The only possible strategy to compete at this stage for light and traditional businesses is to choose niches in luxury segments of the market and to build exclusive brands, like in fashion industry, for Italian or French companies. In these famous cases technology is also improving in new materials utilised and specific talents are necessary.

Moving along the left side towards highest talents availability, we find an area where a firm or a country is richer in talents, but not in advanced technologies. This area has been named WOLVES, very clever animals, team-working, which tries to survive successfully, notwithstanding its size and structure less comparable as compared to other predators. Innovative firms can be positioned here, where abundant talents try to move to new technologies to improve products and processes. It is not generally the first step from the previous basic quadrant, because the dominant myth is to introduce new technologies first and only then talents. The diffused technology fails due to the lack of talents that could not ensure a better change management approach to technologies applications in firms. Thus, any kind of industries can be positioned here, if focused on talent management to diversify product/market strategy. At the country level, it is the positioning of the new industrialised countries, particularly the Asian ones, which have always had important cultural and meritocratic values heritage that gave them a capability to absorb new technologies through Internet at high speed. Yesterday it was the case of Korea; today it can be Vietnam.

Moving clockwise to the right, we find an area, where excellent mix of advanced talents and technologies can be obtained at a firm’s or country’s level. This quadrant has been named LIONS, in honour of the king of animals, very talented and with suitable constitution to hunt. Evidently, all high-tech, high performing companies, innovative products and services industries can be positioned here. At the country level, not only the big USA, Germany and Japan are within the quadrant, but also many small and start-type nations, like Israel, Finland, and Korea. From the viewpoint of others areas, this one should be the objective to move towards, by implementing different strategies that will be discussed further.

The last area in the lower right quadrant is for positioning firms or countries rich with new technologies, but with a lack of talented people. The area has been named CHICKEN for obvious reasons, referring to the common stereotype regarding these animals. It is a very crowded quadrant, because the marketing of technologies, particularly ICT, has been stronger than capabilities to absorb and manage new ideas and products. Hence, it is a normal evolution from the basic positioning of a firm and also for countries. Almost all of them are fond of buying technologies from USA and Japan, but very often with no capabilities of deep exploitation and improvement, low investments in educational systems and adequate incentives policies for young graduates produced by local universities.
4. Strategies according to positioning

Starting from the basic quadrant – TURTLES – it is clear that a lot of work must be done concerning both people and technologies. Underestimation of technology competences is a very common situation in a firm, which also makes it difficult to buy technologies, classical receipt of marketing/finance-oriented strategist. At the same time, buying technologies in order to move to the right in the matrix does not bring results without talents to adjust them to the internal cultural context and to exploit them better. It is not only the problem of size: many big bureaucratic companies move to this quadrant, having achieved nice results in the past. Certainly, for SMEs it is more difficult to diversify and innovate, but sometimes there are more brilliant talents to look for new ideas and solutions. At the country level, this is a positioning with high risk of a further economic and social decline. At micro- and macro-level, this positioning derives from complacency with previous good results, from conservative attitude and unbalanced demographics between old and young people. These situations push politicians to allocate more resources for current welfare than for R&D investments in future. A firm positioned here should adopt a niche strategy on luxury segments in all the countries, and export its old product to underdeveloped markets, get resources to find new talented people and new product/market mix through technologies. A country needs to plan more stressing educational system, benchmarked with the best practices of more advanced countries, and to give incentives to public/private investments on new technology.

WOLVES are very hungry and aggressive, with a lot of talented people hunting for new technology to attack LIONS. This situation corresponds to SMEs having recruited young graduates from universities, which try to penetrate new markets and push new products. Many mature firms are restructuring and renovating traditional products, using new materials from bio- and nanotechnologies, both in textile and in mechanics. And SMEs are also updating their production processes at high speed. The success strategy here is based on transferring know-how from young talents and universities, research centres; on cooperation with suppliers having new technologies and clients to improve both quality and functionality of products. This positioning has been the engine for rapid growth of Asian nations, traditionally having high scholarship in young generations and very competitive values. They adopted strategies of imitating products manufactured at low costs of their salaries in the first phase, now becoming excellent also in advanced technologies. The European countries, such as France, Italy, and Spain followed these patterns in sixties and seventies, now being less competitive in manpower and educational systems. Russian Federation is now in this area, as well as Brazil, but quality of its Human Resources is not comparable with Asian countries. Web technology has been particularly useful for leveraging and accelerating growth through low-cost technology transfer.

LIONS are the best, in line with the name of this quadrant. There is a high-performing balance of excellent talents and advanced technologies, as in more successful multinationals in pharmacy, ICT, social networking. Biotechnologies, nanotechnologies, ICT revitalise mature businesses, if people are able to find them and to exploit them at the best level. Business models are light, cooperative, networking with research centres and universities. Talents are recruited, motivated with adequate incentives, organisational culture, friendly and open to innovation; team-working diffused, horizontal structure facilitates integration of different competences and cultures. However, similar to other cases, LIONS do not mean stability and permanent success: it is very difficult to keep on this leadership position. Technologies change continuously, talents become less devoted to companies in the long-term, being tempted by others companies or personal entrepreneurial spirit. It is very easy to be attacked from WOLVES or to descend into the CHICKEN area.

At the country level, it is much more difficult to keep on this positioning, because of the technological spillover effect created through Internet and inclined towards China and India, and the need of small countries to sell know-how, licensing patents very actively to newcomers from the other areas. Transference of know-how is a process that required over twenty years in the last century, but now it is quite instantaneous owing to the World Wide Web, talented countries, mostly Asian, USA and Europe. The right strategy is to keep control of the waves of knowledge, better plan the releasing process in order to maintain leadership in products innovation, using the globalisation model mainly for production flexibility, not for R&D investments.

The last quadrant, CHICKEN, includes firms or countries driven more and more by the diffusion of new technologies, but which are not able to exploit potential at their best, because of the lack of talented human resources. Large amount of small family businesses and countries of underdeveloped parts of the world, such as South America and Africa, are in this area. Traditionally SME's survived by importing talents from big enterprises, i.e. buying people, not only technology. But now the lack of talents is a serious problem in most countries, also in Asia, and of course the most competent people want to have better possibilities of career planning, like it is more frequent in big firms. So the most feasible development strategy is to improve
cooperation with universities (spinoffs) and Technology Transfer Centres, which will be more and more available to disseminate technologies and new talents produced inside schools and sometimes motivated by friendly and not hierarchical environment of SMEs.

At the country level, exit strategies from the CHICKEN area are very difficult, as the history of underdeveloped countries demonstrates. Concentration of international aid on serious and long-term objectives is very far from the culture of leading classes in these countries, which have normally very short-sighted views and style of living imitating large rich countries in consumption patterns. Severe policies of long-term investments in schools and high-level of educational infrastructures are necessary. Meritocracy-based selection of new talents is also fundamental to avoid economic decline toward the TURTLES area.

The evolution process of firms, starting from a TURTLE type positioning can go towards CHICKEN or towards WOLVES quadrants, depending on history and culture of entrepreneurs and managers. LIONS remain an objective very difficult to reach.

At the country level, normal evolutionary process is from TURTLES to CHICKEN, moving towards LIONS leaders. Sometimes, like in the small countries we referred to, a jump to WOLVES has been possible, due to long-term oriented managerial class and excellent tradition in educational process based on meritocracy values.

5. Conclusions

A general framework of possible mutual influences between technology knowledge and talents availability has been presented, in order to try to understand better the innovation process in a firm or in a country. These two are the main variables of a strategy to survive in today’s highly competitive globalised world. The present managerial literature is not cross-fertilising the two fields of investigation. A lot of books deal with talents management problems, some deal with technology innovation problems. In my opinion we need more multidisciplinary approaches to these managerial areas, but of course the two cultures are very far and different and each of them has fear to enter in the other competence arena.

We enclose references to outstanding works in both fields, but the ambition here is to propose a new more mixed area of research. Technology does not progress without talents in R&D and in diffusion and application processes. Managerial talents may lack the technology competence, thus creating resistance to change and losing growth opportunities for the firms, in present and future science-driven businesses. Starting from traditional positioning as TURTLES, firms can go in any direction according to the talents capabilities they have inside and alliances they can establish in the market.

Much more difficult is the evolution at country level: economic development theories are insufficient to forecast convergence processes for the various countries, because a lot of soft variables in the history are implied. But the extraordinary success of BRIC’s in the last ten years demonstrate how much the acceleration of technology transfer processes can contribute to improve the strategic positions of countries considered underdeveloped only twenty years ago. African nations have also been participating in the development during the last five years. Evidently, at this level growth movements become more difficult and slow for a firm, while investments require substantial resources and time to be effective in changing the initial positioning. But the model presented in this article can be useful for rethinking and combining the two variables together, also allowing to consider strategic options existing in the different positioning of communities.

The model is prescriptive in terms of possible exit strategies from the initial positioning of businesses or socio-economic cases: key indicators for positioning in the matrix can also be used to monitor the development dynamics from starting points and success of strategy implementation, alongside with more classical financial performances.

I hope that the paper will be a stimulus to study and research interdisciplinary approaches in more detail and to implement them in the field systems of measurement and control of innovation processes from the viewpoint of human resources and technologies.

References

INVESTMENT OPENNESS: SHOULD ALL INVESTMENT BE WELCOMED

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Abstract

Purpose – the purpose of this article is to elaborate traits of investment that are conductive or contra-conductive to the development of a national economy that receives an investment. Reasons for investing in a country and reasons why countries attract investment are also provided in the article.

Design/methodology/approach – the analysis of existing literature and analysis of investment attraction, which inter alia includes indications or analysis with regard to desirability of different forms and types of investment, has been employed. Information contained in this paper has been discussed at the international scientific conference called “Changes in Global Economic Landscape – in Search for New Business Philosophy” that was held in Riga on April 29-30, 2011.

Findings – attracting foreign investment is crucial for small, investment-driven countries such as the Republic of Latvia, especially in financially difficult times. Though, not all investments prove to bring benefits to a receiving country. Hence, countries should be aware of the desirable and non-desirable traits of international investment and aim to foster the desirable investment and avoid the pitfalls of non-desirable investment. This paper shows traits of both.

Research limitations/implications – the paper does not look at the reasons at micro (firm) level, but rather at the macro (state/national) level. This is done with the aim of further elaboration of policies that foster desirable investment, which, however, is out of the scope of this paper.

Practical implications – the paper may serve as a basis for policy makers to see possible implications of international investment on domestic economies.

Originality/value – the author has not come across with considerable analysis on the desirability of investment. Hence, this article is the author’s first attempt to gather available information and analysis in the domain of desirable and non-desirable investment from the viewpoint of a state.

Keywords: international investment, desirable investment, non-desirable investment.

Introduction

Development of a country can be grounded in endogenous endowments, exogenous endowments, or a mix of both. A country rich in endogenous endowments, such as skilled workforce, abundant production resources or availability of financial capital is ceteris paribus development-wise arguably better positioned than a country not rich in the aforementioned. Countries not rich in domestic resources need to acquire them, be it human resources, financial resources or else.

Many countries that seek increased growth and development do their utmost to attract exogenous resources for that purpose, including foreign capital in the form of foreign investment. However, forms of foreign investment are different and so are their applications and consequently effects on the national economies of the receiving countries.

Of all the forms of investment, often foreign direct investment (hereinafter – FDI) is perceived as the form of investment that fosters the development of the national economy of the receiving country the most. This is because of the characteristics of FDI such as investments in productive sector, possible spillover effects of FDI, FDI being a long-term investment and many more. Likewise, portfolio investment is also often regarded as beneficial for the development of the national economy of the receiving country, since portfolio investment provides stable long-term financing for investment objects that create value, which is a pre-requisite for this type of investment to take place.

To the contrary – there are other forms of investment that are not considered beneficial for the development of the national economy of a receiving country. These are, among others, short-term speculative investment that enters a country to capitalise on some specific fault of the national economy, to reap fast profits and exit until the domestic economy or a particular sector of it collapses. One of the typical examples of such investment is investments that create asset price bubbles, which create enormous wealth for their creators in the short and enormous losses to the sectors or national economies experiencing those bubbles and their subsequent burst. Other examples of non-beneficial investment include investments that
discourage development of local business community, investments that enter the country with the sole purpose of destroying foreign competition, and other forms of investment.

Conventional perceptions and propositions of the politicians of the Republic of Latvia proclaim that investment attraction to the country will solve many of the crisis-related problems and will bring the national economy back on sustainable footing, since Latvia is a small, open, and investment-driven country. Other small and investment-driven countries are no exception to this perception as well. The observed experience around the world and in the Republic of Latvia, however, proves that not all investment brings fruit to the development of the national economy of a country and hence not all investment is desirable. Investment that is not strategically directed but rather directed at an unregulated branch of speculative economy or investment that is directed for acquisition and liquidation of a competing company in another country are just some of the examples of investments that are doubtfully desirable. Investment can serve as a gap filling tool when needed; however, overinvesting may lead to asset price bubbles and deterioration of national competitiveness. There are also other favourable and non-favourable traits of international investment that are discussed in this paper.

When looking at aggregate investment in Latvia, one can also observe that foreign direct investment, arguably the desirable investment, constitutes just about one fifth of total accumulated foreign investment in Latvia. Many countries around the world, including Latvia, are at the forefront of defining their new attitude towards investments as such as well as defining how to enhance the desirable investments especially in the times when the essential financial flows are declining or even reversing.

The author of this paper has not found much research into the topic of desirability of investment and policies, which should be pursued by countries to foster the inflow of desirable investment and counter the inflow of non-desirable investment. There is research that contains indications of the desirability of different investment; however, this research needs further elaboration, since most of it concentrates on some specific aspects of investment or specific types of investment, or even specific geographic coverage of investment under assessment. Hence, this paper attempts to gather the available analysis on the desirability of investment with the goal to elaborate aspects that distinguish between desirable and non-desirable investment from the point of view of the receiving country.

To elaborate the aspects for distinguishing of the desirability of investment, it is important to understand why countries try to attract investments and why investors invest, since this is the starting point for the investment debate. Furthermore, it is also important to understand what characteristics of national economy attract investment and what deter it. When these issues have been dealt with, elaboration of traits distinguishing desirable investment from non-desirable investment can be put in a broader perspective.

Methods employed for writing of this paper are as follows. Analysis of existing literature and analysis of investment attraction, which inter alia includes some indications or analysis as to the desirability of different forms and types of investment, has been employed. Moreover, information contained in this paper has been discussed at the international scientific conference called “Changes in Global Economic Landscape – in Search for New Business Philosophy” that was held in Riga on April 29-30, 2011. The issue of distinguishing desirable investment from non-desirable investment has also been discussed with a number of academics and high level managers both in public and private sector. Discussants have positively evaluated the author’s idea to embark on the topic as well as have shared some insights that have been considered in the course of writing this paper.

This paper does not look at the reasons at micro (firm) level, but rather at the macro (state/ national) level. This is being done on purpose, since the issue being addressed in this paper is concerned with distinguishing among different types of investment and their impact on the national economy of the receiving country as well as what can be done about that. As this is the policy level issue at the outset, macro level is of paramount interest to see what can be done at a country level to foster the desirable investment and limit the non-desirable investment.

The paper is organised as follows. The next part sheds some light on global investment trends. The third part describes why countries try to attract investment, and the fourth part deals with the issue of why investors invest in certain countries. The fifth part shows in what way international investment can be considered desirable to a country, and the sixth part – to the contrary – shows in what way international investment can be non-desirable to a country. The last part concludes the paper and provides suggestions for further research.
Global investment trends

World Investment Report 2010 (UNCTAD, 2010) admits modest recovery of the global FDI in the first part of 2010, which leads to predict some optimism in FDI full recovery in the medium to long-term. According to the said report, global FDI had been expected to rise to over USD 1.2 trillion in 2010, USD 1.3-1.5 trillion in 2011, and USD 1.6-2 trillion in 2012. These numbers, if do come true, will be approaching the global FDI peak level of 2007, when total global FDI was about USD 2.1 trillion. The swift recovery of FDI and prospects for its further growth show that countries interested in attracting FDI should be ready for embarking on the attraction process quality- and quantity-wise.

Later UNCTAD (2011) estimates show that the estimates of World Investment Report 2010 have been slightly overoptimistic, since the global FDI is estimated to having reached USD 1.122 trillion in 2010, which is a modest increase of 0.7%, if compared with corresponding numbers of 2009. It is interesting to note that FDI to developed countries has contracted by 6.9% comparing 2010 with 2009, whereas developing economies witnessed a surge of 9.7% and South-East Europe and the CIS stayed almost where they were, with a 0.8% increase. Some countries have lost significant part of their FDI inflows, leaders being Japan (-83.4%), South Africa (-77.9%), Ireland (-66.3%), Nigeria (-60.4%), Luxembourg (-55.7%), and a number of other countries. The biggest winners in terms of increased FDI flows in 2010 were the following countries: Malaysia (+409.7%), Czech Republic (+199.6%), Indonesia (+162.7%), Singapore (+122.7%), Austria (78.8%), and a number of other countries. Moreover, year 2010 was the first year to mark the fact that more than one half (53%) of FDI flows have been received by developing and transition economies.

Deterioration of economic and financial situation as well as global slowdown of the growth of international economy can serve as facilitators of greater international competition for FDI. Moreover, changing economic landscape in terms of which countries receive the global FDI flows also shows that more attention needs to be paid by countries for developing appropriate investment attraction policies.

Intensifying competition for and availability of FDI goes hand in hand with intensifying competition for other sources of capital. There will always be countries that will not succeed in attracting the most desired FDI or FDI in sufficient amounts. That may well be due to different reasons, some of which being unattractive investment climate, weak regulatory system and rule of law, corruption, and many other obstacles to investment. Countries not succeeding in attracting FDI might still opt for other forms of financing, which might be sub-optimal compared to FDI, and hence not bring the expected benefit, if not to the contrary.

Reasons why countries strive to attract investment

Traditionally, many reasons might be found for why countries seek to attract investment. Fostering growth of a country is one of the most widespread reasons for attracting investment into a country, as seen from the academic and non-academic debate. Vast inflows of capital from abroad do allow recipient countries to grow, at least in the short term and as measured by macro level variables. Recently, however a debate has begun that probably growing is not enough or even is not right as a proposition of a development path of a country. This is since the advocates of sustainability and sustainable development claim that growing quantitatively (as measured by macro variables such as the GDP or GDP per capita) is not correct if that is being done at the price of decreased sustainability of the place over the long term. Rather, smart growth, or as it is called – development, is necessary instead. Believing these propositions, one can also claim that countries seek to attract foreign capital to develop, not just to grow.

Some discussion on the importance of investment and FDI in particular has been discussed by Zvigulis and Jevcuka (2010). Among the benefits to a receiving country are transfer of technology, improvements in efficiency and productivity of producing sector, spillover effects, etc.

By attracting foreign capital, countries strive to attract positive “externalities” that are connected with that capital. Those externalities might include bringing over new skills and technologies from the countries providing investment. Bringing over skilled workforce can also be considered beneficial, especially in cases of small countries that lack workforce.

Attracting financing can also serve as a positive catalyst for attracting further financing from other sources. This might be especially true if some big companies or big private investors decide to invest in a country, thereby declaring a country interesting and safe enough for investments, which might encourage other investors to invest in the country.

Increased investment into a country can also mean increased budget revenue for administration of a respective country. These increases can take place in the form of increased government revenues from
different taxes, increased revenues from exports etc. Benefits can also accrue in the form of improved indicators of the national accounts.

List of reasons why countries try to attract foreign investment, which have been listed above, is a non-exhaustive. Though, it includes often persisting perceptions as to why countries should strive to attract investors and investment. It is important to understand these reasons, since they have an impact on the decision taking at the macro level.

When striving to attract foreign investment, policy makers need to bear in mind that there are certain pre-conditions that need to be fulfilled for the effect of foreign investment to be as beneficial as possible. Wang and Wong (2009) find that “FDI promotes productivity growth only when the host country reaches a threshold level of human capital; and FDI promotes capital growth only when a certain level of financial development is reached”.

Countries need to decide on what are the core reasons why they want to attract foreign investment. Are those reasons some of the above mentioned or any other. Do countries try to attract just foreign capital or also foreign know-how, technologies etc.? In this regard, it is interesting to note an example from the Golf Cooperation Countries (GCC), mentioned in the paper by Faras and Ghali (2009) and stating that distinction between real and financial FDI must be made. As commonly known, GCC countries have a surplus in capital. What is not that commonly known, is that GCC countries need advanced technologies and know-how. Hence, these countries as well as others that use the advice need to understand what benefits the particular financing will bring and why it is necessary for the development of the national economy of the receiving country.

Reasons why investors invest in certain countries
Countries wanting and seeking investment need to know why investors look for investment possibilities outside their countries of origin. This can help the said countries embark on investment attraction more wisely, including both, attracting investment in the right manner as well as attracting the right investment.

The most traditional reason for investing abroad, which is in line with the neoclassical economic theory, says that investment abroad is being done with the aim of profit maximisation and cost minimisation. Since firms, when investing abroad, do have additional costs as compared to investment domestically, the gains from foreign investment need to at least offset the increased costs of doing foreign investment. Firms may want to get access to foreign markets and therefore invest abroad. Firms may also want to avoid some trade barriers, and thereby invest in a country as opposed to exporting to a country. Other reasons might also include various factor endowments that become reasons for investing abroad. According to Dunning (1993, cited in Deichmann et al., 2003), “the importance of each [characteristic of a market, such as resources, labour, infrastructure, and other variables] varies according to a firm’s specific inclination toward natural resources, markets, efficiency, strategic assets, and other firm-specific considerations”. There are also so-called “follow-the-leader” investment strategies, which basically imply that as soon as some companies start investing in a country, others will follow (Kindleberger, 1969, as cited in Deichmann, 2003).

Some authors claim that different factors determine investments in different regions. By using a regression analysis on a panel data set, Tondel (2001, cited in Deichmann, 2003) has found that the only important variable that determines why investors invest in Central and Eastern European countries is transition progress. At the same time, similarly important variables for Commonwealth of Independent States countries are market size, natural resources, and wages. These conclusions arguably also show different motives of foreign investors when investing in either of the groups of countries.

Research by Globerman and Shapiro (2003) reveals some insights into what are the necessary preconditions for a country to attract US FDI. The research claims that no major US FDI will be received by a country that does not have effective governance system in place. Countries that do not receive major or even any US FDI are typically countries that do not promote free and transparent markets, have ineffective governments, and often have legal systems not rooted in English common law. Moreover, the authors find that for those countries that have received US FDI governance infrastructure – including the nature of the legal system – is an important determinant of the amount of US FDI received. Since US is an important trend-setter as well as an interesting capital holder in the eyes of many countries, these characteristics or minimum requirements for attraction of US FDI might be worth considering for a country seeking to attract investment, not only from the US.

Already back in 1973 Reuber et al. (1973, cited in Sethi et al., 2003) identified some determinants of the flow of the US FDI into Western Europe, such as lucrative market, liberal host government policies, technological infrastructure, skilled labour, and cultural proximity. These determinants are among the
“traditional” determinants as seen elsewhere in the literature as well as in the public debate on investment attraction determinants.

Cevis and Camurdan (2009) constructed a model for testing what are the factors that foster FDI attraction and what are factors that deter it in developing countries and transition economies. They found that “FDI is related positively with interest and growth rates, trade (openness) rates and the previous period FDI but inversely related with inflation rates”.

Since foreign investors need to collaborate in and with the local market of the country they invest into, it is important to understand what the resource conditions that seen as attractive by investors are. Deichmann et al. (2003) has found that human and social capital is the most important determinant of distribution of investments. This factor underlines the importance of professional skills and highly developed infrastructure that help in investment attraction. The authors also find that natural resources are important, especially for countries that are unattractive by other measures. Foreign firms also tend to respond positively to favourable investment climate, trade policy, and market reforms. Financial depth is also important, though in the analysis it falls short of one percent level of significance.

Traits of desirable international investment

Many decades back scientists tried to determine what the possible positive impacts of foreign firms investing in a country are. Safarian (1973) mentions spillovers from the firm that might be important for a host economy. He identifies benefits from manpower training and uncaptured productivity as being the most important benefits from spillovers. At that time, the spillover definition was relatively narrow and no much research was done to tackle the issue, just as there was insufficient empirical data to judge.

One of the most typical reasoning why policy makers tend to argue for and work to attract external resources is to finance savings gaps and promote growth and economic development (Dornbusch, 1998, cited in Combes et al., 2011). Investment, indeed, can be seen as the financier of insufficient capital for development of a national economy, subject to appropriate policies being put in place. Foreign investment is particularly important for countries that are not rich in natural endowments and that need to base their economic structure on production of other products and services. This is especially true for small countries, which do not have well-developed systems of education and science, yet these countries must rely on production of high value-added products and services. In similar cases foreign investment can be beneficial for the host country if financing is complemented with transfer of knowledge, technologies or know-how.

Smarzynska Javorcik (2004) in her article analyses if FDI increases the productivity of domestic firms through spillovers, which have been often claimed as one of the positive aspects of attracting FDI to a country. In literature, the author has not found sufficient conclusive evidence that would prove the existence of such spillovers – the existing evidence can either not be generalised or it encounters problems with establishing of causality between foreign investment and spillovers. Hence, although usually spillover effects are being sought within industry (horizontal spillovers), the author looks for spillovers between foreign affiliates and their local suppliers (vertical spillovers), with particular emphasis on spillovers in backward linkages. Author finds an interesting and noteworthy revelation when looking at the positive aspects of FDI. She proves that FDI creates positive backward externalities if there is some shared ownership in a company or project receiving the investment, which is also a company or project that does have backward linkages. This is associated with larger share of local sourcing associated with companies or projects with larger domestic ownership, which, in turn, leads to higher output in domestic companies.

Impact of foreign investment on the national economy also varies based on how it is being made. FDI in an asset-creating mode (investment that brings in new technologies, skills etc. and is oriented towards export markets) has been found to be conductive to the development of the host national economy, as explained by Dyker (1999, cited in Deichmann, 2003). In the same vein, investments in asset-absorbing mode (investments that mobilise existing assets with the emphasis on the domestic market) do not bring that much benefit to the receiving economy. Similarly to that, Ramcharan (2000, cited in Deichmann, 2003) states that “FDI in greenfield and non-privatisation investments have generally been more conductive to economic growth than FDI in privatisation of state-owned assets”.

It has been widely described in academic research and also in non-academic publications that investment and FDI in particular tends to flow to those countries that have at least minimum regulatory system in place, which is in accordance with international standards that have favourable investment climate etc. Hence, a country that is preparing for massive investment attraction has to do its best to put adequate rule of law in place, streamline its business environment, decrease bureaucracy for business, promote transparent dealing, fight corruption, and many other activities. Even if all of this is being done in the name of investment
promotion, this still brings benefit to the country as such and any domestic entities (legal and private) that operate in the country. Hence, preparation for investment attraction and improvement of domestic conditions to attract even more foreign investment can also be considered benefit from foreign investment, although indirect and pre-emptive in this case.

**Traits of non-desirable international investment**

Although investment attraction is often positioned as universal panacea for solving difficulties faced by countries, not all available evidence and research confirms the assertion of the universal panacea. A number of authors post various negative aspects of attracting foreign investment.

Growing amounts of foreign investment pose potentially negative effects on domestic market structures and national sovereignty (Venron, 1971 and Caves, 1982, as cited in Hooley et al., 1996). In addition to that, Faras and Ghali (2009) state that FDI can also not contribute to the growth of the host economies if it is being attracted by economic growth and some particular favourable economic conditions in the host country. In such a case, FDI is typically attracted due to significant market size of the host economy, and there are cases when more than the necessary amounts of FDI have been attracted. That is not favourable from the point of view of the host country, since excess financing inflates asset prices, other prices, and tends to overheat national economies.

Issue of overheated economies has also been analysed by Combes et al. (2011) with regard to significant increases of capital inflows and their relation to the national competitiveness. “Capital inflows generate higher demand for both tradables and nontradables and lead to a higher relative price of nontradables and to appreciation of the real exchange rate”. The impact of different types of capital that flows in an economy, however, is different. Capital inflows that are connected with domestic consumption under the situation of constrained supply will inflate prices and hence contribute more to the appreciation of the real exchange rate than will investments that have significant imported goods content. In this vein, FDI will arguably put less pressure on the real exchange rate appreciation than will bank loans. Additionally, it also needs to be mentioned that “with a fixed exchange rate, capital inflows potentially increase inflation”, which is an issue also seen in many countries facing significant capital inflows and having fixed exchange rate in place. Testing of the available data gathered by the authors shows that portfolio investment has about seven times larger impact on the appreciation of the real exchange rate than does FDI or bank loans.

Montiel (1998) analyses effects of increased capital inflows on a large number of developing countries. Although this research is more than a decade old, many similarities can be drawn with what has happened during the recent financial and economic crisis that broke off in 2008. Huge capital inflows that were witnessed by many developing countries both then and now posed significant challenges for governments of the respective countries to devise appropriate policies to absorb them and prevent asset price bubbles and their consequent bursting. As seen from the empirical evidence, many countries did not cope to devise appropriate policies and run into problems associated with excessive inflow of foreign investment that was not directed to productive areas of national economy; instead it created asset price bubbles with all the corresponding adverse effects on the national economies of the respective countries – macroeconomic overheating and macroeconomic imbalances. Authors also mention the potential threat posed to globally-integrated investment-dependent countries when capital flows reverse. Reversals of investment flows in these cases have the potential to be significantly harmful for the host economies.

Foreign investment and its relation to economic development via employing right policies is being analysed by Soon and Stoever (1996) based on the experience of Singapore, a highly developed country by contemporary measures but a less developed country just some decades ago. In their article authors look at a number of possible pitfalls a country can run into when attracting foreign investment – particularly from the point of view of policy formulation. One of the pitfalls mentioned in the analysis is that when promoting foreign investment politicians may start viewing investment attraction as the policy cornerstone rather than instrument for driving development of the national economy of a country. On one hand, government interventions may speed up investment attraction via positive regulation, investment promotion, provision of information, and in many other ways. On the other hand, too much of government intervention may result in market distortions that occur via suboptimal investments. Among disadvantages of foreign investment that occurred in the case of Singapore, authors mention high dependence of the country on foreign investments and decisions taken about the said, which is largely out of control of the receiving country. Moreover, large inflows of foreign investment resulted in unbalanced development, i.e. domains of national economy that received foreign investment developed rather swift if compared to those that did not. Moreover, putting most of the effort in attracting investment and building local conditions that are seen as enabling for foreign
investors may result in underdeveloped local entrepreneurs, since all effort is being put in assisting foreign investors.

It has long been held that tax incentives are seen as attractive for foreign investors to invest funds in the particular country. Many countries and municipalities in particular do offer various tax incentives for potential investors, thereby thinking of being more attractive in the eyes of those potential investors. Szanyi (1998) in his paper explains that the experience of Spain and Portugal as well as some Central European countries show that tax incentives had little diverting effect on FDI. It is interesting to note that tax transparency and stability are rather those drivers that divert those flows. As authors put it, there is no clear evidence of the fostering effect of tax holidays, whereas there is evidence that competing tax breaks to foreign investors have caused developing countries substantial loss of fiscal revenues. Hence, one can conclude that investors move outside their home countries not because of some external stimulus, which tend to be short-run, but rather due to well thought-out reasons and where stability and predictability more than offsets short-term financial gains.

Szanyi (1998) also claims that while investment can be the main debt financing throughout transition periods, the level of investment might start to diminish in the course of time. Meanwhile, transfer of profits might start to soar, thereby creating net outflow of capital.

When inflow of foreign investment is done through mergers and acquisitions, it is always a question of the intentions of the acquiring investors with regard to future operations of the acquired company or business. Good businesses are not always been bought with the best possible intentions of further developing those businesses. They are sometimes bought for being closed down thereby reducing competition in the market, which in such a case has been undesirable from the acquiring company’s point of view. This is in a way supported by Szanyi (1998) where he argues that sometimes foreign investors that have acquired domestic businesses tend to replace products produced by the domestic company with the products produced by the acquiring company. In these cases, it tends to be difficult to know if this has happened due to the fact that domestic products have become obsolete or due to the fact that domestic products are being pushed out of the market in favour of products of the acquiring company.

Countries benefit not only from foreign investment, but also from domestic investment. Having domestic investors and domestic investment is important because the existence of such denotes that capital is being accumulated and diverted to possibly productive domains of the national economy. Misun and Tomskik (2002) analyse if FDI crowds in or crowds out domestic investment using data of Czech Republic, Poland, and Hungary as the basis for their research. Authors do observe some crowding out effect of FDI. Authors claim that the positive impact of rising FDI is not assured, since “in some cases, total investment may increase much less than FDI, or even fail to rise when FDI increases”, thereby signalling of non-conductive traits of FDI.

Foreign investment often is associated with higher imports into a country, since the company investing in a country needs to buy equipment it has gotten used to, which is usually imported. Hence, it can happen that all of the funds leave the country rather than goods being acquired domestically. Often importing of goods is necessary since no such goods are being produced domestically. Safarian (1973) in his paper states that high dependence on imported techniques can create an environment where entrepreneurial spirit is dampened permanently. In the case of heavy inflows of foreign investment and consequent rise in imports of goods, entrepreneurial effort can indeed be put in peril. The author goes further to argue that if a country creates an environment where domestic saving and domestic entrepreneurial groups are being supported for long time, substantial growth can occur without FDI or foreign-controlled technologies. From nowadays perspective, this argument needs to be further elaborated bearing in mind all the regional and international agreements on free trade, free movement of labour and products etc., which, however, is out of the scope of this paper.

Conclusions and suggestions for further research

Varying evidence exists as to the conductive and contra-conductive characteristics of foreign investment, and especially those of FDI. It is impossible to have one single opinion as to if foreign investment is desirable or not in the understanding that it is conductive to the development of the national economy of the receiving country or not. However, further research in this domain is necessary.

One of the immediate conclusions from the information presented in this paper is that foreign investment indeed can be beneficial if it is absorbed in the right way and if policies that prevent the negative traits of it are present. Some of the positive aspects in addition to financing of financial gaps and making working capital readily available are transfer of knowledge, technologies, and know-how. Spillover effects are also
often cited among the positive aspects of foreign investment, although research mentioned in this paper suggests they might be occurring vertically rather than horizontally. At the same time, foreign investment also poses significant threats to the development of a national economy if it is not absorbed in the right way, inter alia due to inefficient public policies in the relevant domain. Among the perils of foreign investment one can also mention the conventional threats such as losing of sovereignty of a country, at least financial if not political. Excess capital inflows tend to overheat economies with the consequent results of lost national competitiveness and inflated asset prices that tend to create asset price bubbles and burst over time. Foreign investment can also cause loss of competitiveness through appreciating real exchange rate.

From the traits of investment mentioned in this article, one can embark on deriving possible factors for understanding if particular investment under consideration is conducive to the development of the national economy or not. However, it is not straightforward to tag different investment proposals or projects with the sign “go on” or “go home”. It requires more than analysis of available literature on the determinants of investment being conductive or not. Hence, the author of the paper has decided to embark on assessing impact of a number of investment projects with the utmost goal of elaborating investment impact assessment criteria on the national economy of the country. This is also the possible suggestion for further research. Additionally, further research can be done to assess investment desirability on a regional level.

References
NECESSITY OF IMPROVEMENT OF LONG-TERM FINANCIAL INVESTMENT EVALUATION MECHANISM IN PUBLIC SECTOR COMPANIES IN LATVIA

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Abstract

Key findings of the research are as follows: long-term financial investments done by public sector is a significant part of its total assets. Starting with the fact that no single definition and terminology exists for concept, it comes to other findings – besides being valuable assets with a potential long-term financial investments are difficult to be assessed; different evaluation methods are applicable both having pros and cons what makes information for its user incomparable and useless for analysis and judgment of financial health of a company, local municipality and state.

The aim of the paper is to investigate, summarize and systematize concept and evaluation methods of long-term financial investment. identify potential problematic aspects and develop recommendations for its improvement.

Research is limited to long-term financial investments done by public sector, in detail is examined case of Latvia with slight touch of international regulation.

Since long-term financial investments are subject for private as well as for public sector, research provides complex look to the problem and is relevant for shareholders in private companies, local municipalities and state owned companies.

Key words – long-term financial investments; public sector; public sector companies; long-term financial investment evaluation; information disclosure; holding company.

1. Introduction

Long-term financial investments in other companies and their performance are part of the building blocks what make the holding’s company market value.

Value growth of holding company is a result of the successful management and should be objectively reflected in the financial statements of leading company of holding. Similarly, the holding company management and owners should understand the basic principles of evaluation and information disclosure about long-term financial investments in order to understand what value they manage or what value they own and how to increase this value and to reflect objectively in financial statements to get attention from potential investors, partners and creditors. This is particularly important if regulatory rules permit variations in financial investment evaluation and information disclosure as it is in the public sector in Latvia, when disclosing information about its participation in companies. This will be discussed in this research in detail.

Much of the public sector (state, municipalities) delegated functions (e.g. water supply, central heating, healthcare etc.) in Latvia are being implemented by public sector fully or partially owned companies. Since public sector have a number of functions which are implemented by public sector owned companies, they form a group of companies where the leading role is for municipality or state. Thus in its economic substance (however not from a legal view point) some type of holding company is being created.

The aim of the paper is to investigate, summarize and systematize information about the concept and evaluation methods of long-term financial investments based on scientific studies and regulatory norms; identify potential problematic aspects of long-term financial investment evaluation in public sector in Latvia and develop recommendations for its improvement.

Since long-term financial investments are subject for private companies as well as for municipalities and state, study of long-term financial investment concept, evaluation and impact on the investor’s value is relevant both for private companies and local municipalities and state.

The methodology of the research includes qualitative, theoretical research approach, involving literature review, data collection from published financial reports, data analysis and drawing conclusions.

By “public sector” in this article are understood local municipalities and state authorities. Holding company and group of companies are used as synonyms. Local level is attributed to Latvia, international – scope that is subject to International accounting standards (hereinafter – IAS) and International public sector accounting standards (hereinafter – IPSAS). Reader may be more familiar with term financial fixed asset instead of long-term financial investment which is key terminology used in research. This is the first problem to be discussed in next section.
Following parts of the paper will represent the concept and different definitions of long-term financial investments; reveal existing evaluation methods of long-term financial investments with a practical example to better highlight the difference between the two evaluation methods. Also evaluation practice of long-term financial investments in public sector in Latvia is discussed. In the final conclusions and recommendations for future research are presented.

2. Long-term financial investments: concept and definition

Significant problem facing the long-term financial investment analysis is a single international use of the term and its definition. Laws and regulations either name the consisting components (Latvian practice) or define components itself (international practice), while researchers tend to focus on the economic substance of the concept. Next, in Table 1 author has summarized terms and definitions in use for long-term financial investments (some definitions are abbreviations made by the author).

<table>
<thead>
<tr>
<th>Source of information</th>
<th>Definition, description of long-term financial investment</th>
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<tr>
<td>IAS 32 Financial Instruments: Presentation, § 11</td>
<td>Financial asset is any asset that is a) cash b) an equity instrument of another company c) a contractual right to receive cash or another financial asset from another entity or to exchange financial assets or liabilities with another entity d) a contract that will or may be settled in the entity’s own equity instruments and is a non-derivative or a derivative</td>
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<td>Latvian law on annual reports</td>
<td>Long-term financial investments: Investment in subsidiaries and loans to subsidiaries. Investments in associated companies and loans to associated companies, other securities and investments, other loans and other long-term debtors, own shares, loans to shareholders and management</td>
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<tr>
<td>Regulations of Cabinet of Ministers “Procedures for the Budgetary authority accounting”</td>
<td>Long-term investments of all types of resources that Budgetary authority intends to use more than one year, as well as all types of assets, payment for which is for more than a year after the balance sheet date. Long-term investments are classified into the following groups: intangible assets, fixed assets, long-term financial investments</td>
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<tr>
<td>Fédération des experts comptables européens, 1991 (FEE European survey of published accounts)</td>
<td>Investment is an asset held by an enterprise for a purpose of achievement of the economic benefits through the distribution of capital, appreciation or for other benefits to the investing enterprise such as those obtained through trading relationships</td>
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<tr>
<td>Susan Thomas, 2010 (Lecture notes on Financial assets: The Indira Gandhi Institute of Development Research (IGIDR), Bombay, India)</td>
<td>Any financial asset is “defined cashflow” expected at “defined maturity”. Cashflows can be either fixed or random, positive or negative. Cashflow-maturity describes what point in time is the cashflow expected. Based on these two features, financial assets fall into following broad categories: 1) assets with fixed cashflows and fixed maturities (loans, bonds) 2) assets with fixed cashflows and uncertain cashflows (insurance products 3) assets with uncertain cashflows and fixed maturities (equity investments 4) assets with uncertain cashflows and uncertain maturities (equity investments)</td>
</tr>
<tr>
<td>Aivars Lodebergs, 2003 (“Financial Accounting for trade” Latvian informatics dictionary, Elko)</td>
<td>Long-term financial investments are assets of company, which serve as a source of growth in material well-being. Such an increase may occur: 1) by receiving income from the investments object - dividends, interest, fees for use rights, 2) by increase in investment value, 3) acquiring other types of economic benefits</td>
</tr>
<tr>
<td>Harald A.Brenink, 1992 (Financial integration in Europe)</td>
<td>Financial fixed assets are those intended for use in a continuing basis in the normal course of an undertaking’s activities. This term is nevertheless necessary in connection with the valuation rules</td>
</tr>
<tr>
<td>Harvey Stinson, Michael Lebas, 2006 (Financial accounting and reporting: a global perspective)</td>
<td>Financial fixed asset is an asset or investment, the investing firm has rights or possibilities to influence the behavior of the enterprise. Active in the sense that the investing firm chooses to apply its resources to deliberately grow its value creation potential and do so with a long term, strategic view, requiring that it take an active role in the decision-making process of the firm in which it has invested</td>
</tr>
<tr>
<td>Translators discursive about financial asset terms (available at <a href="http://www.pjec.com/ed/sf/eatm/sf_eatm/accounting/sf_accounting/sf_accounting.html">http://www.pjec.com/ed/sf/eatm/sf_eatm/accounting/sf_accounting/sf_accounting.html</a>)</td>
<td>Assets of a purely financial nature which a firm owns and which are not directly used in the production process. Its objective is to maintain control of its affiliated subsidiaries and stable equity participation in other companies via the ownership of shares, debentures, etc.</td>
</tr>
<tr>
<td>The financial literates (available at <a href="http://www.t">http://www.t</a> vindas.info/2010/06,long-term-and-short-term-investments.html)</td>
<td>Long term financial investment which best inflation is equity and it is equity which creates wealth in long term. Ownership assets have short term fluctuations but in long term, they best inflation and create wealth</td>
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The summary of definitions shows following:
1) There is no single term and definition for long-term financial investment;
2) Diversity in terms makes difficult to identify existing researches and studies;
3) International regulation makes emphasis on the concept of financial assets – IAS does not make distinction between fixed and current financial assets. Financial fixed assets from provided definition of financial assets by IAS 32, § 11 include equity instrument of another company and contractual right to receive financial asset from another entity. Identical in substance is the definition for the public sector - IPSAS (see IPSAS 15, § 9), only with exclusion of derivatives as there are no opportunities to acquire the shares of public sector. While the current version of IAS 39 no longer defines the financial assets and refers to definition in IAS 32 where the term of financial asset is defined.

Previous version of IAS 39 (however still valid in IPSAS 29, § 10) described four categories of assets-financial instruments. Hervé Stolowy and Michel Lebas, 2006 suggested to apply fifth category "in our mind" because IAS 39 does not apply directly to investments in subsidiaries, associates and joint ventures.

In practice, say Hervé Stolowy and Michel Lebas, 2006, two main types of financial fixed assets will be found under available-for-sale headings:1) all equity securities, eg, long-term equity investments held for return without intention to influence the business whose shares are held as an asset 2) investments in non-consolidated companies (because they do not meet required threshold) or speculative investment (i.e., not part of an “industrial strategy”) included in the parent company's or any subsidiary's separate balance sheet. This opinion from other researchers put together with IPSAS 6, § 53 solves the problem of how to evaluate and disclose investment where participation is under 20%. However this still stays open question in Latvian regulatory norms.

4) Latvian regulatory norms put emphasis on long-term investments, long-term financial investments identifying as a part of long-term investment and further on components of long-term financial investments are being identified, without defining the concept of long term financial investments as such. Different terms are used for same concepts, for example, related company, subsidiary, daughter company, however neither one nor the other term are defined;
5) Finally, researchers’ definitions emphasize economic substance of long-term financial investments concept.

The existence of ambiguity in first, definition phase, is significant problem since the definition of a long-term financial investment is the basis for its classification, recognition and measurement in investor’s financial reports.

3. Evaluation methods of long-term financial investments

Generally exist two methods how evaluate and disclose long-term financial investments in investor's separate financial statements – cost method and equity method. Concept of methods, application in local and international level in public sector, as well as positive and negative features in view of the author's, are summarized in Table 2. The Table 2 is designed by the author based on study of relevant literature, discussion with representatives from local municipalities and the author’s personal experience in this field.
Comparison of cost and equity methods

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<th>Cost method</th>
<th>Equity method</th>
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<tr>
<td>Concept/idea</td>
<td>Investments in an investee is initially recorded at acquisition cost and then is either increased or decreased to reflect the investor’s share of profit or loss of the investee’s operations after the acquisition date</td>
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### Definition of the concept in regulatory documentation

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<th>Latvia</th>
<th>International</th>
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<tr>
<td>Regulations of Cabinet of Ministers “Procedures for the Budgetary authority accounting” Article 76</td>
<td>IPSAS 7, Definition “Cost method”</td>
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<tr>
<td>IPSAS 6, Definition “Equity method”, IPSAS 7, Definition “Equity method”</td>
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<th>Latvia</th>
<th>International</th>
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<tr>
<td>Regulations of Cabinet of Ministers “Procedures for the Budgetary authority accounting” Article 75: investments in subsidiaries and associated companies assess and disclose under the cost or equity method</td>
<td>IPSAS 6, § 53, controlled entities that are included in consolidation procedure may choose between equity method or accounting for as an investment, controlled entities that are excluded from consolidation should be accounted for as an investment</td>
</tr>
<tr>
<td>IPSAS 7, § 23, 26, investment in associate (regardless of investor shares consolidated in statement), should be either accounted using equity method or cost method or accounted for as an investment</td>
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### Application in investor’s separate financial statements

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### Strengths

- Investor’s opportunity to reassess the investment value that is sufficiently subjective process, it is an estimate
- It is not possible artificially inflate the value thus misleading potential investors, creditors
- Has advantage over equity method when there is no fair, easily determinable value for the investment
- Includes less paperwork and calculations than the equity method

### Weaknesses

- Net profit can be a subjective concept when there is absence of single accounting principles for related companies
- Investment value is pegged to the investor’s accounting policies (e.g., provisioning, etc.) which the investor may not always directly supervise
- Cost of acquisition, which is most likely different from the investor’s fair part in the net assets of investee. That reflects in goodwill what makes the understanding more intangible

The summary of comparison of cost and equity methods shows that in public sector, where the use of method is not clearly determined and the choice option for evaluation and information disclosure exists, makes information in financial statements incomparable; there are situations where the regulation is not clearly evident (investment in equity till 20% which is not short-term investments); both evaluations methods have their pros and cons.

Division of characteristics of methods into strengths and weaknesses depends also on whether these characteristics are attributed to provider or user of the financial information and the objective information is used for. Therefore one and the same characteristic can be strength as well as weakness, as it is, for example,
with the possibility to reassess the investment in other companies. Therefore, it is difficult clearly distinguish opportunities and threats for both methods as threat in one case can be opportunity in another. For example, if the related company is suffering losses, cost method gives the opportunity to the owner company unduly raise the value of investment in its financial statements, while it is threat for the information user to get wrong impression about the financial situation of owner company.

Also Polkuamdee, 2007, recognizes that each method could present an advantage or a disadvantage to a given company. Investors should understand the principles of accounting so they can recognise what is a fair price and distinguish the differences.

4. Evaluation methods of long-term financial investments: practical example

To show the difference between cost and equity method in evaluation and information disclosure of long-term financial investment, simplified example is being considered. In the example, an investor (it could be either private enterprise, municipality or state) establishes fully owned company that suffers losses initially, but later on has the opportunity to attract granted funds, that significantly improves its performance. How the company’s operating results reflect in the investor’s balance sheet, depending on the applied evaluation method, see in Table 3.

**Table 3**

<table>
<thead>
<tr>
<th>Year of operation</th>
<th>Description of situation</th>
<th>Value of investment in assets of investor at the end of the year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>An investor sets up fully owned company “X” with investment estimated 1 million lats what is recognized as company’s share capital.</td>
<td>1 million lats 1 million lats</td>
</tr>
<tr>
<td>Year 2</td>
<td>Due to several unfavourable factors (increasing resource prices, decrease of demand) company “X” concludes year with loss of 0.2 million lats.</td>
<td>1 million lats 0.8 million lats</td>
</tr>
<tr>
<td>Year 3</td>
<td>Company “X” has favorable conditions to access grant funding for the project financing that leads to a technology change that reduces the company’s dependence on resource price rate. The company “X” execute the project of total amount of 6 million lats, acquiring new technologies where 50% of the cost or 3 million lats is a grant*. Due to new technologies operating results (including depreciation of new technologies) turn to positive 0.05 million lats.</td>
<td>1 million lats 1.15 million lats</td>
</tr>
<tr>
<td>Year 4</td>
<td>Performance from operations is identical to the previous year</td>
<td>1 million lats 1.5 million lats</td>
</tr>
<tr>
<td>Year 5</td>
<td>Performance from operations is identical to the previous year</td>
<td>1 million lats 1.95 million lats</td>
</tr>
</tbody>
</table>

* According Latvian legislation granted funds gradually, according to the period of depreciation of purchased assets, are “transferred” to the company’s equity through income statement. Assuming that the acquired technology lifetime is 10 years, company “X” within a year using new asset, gradually in its equity include the amount of revenue of 0.3 million lats and during 10 years this amounts to 3 million lats.

This is a simplified example to provide clarity on differences in evaluation and information disclosure of long-term investment in investor’s financial statement.

Example shows that cost method gives unreasonably favorable situation to investor in case of financial distress of investee. However, successfully attracted funding and implemented project, which is clearly advantageous for investment value, cost method can not reflect in investor’s financial statement.

Besides above mentioned, some other situations are worth noting when the original book value does not provide an objective perspective on the value of investment and does not allow to make objective analysis of the financial situation of the municipality and state. So, for example, a municipality may undertake or guarantee the obligations for its fully or partly owned company’s development projects. After successful implementation of project, the project value will not be reflected in financial statement if the investments in companies are valued at cost, only liabilities will be disclosed.
As well problems arise when reorganization of enterprises is carried out and one company is added to another, without increasing the acquiring company’s share capital and merging company's equity records as restructuring reserve. Assuming company's share capital as figure reflecting cost of investment and thus using the cost method, equity that is being added to acquiring company will simply “disappear” of being disclosed.

5. Evaluation practice of long-term financial investments in public sector in Latvia

The question of public sector's long-term financial investment evaluation and disclosure in Latvia has come in sight to experts and controlling institutions from time to time.

Thus Kursīte, 2002, who is a certified auditor and author of many publications on public sector financial accounting in her publication point that Latvian municipalities have no single procedure for long-term financial investment evaluation and accounting. She says, State Treasury instructions in year 2002 for first time gives instructions that in accounting for investments in associates and subsidiaries might be used two different methods - cost and equity method, of course, with no further explanation [25].

While the State Audit Office of the Republic of Latvia, which is the supreme audit institution in the state, in a number of its audit reports on long-term financial investment accounting compliance with the regulatory norms in Latvian local municipalities from year 2005 and 2006, has acknowledged that applied cost method for long-term financial investment accounting does not show true financial position of the municipality of its long-term investment value in companies’ equity. Hence State Audit Office has advised to consider application of equity method in long-term financial investment evaluation in order to reflect the true financial position of municipalities on long-term financial investments in fully or partly owned company equity [17].

Thus optional choice for long-term financial investment evaluation results in situation that local municipalities financial statement and national state balance, which inter alia includes local municipalities participation in companies equity, operate under different long-term financial investment evaluation methods, what makes information unsuitable for analysis.

Consolidated balance sheet of state of Latvia for year 2009 in total amounts to 14.9 billion lats and includes participation in subsidiaries, associated companies and other long term financial investments in total of 3.8 billion lats or 26% of the total balance sheet value and is therefore a significant public asset and asset evaluation and management should be discussed. Notes of annual report show that long-term financial investments in subsidiaries and associated companies, that are valued at cost, is recalculated using the equity method [15]. Fact that the equity method is used should be welcomed however it is worth to point that one evaluation method can not be recalculated into another, it can only be disclosed on the basis of provided data.

Structure of state balance and a significant part of long-term financial investments in it is shown in Figure 1, where data are taken from Annual report of 2009 of Latvian state budget and local government budgets

Figure 1

Assets structure of consolidated balance sheet of state of Latvia as on 2009

![Pie chart showing asset structure](image-url)
Table 4 shows proportion of long-term financial investments in companies’ capitals in local municipalities of national importance and their various reflection in financial statements.

### Table 4

**Long-term financial investments in local municipalities, thousands of LVL**

<table>
<thead>
<tr>
<th>No</th>
<th>Major national importance city of Latvia</th>
<th>Year</th>
<th>Consolidated balance sheet in total</th>
<th>Participation in subsidiaries</th>
<th>Participation in associates</th>
<th>Other long-term financial investments in companies’ equity</th>
<th>% of total balance</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2010</td>
<td>2,560,000</td>
<td>357,358</td>
<td>32,230</td>
<td>1,654</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Riga</td>
<td>2011</td>
<td>1,953,018</td>
<td>313,775</td>
<td>31,087</td>
<td>1,013</td>
<td>18%</td>
<td>Cost method (it is mentioned that participation in share capital of companies is disclosed)</td>
</tr>
<tr>
<td>3</td>
<td>Daugavpils</td>
<td>2012</td>
<td>110,203</td>
<td>33,948</td>
<td>142</td>
<td>0</td>
<td>27%</td>
<td>Cost method (mentioned in annual report)</td>
</tr>
<tr>
<td>4</td>
<td>Luga</td>
<td>2013</td>
<td>198,005</td>
<td>49,301</td>
<td>1,779</td>
<td>0.1</td>
<td>20%</td>
<td>Cost method (it is mentioned that participation in share capital of companies is disclosed)</td>
</tr>
<tr>
<td>5</td>
<td>Ventspils</td>
<td>2014</td>
<td>191,520</td>
<td>51,492</td>
<td>1,467</td>
<td>0.1</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Valmiera</td>
<td>2015</td>
<td>2,080,670</td>
<td>36,592</td>
<td>1</td>
<td>153,709</td>
<td>67%</td>
<td>Cost method</td>
</tr>
<tr>
<td>7</td>
<td>Jelgava</td>
<td>2016</td>
<td>108,807</td>
<td>29,652</td>
<td>217</td>
<td>596</td>
<td>29%</td>
<td>Cost method (mentioned in annual report)</td>
</tr>
<tr>
<td>8</td>
<td>Rīdzene</td>
<td>2017</td>
<td>92,027</td>
<td>20,836</td>
<td>217</td>
<td>522</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Pļaviļi</td>
<td>2018</td>
<td>57,091</td>
<td>9,693</td>
<td>250</td>
<td>4</td>
<td>17%</td>
<td>Equity method</td>
</tr>
<tr>
<td>10</td>
<td>Jurmala</td>
<td>2019</td>
<td>151,564</td>
<td>14,163</td>
<td>2,8</td>
<td>0.2</td>
<td>9%</td>
<td>Cost method</td>
</tr>
<tr>
<td>11</td>
<td>Ogre</td>
<td>2020</td>
<td>148,373</td>
<td>14,169</td>
<td>2,8</td>
<td>0.5</td>
<td>9%</td>
<td>Cost method</td>
</tr>
<tr>
<td>12</td>
<td>Saulkrasti</td>
<td>2021</td>
<td>70,930</td>
<td>14,726</td>
<td>3,426</td>
<td>78</td>
<td>25%</td>
<td>Cost method</td>
</tr>
<tr>
<td>13</td>
<td>Liberi</td>
<td>2022</td>
<td>56,157</td>
<td>10,360</td>
<td>1,010</td>
<td>38</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Jelgava</td>
<td>2023</td>
<td>38,058</td>
<td>10,254</td>
<td>8</td>
<td>0.1</td>
<td>27%</td>
<td>Cost method</td>
</tr>
<tr>
<td>15</td>
<td>Jelgava</td>
<td>2024</td>
<td>29,574</td>
<td>5,816</td>
<td>9</td>
<td>0.1</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

Although in author's view equity method provides more objective picture of the overall public-sector participation in company capital, there is another obstacle in the disclosed data, which suggests that the information user does not receive adequate information on public participation in the companies’ equity on the reporting date.

Deadline for submission of reports for consolidated statement of state is 1st of May of the following year [4, article 30, 32]. This is the time before the legal terms permit to submit annual report and thus to judge about participation in those companies’ equity that are so-called “large enterprises”, whose annual reports should be submitted to legal authorities no later than seven months after the current year ends. Such companies are not so few in number and they are significant value-building blocks of state, such as energetic corporation JSC Latvenergo, air carrier JSC Air Baltic Corporation, managing company of state-owned forests JSC Latvijas valsts meži and others.

To solve the problem, information about state and local municipalities participation in equity is disclosed with one year shift, which do not represent the true and fair view about situation at the end of the reporting period.

### 6. Conclusions and recommendations

Based on the research, author has come to the following main conclusions:

- Company owners and managers should be familiar with basic aspects of long-term financial investment management, which includes evaluation and information disclosure in financial statements in order to understand what value they are managing or what value they own and how to increase this value and objectively reflect to get attention from potential investors, partners and creditors. Besides they must be familiar because the company management takes responsibility for financial statements to give a true and fair view of the company's financial position and operating results.

35
Long-term financial investments of public sector is a valuable asset of state and local municipalities, which potentially can be used as a guarantee of development project funding, attracting partners or subject of disposal.

Considering the significant proportion of long term financial investments in the total assets of state, the issue of development of an evaluation mechanism of long-term financial investment, including establishment and implementation of single accounting, is relevant: for understanding what value is invested in companies; correctly disclose it in total assets and effectively manage to raise its value. In addition, public sector partly or fully owned companies generally represent industries which often are natural monopolies with a broad and persistent customer base, which is important revenue generating asset for state and local governments.

The research has shown that there is no single definition for long-term financial investment and different terminology is used in analysis. This is essential problem, because the definition of a long-term financial investment is the basis for its classification, recognition and measurement.

Different evaluation methods are applicable for long-term financial investment both having pros and cons. When choice of applicable method exists, information from financial statements is incomparable and useless for analysis. Practical example reflected to problems that appear by using different methods - the company's financial difficulties or successfully implemented projects may not be reflected in the financial statements. As a result it is not possible to assess the financial health of the company, local municipality or state.

Each of the long-term financial investment evaluation method permits variations in investment value measurement what makes it less readable for information user, as well not necessarily objective - using the cost method, it is investor's estimate of the value of the investment, while using the equity method, these are different accounting politics used by partly or fully owned companies.

Summarizing the research, need for improvement of public sector long-term financial investment evaluation and management mechanism results. As currently available information on public sector long-term financial investment is not comparable, we clearly and currently do not know what we (i.e. the state and local municipalities) own and how to analyze and evaluate it.

Following recommendations might be useful for improvement of long-term financial investment evaluation and management mechanism for public sector:

- To improve long-term financial investment regulatory framework, making it less receptive to different interpretations;
- Establish and implement a common framework for long-term financial investment evaluation and disclosure in public sector of Latvia;
- In financial statement notes information on long-term financial investment value should be presented according both evaluation methods regardless of that one chosen as reporting in balance sheet;
- To expand discussion on the most appropriate applicable evaluation method to be used in public sector and analyze the practice of long-term financial investment assessment and presentation of the public sector in other countries;
- To centralize overlapping functions and activities in public sector controlled companies thus making management more effective.

7. Recommendations for future research

For future research directions author recommends the following:

- Long-term financial investment regulatory framework and its historical development in local and international private sector and its impact on long-term financial investment value;
- Practice of long-term financial investment presentation and management in public sector in other countries;
- Problematic aspects in managing long-term financial investments, e.g., the decision-making process, power sources and distribution within the holding company etc;
- In depth studies on the long-term financial investment impact on the value of an investor;
- Various aspects of financial investment value - fair value, recoverable value, market value, purchase value, the value of start-up business versus value of a running business, shareholders equity as a value basis for financial investment; cost method in evaluation of financial investment and business valuation;
Accounting estimates and their impact on long-term financial investment value, e.g., savings as value assessment;
Advantages and disadvantages of applying practice of holding company management principles for public sector company management.

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Abstract
The analysis of literature provides a review of the influence of immigration on economy. The immigration has economic motives that influence the labour market in a country of business, employment, remuneration, GDP and social system.

The research aim is to analyse the influence of immigration on employment, remuneration, social system and GDP. The research applies general scientific research methods, including monographic and logical construction methods.

Having analysed issue-related researches of several authors, the author concluded that immigration can have whether positive or negative impact on remuneration of local labour force, employment, social system and GDP. The influence of immigration on labour market depends on skills and qualification of immigrants as compared to the local market.

The negative impact of immigration is noticed in the low-skilled labour segment, while the positive impact – in the high-skilled segment.

The economic influence of migration can change over time, whereas the immigrants acquire new skills and get experience in the local market. There are a number of differences in costs and revenues among different groups of immigrants that depend on age, education and length of residency.

The influence of immigration on employment and salaries in countries of business depends on the local labour market conditions, as well as on the number of immigrants, their skills and qualification level. Immigration can decrease salaries of the local labour force with similar qualification level, at the same time decreasing revenues of one employee on average. Immigration has more negative impact on remuneration in low-skilled industries, while remuneration of high-skilled labour force can even increase, since the amount of resources produced by the low-skilled labour increases.

Keywords: economic aspects of immigration, employment, remuneration, social system, GDP.

Introduction
The social mobility increases rapidly on the global scale and has already influenced economically developed countries. The majority of foreign citizens prefer to settle in the economically developed countries, e.g. Germany, France, Spain and the United Kingdom. The economic motivation and desire to improve standards of living is a vital reason for the migration flow.

Immigration carries economic motives and influences labour market, employment, remuneration, social system and GDP of a country of business. The immigration-driven influences cannot be assessed explicitly since they can be whether positive or negative. Positive attainment is in additional labour force, or deficit specialists, who come to the local market. Negative attainment can be reflected in racial and national conflicts caused by a large number of immigrants, as well as in dependence of local market on foreign specialists (Labour market analysis and summary of recommendations for promoting accessibility to high-skilled labour force in chemicals and pharmacy industry).

Borjas (2006), Card (2001), Friedberg (2001), Dustmann, Fabbì and Preston (2005) as well as other scientists analysed economic influence of immigration on labour market, employment, remuneration, social system and GDP, and suggested several assessments of this economic influence of immigration.

The research subject is the influence of immigration on employment, remuneration, social system and GDP.

The research object is immigration.

The research tasks are to analyse the most recent publications, which are focused on theoretical aspects of immigration and to analyse the influence of immigration on employment, remuneration, social system and GDP described in the literature.

Overview of the migration theory
Having overviewed the migration theory, the author concluded that theories are based on economic factors, for example, search for a better job, necessity to get a higher salary, to ensure better quality of living, etc. – these are the factors, which improve a life and social status of an immigrant.
In a Traditional Migration Model (Push and Pull) (Bijak, Kupiszewski, Kicinger, 2004) the factors that motivate people to leave their country (Push) and factors that acquire the people in another country (Pull) influence migration (See Table 1). The Push and Pull factor model emphasizes that a decision to migrate is based on the stimulating factors, such as unemployment, weak economy, politics, and such motivating factors as good working conditions, higher salary, political stability, effective defense of human rights. The level of economic development is vital for underdeveloped countries.

Table 1

<table>
<thead>
<tr>
<th>Push factors</th>
<th>Pull factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment</td>
<td>Good working conditions</td>
</tr>
<tr>
<td>Differences in remuneration</td>
<td>Higher salary</td>
</tr>
<tr>
<td>Differences in economic development of countries</td>
<td>High living standards</td>
</tr>
<tr>
<td>Low living standards</td>
<td>Wide education opportunities</td>
</tr>
<tr>
<td>Limited career options</td>
<td>Effective defense of human rights</td>
</tr>
<tr>
<td>Poor healthcare</td>
<td>Good healthcare</td>
</tr>
<tr>
<td>Political reasons</td>
<td>More developed economy</td>
</tr>
<tr>
<td>Religious reasons</td>
<td>Social security</td>
</tr>
<tr>
<td>Cultural reasons</td>
<td>Political stability</td>
</tr>
</tbody>
</table>

Source: adapted by the author

Neo-Classical Economic Theory (Bijak, Kupiszewski, Kicinger, 2004) overviews the immigration from poorest to richest countries. Net gain calculated out of immigration costs and provided income level in target country advances immigration. According to this theory, the vector of immigration commences from poor countries towards richer countries and the highest immigration volume has to be between the poorest and the richest country.

Network Theory (Bijak, Kupiszewski, Kicinger, 2004) overviews effects of links that unite immigrants, ex-immigrants and non-migrants to a country of origin and target regions. These links are made with family members, friends and acquaintances. The existence of the links advances immigration by reducing the immigration costs, increasing the income potential and decreasing risks. The immigration can take place even if it has no economic explanation.

New Economy Theory of Work Force Migration (Bijak, Kupiszewski, Kicinger, 2004) deals with the revenue making strategy. The theory states that international immigration stems from economic disadvantages. It explains that immigration is a way of differentiating household income in order to protect from possible risks in conditions of weakening economy.

Segmented Labour Market Theory (Bijak, Kupiszewski, Kicinger, 2004) divides the labour market in two levels, whereas migration is demand-driven. The state creates shortage of employees, who are ready to undertake a second-level work since the economic benefit is low in relation to their experience or education. The labour market, according to this theory, is divided into two levels, whereas immigration is not supply-, but demand-driven. The theory forecasts that people will migrate from poor to richest countries, the underlying motive being to increase the level of life and social security.

Nowadays the European immigration model differs from immigration models introduced 50 years ago. However, the main immigration motive rests the same – to improve welfare, income level, education and security. Personal, family and political reasons also affect immigration increasingly. Social reasons linked to changes in a mode of life and education level also apply.

Immigration influences remuneration and employment

Due to the widespread opinion that immigration affects local employment and remuneration negatively, the issue is studied a lot. Borjas (2006) analyses how the influence of immigration on labour market depends on skills and qualification of immigrants as compared to local labour force. Bojar concludes that employees loose in terms of remuneration, while employers gain in terms of profit due to immigration. Dustmann, Fabbri, Preston (2005) conclude that negative influence of immigration is present in the low-skilled segment,
but positive influence – in the high-skilled segment. Rowthorn R. (2004) thinks that high-skilled immigrants and successful entrepreneurs increase economic effectiveness of their country of business. On the other hand, immigrants from poor countries, with low education level, are economically ineffective. Low-skilled immigrants are a risk for the local low-skilled labour.

Most of researches find out that high inflow of immigrants decrease remuneration of local labour market participants. It is partly connected with immigrant quality, when the volume of immigrants increases in low-skilled labour segment.

Friedberg and Hunt (1995) state that immigration has a weaker impact on remuneration. 10% increase in immigration decrease local remuneration by 1%. However, this impact can be applied to certain professional groups. The US researchers found out that 7% increase in immigration can influence local remuneration by 1-3%.

According to Friedberg and Hunt, the main factor that influences remuneration is the employment substitution factor of immigrants and local citizens. Substitution can differ among various qualification groups. It is limited for high-skilled professional groups, e.g. doctors, because education and/or qualification level of immigrants can fail to meet the level and required licenses of a target country. Accordingly, substitution is simpler for low-skilled industries. Therefore, when studying elasticity among low- and high-skilled employers, it was concluded that the impact of immigration on remuneration is stronger in low-skilled jobs as compared to high-skilled ones. Strong influence of remuneration is directly connected to qualification level of immigrants. This influence becomes negative, if the qualification level decreases.

Capital is another factor that influences remuneration. If immigrants add capital that used to be their reserves, remuneration can increase, especially in high-skilled industries. The capital can also move among industries influenced by immigration flow.

Due to immigration, remuneration evens across different countries, thus the world production increases owing to more effective use of labour resources as a result of labour immigration. New immigrants contribute to economic growth and increase in employment, but influence on remuneration and employment level as such. In addition, immigrants help to overcome shortage of labour and skills, being employed in industries with higher demand for labour.

Labour supply elasticity influence remuneration. Due to unfavourable changes in remuneration, local citizens and immigrants change employers, moving to regions with higher salaries. These changes can lessen the negative impact on remuneration. Orrenius un Zavodny (2006) suggest increasing demand for labour in manufacturing industry, which can result in decreasing the negative impact on remuneration. When the demand of immigrants grows in relation to goods that increase demand in factor markets, the pressure on remuneration level lessens.

Substituion factor, capital of an immigrant, elasticity of labour supply and qualification level of an immigrant are the core factors, which influence remuneration in a country of business (see Figure 1).

Differences in income are present in every country, region and immigration group, for instance, a high-skilled immigrant can earn more than a local citizen. Salary has a greater impact in regions with high density of immigrants, while i.e. in the regions, where the relative weight of immigrants is low, the impact of remuneration is unnoticeable. Some US researches concluded that immigrants in the US earn less than local citizens. 30 years later the immigrants start to earn by 11% more than the locals of a particular age group and education level. As a result of these studies, authors concluded that immigration influences the US economy positively.

Freidberg (2001) in his research on consequences of immigration to the Israeli labour market from 1990 to 1994, when immigration of Russian Jews to Israel rocketed by 12%, has found no negative impact on the local labour market. Bauer and Zimmermann (1999) found out that if the number of EU immigrants augments by 1%, remuneration volume could dwindle by 0.8%. It was therefore concluded that immigration volume has a negligent impact on remuneration volume, while uneven distribution of income is in direct ratio to education level of immigrants, i.e. the higher is the latter – the higher is their income that can compete with income of local citizens. Zimmermann (2009) thinks that immigration can alter economic rhythms by changing mobility of labour, however, it does not always influence the income volume per citizen. Adding the required skills to labour market can foster positive economic tendencies.
Impact of immigration on employment differs across manufacturing industries. It is assumed that immigration is able to influence the economic development; however, it is not possible to clearly define its role in lowering the local unemployment level. Carraro, Soubeyran (2005) did not find a correlation between unemployment and increase in the number of immigrants. In the countries with high immigration rate, unemployment whether stayed constant or decreased. Several studies prove that immigration positively contribute to the employment level along with manufacturing. For example, employing low-skilled labour can augment manufacturing output and thus export volume, which results in increased employment level.

It is accepted that immigration boosts employment, which is usually low-paid and low-skilled as compared to local citizens. EU studies on impact of immigration do not provide enough evidence of this impact being negative. Altonji and Card (1991) state that 1% increase in immigration decreases unemployment by 0.23%. Dustmann, Fabbri and Preston acknowledge that negative labour market influence can appear only if there are salient differences between immigrants and local citizens. The researchers conclude that new immigrants have weaker influence on employment as compared to immigrants, who reside in a country of business for a long time. The longer an immigrant stays in a country, the easier it becomes for him/her to replace a local citizen in the market.

The US studies (Borjas, 2005) found out that immigration has an important meaning in decreasing the lack of elasticity on a labour market. The US observations show that improvement of effectiveness in the labour market brings about USD 10 billion per annum (Holzer, 2005). Immigration can improve effectiveness of the labour market, if this market is competitive.

An observation of economic influence of immigration in low-skilled labour groups is shown below – Table 2.

### Table 2

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Country</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borjas (2006)</td>
<td>USA</td>
<td>Negative impact on employment in groups with low proficiency level</td>
</tr>
<tr>
<td>Card (2001)</td>
<td>USA</td>
<td>Negative impact on employment in groups with low proficiency level</td>
</tr>
<tr>
<td>Orrenius, Zavodny (2007)</td>
<td>USA</td>
<td>Negative impact on employment in groups with low proficiency level</td>
</tr>
</tbody>
</table>

Impact of immigration on employment can change over time, while immigrants acquire new skills and experience in the local labour market. The US studies revealed that the influence of employability was noticed in various education groups.
Borjas (2006), Card (2001) and Orrenius, Zavodny (2007) researched economic influence of immigration in low-skilled labour groups. They proved that this impact is negative. The negative appraisal is related to involvement of immigrants into low-skilled jobs, which do not benefit the economy. These scientists carried out the scientific research in the USA, where immigration reached 13.8% in 2010.

Appraisal of economic influence of immigration in all groups of immigration labour is summarised in Table 3.

Table 3 is compiled from works of the leading researchers. Most of them conclude that the economic influence of immigration on employment and remuneration is whether negative or weak. The authors, who state that immigration has a positive impact, used incomplete data for their research, and the resulting appraisal cannot be considered as complete either. Positive economic influence is noticed in Great Britain and Israel. Parasnis, Fabbi and Smyth (2006) also mention Australia, while Zorlu and Harton (2005) detected slight influence on employment in Norway.

Analysing the research results, it can be concluded that the influence of immigration on a local labour market is whether minimal or negative, and it serves as “a substitute” for the local market.

The studies reveal that inflow if immigration differs in various regions (Borjas, 2005) and its concentration is noticed in a number of low-skilled industries, e.g. construction and agriculture.

Table 3

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Country</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chiswick, Miller (2002)</td>
<td>Australia</td>
<td>Negative impact on remuneration</td>
</tr>
<tr>
<td>Grady (2006)</td>
<td>Canada</td>
<td>Negative impact on remuneration</td>
</tr>
<tr>
<td>Winkelmann, Zimmermann (1993)</td>
<td>Germany</td>
<td>Slightly negative impact on employment</td>
</tr>
<tr>
<td>Zorlu, Harton (2005)</td>
<td>Norway</td>
<td>Slight impact on employment</td>
</tr>
<tr>
<td>Friedberg (2001)</td>
<td>Israel</td>
<td>Negative impact on employment and remuneration</td>
</tr>
<tr>
<td>Dustmann, Fabbi, Preston (2005)</td>
<td>UK</td>
<td>Positive impact on employment</td>
</tr>
</tbody>
</table>

Source: adapted by the author

Influence of immigrants on GDP

Several researches (Taylor, 2006; Rowthorn, 2004; Borjas, 2005) suggest that growth of immigration can foster economic growth. As a result, the demand for goods increases, shortage of professional knowledge lessens and GDP raises. Immigration has a positive impact on financial industry as the social system burden lessens. Influence on inflation is rarely analysed and is not clear, because immigrants are both consumers and manufacturers, i.e. impact on total supply and demand.

Other foreign researches (The economics of migration, 2007) acknowledge that inflow of foreign labour can improve economic development and GDP, increasing supply and compensating soft spots in competencies and skills of the national economy. The study accomplished by International Trade Union admits that migrating employers spend 87% of their income (The economics of migration, 2007) in a country of business, which is an evident contribution to the economic development of this country.

The US studies (The economics of migration, 2007) revealed that immigrants augment manufacturing capacity of an economy, fostering investments. This leads to higher effectiveness and income per one employer. The World Bank forecasted the economic gain from migration until 2025, where 3% growth in labour force earnings is expected. On the global scale, the total growth of 0.63% or USD 356 billion forecasted (The economics of migration, 2007).

Therefore, it is concluded that labour force immigration influence GDP level and depends on qualification level of immigrants, because low-skilled immigration furthers uneven distribution of income considerably. Increase in high-skilled labour contributes to GDP growth.
Influence of immigrants on social system

The important political question is how immigration influences social system of a country, its welfare, education system and healthcare. Several researches admit that economic influence is comparatively low. Auerbach and Kotlikoff (1987) compared tax disbursements of immigrants with consumption of goods and services, and term of residency of immigrants in a country. The key economic conclusion is a difference between the tax disbursements and expenditures in the country during employment of an immigrant.

Immigration has a direct impact on fiscal system of a country, which is connected with influence and dynamics of labour market. Immigrants contribute to revenues of the countries through tax disbursements (including social insurance), augment healthcare, education and social security expenditures of a government.

According to Storesletten (2000), there are significant differences among groups of immigrants. High-skilled immigrants pay more taxes, but consume less goods and services. Low-skilled and older immigrants make the economy to spend more for social allowances. For this reason, immigration is considered to be a big tax burden in the EU countries, especially, in France, Germany and Italy. The British research revealed that young immigrants bring positive impact, because this kind of immigration generates more economic benefits related to tax disbursements. The CGE research states that influence of tax systems differs across regions, however, the strongest, negative influence, is noticed in the least developed regions. Rowthorn R. (2004) believes that economically inactive immigrants are a burden for every tax system. All immigration groups in total carry low fiscal effect. Qualified labour contributes positively as opposed to low-quality labor, which gets more of government allowances as compared to its tax disbursements. Therefore, net impact is close to zero.

Economic calculations (The economics of migration, 2007) prove that differences between expenditures and revenues are present within various groups of immigrants depending on age, education and residence term. As a result of the analysis of the undertaken studies about immigration and social systems, the author concluded that the time factor brings an impact on the research results. The newest researches acknowledge that immigration positively influences on the social system. Countries attract high-quality labour actively in order to foster development of the national economy.

Conclusions

1. Immigration has economic motives and it influences labour market, employment, remuneration, social system, and GDP.
2. Immigration can have whether positive or negative influence on the local remuneration, employment, social system or GDP. The impact of immigration on labour market depends on skills and qualification of immigrants, particularly when comparing these skills to the local labour.
3. Young immigrants bring weaker impact on employment in comparison to immigrants who stay in a country of business for a long time. The longer an immigrant resides in the country, the easier he/she can replace a local citizen.
4. Influence of immigration on employment can change over time, while immigrants acquire new skills and experience on the local market. Differences between expenditures and revenues exist in various groups of immigrants depending on their age, education and residence term.
5. Inflow of immigrants differs in various regions; its concentration is higher in low-skilled industries, e.g. construction and agriculture.
6. Immigration influences fiscal system of a country, which is connected with influence and dynamics of labour market. Immigrants contribute to revenues of the countries through tax disbursements (including social insurance), augment healthcare, education and social security expenditures of a government.
7. The time factor determines impact of immigrants on social system. The newest researches acknowledge that immigration positively influences on the social system. Countries attract high-quality labour actively in order to foster development of the national economy.

References


NEW PRODUCT DIFFUSION IN THE BALTIC STATES

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Abstract
Innovation diffusion theory has been a subject of considerable research among marketing management and consumer behaviour for the last four decades. The best-known first-purchase diffusion model is the Bass model, where potential adopters are divided into two groups: innovators and imitators. There are many empirical studies where the parameters of the model have been estimated for different countries for several products. Due to the fact that the values of these parameters depend on a country (wealth, trade) and its cultural effect, it is useful to apply this model in those countries that have not yet been investigated. The purpose of this paper is to estimate the coefficients of innovation and imitation in the Baltic States in order to compare the consumer behaviour in these countries and to examine the similarities and differences between the Baltic States and other European countries. To accomplish this objective a time-series of telecommunication services are used. The estimation results can be used to forecast the diffusion pattern for analogous products and are useful to firms, which operate in the Baltic market or have such plans.

Keywords: innovation diffusion; Bass model; telecommunication services.

Introduction
Nowadays many managers use model-based results for marketing decisions. The increasing availability of empirical data offers chances for researches to build models that augment the knowledge about customers’ behaviour and help to improve the marketing judgement.

One class of such models are diffusion models. They provide a mathematical model to underlie the shape of the cumulative sales pattern of innovative products (consumer durable goods, electronic devices, telecommunication services, electronic payments, etc.), and they can take different forms. During the last 30 years there have been several reviews of diffusion models (Meade, 1984; Mahajan, et al., 1985; Baptista, 1999; Mahajan, et al., 2000; Lilien, et al., 2006). Meade and Islam (2006) have brought a substantial list of research works related to this topic in their paper “Modelling and forecasting the diffusion of innovation - A 25-year review”.

These models are applicable to forecast first purchase sales of different products and services (Srinivasan, et al., 1986; Hardie, et al., 1998). Wenrong, Xie and Tsui (2006) used a diffusion model to forecast the number of mobile service subscribers in major countries in the Asia-Pacific region. Chu and Pan (2008) applied it to estimate the growth pattern of the mobile Internet subscribers in Taiwan. Wu and Chu (2010) analysed mobile telephone subscribers' data for Taiwan, during 1988-2007, and compared performance of four models: three popular diffusion models (Gompertz, Logistic, Bass), and a time-series autoregressive moving average (ARMA) model. Morrison (1996) has given very practical guidelines how mature products can be used to determine the growth pattern of new products, using the Logistic and Gompertz curves.

Diffusion theory’s main focus is on communication channels, which are the means by which information about the new products or technology is transmitted within the social system. Consumers have different propensities for relying on mass media or interpersonal channels when seeking information about new technology. On that basis, the new product diffusion models can be classified into at least three major groups: pure innovative models (Fourt, et al., 1960), pure imitative models (Fisher, et al., 1971), and combination models (Bass, 1969).

The Bass (1969) model is the most popular model and has received extensive attention by academics and practitioners. The model assumes that new product adopters are influenced by two types of communication: mass media (external influence) and interpersonal communication (internal influence). An external influence is described by the coefficient of innovation, and an internal influence is described by the coefficient of imitation. The coefficients vary across products and countries (Bass, 1969; Takada, et al., 1991; Dekimpe, et al., 2000; Sundqvist, et al., 2005). Due to its simplicity and forecasting power there are over 700 estimations or applications of the Bass model throughout the literature. Knowing the values of these coefficients and the estimated market capacity, one can forecast sales over the projected time. For such purposes it has been used...
by a number of large corporations, such as IBM, Kodak, AT&T (Rogers, 2003). In addition to the application in forecasting, the estimated values of innovation and imitation coefficients can give us the information about the cultural similarity of countries (Sundqvist, et al., 2005; Van den Bulte, et al., 2004; Huang, et al., 2010).

The aim of this paper is to estimate the coefficients of innovation and imitation for different telecommunication services in the Baltic States and to determine consumers' behaviour as similar, or not, in these countries. Such information could be useful to develop marketing strategies by firms, which operate in the Baltic market or have such plans.

**The Bass Model**

Frank Bass (1969) divided potential customers into two groups: innovators and imitators. Innovative customers tend to acquire information about a new product from mass-media and other external channels. Their decision to adopt the product (or service) does not depend on other users. Imitators have a tendency to get such information from interpersonal channels and observation and, on the contrary, their decision depends on the number of existing adopters. Therefore, the probability of an initial purchase consists of two parts:

\[
N(t) = \frac{m}{1 - q e^{-pt}}
\]

where \(N(t)\) is the number of previous buyers and \(m\) is the ultimate market size. The timing is based on a common time period of introduction, rather than calendar time. Parameters \(p\) and \(q\) are the innovation and imitation coefficients, respectively. Since \(N(0)=0\), the parameter \(p\) is equal to the probability of an initial purchase at time \(t=0\). Consequently, its value reflects the importance of innovators in the social system; whereas, \(q\) is related to the pressure on imitators.

From Eq. (1) follows that the cumulative number of adopters at time \(t\) is:

\[
N(t) = \frac{m}{1 - q e^{-pt}} - 1
\]

The curve \(N(t)\) has a typical “S” shape. When both \(p\) and \(q\) are large, product sales take off rapidly and after reaching a maximum, fall off quickly. When the innovation effect is negligible, the Bass model degenerates into the logistic model, in which the imitation effect equals growth rate.

There are different methods to estimate the values of \(p\), \(q\), and \(m\): such as, Ordinary Least Squares, Nonlinear Least Squares, Maximum Likelihood (Bass, 1969; Srinivasan, et al., 1986; Wenrong, et al., 2006). If the values of the parameters are established, the analyst can apply the model to other analogous products. Thomas (1985) specifies that five bases of likenesses should be considered when selecting a similar product on which to base diffusion model components: environmental context (e.g., socioeconomic environment); market structure (e.g., number of competitors); buyer behaviour (e.g., buyer situation, choice attributes); marketing mix strategies of the firm (e.g., promotion, pricing); and characteristics of the innovation (e.g., relative advantage over existing products, product complexity).

**Method and data**

In this analysis we applied Nonlinear Least Squares to fit the time-series data and estimate the parameters of the model (2). For this purpose the econometric software STATA 11 was used.

The main source of data was the World Telecommunication/ICT Indicators’ database. The database contains annual time series data from 1975-2009, for around 150 telecommunication/ICT statistics covering fixed telephone networks, mobile cellular services, Internet, and others. In addition some data was obtained from Statistics Estonia, the Central Statistical Bureau of Latvia and the Communications Regulatory Authority of Lithuania. The description of datasets is given in Table 1.

<table>
<thead>
<tr>
<th>Time series data</th>
<th>Estonia</th>
<th>Latvia</th>
<th>Lithuania</th>
</tr>
</thead>
</table>
Proportion of households with a computer

<table>
<thead>
<tr>
<th>Year</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-2009</td>
<td>9 obs.</td>
</tr>
<tr>
<td>1999-2010</td>
<td>12 obs.</td>
</tr>
</tbody>
</table>

Proportion of households with Internet access at home

<table>
<thead>
<tr>
<th>Year</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2010</td>
<td>11 obs.</td>
</tr>
<tr>
<td>2002-2009</td>
<td>8 obs.</td>
</tr>
<tr>
<td>2002-2009</td>
<td>8 obs.</td>
</tr>
</tbody>
</table>

Results and discussion

As we see from Table 1, the time-series of mobile cellular subscriptions are the longest. Figure 1 presents the actual and predicted data for Estonia, Latvia and Lithuania. Coefficients of determination, which indicate goodness of fit, are 0.9986, 0.9992, and 0.9974, respectively. The estimated value for market capacity in Estonia is 1.694 million, in Latvia 2.441 mln, and in Lithuania 5.246 mln. For all three countries it is greater than the actual population: the Estonian population is 1.3 mln, Latvia’s population is 2.3 mln and the population of Lithuania is 3.2 mln. The reason is that many people have different mobile numbers for business and personal calls. Estimated values for innovation coefficient p and imitation coefficient q are as follows: Estonia p=0.00172, q=0.482; Latvia p=0.000709, q=0.560; Lithuania p=0.000278, q=0.694.

![Figure 1. Mobile phone subscriptions, actual and predicted](image)

As the historical data of mobile cellular subscriptions are completely available for many countries it was interesting to compare the estimated parameters for Baltic States with other European countries. After working with the data of other countries, for 13 of these countries we got a model where all three parameters were statistically significant at the 5% level. A graphical representation of the innovation and imitation coefficients for the 16 European countries is proposed in Figure 2. We see that the distance between the Baltic countries is quite large and they do not band together. Note that the Nordic countries Sweden, Denmark, and Norway are very close, but Finland is situated apart from them.

Among these countries, Estonia takes the 3rd place in the importance of innovation, Latvia is the 7th and Lithuania is the 12th. The order of these countries by the imitation coefficient is just the opposite: the imitation effect is largest in Lithuania. This means that interpersonal communication is more important in Lithuania, and the fraction of imitators amid the potential consumers is the greatest. Latvia takes the 3rd place and Estonia the 6th. In addition we estimated regression models for two other time-series: proportion of households with a computer and proportion of households with Internet access at home. Table 2 summarises the estimates of the parameters p and q for the different services in all three countries. All the parameters are statistically significant. Comparing the results we see that the importance of mass media is the largest in Estonia, where the innovation coefficient is greater than in Latvia and Lithuania for all three diffusion paths.

Consider the q coefficient values; the impact of imitators on the sales growth is greater in Latvia and Lithuania. It means that in the two countries the number of previous adoptions has more influence on future sales.
Figure 2. Imitation and innovation coefficients for 16 European countries, mobile phone subscriptions’ diffusion.

Table 2

Comparison of innovation and imitation coefficients of diffusion curves across the different technological products in Baltic States

<table>
<thead>
<tr>
<th>Country</th>
<th>Mobile phone subscriptions</th>
<th>Proportion of households with a computer</th>
<th>Proportion of households with Internet access at home</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Innovation coefficient p</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Estimated value</td>
<td>Std. err.</td>
<td>Estimated value</td>
</tr>
<tr>
<td>Estonia</td>
<td>0.001716***</td>
<td>0.00036</td>
<td>0.01471***</td>
</tr>
<tr>
<td>Latvia</td>
<td>0.000709***</td>
<td>0.00014</td>
<td>0.00540**</td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.000278**</td>
<td>0.00013</td>
<td>0.00582***</td>
</tr>
</tbody>
</table>

|             | Imitation coefficient q |                                         |                                                     |
|             | Estimated value | Std. err. | Estimated value | Std. err. | Estimated value | Std. err. |
| Estonia     | 0.482***       | 0.025     | 0.258***       | 0.028     | 0.369***       | 0.076     |
| Latvia      | 0.559***       | 0.022     | 0.396***       | 0.052     | 0.825**        | 0.106     |
| Lithuania   | 0.694***       | 0.052     | 0.427***       | 0.024     | 0.691**        | 0.140     |

** significant at the 1% level
*** significant at the 0.1% level

In Figure 3 we presented the computed sales curves – the cumulative percentage of the potential market versus time. To calculate these curves we used Eq. (2), where the market capacity (m) = 100% and the coefficients of innovation and imitation have the mean values, obtained from the three models for each country (averages of rows in Table 3). For Estonia \( \bar{p} = 0.01718 \), and \( \bar{q} = 0.3699 \), for Latvia \( \bar{p} = 0.01207 \), \( \bar{q} = 0.5936 \), and for Lithuania \( \bar{p} = 0.008432 \), and \( \bar{q} = 0.6040 \). Entrance to the market is simultaneous in all three countries. The inset depicts the early growth.
We see that initially the growth rate is largest in Estonia. But after a little time the growth rate in Latvia and Lithuania become greater and the corresponding curves pass Estonia’s curve. An explanation for this is that in Estonia the value of the innovation coefficient is greater and the relative impact of innovative customers is higher. The impact of innovative customers is more important especially at the outset of the product launch. When some number of purchases has been done, the relative importance of imitative costumers grows (see Eq. (1)). Consequently, when the entry to the market has been done at the same moment in all three countries, in Latvia and Lithuania the ultimate market is reached earlier than in Estonia.

Conclusions

The diffusion models are important tools for effectively assessing the merits of investing in new technologies and to forecast growth of first time purchasers. In this paper we analysed the time series of three different ICT services - mobile phone subscriptions, the proportion of households with a computer, and proportion of households with Internet access at home - in the Baltic States. Our results show that there is a difference in costumers’ behaviour in the three selected countries. In Estonia there are more potential buyers who receive information about new technologies from mass-media. In Latvia and especially in Lithuania the interpersonal communication is more important and the imitation effect greater. Therefore it can be assumed that when a new product launch takes place simultaneously, at the beginning the total sale (as per cent of maximum level) grows faster in Estonia. After some time the growth rate becomes greater in Latvia and Lithuania and the maximum number of adoptions will be obtained earlier in these two countries.

It is always better to have more information for obtaining the most accurate forecast possible. We believe that our results could help ICT and other companies to forecast the sales of new goods and services and to develop their marketing strategy in the Baltic market.

References

CROWDSOURCING AS USER-DRIVEN INNOVATION, NEW BUSINESS PHILOSOPHY’S MODEL

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Abstract
Purpose – This work aims to summarise research papers on crowdsourcing, to determine directions of future research.
Approach – Literature review.
Findings – This paper generalises crowdsourcing taxonomy. Until recent time, especially in pre-crisis period, most of innovation initiatives came from manufacturers, often imposing excessive functionality of products to its users. Economical downturn revealed defectiveness and unsustainability of consumer society, the time for a new business thinking paradigm came, which is oriented to true customer needs. The answer to new business philosophy call is user-driven innovation, particularly Crowdsourcing. Crowdsourcing is an online, distributed problem-solving and production model, which emerged recently. Crowdsourcing was mentioned in the literature for the first time in 2006. This work provides an introduction to crowdsourcing and proposes directions of further research.
Value – This paper provides value for those, who are facing problems, which solutions could be drawn from mass online collaboration.

Introduction
In recent time innovation research has become widely spread, because, as history shows, future is behind companies, which are able not only to develop and implement, but also to sustain innovation. Traditionally the source of innovation was a company’s internal R&D department. New tendency to attract innovation from outside the company recently emerged, which received severe critique, because it could be interpreted as outsourcing of innovation, which, according to Peter Drucker, is the key factor of companies’ competitive advantage (Drucker, 1985). Referring to Chesbrough (2003), attracting innovation from outside has its right to existence. The biggest problem with innovation developed within the company is divergence between product’s features and real needs of customers. This problem is created due to competition and incremental innovation. Companies have to react to competitors’ actions, especially when they introduce new features to rival’s product, in order to keep customers and market share, company has no other choice, but to copy new features. As a result, after some time a product becomes overloaded with functions and features, which were introduced to satisfy a wider range of customers and competition. This ‘too heavy’ product, in terms of features, became appealing for no one, because customer should pay for all extra features. At this stage marketing department helps, if customer has insufficient motivation to buy the product, it should be created artificially, through new design or functionality. Artificial demand is a sign of consumption society, which is unable to create sustainable development. The crisis of 2008 proved this statement, when consumption increased negative consequences of real estate market collapse. But we should not only criticise innovation from manufacturers, it features own benefits, such as better reliability of product, which is explained by the sticky information effect, researched by Erick von Hippel (von Hippel, 1994, 2005).

Customer-centred or user-driven innovation is an alternative to manufacturer-centred innovation, which satisfies real customer needs better. There are several approaches how to involve customer in innovation process, these are: lead user, mass customisation, open innovation and crowdsourcing. The lead user concept emerged the very first – the initial research was published in 1986 by MIT professor Erick von Hippel. Lead users are defined as follows:

“Lead users face needs that will be general in a marketplace – but face them months or years before the bulk of that marketplace encounters them, and Lead users are positioned to benefit significantly by obtaining a solution to those needs”.

In other words: Lead users are users of a product that currently experience needs still unknown to the public and who also benefit greatly if they obtain a solution to these needs. Later the lead user method was utilised in 3M’s Medical-Surgical Division to develop a breakthrough surgical drape product. 3M assembled a team of lead users which included a veterinarian surgeon, a make-up artist, doctors from developing...
countries and military medics, this method consist of 4 stages and require arrangements of conferences and workshops (von Hippel et al., 1999; von Hippel & Sonnac 1999), which is cost-intensive, especially in case when lead users are spread around the globe (Von Hippel & Riggs, 1996).

Mass customisation approach was thoroughly research in Europe by Professor Frank Piller from Aachen University in Germany (Piller & Tseng, 2010). The essence of mass customisation is to give an opportunity to users to modify product in line with unique needs, remaining within mass production price range. Applying this technique, manufacturing company receives information about fashions and trends in the market directly from customers, thus it could promptly introduce products, which correspond with latest trends (Moser et al., 2006). The shortcoming of this method is a high cost to develop and sustain the system for mass customisation.

Open innovation takes it roots in open source software communities, which is successors of first authentic hackers communities, the programming enthusiasts, who created first software in order of developing computer movement, but not profit or IP oriented (Chesbrough, 2006). Open innovation and in particular virtual communities, developing open source software are similar with next approach of user driven innovation, because use internet as technical tool for own realisation, what substantially decrease costs to communication, coordination and data transfer (Lerner & Tirole, 2002).

All four approaches have their differences, but in certain circumstances overlapping each other. I should mention that crowdsourcing is the most recent approach to user-driven innovation. The term appeared for the first time in 2006, in Jeff Howe article “The rise of crowdsourcing”, published in the online magazine “Wired” (Howe, 2006a). The word itself is a combination of two – crowd and outsourcing, which create the portmanteau “crowdsourcing” together. Jeff Howe defined crowdsourcing as follows: “Crowdsourcing is the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call” (Howe, 2006b). I should mention that Jeff Howe did not invent the concept, but only the name and definition, which covers a very wide range of actions often differing in its essential features. In modern literature there are two main approaches how to structure crowdsourcing: by type of task and size of reward.

Crowdsourcing is divided in three types of tasks: routine, complex and creative (Schenk & Guitard, 2009). The routine are simple, mechanical, recurring tasks impossible to automate, for example, tagging the photos. Complex tasks require more involvement, comparing to the routine one, but still remain simple and do not require special skills and knowledge, for example, writing a short movie review (Hsueh et al., 2009). Creative tasks are the tasks where solutions to a problem are created, for example, development of molecules for a certain drug. This kind of structuring is used by such authors as Daren Brabham et alia (Brabham, 2008a; 2009; Hsueh et al., 2009; McCreadie et al. 2010). The shortcoming of this approach is imprecision of definition, as a result, borders between the routine and complex, complex and creative blur.

The second approach to crowdsourcing taxonomy is structuring it according to a size of reward. Many researchers are interested in this field of crowdsourcing, they are interested in people's motivation to take part in crowdsourcing activities, and this is interesting for entrepreneurs as well, since crowdsourcing substantially decreases labour costs. The Dutch researcher Ima Borst suggests dividing crowdsourcing in four categories: with no reward, penny rewards, dollars rewards and millions reward (Borst & Van Den Ende, 2007; 2008). Similar to the previous approach of crowdsourcing structuring the difficulty is in borders among these categories, where exactly dollars rewards end and millions started, since millions are used mostly as a metaphor here.

In order to make crowdsourcing taxonomy more visual, my proposal is to combine both approaches in one matrix, with 9 fields (Tabel 1), because three will not have real life examples due illogicality. No one will pay substantial rewards for simple tasks.

### Crowdsourcing Matrix

| No reward | reCAPTCHA | www.noziegumakarte.lv | MIX |
| Penny reward | www.one.lv | mTurk | iStockphoto |
| Dollars reward | n/a | Thereadless | FYI |
| Millions reward | n/a | n/a | PepsiCo |

Table 1
For better understanding of crowdsourcing cases for each category of crowdsourcing are overviewed below, simultaneously rewards and task types.

**No reward and routine task.** Attractive example of this type of crowdsourcing activities is the project reCAPTCHA, where CAPTCHA stands for "Completely Automated Public Turing test to tell Computers and Humans Apart". The idea of this project is to combine human identification for using website and library digitalisation project. During books scanning process some words appears to be undetectable by software, traditionally human manually enters meaning for this kind of words, the work of this person should be paid and his productivity is limited, thus the hole process of library digitalisation become more time and labour intensive. ReCAPTCHA project enable to automate this process through crowdsourcing activities in the internet. It offers to identify two words, one's meaning is known, the other one is taken from the blur scans, when several users give same meanings for the same word, and programme put this meaning into the text. As a result, lower labour costs and better efficiency in terms of speed. Internet users help to digitise library, without receiving any reward, only because they need to access certain web-page, which requires human identification (von Ahn et al., 2008).

**No reward and complex task.** A web application www.noziegumakarte.lv, which could be translated as crime map, is created to inform how safe situation on Latvian streets is. People can check what crimes have happened around place where they are living, working or going to have fun. People can also easily add a crime report that has happened to them earlier. There are options to select crime category, date and place where it happened, add a description. The project motto is to warn others and others will warn you (Krauze, 2011).

**No reward and creative task.** The Management Innovation eXchange (MIX) is an open innovation project aimed at reinventing management for the 21st century. The premise: while "modern" management is one of humankind's most important inventions, it is now a mature technology that must be reinvented for a new age. Current management practices emphasise control, discipline and efficiency above all else — and that's a problem. To thrive in the 21st century, organisations must be adaptable, innovative, inspiring and socially accountable. That will require a genuine revolution in management principles and practices. The MIX helps to accelerate the pace of management innovation by energising and organising the conversation around the most critical challenges facing managers today — and by providing a practical platform where they can document, share and develop their leading-edge ideas and practices. The MIX is designed for all those who are frustrated by the limits of our legacy management practices. It is for all the inspired thinkers and radical doers who believe we can — and must — find alternatives to the bureaucratic and disempowering management practices that still rule most organisations. The MIX is joining forces with Harvard Business Review and McKinsey & Company to launch our most comprehensive contest ever, dedicated to reinventing management for the 21st century: The Harvard Business Review and McKinsey M-Prize for Management Innovation. In the first leg of the Harvard Business Review and McKinsey M-Prize for Management Innovation, they are seeking the most progressive practices and disruptive ideas that illustrate how the governing principles and tools of the Web can make our organisations more adaptable, innovative, inspiring, and accountable. Instructive case study or an experimental design are brought to this contest that demonstrates how Web 2.0 values (including transparency, collaboration, meritocracy, openness, community and self-determination) can be unleashed to overcome the design limits of Management 1.0 — and help to create Management 2.0. Winners will receive significant recognition as management innovators on the MIX, Harvard Business Review and HBR.org, the McKinsey Quarterly and McKinseyQuarterly.com. Winners will also earn the chance to appear at the MIX Live gathering (www.manageme)
arranged in a form of auction, thus services value changes from a lot to lot, but average value of a lot does not exceed one euro.

**One.lv points reward system**

<table>
<thead>
<tr>
<th>Decision</th>
<th>Photo's status</th>
<th>Gained points</th>
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<tbody>
<tr>
<td>To block</td>
<td>blocked</td>
<td>5</td>
</tr>
<tr>
<td>To show</td>
<td>displayed</td>
<td>2</td>
</tr>
<tr>
<td>To block</td>
<td>displayed</td>
<td>-1</td>
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<tr>
<td>To show</td>
<td>blocked</td>
<td>-10</td>
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**Penny reward and complex tasks.** Amazon Mechanical Turk is the project of an internet company Amazon. This web-page gives an opportunity to earn small amounts of money, executing simple tasks on computer. Usually these tasks are tagging pictures, writing short reviews and participation in online surveys. Each task is paid for in a form of Amazon.com coupon. This made the service unattractive for contributors from the third world, for whom the level of earning is interesting as a main source of income. Due to low income level in these countries, but the way of receiving a reward is unacceptable, because they cannot receive rewards in their country and trade it for essential goods, like food, medicine and fuel (Barr & Cabrera, 2006).

**Penny reward and creative tasks.** iStockphoto is a depositary with semi-professional photos. This website sells good quality photos to mass-media for a price below the industry average. It becomes possible thanks to the development of digital photo cameras. Everyone, who thinks that his/her photos has a market potential, could apply to become a member of iStockphoto. This person should submit three photos for evaluation. If judges approve pictures, then a person will be entitled to submit pictures with proper labelling, to simplify picture search. The price range for photos is from $1 to $100, authors royalties is from 15% to 45% (minimum $0.65) depending on experience and previous performance. In absolute figures it is much lower than professional photographer rates. It is the reason why amateurs take part in this project, while it is not the main source of income for them (Brabham, 2008b).

**Dollars reward and complex tasks.** The American company Threadless is a classical example of crowdfunding, since it is embedded in its business model. This company produces t-shirts; a design for prints on t-shirts is submitted by internet users and approved by them, through voting too. In addition to graphical design anyone can submit a slogan, which also goes through voting, if slogan is selected for print, its author receives $500, but no more than $2500, which limits every contributor to five successful slogans. This business model uses product users as drivers of product ideas, which they are interested to buy. Consumer becomes member of a value chain on R&D stage (Duffy, 2009).

**Dollars reward and creative task.** Airbus contest “Fly your idea” (FYI). In 2011, Airbus held a contest FYI for the second time with a task to find ideas for airline industry to increase eco-efficiency. The main shortcoming of this project, from crowdsourcing point of view, is a limited number of participants. Only groups of students can take part in this contest. But it is the only limitation. Students from all countries, fields and levels are welcome, including PhD students, what substantially increases the number of potential contributors and gives grounds to call them a “crowd”. Submitted ideas are selected in two rounds. During the first one, professionals evaluate a potential of ideas and viability of its development. Selected ideas are progressed to the second round, where participants have time to elaborate the ideas under guidance of a mentor from Airbus. Based on results of the second round, five finalists are chosen who are invited to air show in Paris, as well as to an excursion to Airbus plant in Toulouse. The winner is chosen from finalists, and the main prize is € 30 000. Worth to mention, that there is no limitation only to technological ideas, Airbus welcomes social innovation as well, like passenger logistic in the airport. The winner of first FYI contest in 2009 was the "COZ" team from University of Queensland, Australia. Their project was to use the castor plant to develop the first ever single plant-based high performance composite materials for aircraft cabin components (www.airbus-fyi.com).

**Millions reward and creative task.** Pepsi-Co implements the project “Refresh everything”, an opportunity to receive financial grant for ideas realisation. Ideas could be from fields of art, society, education and every month a special category is offered. The maximum size of grant is $250 000. Project selection is going through voting in the internet. The projects that received maximum financing are: “Fund a
gene therapy to cure the genetic disorder Sanfilippo Syndrome” and “Make 10,000 Schools Safer for LGBT Youth” (www.refresheverything.com).

Crowdsourcing application in marketing
Crowdsourcing finds its application in marketing as well (Whitla, 2009), where it is used as a production model, owing to which, not only ideas are created, but also video commercials. These video commercials have significantly lower production costs than traditionally made. Real crowdsourcing initiative in marketing success story is the cosmetics company L’Oreal, which reduced video commercial production costs to $1000, comparing to $164 200 it usually paid (Hempel, 2006). But it does not work all the time. The real disaster was Chevrolet effort to attract wide internet audience to promote its vehicle Tahoe. As a result, internet was full of jokes and mockery about that car (Bosman, 2006).

Intermediates in crowdsourcing
All crowdsourcing projects are realised by means of internet, owing to new possibilities of Web 2.0. Worth to mention, than it could be built on a company’s own web-page, or use a platform of intermediates, these are the companies which bring together enterprises with problems and people with solutions. One of the crowdsourcing success factors is an ability to gain critical mass in crowdsourcing (Toral et al., 2009) that could be a serious barrier for companies with only one crowdsourcing project, which is executed on their own web-page, due to high investment in project promotion. Crowdsourcing intermediates are operating as in creative tasks with substantial reward, as in routine tasks with minimum reward, but they are not interested in projects with no reward, because in this case, there is no one to pay for their services. Most known crowdsourcing intermediate websites are Amazon Mechanical Turk (mturk) and InnoCentive. Research of Karim Lakhani from Harvard Business School shows that InnoCentive helped to solve 29.5% of problems, which could be solved by company's in-house R&D (Lakhani et al., 2007). InnoCentive services are using such giants, like Procter & Gamble, Roche and NASA. The web-page was originally created by the pharmaceutical company Lilly.

Crowdsourcing critique
During its short life, crowdsourcing gained not only followers, but also opponents. First of all crowdsourcing is criticised for its name and too wide definition. Jimmy Wales, co-founder of Wikipedia said: "Any company that thinks it's going to build a site by outsourcing all the work to its users not only disrespects the users but completely misunderstands what it should be doing. Your job is to provide a structure for your users to collaborate, and that takes a lot of work." (McNichol, 2007). Crowdsourcing also is criticised for low quality of outcome, fraud (Chan et al., 2010; Soleymani & Larson, 2010), manipulation with votes and people exploitation (Gill & Pratt, 2008). There is a clear analogy with a critique of social media, right for low quality (Keen, 2007). The problem of low quality results is present in both routine and complex tasks of crowdsourcing, with financial reward – routine tasks and penny reward, complex tasks and penny reward, complex tasks and dollars reward. McCreadie's research shows that participants try to maximise a number of performed tasks, in order to increase their reward (McCreadie et al., 2010). To battle this problem, performance time should be taken into account, and unrealistically fast answers should be rejected, as fraud attempts. Check questions should be included in the tasks, which answers are already known (Kittur et al., 2008). Answers also could be checked by the “crowd” itself, through the second round of crowdsourcing activities, as well as uneven gradation scale for answers, to increase precession of results (Hirth et al., 2010).

Creative and partially complex types of crowdsourcing, independently of reward size could be under pressure of attempts to manipulate votes, if voting is offered for the internet users. In this scenario contributors with wider social network have an advantage, being able to attract more votes for own contributed project. Another problem with voting is disproportional web-page visitors’ attention to certain projects in case top leaders are presented, where truly best project could receive insufficient exposure, only due late entry to the contest. Technical means should be used as tools to prevent these shortcomings, like filters to limit number of votes from same IP address, restricted access by direct URL, which disable directly open and vote for certain project. More equal distribution of votes between projects could be reached, by replacing leaders top with random projects, as well as separate in time projects submission and evaluation, although this approach could bring new difficulties, e.g. voters could lose interest and critical mass would not be reached, thus the results would not be objective.
Crowdsourcing received serious critique for human exploitation, absence of agreements for work with contributors and wages level much lower then minimums defined by the law (Cove, 2007; Postigo, 2003). Crowdsourcing is even regarded as the 21st century slavery. Opponents note that participation in crowdsourcing activities is voluntary, there is no any compulsion to take part in crowdsourcing, and thus there are no any signs of exploitation. In case of a creative type of crowdsourcing, an author of idea transfers IP rights by signing an agreement. His/her power is limited to a possibility refuse to grant rights, although this is extremely rare case. Lakhani in his research on InnoCentive describes only one case when the author of idea refused to sign an agreement. Thus the idea was not developed further (Lakhani et al., 2007). From the formal point of view, there is no exploitation, but from ethical position there is a clear misbalance in rights and obligations in favour of crowdsourcing executor. Let’s look at a relationship of employers and employees. An employer has a problem, which has to be solved. There is also an employee with special skills to solve this kind of problems. However, the problems were not solved, the problems itself point this out. Speaking about tasks, which require creative approach and mental work, it is impossible to forecast how much time will be required to solve certain problems, but the employer pays the employee, who is trying to solve the problems, even unsuccessfully. There is no guarantee that the employee will solve this problem. In this case the company has losses, which include direct costs to cover the employee’s wages, as well as losses due to the unsolved problems. In case of outsourcing the problem solving, the employer becomes an outsourcer, and the cost burden in this relationship moves toward an outsourcee (Figure 1). All depends on a signed agreement, where the outsourcee is a legal person and is less protected than a private person, but still could embed in agreement a minimum reward, even in case of failure, and a much bigger one in case of success. In this case, the outsourcer is tied to this agreement, but not with the legislation concerning labour rights. Theoretically the outsourcee has better chances to find a solution to the problems, owing to more narrow specialisation and bigger experience in similar cases. In a worst-case scenario the outsourcer will have losses, which will be lower. The difficulty is to determine a proper time frame for finding a solution, which might be crucial. In case the crowdsourcing costs are moving further to the contributor or solver, the company will pay only for a successful solution, no minimum payments, no obligations.

<table>
<thead>
<tr>
<th>Internet users</th>
<th>Outsourcee</th>
<th>Employee</th>
<th>Company</th>
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<td>perform task</td>
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Figure 1. Costs burden migration

After scrutinising crowdsourcing from the ethical point of view, it became obvious that ethical norms are violated at the expense of contributors, and that is how cost reduction is achieved. This conclusion determines future research direction aimed to find out how crowdsourcing is viable, taking into account ethical norms violation.

**Future research**

First of all, it is the research of ethical part of crowdsourcing, in order to determine borders for a crowdsourcer’s behaviour and actions. How far these border can be widened, without negative effect on results. Secondly it is essential to find out a condition, when and where crowdsourcing might be applied, in order to have a clear picture, in which industries it could be used. The third direction of research is crowdsourcing within globalisation process, transfer of crowdsourcing activities to such countries like China and India. Within this direction, the special attention should be paid to technological aspects of crowdsourcing and its perspectives on mobile devices. Developing countries have huge human potential, but
lacking proper infrastructure. The new technological level could help overcoming the problem of infrastructure and add new participants.

**Conclusion**

In spite of all shortcomings, crowdsourcing remains interesting either to entrepreneurs, or the public sector. Its positive features are: the ability to bring innovative solutions to difficult problems in a short period of time and minimal costs; the ability to attract brightest minds to the solution process (Surowiecki, 2004). Another strong side of crowdsourcing is performance simple tasks, which cannot be automated, at a very low cost, or even for free in the short-term (Van den Ende et al., 2009). At present the largest chunk of internet activities is in developed countries with high level of income, which still does not bother contributors to participate in crowdsourcing activities. Future research will show how far crowdsourcing can go in terms of its distribution in the developing world.

**References**

USE OF LOWER PARTIAL MOMENTS IN THE ASSET ALLOCATION PROCESS

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Abstract

Over the past years before the world financial and economic turmoils, the Baltic States have been the fastest developing economies in Europe. The Baltic insurance industry (and the Latvian one as well) was a direct beneficiary of this economic miracle. In 2002 – 2007, the local insurance market in three Baltic States doubled in volume. After the booming years insurance business suffered from the economic downturn as the income from main business operations did not show sustainable growth and companies should gain extra income from investing activities in order to stay on the market, but due to the vulnerable financial markets the return on investment decreased. So the relevance of asset allocation problem gained extra attention in the particular industry. The main purpose of the current paper is providing the foundation for the development of the “new” portfolio model. The reader is going to be instructed on the essential aspects of the (μ,LPM)-portfolio model which, on the one side, enables its critical review, and on the other side, provides a platform for its later application in the practice of portfolio management. The paper is covering only the theoretical aspect of the topic. The research is concerned with the portfolio selection based on the downside risk and mean, which utilises risk measure corresponding with the risk understanding of the prevailing number of investors. As a consequence, by the portfolio optimisation based on the downside risk the chance to over-perform the reference point is not minimised as by the portfolio optimisation based on the variance.

Keywords: asset allocation, portfolio management, lower partial moments.

Introduction

Information provided by Latvian Insurance Association (2011) allows to come to the conclusion that Latvian insurance companies who have been affected by challenging market conditions in 2008 – 2009 are de-risking portfolios and shedding questionable lines of business. As insurers seek to identify new sources of capital, as well as they need to allocate capital effectively among product lines and business units. Analysing the asset allocation question (in the framework of portfolio management), the considerations lead to the portfolio theory whereby the appropriate question that is asked is how it could be substantially improved nowadays in order to develop a “better” portfolio model as the portfolio model of Markowitz, which laid the basic ideas of the modern theory, is being consequently criticised due to the subjectivity of preferences.

The proposal of downside risk measure’s use aroused in academic research at the same time as the Markowitz’s portfolio model discussed in the previous chapter. Different to Markowitz, who based the theory on the maximisation of the investor’s expected utility, Roy (1952:433) declared, that a man who seeks advice about his action will not be grateful for the suggestion that he has to maximise expected utility, and instead of the expected utility maximisation, he proposed the concept of safety of principal, while a minimal acceptable return has to be set. Consequently, the investor prefers the portfolio with the smallest probability of falling below this disaster level.

The probability of disaster introduced by Roy plays also important role in the Kataoka’s criterion (1963:181-196), who claimed that the portfolio, which achieves from available efficient portfolios on the (μ, σ)-efficient frontier the highest target return for a predetermined probability of disaster, has to be chosen. Also Telser (1955-1956:1-16) applied the probability of disaster, but the selected portfolio is expected to achieve the highest return for a given probability of failing to achieve a predetermined level.

Later on the ideas expressed by Roy, Kataoka and Telser was called as “safety first” principle. The approach was developed later by Leibowitz and Henriksson (1989:34-41) and named “shortfall risk”, while the authors paid special attention to the asset-liability management, where not asset return but surplus is relevant, while the benchmark is defined as the liabilities and is assumed to randomly fluctuate. Follow also papers by Leibowitz, Kogelman and Bader (1992:28-37); Jaeger and Zimmermann (1996:64-74).

General overview of the literature on safety first is given in Albrecht (2004:1-16). Markowitz accepted the idea of downside risk, and suggested two measures: below-mean semivariance and below-target semivariance, both capturing squared return deviations below mean or target return. Nonetheless, the most important restriction of the portfolio semivariance proposed by Markowitz is that it depends on asset weights. In the later proposal, the co-movements between individual asset returns falling below the target are
not quantified, and therefore risk diversification is not reflected in the portfolio optimisation (Markowitz et. al., 1993:307-317). The new period of downside risk research began with the generalised concept of downside risk defined by the Lower Partial Moment1 (LPM) developed by Bawa (1975:95-121) and Fishburn (1977:116-126).

Bawa and Lindberg (1977:189-200) examined the downside risk diversification and proposed the measure of return co-movements below the target return. Bookstaber and Clarke’s (1981:63-70) worked on optioned portfolios and discovered the necessity of the consideration of additional moments of return distribution. Asset pricing model in the generalised LPM-framework was developed by Harlow and Rao (1989:285-311). The relationship of the \(LPM^-\) portfolio model to the capital market theory was developed by Nawrocki (1996:1-11), who declared that portfolio management strategies should derive from the segmented market theory. Segmented markets generate non-normal return distributions and require the use of utility theory, thus, the \(LPM^-\) model is the decision model, because it does not assume normal distributions and allows different utility goals expressed by. The characteristics of the downside risk-optimised portfolios were most extensively tested by Nawrocki, whereas the most important result was that portfolio skewness can be managed through the LPM measure, since with the increasing degree of LPM the portfolio skewness increases; the size and composition of portfolios selected by the \(LPM^-\) optimal algorithm in comparison with the \((\mu, \sigma)\) -efficient portfolios, and the effect of different degrees of risk aversion on the expected performance of derived portfolios were tested.

Since the nineties the downside risk measures have been increasingly attracting practitioners, who have initiated tests of real performance of the \(LPM^-\) portfolio. Harlow (1991:28-40) tested out-of-sample performance of the global portfolio with eleven mature capital markets and came to the conclusion that the \(LPM^-\) portfolios achieved not only higher average return but also decrease in risk measured. Sortino and Price (1994:59-64) and Nawrocki (1992:195-209) worked on the optimisation algorithm with LPM-matrix. Stevenson (2001:50-66) studied the out-of-sample performance of minimum risk and tangency portfolios and showed that only minimum LPM – portfolios consistently outperform the benchmark. Morton, Popova and Popova (2006:503-518) studied portfolio allocation in which the underlying investment instruments are hedge funds, while considering a family of utility functions involving the probability of outperforming a benchmark and expected regret relative to another benchmark. Non-normal return vectors with prescribed marginal distributions and correlation structure were modelled and simulated using the normal-to-anything method. Danielsson et al. (2006:202-208) used regular variation to define heavy tailed distributions and showed that prominent downside risk measures produce similar and consistent ranking of heavy tailed risk. Thus, the authors concluded that regardless of the particular risk measure being used, assets are to be ranked in a similar and consistent manner for heavy tailed assets. Vercher, Bermúdez and Segura (2007:769-782) developed two fuzzy portfolio selection models, where the objective was to minimise the downside risk constrained by a given expected return. The authors assume that the rates of returns on securities are approximated as LR-fuzzy numbers of the same shape, and that the expected return and risk are evaluated by interval-valued means, so that the relationship between those mean-interval definitions for a given fuzzy portfolio by using suitable ordering relations were established. Pinar (2007:295-309) developed and tested multistage portfolio selection models maximising expected end-of-horizon wealth, while minimising one-sided deviation from a target wealth level, and report that the robust investment policies are stable in the face of market risk, while ensuring expected wealth levels quite similar to the competing expected value maximising stochastic programming model at the expense of solving larger linear programs. Bali, Demirtas and Levy (2009:883-909) examined the intertemporal relation between downside risk and expected stock returns, while using Value at Risk, Expected Shortfall, and tail risk as measures of downside risk to determine the existence and significance of a risk-return trade-off, and found a positive and significant relation between downside risk and the portfolio returns on NYSE/AMEX/Nasdaq stocks. Liang and Park (2010:199-222) compared downside risk measures that incorporate higher return moments with traditional risk measures such as standard deviation in predicting hedge fund failure. When controlling for investment strategies, performance, fund age, size, lockup, high-water mark, and leverage, they found that

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1 Lower Partial Moments is one of the downside risk measures, therefor notation Lower Partial Moments (LPM) and downside risk measures are going to be used as equivalents.

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funds with larger downside risk have a higher hazard rate. However, standard deviation loses the explanatory power once the other explanatory variables are included in the hazard model.

In conclusion it is worth to mention that downside risk measures nevertheless their long history still play important role in the literature on the field of finance and financial portfolio management, so that investigations in the current paper are going to contributed to the research.

**Basic Elements of Lower Partial Moments and Their Application in Asset Allocation Process**

When investment objective is defined as the aspiration return level, risk is measured in the downside part of return distribution as falling below this aspiration return $\tau$. General continuous form of such risk measures is obtained by the evaluation of downside return deviations from the reference point $\tau$ by the general function. Bawa (1975:95-121); Fishburn (1977:116-126) and Harlow (1991:28-40), in developing the relationship between LPM and stochastic dominance, define a-degree LPM as following:

$$\text{LPM}(a; \tau) = \int_{-\infty}^{\tau} (\tau - x)^a f(x) dx \quad [1]$$

The minimal aspiration return level divides all possible return outcomes on losses which are lower than $\tau$, and gains which than higher than $\tau$. Thus, its economic plausibility arises only by its correspondence with the lowest acceptable return necessary to accomplish financial goal. It is important underlining that risk measured by LPM is risk of falling below specified minimal target return denoted by $x$ in the formula above, so that any outcomes above this reference point do not represent financial risk anymore and can be considered as chance for additional gain. Consequently the minimisation of LPM in the optimisation algorithm (discussed below) do not eliminate the chance to over-perform this reference point set as target return as it is the case in the portfolio model based on the variance (follow classical approach discussed in the previous chapter). Figure 1 shows these considerations in the graphical way.

The determination of the target return or minimum requirement level of return is difficult and a fixed defined $\tau$ as best suitable minimum level of aspiration cannot be recommended, as its size is always dependent on subjective investor-specific ideas. By setting the $\tau$ level the investor chooses critical minimum return. It should be noted that the magnitude of risk depends on the chosen $\tau$: $\tau$ is increasing with an increasing proportion of the probability distribution seen as risky (Schmidt-von Rhein, 1996:424).

A realistic investor must be able to justify his return requirements, as the maximum return cannot always be achieved. Possible, economically justified cases for the determination of target return, which cannot be understood differently as a benchmark are the following (follow also Poddig, Brinkmann and Seiler (2005:306); Schmidt-von Rhein (1996:425-429):

- $\tau = 0$: this corresponds to determining the economic demand to safe the capital employed;
• \( \tau = \) expected rate of inflation: the investor wants to achieve at least a return on invested capital in the amount of the expected inflation rate for the investment period, while capital preservation is secured;

• \( \tau = \) guaranteed interest rate, as by investing in the risky asset the investor loses the ability to get the risk-free interest rate;

• \( \tau = \mu : \) in this definition is to distinguish whether it is about return on expectations of a market index (equal to the previous case) or a risky investment (while the expected capital appreciation should be guaranteed).

Finally, it should be stressed that the increase of \( \tau \) among for all LPM shows risk-increasing effect, what can be proved by differentiation with respect to \( \tau \). As it was already mentioned, the LPM in the general case can be represented as in [1]. By differentiation of the equation using the Leibniz’s rule one can come to the following equation, which has a positive value:

\[
\frac{\partial \text{LPM}(a; \tau)}{\partial \tau} = \int_{-\infty}^{\tau} a(x - \tau)^{a-1} f(x) dx = a \int_{-\infty}^{\tau} (\tau - x)^{a-1} f(x) dx = a^* \text{LPM}(a - 1; \tau) \tag{2}
\]

The minimal aspiration return \( \tau \) (called also target return or benchmark) is explicitly included in the downside risk and expresses the lowest acceptable return to complete the financial target set in the beginning of the investment process as it was already mentioned. So that in the LPM framework return deviations are related to a variable investor target (follow discussion above), whereas the portfolio based on variance (in the classical approach) is related solely to the expected return. As a result, the conclusion to make is the following: the difference in the portfolio optimisation based on variance and LPM grows, the greater distance between the target and the expected return that is expressed in the shifting of the \( \mu, \text{LPM}^\text{-} \) efficient frontier further to the right in the \( \mu, \sigma^\text{-} \) framework.

Other important element is the order of the LPM measure. The LPM of the zero order can be defined as the probability of loss, the LPM of the first order – as the target shortfall, and finally LPM of the second order – as target semivariance. It is to be noticed that there are also target skewness and target kurtosis possible. Further details are given below.

The return deviations from the lowest target level are penalised with the \( \alpha \)-exponent in LPM (determinating the order of the LPM) that is also an instrument expressing different degrees of risk tolerance in the asset allocation process, as it replicates the decision maker’s feelings about the relative consequences of falling below target return. Risk aversion for \( \alpha > 1 \) means that smaller losses are perceived as relatively harmful, when compared to larger losses. Risk seeking for \( 0 < \alpha < 1 \) means that the main concern is to have a loss without particular regard of the amount of loss. So that the higher the difference between the \( \alpha \)-parameter of LPM, the further the efficient frontiers are from each other, which indicates changing structure in the portfolio composition. As the variance in the return deviations are squared, the most similar efficient frontiers of the \( \mu, \sigma^\text{-} \) portfolio model and \( \mu, \text{LPM}^\text{-} \) portfolio model are obtained when the \( \alpha \)-parameter (the order of the LPM) equals two. The more the \( \alpha \)-parameter differs from \( \alpha = 2 \), the more divergent the \( \mu, \sigma^\text{-} \) and \( \mu, \text{LPM}^\text{-} \) efficient frontiers (for further details follow Nawrocki (2003:79-96).

The LPM of the zero order is called as probability of loss (shortfall probability or target probability) and describes the occurrence possibility of an event if the minimum return requirement is exceeded. Figure 2 provides graphical description.

Such a definition of risk is an intuitively correct understanding of risk corresponding to the investors, setting the minimum return requirement. The same idea is represented by Zenger (1992:111), who claim that the concept of probability of selection is well suited because of the ease intuitive understanding of the practical implementation. At the same time the same authors point out that this concept is not applicable as the only measure of risk but in the combination. Therefore, it is important to note that not only the probability of failure, but also the extent of the failure of the investment decision is important.
It is necessary that, besides the probability of failure and the extent of this failure is measured. This can be done by using a target shortfall. This measure of risk – LPM of the order one (expected shortfall, target shortfall) measures the expected negative deviation of \(\tau\) and corresponds to the LPM of the first order.

It should be noted that the combination of LPM \((0, \tau)\) and LPM \((1, \tau)\) is not a perfect solution. If it is assumed that two portfolios have the same target shortfall. Portfolio A shows a lower probability of a large loss, while Portfolio B - a high probability of a low loss (follow Figure 3). Based on the LPM \((1, \tau)\), the two portfolios are considered equally risky, while the investors sees the portfolio A as much more risky portfolio in comparison to portfolio B. It is shown that risk attitudes are not linear. High negative errors by the minimum requirements are intuitively much more weighted than the lower, the respective probability of occurrence is not taken into account. To fix this problem, the concept of semivariance is applied.

The second order LPM is determined by semivariance or downside variance and measures the expected, squared loss below the target return. Just by squaring the larger losses are weighted more heavily than the smaller ones, whereby the value of the semivariance is influenced. Thus, the second-order LPM can be seen as a risk measure, which describes the conditioned volatility below the target returns.

LPM of the third order are called semiskewness or downside skewness and fourth order as a downside curtosis or semicurtosis. In contrast to the skewness and kurtosis measures this risk measures determines only the deviation below the reference value and thus can be interpreted as follows: degree to which it comes to over-or under-proportional weighting increases below the required minimum return. Since this risk measures have less relevance in practice, they will not be considered further.

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**Figure 2. LPM of the Order 0** (where \(p(x)\) – probability of event; \(\tau\) – target return; \(x\) – expected return)

*Source: worked out by the author*

**Figure 3. Two Portfolios Example** (where \(p(x)\) – probability of event; \(\tau\) – target return; \(x\) – expected return)

*Source: developed by the author*
The following table provides an overview of the LPM application in the portfolio management framework.

### Table 1: Risk Measures Application in Portfolio Management

<table>
<thead>
<tr>
<th>Risk measure</th>
<th>Important papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPM (0;(\tau)) Shortfall probability</td>
<td>Roy (1952:431-449) – the paper considers the implication of minimising the upper bound of the chance in the event of shortfall. Telser (1955:1-16) – his paper is concerned with the theory of hedging, while the investor’s attitude toward risk is discussed. Kataoka (1963:181-196) – the author proposes a stochastic programming model that considers the distribution of function and probabilistic constraints. Leibowitz and Henrickson (1989:34-41) – so called confidence approach for portfolio optimisation is proposed that provides meaningful description of risk. Leibowitz, Kogelmann and Bader (1992:28-37) – the authors states that pension fund can pursue traditional asset return objectives while protecting surplus using shortfall-approach. Browne (1999:76-85) – the author argues that properties of dynamic investment strategies that minimise the probability of a shortfall relative to a given target return are misunderstood; and proposes the way that allows a decision-maker to make some definitive quantitative comparisons that are in the understanding of risk.</td>
</tr>
<tr>
<td>LPM (1;(\tau)) Shortfall expectation</td>
<td>Ang (1975:849-857) - presents a simple computational algorithm to approximate the E, S portfolio selection model. The essential feature of the model is the utilisation of the familiar linear programming framework by representing risks as a series of linear constraints. Yamai and Yoshiha (2005:997-1015) - in the paper the authors illustrate how the tail risk of VaR can cause serious problems in certain cases, in which expected shortfall can serve more aptly in its place. Acerbi, Nordio and Sirtori (2008:1-10) - study the properties of Expected Shortfall from the point of view of financial risk management.</td>
</tr>
<tr>
<td>LPM (2;(\tau)) Shortfall variance</td>
<td>Hogan and Warren (1972:1881-1896) – the authors suggested portfolio selection models based on expected value-semi-variance criteria as it is offering certain advantages over the expected value-variance approach. Nawrocki (1999:9-25) – providing an overview about LPM development process, paying extra attention to the shortfall variance risk measure. Sing and Ong (2000:213-223) – the article demonstrates illustrates the implementation of downside risk models using spreadsheets programs. Konno, Waki and Yuuki (2002:127-140) - the purpose of the paper is to review important characteristics of risk measures and conduct simulation using four alternative measures, lower semi-variance, lower semi-absolute deviation, first order below target risk and conditional value-at-risk, as they are useful to control downside risk when the distribution of assets is non-symmetric.</td>
</tr>
<tr>
<td>LPM (3;(\tau)) Shortfall skewness</td>
<td>Estrada (2008:1-8) claims that academics and practitioners optimise portfolios using far more often the mean-variance approach than the mean-semi-variance approach, and that despite the fact that semivariance is often considered a more plausible measure of risk than variance. The author proposes a heuristic approach that yields a symmetric and exogenous semicovariance matrix, which enables the determination of mean-semi-variance optimal portfolios by using the well-known closed-form solutions of mean-variance problems.</td>
</tr>
</tbody>
</table>

Harvey, Liechty, Liechty and Mueller (2004) – the authors propose a method for optimal portfolio selection using a Bayesian decision theoretic framework that addresses two major shortcomings of the Markowitz approach: the ability to handle higher moments and estimation error, while employing the skew normal distribution, which has many attractive features for modeling multivariate...
LPM (4; τ) Shortfall kurtosis Nawrocki (1991:465-470) – the author claims that portfolio management in the finance literature has typically used optimisation algorithms to determine security allocations within a portfolio in order to obtain the best trade-off between risk and return. These algorithms are restrictive in terms of an investor’s risk aversion. Since individual investors have different levels of risk aversion, he proposes two portfolio optimisation algorithms that can be tailored to the specific level of risk aversion of the individual investor and performs ex-post evaluation tests of the algorithm performance.

Even though the downside measures were known for the long period of time, it is to be considered that Lower Partial Moment of the second order or semivariance are only briefly discussed in the scientific literature as appropriate risk measure in the asset allocation process, thus the main contribution of the following part is to provide to better understanding of this risk measure and show the possibilities of its practical application. So that the following optimisation problem is to be discussed Portmann (1999:87):

$$\min_{\omega} (\omega; \Delta) = \text{LPM}(2; \tau) - \pi_{\mu} \omega^T \mu$$ \[3\]

with $\omega^T = 1, \omega \geq 0; \Delta, \pi_{\mu} \in \Re$ while $\pi_{\mu}$ is reduction in amount of corner portfolios. The problem could be solved under Lagrange method and Kuhn-Tucker – optimisation algorithm (for further details follow Portmann (1999, pp. 89-93)) and define the function as following:

$$\text{LPM}(2; \tau) = \text{LPM}(2; \tau)_{up} + \frac{\text{LPM}(2; \tau)_{up} - \text{LPM}(2; \tau)_{down}}{(\pi_{up})^2 - (\pi_{down})^2}.$$ \[4\]

The other possibility is to introduce the method in general way under assumption of normal distribution of returns, while the risk measure could be expressed as following:

$$\text{LPM}(2; \tau) = \frac{1}{\sqrt{2\pi} \sigma} \int_{-\infty}^{\tau} (\tau - x)^2 e^{-\frac{(x-\mu)^2}{2\sigma^2}} \, dx$$ \[5\]

The equitation [3.4] could be standardised, while setting $x$ equal to $(\sigma^2 z + \mu)$, if $(Z \sim N(0;1))$.

$$\text{LPM}(2; \tau) = \frac{1}{\sqrt{2\pi} \sigma} \int_{-\infty}^{\tau-\mu} (\tau - \mu - \sigma z)^2 e^{-\frac{z^2}{2}} \, dz$$ \[6\]

In the next step the minimum frontier of the LPM of the second order is to be detrained. Thanks to the derivation of equitation [5] under the rule of Leibniz the following strictly positive result is achieved, where the relationship between LPM of the second order and $\sigma$ is strictly monotone (Cremers, 2008:79-84).

$$\frac{\partial \text{LPM}(2; \tau)}{\partial \sigma} = \frac{2}{\sqrt{2\pi}} \int_{-\infty}^{\tau-\mu} (-z)(\tau - \mu - \sigma z)e^{-\frac{z^2}{2}} \, dz = \frac{2(\mu - \tau)}{\sqrt{2\pi}} \int_{-\infty}^{\tau-\mu} \frac{z^2}{2} \, dz + \frac{2\sigma}{\sqrt{2\pi}} \int_{-\infty}^{\tau-\mu} \frac{z^2}{2} \, dz$$
Interesting considerations on the field of portfolio optimisation were provided by Merton (1972:1851-1872): there is an analytic relationship between expected portfolio’s return and standard deviation, which leads to the following equation:

$$\frac{dLPM(2; \tau)}{d\sigma} = \frac{2}{\sqrt{2\pi}} \left( (\mu - \tau) - e^{\frac{x^2}{2\sigma^2}} \right) + \sigma \int_{-\infty}^{\infty} z \cdot e^{\frac{z^2}{2\sigma^2}} dz =$$

$$= \frac{2}{\sqrt{2\pi}} \left( (\mu - \tau) - e^{\frac{(\tau-\mu)^2}{2\sigma^2}} + (\tau - \mu) - e^{\frac{(\tau-\mu)^2}{2\sigma^2}} \right) + \frac{2\sigma}{\sqrt{2\pi}} \int_{-\infty}^{\infty} e^{\frac{x^2}{2\sigma^2}} dx > 0$$

[7]

Thus the portfolio with lower semi-variance bourdon can be presented graphically as following in the figure 4. Minimum LPM(2; \tau) can be determined through numeric approximation (Cremers, 2008:89):

$$LPM(2; \tau) = \frac{\sqrt{\mu(R)^2 - 2b\mu(R) + a}}{d}$$

where \( a = \mu^T \Sigma^{-1} \mu, \; b = \mu^T \Sigma^{-1} i, \; c = i^T \Sigma^{-1} i, \; d = ac-b^2 \)

Using Merton’s equation instead of \( \sigma \) in [5], we come to the following functional relationship between expected return and minimum semi-variance rate in accordance to fixed target return:

$$LPM(2; \tau) = \sqrt{\frac{ac-b^2}{\mu(R)^2 - 2b\mu(R) + a}} \int_{-\infty}^{\infty} \frac{(\tau-x)^2 e^{-\frac{(ac-b^2)(x-\mu)^2}{2(\mu(R)^2 - 2b\mu(R) + a)}}}{\sqrt{\mu(R)^2 - 2b\mu(R) + a}} dx =$$

$$= \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} (\tau - \mu - \sqrt{\frac{\mu(R)^2 - 2b\mu(R) + a}{ac-b^2}}) z^2 \cdot e^{-\frac{z^2}{2\sigma^2}} dz$$

[9]

Thus the portfolio with lower semi-variance bourdon can be presented graphically as following in the figure 4. Minimum LPM(2; \tau) can be determined through numeric approximation (Cremers, 2008:89):

$$\frac{dLPM(2; \tau)}{d\mu} = \frac{2}{\sqrt{2\pi}} \frac{\sqrt{c\mu^2 - 2b\mu + a}}{(c\mu^2 - 2b\mu + a)} \left( \mu - \tau + \frac{z^2 (c*\mu - b)}{d} \right)$$

$$\frac{z(c*\mu^2 - (3b + c\tau)*\mu + a + b*\tau)}{\sqrt{d(c*\mu^2 - 2b*\mu + a)}} e^{-0.5z^2 dx} = 0$$

[10]

and weights of assets in the portfolio are determined as following:

$$\omega = \frac{1}{d} (c\mu - b) - \frac{1}{d} (b\mu - a)$$

[11]
As far as the possibility to invest under risk-free rate should be considered in the optimisation process, it would lead to the discussion about the construction of capital market line. Capital market line is a line used in the capital asset pricing model to illustrate the rates of return for efficient portfolios depending on the risk-free rate of return and the level of risk for a particular portfolio. In order to determine the capital market line and detect the optimal portfolio expected return of the market portfolio and expected return of the portfolio under optimisations are to be determined.

In order to determine efficient portfolio with LPM of the second order the following considerations are to be considered: the starting point in this discussion is the concept of corner portfolio - is optimal portfolio for a given risk tolerance at which a variable changes status. It is called a corner portfolio because in a graph that plots asset holdings – asset weights against risk tolerance – lambda, two or more variables turn a corner.

In the framework of portfolio optimisation this question was discussed by Serf (1995:177-184) and based on his considerations the return of the corner portfolio can be seen as linear combination:

$$\mu = \alpha \mu_{up} + (1 + \alpha) \mu_{down}$$ \hspace{1cm} [12]

where $\alpha$ is weights – factor that shows the following characteristics:

$$\alpha \in [0,1] \land \alpha = 0 \mid \mu_{down}$$

$$\alpha = 1 \mid \mu_{up}$$.

According to the previous equation the variance of the portfolio and weights of assets in the portfolio could be established:

$$\sigma^2 = \omega^T \sum \omega = (\alpha \mu_{up} + (1-\alpha) \mu_{down})^T \sum (\alpha \omega_{up} + (1-\alpha) \omega_{down})$$ \hspace{1cm} [13]

$$\omega^T = (\frac{\mu_{down} - \mu_{up}}{\mu_{up} - \mu_{down}} (\omega_{up} - \omega_{down}) + \omega_{down})$$ \hspace{1cm} [14]

In the concept of LPM of the second order, while looking for an efficient portfolio by utilisation of equations [12] to [14], the standard deviation term – $\sigma$ in the equation [5] is to be changed against [14] in order to find the relationship between expected return of the portfolio and shortfall variance, and thus to find efficient portfolio (Kaduff, 1996:167):
LPM(2; τ) = \frac{1}{2\pi (\omega_\text{portfolio})^T \sum \omega_\text{portfolio}} \int_{-\infty}^{\tau} (x - \bar{\omega})^2 e^{-\frac{1}{2}(x - \bar{\omega})^2 \sum \omega_\text{portfolio}} dx \tag{15}

with following weights of assets in the portfolio:

\omega_\text{portfolio}^T = \left( \begin{array}{c} \mu - \mu_\text{down} \\
\mu_\text{up} - \mu_\text{down} \\
\omega_\text{down} \\
\omega_\text{down} \end{array} \right) \tag{16}

The purpose of the theoretical overview was to introduce the LPM of the second order as an appropriate risk measure in the portfolio optimisation process.

**Usage of Lower Partial Moments in Management of Investment Portfolios: Theoretical Description**

The importance of asset allocation and portfolio management for the Latvian insurance companies to cover losses from their main business operations were mentioned in the in the introductory part of the current paper. The asset allocation decision is not an isolated choice, but rather a component of a structured four-step portfolio management process that never stops. Due to the importance of the topic, the process of portfolio management will be discussed in detail below. The author will also include a portfolio construction algorithm with Lower Partial Moments (LPM) in this process.

Taking into consideration the fact that in the process of financial portfolio construction, while making decisions about an investment, investors are more concerned with the downside movements of their portfolios (when their target return has failed), than with the upside potential, the main concern of that particular algorithm is in regard to the possibilities of asset allocation based on downside risk. The existence of– risk measure, presenting the squared failure of the investor’s target return can be justified by its dominance Lower Partial Moment being equivalent to the stochastic dominance of the third order. Thus, the dominance concerning Lower Partial Moments of the second order fulfils the criterion for the Bernoulli principle and therefore can be used for decision making under risk (Estrada, 2008:9-11).

The first step in the portfolio management process for the insurance company’s management (either using internal resources – an in-house team or with the assistance of an external investment advisor) is to construct a policy statement. The policy statement should be understood as a road map, where the investor specifies the types of risk he is willing to take (by determination of a risk aversion parameter – \( \alpha \)), investment goals (capital preservation, capital appreciation, current income by determination of target return parameter - \( \tau \)) and constraints (like liquidity, time horizon, tax concerns, legal and regulatory requirements, etc.). Since investor needs change over time, the policy statement must be periodically reviewed and updated. The process of investment seeks to look into the future and determine strategies that offer the best possibility of meeting the policy statement guidelines determined in the previous step.

In the second step of the process – determination of financial strategy – the management should study current financial and economic conditions and forecast future trends, which require constant monitoring and updating to be able to reflect changes in financial market expectations.

The third step of the portfolio management process is to construct the actual portfolio. With the policy statement and financial market forecast as input, implementation of the investment strategy is prepared by determining asset allocation across countries, asset classes and different securities. Portfolio construction is achieved by minimising risk and maximising expected return. When comparing the classical (\( \mu, \sigma \)) model and the (\( \mu, \text{LPM} \)) model, it should be said that the models differ substantially in terms of risk measurement and return dependence. The (\( \mu, \sigma \)) model only takes into account the mean and variance, whereas the (\( \mu, \text{LPM} \)) model also considers non-normality of return distribution. As the same input data were used for both portfolio models, which differ only in risk measure, an enhanced realised performance can be explained only by the application of more appropriate and exact risk measures. In the construction process of a tangential portfolio on (\( \mu, \text{LPM} \)) – an efficient frontier should be chosen. The tangential portfolio holds the maximum efficiency portfolio: the portfolio with the highest return premium on one unit of risk.
The last step is the continual monitoring of the needs and capital market conditions. One of the essential components of the monitoring process is the evaluation of the portfolio’s performance and its comparison to the goals set in the policy statement.

Due to the relevance of this topic for practical implementation further research on the impact of the two portfolio models representing the two approaches in the portfolio theory – classical model and model based on the LPM - should be examined. Further considerations can be found in Kuzmina (2011:361-372).

Conclusions
Main goal of the current research was to present financial portfolio management model as an internal model for insurance companies holding small number of stocks in their investment portfolios, which not only satisfies regulatory requirements and internal risk management standards, but also allows dealing with otherwise complex multivariate modelling using generally available computation applications, due to the fact that so called “all in one solutions” like for example BARRA, NORTHFIELD, WILSHIRE and others require considerable financial investments and present a kind of black box (as several estimation parameters and computation techniques are not completely disclosed).
The reader was instructed on the essential aspects of the $(\mu,LPM)$-portfolio model, which, on the one side, enables its critical review, and on the other side, provides a platform for its later application in the practice of portfolio management. The research was concerned with the portfolio selection based on the downside risk and mean, which utilises risk measure corresponding with the risk understanding of the prevailing number of investors. As a consequence, by the portfolio optimisation based on the downside risk the chance to over-perform the reference point is not minimised as by the portfolio optimisation based on the variance.

References


Abstract

Purpose – The aim of the given research is to ascertain indicators which characterise saturation of domestic market of financial services as the reason that stimulates financial services export.

Design/methodology/approach – There were used such research methods as analysis of advanced researches in financial field and interviewing experts concerning their opinion on financial services market saturation indicators.

Findings – In order to define the level of financial services market saturation there were suggested 12 indicators divided into two categories. To the first category of indicators one relates those which ought to be used at the initial stage of financial services market analysis. To the second category one relates the indicators which have auxiliary character, i.e. those which can be used only as additional ones for more exact definition of separate aspects of financial services market saturation.

Originality/value – The given research is important for both the countries which intend to position themselves as exporters of financial services - in respect of defining possibility and necessity of entering the world market with their financial services, and for the countries and individual financial institutions which are working out their strategy in financial services export - in respect of discovering of regions and financial services for export.

Keywords: financial services, financial services export, stimulus for export, financial market saturation.

Introduction

Export of financial services can be defined as a process of providing financial services (according to WTO definition) by financial and payment institutions (banks, broker companies, payment systems, etc.), which are registered in one country, to clients of other country. The total amount of the received income from providing financial services is reflected in trade balance of the country, raising its positive side (definition is created by the author).

Statistical data provided by international organisations indicate that all countries in the world export or import financial services, to a greater or lesser extent. For most countries export of financial services is not their specialisation, its earnings add up to a collateral part of their main economical activities and they make up an insignificant share in their overall trade. On the other hand, there is a small group of countries, for which export of financial services could be not the main although a rather substantial source of their income. Due to the development of the sphere of financial services this group tends to expand over time. More and more countries aspire to secure this niche, realising “the power of finance” and “an intangible scale of financial market”.

Different reasons can serve as after-effects of uneven geography of financial services export. The author in the given article proposes a hypothesis to the effect that one of the main stimuli that induces export of financial services proves to be saturation of domestic market with financial services to such a level when there appears the necessity to export them. When considering the given effect it is appropriate to mention philosophical position of dialectical law of transition from quantity to quality. In this case «the quantity» is a whole complex of offered financial services within any country which, having reached the level of complete or almost complete saturation of the market, are compelled to be exported, and that becomes a qualitatively new phenomenon.

The aim of the given research is to reveal the indicators which can in the best way characterise internal saturation of financial services market as the reasons for inducing their export. As the basis for the achievement of the given incentive one used such research methods as analysis of fundamental theories in trade and markets, analysis of advanced researches in financial field and interviewing experts about their opinion concerning financial services export. The given research can be topical (1) for the a.m. category of the countries which intend to position themselves as exporters of financial services – in respect of defining their opportunity and necessity to enter the world market with their financial services; (2) for the countries and individual financial institutions which develop their strategy of financial services export – in respect of defining regions and products for export.
Dialectic view on export in the context of global economic changes

In the last year the reports of information agencies regarding the state of world finance tell about coming changes in the global economic landscape. Under the conditions of a poor growth and high risks of the renewal of recession, governments of different countries make efforts not to strengthen their national currencies, in order to gain, inclusively, additional competitive advantages for export. So long as devaluation (weakening of national currency exchange rate on the world market) is the easiest way to support real sector, monetary powers on both sides of the Atlantics start abusing interventions and other, practically speaking, emission instruments (Vyazovsky, 2010). No wonder that Brazilian finance minister is talking about a “currency war” (Financial Times, 2010). On January 17, 2011 U.S. Senators-Democrats Bob Casey, Charles Schumer и Debbie Stabenow announced about their intention to propose a bill according to which one would introduce tariffs on the goods exported by the countries which, in the U.S. Ministry of Finance opinion, manipulate currency rates. Companies from these countries will be deprived of the right to conclude contracts with the U.S. government (Voice of America, 2011). Basing on the law, American companies will be able to lodge claims demanding imposition of import duties on Chinese goods (Finmarket, 2010). According to Guido Mantega, the world is following the course of a full-blown “trade war” (Alloway, 2011). Then it is appropriate to put a question: «Where are the rules and ideals of WTO? ». The Russian economist Mikhail Leonidovich Khazin gives an interesting and convincing explanation of what is going on. In his opinion, no economy whatever is possible without ultimate demand as, in principle; somebody ought to consume manufactured goods and services. But the basic mechanism of a crisis, i.e. the slump in final private demand and, in this sense, competition among manufacturers of both goods and services tends to intensify more and more. And that fact presses the governments to defend their markets and manufacturers and make attempts to increase exports. On the other side, globalisation categorically demands execution of certain formulas which are obligatory for politicians. One of these formulas concerns the advantage of “free” world markets over national ones and detriment of protectionism. In the current situation they completely fail to correspond to the existing reality (Khazin, 2011). On April 3, 2011 at the annual meeting of IMF and World Bank, President and Executive director of IMF declared that before the crisis it seemed that everybody had been firmly convinced of knowing how one ought to manage economic systems. There existed “Washington consensus” – concrete rules of currency and tax policy formulated by the English economist John Williamson in 1989. However, actually it turned out that low inflation, high economic growth, over-free and uncontrolled (by anybody) financial market were leading to financial and economic disaster. In connection with this important conclusion, Head of IMF ascertained: “Washington consensus with its oversimplified economic notions and formulas collapsed during world economic crisis and remained behind.” Financial globalization, as stated by Head of IMF, intensified inequality, and that factor became one of secret mainsprings of the crisis. “Therefore steady growth is associated with a more just distribution of income in a long-term prospective.- declared Head of IMF.- We require globalisation of a new kind, a more just globalisation, the one with a human face. Benefits derived from economic growth ought to be widely distributed and not just appropriated by a handful of privileged people” (Vadzhra, 2011). However, it is more a philosophic issue, as one does not see any concrete solutions of today’s contradictions for the time being. The present economic landscape is actually an integral cluster with the U.S.A. as its leader. Till recently these contradictions have also been a locomotive of world economy generating 40% of world demand (Knyazev, 2011). The remaining countries, directly or through mediation, concentrated their production on consumers from the U.S.A., although it were large-scale goods (China), high-technology products (EU, Japan) or delivery of raw materials for the aforementioned groups (Russia, Arab states). At present this demand has decreased. One of the reasons for it, in Mikhail Khazin’s opinion, lies in over-crediting U.S. households with 3 trillion US dollars more than their real possibilities of repayment prove to be. All that led to a crisis not only in the U.S.A. but also throughout the world. The situation is especially difficult for small countries. In Mikhail Khazin’s opinion, none of small countries, such as Latvia, are in a position to survive solely at the expense of their domestic market. The entrance to foreign markets is required, and it is necessary to solve two problems for that. The first one is to understand who can purchase your goods, and the second one is to know which of your commodities will be in demand. (Knyazeva, 2011). The question is: what country can provide a solvent demand and for what missing goods or service to its subjects (or potential customers), taking into account their characteristics: quantity, quality and price? On the other hand, who can deliver (sell) scarce this deficit? And what is more important, can we do it, i.e. our country? The author, fully supporting fairness of this point of view, holds the opinion that dialectic approach can help answer at least some of these questions. Dialectical contradiction between production and consumption of a certain product (or integral system) inland under the conditions of dominance of the first over the second, is
leading to a decisive role of production in the development of export. And vice versa, dominance of consumption is leading to import. For all this, although production and consumption assume unity, one can primordially conceive production without consumption, for instance goods for a warehouse, whereas consumption of non-manufactured goods is unconceivable. Thus, production is a dominant factor. According to the dialectic law of transition from quantity to quality, as soon as dominant becomes super-measured in quantitative ratio, transition to a qualitative change takes place. That is why transition of quantitative saturation of domestic market to a qualitative leap, i.e. export, is of great interest. On the given stage of research the author does not consider conditions and grounds for such changes but concentrates her attention on the indicators which reveal possibility or even necessity of export. For all this, one defines sequence of their priority in the reflection of inland saturation of market and their influence on probability of transformation of possibility of export into its reality. In the capacity of the material under research one chose the sphere of financial services, namely banking activities.

**Indicators of saturation of financial services market**

During the last 30 years financial institutions embraced different groups of clients more and more widely, one developed new financial services and a large amount of solutions for the improvement of their quality and facility of usage. In view of this, it is becoming more difficult to break into the so-called ‘blue ocean’ in the sphere of financial services. The given market is characterised by keen competition. When competition reaches a critical level in the frames of any country, then export proves to be a natural exit. However, it is not an obligatory condition for export due to the fact that strategy in this direction can bear a leading character.

When necessity to export becomes obvious, there appears the question where and what can be exported. For settlement of both problems the author proposes to pay attention at indicators which can define the degree of saturation of financial services market in one or another country. These indicators in themselves are not the ground for starting immediate export. Firstly, on any market, even a saturated one, one can stand competition in a classical way with the help of prices and quality. Secondly, indicators don’t ascertain the conditions of export as they don’t exclude availability of juridical and other barriers which hinder one’s entrance to the market. Their aim is to determine potentially favourable or unfavourable geographical zones for trade in financial services.

The author revealed 12 indicators of saturation of financial services market that are conventionally divided into 4 groups. Their description is listed below.

**Group 1: indicators characterising banking activity in the country**

**A) The number of credit institutions in the country (per 1 million residents)**

This indicator shows the degree of competition between banks in the country. The higher the competition the more credit institutions are predisposed toward export and the more difficult is import to their territory. The quantity of banks, without regard for their size (amount of capital invested) is important because any bank, even a small one, tends to expand its own share in the market. In case domestic market does not already allow it, there is a chance of realising one’s potential on foreign markets. The comparison of parameters of the given indicator for different countries is presented in Table 1. It can be seen from the table that in most cases the less residents are related to one bank, the higher is the volume of financial services export and/or its proportion in total exports of the country’s services.

**Table 1**

<table>
<thead>
<tr>
<th>Country</th>
<th>Amount of residents related to one bank</th>
<th>Volume of financial services export in 2008 in mil. US$</th>
<th>Proportion of financial services export in total exports of services (in %, 2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxemburg</td>
<td>3304</td>
<td>44 593</td>
<td>65,10</td>
</tr>
<tr>
<td>Finland</td>
<td>16854</td>
<td>648</td>
<td>2,03</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>19493</td>
<td>60 189</td>
<td>11,06</td>
</tr>
<tr>
<td>Switzerland</td>
<td>27306</td>
<td>19 325</td>
<td>25,30</td>
</tr>
<tr>
<td>Korea, Rep.</td>
<td>43308</td>
<td>3780</td>
<td>5,10</td>
</tr>
<tr>
<td>Germany</td>
<td>46086</td>
<td>13 328</td>
<td>5,09</td>
</tr>
</tbody>
</table>
Some experts assert that high concentration of banks in a country does not always lead to targeted export. Firstly, not all banks can afford themselves an entrance to the foreign market as that demands considerable expenses. Secondly, there exists a certain amount of “pocket banks” aiming at services for a certain group of clients (for instance, business groups). These banks are established in order to assist the given business and not to set up one’s banking business as such. Thirdly, parent foreign banks are usually not interested in export strategy of local banks. Expansion of the head office in new markets is carried out not through already existing subsidiary structures but by means of establishing a new subsidiary. In other words, every country gets its subsidiary bank or a branch of the head bank.

B) Volume of assets of credit institutions (as % from GDP)

This indicator, as well as the previous one, is intended for defining the level of competition between banks on domestic market. However, its difference from the previous one is that it shows proportion of financial services in active business. The higher the indicator is, the higher is necessity of realisation of financial services export by local banks. That means, if the development of business in a country does not require a wider use of financial services, financial institutions are forced to look for clients abroad. In this case such region is unpromising for export of financial services to it.

At the same time, the growth of this indicator can also be the evidence of quite the opposite regarding developing business environment, growth of volumes of foreign trade that raises demand on financial services among both residents and non-residents. In the given case this region can be attractive for both export and re-export of financial services.

One should take into account the fact that owing to global economic crisis banks of some countries are artificially supported by state funds to impart stability to them, and that factor makes calculation and use of the given index more difficult.

In other respects the calculation of both a.m. indicators is based on accessible international statistics (OECD Stat Extracts, 2009).

Group 2: indicators characterising stock market

A) Stock market capitalisation (as % from GDP)

Stock market capitalisation is pecuniary valuation of capital in the form of securities circulating on the market. The author sees correlation between stock market capitalisation and financial services export in the fact that financial institutions offer services accompanying financial instruments of a corresponding stock market not only to local but also to foreign investors. Foreigners use, i.e. import, financial services, and owing to that, export of financial services of the corresponding country is growing. One can say that under a comparatively large capitalisation of stock market financial services market is usually developed and saturated. Furnishing of financial services related to the trade on a stock market assumes the availability of demanding, informed and financially educated clients, as well as the use of complicated technological solutions and the proposal of a package of related high-quality financial services. It is rather difficult to compete with this sort of financial institutions. According to this indicator, in 2009 the first ranks were taken by the countries which, at the same time, were recognised as leaders in financial services export (Table 2).
Leaders in capitalisation of stock market in 2009

<table>
<thead>
<tr>
<th>Country Name</th>
<th>Stocks traded, total value (% of GDP)</th>
<th>Stocks traded, total value (in mill. of current US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong</td>
<td>707.44</td>
<td>1 489 635</td>
</tr>
<tr>
<td>United States</td>
<td>331.01</td>
<td>46 735 934</td>
</tr>
<tr>
<td>Korea, Rep.</td>
<td>189.97</td>
<td>1 581 486</td>
</tr>
<tr>
<td>China</td>
<td>179.65</td>
<td>8 956 187</td>
</tr>
<tr>
<td>Switzerland</td>
<td>161.72</td>
<td>795 556</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>156.47</td>
<td>3 402 495</td>
</tr>
<tr>
<td>Singapore</td>
<td>138.43</td>
<td>252 265</td>
</tr>
<tr>
<td>South Africa</td>
<td>120.02</td>
<td>342 502</td>
</tr>
<tr>
<td>Spain</td>
<td>109.52</td>
<td>1 599 261</td>
</tr>
<tr>
<td>Sweden</td>
<td>96.12</td>
<td>390 323</td>
</tr>
<tr>
<td>Canada</td>
<td>92.78</td>
<td>1 239 626</td>
</tr>
</tbody>
</table>


B) Stock market trade turnover (as % of GDP)

This indicator shows the activity of a country’s stock market (at present leading countries according to this parameter are: United States, Korea, China, United Kingdom, Spain, Turkey and Germany). The growth of activity of stock market can be observed under both rising and declining markets. In both cases export of financial services will increase as any operations with financial instruments are accompanied by financial services. Only under declining market its growth will take place on condition of a collapsing character of the recession and its short duration. For all this, in a long-term prospect financial services export will sharply shrink as the clients who had closed their positions will not come back to the stock market before long. Taking into account this effect, it is recommended to use the given parameter as an addition to the indicator “Stock market capitalisation (as % of GDP)”.

C) Number of local enterprises quoted at a stock exchange (on 100 thousand companies in a country).

This parameter is important for defining financial activity of enterprises. The more enterprises use the possibility of drawing financing through sale of financial instruments at a stock exchange, the higher is the potential of the stock market. A wide choice of investments attracts foreign investors who don’t manage without the use of financial services. The given indicator can be indirectly indicative of saturation of financial services market.

D) Number of kinds of financial instruments quoted at a stock exchange.

Subject to availability of a wide range of various kinds of financial instruments (stocks, bonds, shares in funds, different derivatives, etc.) possibilities of attracting foreign capital considerably expand. Presently there are not so many countries whose stock exchanges offer a full range of financial instruments. One should mark out American and European ones as most popular. Through spectrum of their financial instruments they satisfy diverse demand of a great number of both institutional and private foreign investors. Availability of that sort of stock exchanges is a pledge of success for a country in export of financial services.

Group 3: indicators characterising interest rates

A) Average deposit and lending rates in a country.

Export of deposit and crediting services is used in order to increase marginal profit of financial institutions. For export of deposit services one defines a country with lowest interest rates. As a rule one has to increase deposit rate a little as it is sort of payment to a non-resident for the risk of placing his funds in a foreign country. In its turn, for credit export one chooses a region with acceptable ratio “profitability/risk”. For all this, it’s quite natural that credit rates ought to be higher than deposit ones.

Profit on export can be increased as a result of placing funds in regions with overestimated risk. In theory higher risk corresponds to larger income and vice versa. For all this, profit remains unchangeable as profitability and riskiness have already been included in its rate. It turns out that under adequate estimation of risk it’s not important in what country one’s funds are placed- with low or high profitability (Figure 1).
Actually a country can be overestimated or underestimated from the standpoint of investment risks. The situation is positive for an exporter when a real risk is lower than the one included in the market credit rates. For instance, in 2007 individual Latvian banks used a similar situation when they borrowed funds in Germany at the annual rate of 3% and placed them as credits at the rate of 18% in UIS (Union of Independent States) countries. The given countries were overestimated from the point of view of risk, and that provided an additional income to exporting financial institutions (Figure 2).

![Figure 1. Combination ‘profitability/risk’ of crediting in theory](image)

**Figure 1.** Combination ‘profitability/risk’ of crediting in theory

![Figure 2. Effect from overestimated credit risk in developing countries](image)

**Figure 2.** Effect from overestimated credit risk in developing countries

![Figure 3. Tendency to approach of profit from investments under different levels of risk](image)

**Figure 3.** Tendency to approach of profit from investments under different levels of risk

With the development of these countries estimation of credit risk will gradually become more precise. That may lead to the reduction of rate and, correspondingly, profit of exporter of financial services (Figure 3).

B) **Difference between lending and deposit rates in a country**

This indicator defines potential profit of financial institutions which intend to export deposit and lending products within one region. According to the author’s observation, heightened spread can indicate instauration of market even with classical banking lending-and-credit services, not to say about more complicated financial services. At the same time, heightened spread can be caused by economic crisis when banks, lending with caution, increase loan rates. Examples of countries with a heightened spread between rates are presented in Table 3.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Interest rate spread (lending rate minus deposit rate, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

79
Group 4: Indicators characterising consumers of financial services

A) Adults who don’t have any bank account (as % of all adults in a country)

The given indicator defines per cent of potential clients in a country who are not covered with financial services. The higher the indicator the less saturated region with financial services is. Permanent statistics on the given indicator has not been recorded; however, there exist separate researches in this direction. For example, interesting and even curious information was received as a result of the research carried out in European Union in March 2009 by Eurobarometer on accessibility and use of main banking service. It turned out that 7% of Europeans experience difficulties in getting access to banking service, and 2% more don’t have any access at all. The situation in different countries is presented in Figure 4.

![Figure 4. Percentage of population finding access to banking system through a current account difficult or impossible](source)

Source: Eurobarometer (2007)

B) Number of kinds of used banking services (on average per 1 client)

In author’s opinion, the given parameter is most precise for defining degree of saturation of financial services market. At the present moment statistics on the given indicator is available only within financial institutions being confidential as a rule, and that fact does not allow to use it. From subjective standpoint of the author, one can consider as saturated that market where a client makes use of 5 financial services on average. Usually that can be credits and deposits, money transfers, payment cards and two more specific products such as, for instance, operations with securities, bank guarantee and pension savings.

C) Number of accounts (on average per 1 client)

The given parameter is an alternative to the indicator «Number of kinds of used banking services» as it also indirectly defines intensity of use of financial services. And even in case accounts of a number of clients are not active, their number will speak about strength of financial institutions in promotion of their products.

D) Volume of e-made transactions and deals (as % of all transactions and deals)

At the present time remote service is a key to success in export of financial services. The more is the volume of remote-and-e-made transactions and deals, the higher are the possibilities of embracing not only a local market but also exporting their services to non-residents throughout the world. Presently this kind of
statistics, based on the way of handling transactions, is not recorded, so practical use of the given indicator is impossible.

**Expert assessment**

All the aforementioned indicators of financial services market saturation were selected by the author subjectively. To raise objectivity in the given matter, i.e. in order to reveal most appropriate indicators for analysis of the degree of saturation of financial services market of different countries, the author organised an experts’ opinion questioning. The experts’ questioning was carried out within February - March 2011. Twenty experts participated in it, and answers were received from 15 of them. The list of experts was carefully selected in order to obtain feedback from different perspectives, taking into account daily duties and professional experience of experts.

The selected experts were:

- executive managers of commercial banks (vice presidents, board members);
- managers of commercial bank customer service departments;
- leading analysts and auditors of commercial banks;
- investment fund managers;
- representatives from the Central State Bank and supervisory board of the banking system in Latvia;
- head of Association of Latvian Commercial Banks;
- governmental representatives;
- academic professors of economic sciences.

Experts were asked the following question: «Please, evaluate which indicators, in your opinion, characterise in the best way the level of saturation of financial services market of any country (on a scale from 1 to 5):

1. the indicator doesn’t characterise level of a saturation of the financial services market.
2. the indicator weakly characterises level of a saturation of the financial services market.
3. the indicator can be used as additional for defining the level of saturations of the financial services market.
4. the indicator overall characterises level of a saturation of the financial services market.
5. the indicator especially precisely characterises level of a saturation of the financial services market.

All 12 aforementioned indicators were estimated. Methodology of 15 expert feedback analyses was carried out using such exponents as (see Table 4):

- total sum of grades and statistical average of grades for each individual indicator;
- mode, median, standard deviation of each indicator;
- maximum and minimum values, their delta for each indicator.

**Table 4**

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Indicators / Exponent</th>
<th>Sum</th>
<th>MOD</th>
<th>MED</th>
<th>Aver.</th>
<th>Std.Dev.</th>
<th>MAX</th>
<th>MIN</th>
<th>MAX-MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Average deposit and credit rates in a country</td>
<td>38</td>
<td>3</td>
<td>3</td>
<td>2,5</td>
<td>1,25</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Number of the local enterprises quoted at a stock exchange (on 100 thousand companies in a country)</td>
<td>46</td>
<td>3</td>
<td>3</td>
<td>3,1</td>
<td>0,59</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Number of accounts (in average on 1 client)</td>
<td>48</td>
<td>3</td>
<td>3</td>
<td>3,2</td>
<td>0,86</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Difference between credit and deposit rates in a country</td>
<td>49</td>
<td>4</td>
<td>3</td>
<td>3,3</td>
<td>1,16</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
The diagram below illustrates an average estimation of each indicator (Figure 5).

![Figure 5. Average expert evaluation of indicators of financial services market saturation.](image)

Source: worked out by the author based on the expert survey.

As a result of the carried out mathematical processing of experts’ answers, one made a conclusion to the effect that none of the indicators presented by the author, in experts’ opinion, will give an exact definition of the degree of saturation of financial services market in a country. Correspondingly, none of them can become a clear signal for making a decision in respect of financial services export. For all this, in experts’ view, in general one can use the three marked indicators in Figure 5 at the initial stage of estimation of financial services market. The given three indicators prove to be:

- Number of kinds of used banking services (on average per 1 client);
- Volume of bank’s assets in a country (as % of GDP);
- Securities market capitalisation (as % of GDP).

One can consider as a positive sign the fact that all of them are in different groups, and that means a wide range of different aspects of saturation of financial services market. In experts’ opinion, one can use the rest of indicators only as additional ones. That means that it is rather risky to found one’s decision regarding export of financial services exclusively on them.
Conclusions

Changes in global economic landscape point to the fact that fundamental grounds of world economic crisis are far from being overcome. Under the pressure of a new approaching recession, every country of the world is carrying on a struggle for possibility of export solving two main tasks at the same time: firstly, understanding the one who can buy products manufactured by it (by a certain country), secondly, understanding who (what country) can provide a solvent demand for these products. Dialectic approach partially gives answers to the given questions. Dialectic contradiction between production and consumption of a certain product inland under the situation of dominance of the first over the second is leading to a decisive role of production in the development of export.

Having chosen the sphere of financial services as an object of investigation and following the given philosophical law of transition from quantity to quality, the author arrived at the conclusion that saturation of financial services market is a ground (but not a condition) for export of financial services. The level of saturation of financial services market ought to be taken into consideration:
- by countries which intend to position themselves as exporters of financial services – in respect of defining their possibility and necessity to enter the world market with their financial services;
- as well as by countries and individual financial institutions which are developing their strategy of financial services export – in respect of defining regions and products for export.

To define the degree of saturation of financial services market, the author elicited two categories of indicators. To the first category are related those indicators which should be used at the initial stage of evaluation of financial services market:
- Number of kinds of used banking services (on average per 1 client);
- Volume of bank’s assets in a country (as % of GDP);
- Securities market capitalisation (as % of GDP).

To the second category one relates indicators bearing an auxiliary character. They can be used only as additional ones for a more exact definition of separate aspects of financial services market saturation. To the given indicators belong:
- Average deposit and credit rates in a country;
- Number of local enterprises quoted at a stock exchange (per 100 thousand companies in a country).
  Number of accounts (on average per 1 client);
- Difference between credit and deposit rates in a country;
- Adults who don't have any bank account (as % of all adults in a country);
- Number of banks in a country (per 1 million of population);
- Securities trade turnover (as % of GDP);
- Number of kinds of securities quoted at a stock exchange;
- Volume of e-made transactions and deals (as % of all transactions and deals).

All the aforementioned indicators cannot serve as a signal for starting immediate export of financial services without the availability of the remaining causal basis (including conditions and reasons). Their aim is to define potentially favourable or unfavourable geographical zones for trade in financial services.

References


DEVELOPMENT OF MICROFINANCE IN LATVIA: NEW LOOK AT SAVINGS AND CREDIT UNIONS

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Abstract
Purpose – Up to nowadays, microfinance was mostly associated with developing countries, but the global financial crisis 2008-2010 has brought developed and developing worlds together, facing growing poverty and social inequality. Microfinance promotes everyone’s access to safe financial services as a key solution to financial and social problems. The author proposes to apply microfinance principles to Latvian conditions, using unique role and status of savings and credit unions (SCU).

Design/Methodology/Approach – The main structure of the paper is as follows:
1. Analysis of microfinance essence and its application to Latvian conditions;
2. Analysis of operation and members’ profile of Latvian SCUs.

The paper is based on analysis of the latest literature and research papers in microfinance and financial cooperation fields; statistical and social research methods. In July-December 2010, the author has conducted a survey of SCUs’ members (241 respondent) targeted to understand members’ profile and opinion about SCUs operation.

Findings –
1. There is a broad niche for microfinance services in Latvia.
2. SCUs operation peculiarities, deep regional penetration and social goals are key features to occupy the microfinance niche on the market.
3. SCUs sustainable development in Latvia is possible only in case of strong support at macro and mezo levels; and well-organised and planned work at micro level.

Practical and social implications – The proposed microfinance platform can become a key tool to combat poverty and social exclusion in the country.

Originality/Value – The proposed microfinance platform is developed by the author especially for Latvian conditions and is based on unique primary data received from Latvian SCUs network.

Keywords: microfinance, savings and credit union, cooperative finance, poverty, social exclusion.

Introduction
Since money was introduced into everyday life people continue to reform financial systems in order to find the best way of money transfer from savers to borrowers. Financial history is full of both positive and negative examples, including free banking system in Scotland of 18-19 centuries and strictly regulated banking system in USA and Canada in 19-20 centuries (Caprio and Vittas, 1997). A crisis historically was treated as a key driver for changes and improvements in financial systems. Global crisis 2008-2010 has proved that the world is not ready for high liberalism in financial systems and moved developed and developing worlds closer, deepening such problems as poverty, social inequality and exclusion. Today many countries face sharp necessity for radical changes both in provision of financial services and mindset of society. Necessary changes should be done in order to strengthen sustainability of local and global financial systems, where inclusive and participatory finance can play highly important role.

Microfinance essence and evolution
Microfinance step by step is entering financial sectors of the developed world. It was called the social revolution (Yunus, 2007), phenomenon (McGuire and Conroy, 2000), financial miracle (Banerjee, 2009), innovation in financial system, revolution in finance (Robinson, 2003), panacea from poverty; finance with human side (Shinn, 2009). All these epithets emphasise the ultimate role of microfinance services in improvement of life conditions of poor and low income people. Microfinance is used as a development tool in developing countries already for more than forty years, but it became globally famous only in 2006, when Muhammad Yunus together with Grameen Bank were granted the Nobel Peace Prize for great achievements in poverty reduction in Bangladesh (Yunus, 2007) (Bayulgen, 2008). United Nations have announced the year 2005 to be the year of microcredit, reflecting the ultimate role of microcredit in development of society. Conventional financial systems typically exclude the poor, but in developing countries microfinance
institutions have demonstrated the opposite approach, successfully delivering full range of commercial financial services to unbankable micro-entrepreneurs and poor families (Bayulgen, 2008).

Researches and microfinance specialists provide different definitions of microfinance, but still all of them connect microfinance with serving poor and low-income people. J.Ledgerwood’s treats microfinance as a development tool and defines it as a provision of financial services to low-income clients, including the self-employed. Financial services generally include savings and credit, but may be broadened by insurance and payment services. Social intermediation may be added to financial intermediation, covering the most needs of the clients with low income (Ledgerwood, 1999). M.S.Robinson defines microfinance as the process, through which financial services for the economically active poor are implemented in a large scale by multiple, competing, financially self-sufficient institutions (Robinson, 2003). K. Rao does not distinguish microfinance from microcredit and defines microfinance as a provision of small loans to unbankable individuals, households and economical entities (Rao, 2003). Khandakar Qudrat-I Elahi and M.Lutfor Rahman see big difference between microfinance and microcredit, defining microfinance as a development approach to provision of financial and social intermediation. Financial intermediation consists of savings, loans and insurance, but social intermediation motivates people for mutual help and policy influence (Elahi and Rahman, 2006). S.Wisniwski defines microfinance as a part of financial market that provides financial services to households and enterprises, which are not able to get these services from other formal financial institutions (Wisniwski, 2004). N.Felder-Kuzu defines microfinance as a provision of financial services in small amounts on commercial basis to microenterprises, stressing the link between households and family business (Felder-Kuzu, 2004). S.Sundaresan agrees that microfinance is a provision of financial services – savings, loans and insurance – to the people with small income, emphasising that these services should be for the reasonable price (Sundaresan ed., 2008). J. Fairbourne, S.W. Gibson and W.G. Dyer define position of microfinance in the spectrum of relief and economic development work between microcredit and microenterprise development, which is followed by development of microenterprises and microfranchising (Fairbourne et al., 2007).

Big number of microfinance definitions can be caused by constant evolution of microfinance principles, which is shown in Figure 1 (developed by the Author based on (Ledgerwood, 1999; Daley-Harris, 2009; Robinson, 2003; Yunus and Jolis, 2007).

![Figure 1. Evolution of microfinance in 1970 – 2010 (*MFIs – microfinance institutions)](image)

In 1970-ties governments believed, that poor people needed cheap loans, and together with donor institutions subsidised microloans and interest rates. In 1980-ties this model was highly criticised for being non-productive – clients did not see motivation to repay their loans. A new approach based on market
principles was needed. Microfinance started to be treated as an integrated part of existing financial systems, stressing self-sustainability of microfinance institutions. Microfinance continued its high-speed development, but still could not satisfy needs for loans of all poor people in the world. Starting from 1990-ties microfinance institutions moved into formal sector of financial market in order to attract savings and investments from capital markets (Ledgerwood, 1999) (Hulme and Arun, 2009). The latest approach in microfinance evolution treats microfinance not just as a service, but as a platform, facilitating provision of services and goods to low-income clients (Daley-Harris, 2009). Today microfinance is broadly used in politics, emphasising its highly valuable moral and social goals. At the same time its operation becomes more and more commercialised and standardised (Hannig, 1999). It became obvious, that success story of microfinance institutions in one country may not fit traditions and life conditions of other countries. T. Shabbir compares microfinance with plants, that plants from hot countries do not grow well in colder climate\(^2\). That is why in each case of launching microfinance services regional peculiarities should be taken into account. Deep analysis of existing supply of financial services, potential demand for microfinance, state economical situation and development policies can help to choose the best form of microfinance institution to operate in definite region. In this paper the Author uses the macroeconomic approach suggested by World Bank specialists, which places microfinance in the overall context of a country. Figure 2 shows the structured scheme of state contextual analysis for Latvian conditions (developed by the Author based on (Ledgerwood (1999)).

![Figure 2. Analysis of potential demand for microfinance services: State Contextual Approach](image)

**Potential supply of microfinance services in Latvia**

Definition of microfinance emphasises the formal status of microfinance institutions. They should be chartered by the government and are subject to banking regulations and supervision. The formal status allows microfinance institutions to attract savings and broaden range of their services. Semi-formal and informal sectors indicate existence of unbankable people and demand for microfinance services in the country (Ledgerwood, 1999).

Savings, loans and insurance are the key microfinance services. The data of Commission on Finance and Capital Markets (CFCM) shows that at the end of 2010 in Latvia 29 banks and branches of foreign banks, 3 life insurance companies and 9 non-life insurance companies, 34 SCUs, 16 investment management

companies, 37 investment funds, 7 pensions funds and 10 state funded pension scheme asset managers were operating (CFCM, 2010). Semi-formal sector in Latvia is represented by leasing, factoring and credit companies. These organisations are not under supervision of CFCM, there are no strictly defined requirements for their establishing. Their main operation is mostly connected with provision of different types of loans. Unfortunately there is no official data about this sector. At the end of 2010, 11 lease companies (8 of them were united by Association of Leasing Companies of Latvia (ALCL)), and 32 credit companies promoted their services at lending portals. But the total number of credit companies in the country unofficially was valued already around 2164. The big number of semi-formal lending institutions in Latvia indicates that there are still unbankable people, who cannot receive necessary services in the bank.

Banks, SCUs, lease and credit companies are oriented to lending services. Insurance companies occupy rather unshared niche and willingly provide insurance services in cooperation with banks or SCUs. Only banks and SCUs are eligible to attract savings from their clients, competing with possibilities provided by investment companies and funds. Households with small income are not well acquainted with possibilities of long-term investments or are not able to invest long-term. They give preference to short-term or medium-term savings or investments in their own micro and small enterprises. From this point of view, only banks and SCUs potentially may become leading microfinance institutions in the country, providing basic microfinance services.

Operational principles of banks and SCUs are radically different. Banks are interested in shareholders’ value and profit maximisation and are not interested to serve unbankable people. During the economic boom profit-oriented companies did their best to get maximum profit from short-term situation, being broadly involved in subprime lending. Subprime lending should not be mixed with provision of loans to low-income households. The main difference is in risk control. In the first case companies are involved in high-risk deal, in the second case – risks are mitigated via social collateral or special lending program. M.Yunus said, that poor people guarantee their loans with their lives, as they are extremely dependable on further lending opportunities and are afraid not to repay loan in time (Yunus and Jolis, 2007). With the first signs of crisis banks stopped lending, asked to repay loans before term, increased interest rates, as a result earned high critics and mistrust from public. Loans became available only for the limited number of well-situated clients. SCUs are working on totally different operating principles. SCUs are cooperative institutions, which are oriented on provision of safe financial services on reasonable price to their members, and not just to profit maximisation. Members of SCUs are owners, rulers and clients of their financial cooperatives. They define services, membership and prices themselves, offering better services and prices to members (Jerving et al. (ed.), 1994). Difference in operating principles caused also different operating trends during economic boom and crisis periods. Dynamics of operation of different types of financial and credit institutions in 2005-2010 is shown in figures No.3-5: operating statistics of banks; lease and factoring companies; and SCUs (developed by the Author based on statistical data 2005-2010 of CFCM and Latvian Association of Cooperative SCUs (LACSCU)).

Figure 3 shows that during the years 2005-2010 the number of banks and branches of foreign banks in Latvia has grown from 23 up to 29. Total assets continued to grow until 2008, starting with 10 943 MLVL in 2005 and achieving 23 243 MLVL in 2008. Then total banking assets decreased till 21 678 MLVL in 2009, but in 2010 again started to grow - 21 967 MLVL. Banking outstanding loans were growing during economic boom period from 6 960 MLVL in 2005 till 16 589 MLVL in 2008. Affected by deep financial crisis banks strongly diminished lending, and volume of outstanding loans decreased down to 14 334 MLVL in 2010. At the same time volume of attracted savings was constantly growing and achieved 10 179 MLVL in 2007, then in 2009 decreased till 9 550 MLVL and started to grow again, achieving 11 111 MLVL in 2010. Total capital and reserves did not show significant fluctuation, staying close to 1 600 MLVL. Main trends in banking sector cannot be positively evaluated. In the growing phase of economy banks were extremely active in lending, causing overheating of the economy. But when their assistance became the most needed – to support economy in recession period – it was not extremely profitable for banks anymore and they kept distance position. Situation, when savings are growing, but lending is going down, shows that there is something wrong in the economy of the country, money is collected but not used for the growing purpose, money is not working.

1 http://www.kreditiem.lv (viewed: 10 February 2011)
2 „Beidzot sāk sakārtot nebanku kredīta tirgu‖, available at: http://www.credit.lv/krediti/beidzot-sak-sakartot-nebanku-kreditu-tirgu/ (viewed: 10 February 2011)
The same situation can be viewed in leasing and factoring business. Figure 4 shows, that, based on data provided by ALCL, leasing companies stopped to finance new purchases at all and lease portfolio has diminished from 1 640,9 MLVL in 2008 till 874,7 MLVL in 2010, almost achieving the result of 2005 – 619,5 MLVL in lease portfolio.

Operation of SCUs (see Figure 5) was rather conservative but stable during the whole 6-year period – both in economic boom and crisis phases. Number of SCUs in Latvia is rather constant – 34 SCUs. At the end of 2010, SCUs network united 25,52 thousands members, 11,68 MLVL in total assets, 8,59 MLVL in outstanding loans, 9,70 MLVL in attracted savings and shares. These amounts are rather insignificant in comparison with banking sector: total assets of SCUs are equal only to 0,05% of total banking assets. But SCU members because of some reasons do not use bank services, and mentioned amounts could stay out of economic processes in the country. SCUs provide services only to the local people and their accumulated resources are called the national capital, which is linked to the definite region or organisation. SCUs with their conservative policy, social goals, not-for-profit principle and risk aversion could survive during the crisis and showed low correlation between their operation results and macroeconomic situation, causing less and smaller shocks to their members. SCUs are the only institutions among above mentioned ones, which showed stable growth both in attraction of savings and provision of loans during 2005-2010.

<table>
<thead>
<tr>
<th>Year</th>
<th>Assets, MLVL</th>
<th>Loans, MLVL</th>
<th>Savings, MLVL</th>
<th>Capital &amp; Reserves, MLVL</th>
<th>Banks and foreign branches</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>10 943</td>
<td>6 960</td>
<td>834</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>15 907</td>
<td>10 873</td>
<td>1 209</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>21 916</td>
<td>14 916</td>
<td>1 736</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>23 243</td>
<td>16 589</td>
<td>1 703</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>21 678</td>
<td>15 429</td>
<td>1 596</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>21 967</td>
<td>14 334</td>
<td>1 111</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3. Operation statistics of banks and branches of foreign banks in Latvia, 2005-2010
Figures 3-5 show that it is not enough for the economic growth, when only for-profit institutions are ruling the financial market. There is a definite need for stable formal alternative institution or network of institutions, which can provide the same financial services but based on different operating principles, social goals and values. In Latvian case SCUs can serve as a good alternative to banks and occupy microfinance niche on the financial and capital market. SCUs usually provide services to individuals in small amounts for
consumption or micro business needs. Very often it is difficult to distinguish, is it consumption or productive loan. Big SCUs provide also mortgage loans to their members. The hottest competition between banks, credit companies and SCUs is directly in lending for consumption needs.

Analysing consumer lending interest rates offered by banks, SCUs and credit companies in their web sites or lending portals, SCUs survey, the author has found out the following information:

- banks provide consumer loans from 100 LVL up to 8000 LVL for the period 3-60 months, interest rates from 16% up to 30%, service fee 1-5% from loan amount;
- SCUs provide consumer loans from 5 LVL up to 5000 LVL for the period up to 60 months, interest rates 15% - 36%, service fee 0.3% - 4% from loan amount;
- credit companies provide consumer loans from 50 up to 1000 LVL for the period 2 weeks – 24 months, interest rates 25% - 937%.

Savings opportunities again are different in Latvian banks and SCUs. At the end of 2010 – beginning of 2011, banks offered interest rates for savings and term deposits from 0.05% (savings account on demand) per year up to 4.06% (5-years deposit). Banks follow the principle – longer the period better the rate. But people with low income are mostly interested in savings of rather small amount for a short period – up to 2 years, as they may need this money for definite purposes. SCUs offer annual interest rates for savings and deposits minimum 0.25% for saving accounts on demand up to 10% for term deposits. SCUs do not have high administrative costs and can offer much better rates for attracted capital than other credit and financial institutions.

Analysis of interest rates shows that credit companies cannot be qualified as microfinance institutions, because their provided interest rates cannot be treated as reasonable ones for clients. Banks and SCUs provide rather similar savings and lending terms and conditions, but there is still an open question – how far banks are ready to work with households and microenterprises with low income, if it is not profitable for banks. One more problem – banks do not know their clients so well, as all of them are more or less random people. It causes additional costs related to the analysis of the clients. At the same time SCUs know their members very well, membership provides opportunity of social collateral and mutual cooperation. SCUs are organised not just for profit, but for serving their members. In the author’s opinion, at this moment SCUs are the best option to become the key microfinance institutions in Latvia.

**Potential demand for microfinance services in Latvia**

Potential microfinance clients are poor people, households with low income, micro and small enterprises, farmers and seasonal agriculture workers, self-employed people, labour emigrants, whose families stay in Latvia. The latest available statistics of EU 27 countries shows, that in 2009 16.3% of the EU population were assessed to be at-risk-of-poverty, but in Latvia this rate was the highest one – 25.7%. Each fourth person in Latvia was at risk of poverty. Latvia showed also the highest income inequality rate in EU - 7.3. Latvian elder people lived on 60% less income than other people in the country. 40% of Latvian inhabitants suffered from material deprivation and 22% were severely deprived. All these rates were calculated based on income after social transfers! Recovery from crisis is very slow and difficult, and it deepens social problems in the country. Eurobarometer data shows that 89% of Latvian inhabitants are sure, that poverty in Latvia is broadly represented (Eurobarometer 2009). Sharp social problems demand urgent use of relief and development tools and ensure broad niche for microfinance services in Latvia.

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The analysis of regulation and state policies in Latvia

Financial and credit sector in Latvia is strongly regulated and controlled by separate independent bodies. The roles of CFCM and Bank of Latvia are highly important, but at the same time both institutions are not able to totally control all the processes on the market. Such a passive behaviour of regulators has partly caused deep financial and economic crisis in the country and both institutions have deserved high critics from politicians and society. But overall legislative basis in financial sector of Latvia is developed in accordance with EU directives and is considered to be stable and well-developed. Banks, SCUs, insurance companies, investment companies and funds are under supervision and regulation of CFCM. All these institutions are considered to be the formal ones. Unfortunately microfinance and microfinance institution are not defined in Latvian legislative acts yet. Microfinance is mostly used in the context of EU special programs – lending of microfinance funds for microenterprises and self-employed people.

At the same time inhabitants’ wellbeing and social protection are included in Latvian state policies and could be found in all strategic documents developed by the government since Latvia regained its independence. Short historical overview of state developed strategic documents shows, that the same problems and goals are mentioned from year to year. „Evaluation of Opportunities of Economic Development of Latvia” (Ministry of Economics of RL, 1999), „Latvian Long-term Economic Strategy” (Cabinet of Ministers of the RL, 2001), „United Economic Strategy” (Project of Ministry of Economics of RL, 2004), “Latvian National Lisbon Program 2005-2008” (Ministry of Economics of RL, 2005), „Latvian Growth Model: a Human at the first Place” (Saieima, 2005), „Latvian National Development Plan 2007-2013” (Saieima, 2006), „Informative report on directions of economical recovery in the middle term” (Ministry of Economics of RL, 2009), „Latvian Sustainable Development Strategy till 2030” (Saieima, 2010) – all these documents continuously indicate necessity for development of civic society, fostering economic growth and social protection through diminishing regional and social disproportions, stimulation of business activities and development of small and medium business, growth of middle class, decrease of poverty and social exclusion, stimulation of employment and self-employment, availability of financial resources for business, development of rural areas, development of social capital and increase of quality of human life, cooperation between public, non-government and private sectors. Time is passing by, but social problems stay the same from year to year. Lack of positive results in solution of social problems may be caused by insufficient efforts or funds, wrong or inefficient tools. At this moment microfinance is not included in any of state policies or strategies as a tool to solve poverty and social exclusion. Political support is extremely needed to achieve the broad use of microfinance in the country. SCUs with their independent mutual-help approach, social goals and low-income clientele already work in the fields mentioned in state strategic documents, but still their potential is not fully recognised and evaluated by the state.

SCU essence and operation principles

SCU is a group of people who join together to pool their savings and make loans to each other at reasonable rates of interest. The group also aims to educate its members on the wise use of money so they can improve their lives. To make the process easier, the group maintains a business structure – a cooperative – which functions as an intermediary between savers and borrowers. The members of the group own and control the organisation (Jerving et al (ed.), 1994). History of SCUs usually is connected with operation of credit cooperatives in Europe in the end of 19th century – beginning of 20th century. Despite the name, credit cooperatives were active in savings attraction, they were established in rural and urban areas and helped their members to survive in difficult times, educated them in savings and borrowing culture, were linked to the local society and got broaden support from philanthropists, politicians and church. Today credit cooperatives continue their operation all around the world and demand for their services is proved by 150 years of successful operation (Caprio and Vittas, 1997). SCUs main goal is not profit maximisation, but provision of safe qualitative services to their members on reasonable price. SCUs promote education of their members and high social responsibility (Jerving et al. (ed.), 1994), (Witzeling (ed.) 1993). SCUs membership usually is defined by SCU Law and is based on territory, employment or interest unity principle (Latvian Law on SCUs).

In Latvia, SCUs serve mostly individuals within the definite membership. The Latvian Law on SCUs was developed in order to enforce access to financial resources and to foster regional development, activating participation of individuals in the economic processes of the country. To start a SCU in Latvia at least 20 members and 2000 LVL in share capital are needed (Latvian Law on SCUs). This amount is affordable and does not limit SCU establishing opportunities. SCUs accumulate members resources in savings and shares, then lend out to the members for definite purposes. The ideal way of financial operation
is when cooperative institution is self-sufficient and can operate only with internal resources of its members. It means that 80-95% of SCUs funds should be lent out to the members, and attracted savings should be 55-70% of total funds of the SCUs (LACSCU). But very often SCUs are forced to attract external funds from banks to satisfy demand for loans. Traditionally SCUs play highly important role in regional development, in case if they are supported by local self-governments, inhabitants and enterprises. Usually SCU is established by local initiative group and from the beginning gets positive attitude from local people as their own local entity. At the same time development of regional SCU can be fostered by local officials, positioning SCU as a local financial and social centre. The author shows potential position of SCU in a regional community in Figure 6, (Mavrenko, 2002). SCU can unite the three parts – inhabitants, self-governments with their special funds and programs, and local business as employers and investors. Involvement of all three parts in the development of their region can help to fulfil government plans in regional development, diminishing of regional disproportions, promotion of inclusive and participatory finance, decrease of poverty and social exclusion via affordable and safe access to financial services.

![Figure 6. SCUs relationship with local society](image)

**Operation of SCUs in Latvia**

Despite positive development dynamics of SCUs in Latvia in 2005-2010 (see Figure 5), the impact of the existing SCUs on the economy of Latvia in absolute numbers is rather insignificant. There is a huge potential in SCUs, but still big work should be done to strengthen and broaden SCUs network in the country. Fast growth is possible only in case if SCUs will be formally approved to be the key microfinance institutions in the country and will get strong political support as a tool to combat poverty and social inequality. Thirty from thirty four SCUs are members of LACSCU. There are only two types of membership represented in Latvian network of SCUs – interest unity and territory basis (see Table 1).

<table>
<thead>
<tr>
<th>Local society</th>
<th>Entrepreneurs</th>
<th>Individuals</th>
<th>Self-governments</th>
<th>Privatisation Fund</th>
<th>EU Funds, Aid Programs, Rural Development Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCUs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 1**

<table>
<thead>
<tr>
<th>No</th>
<th>SCU</th>
<th>Members</th>
<th>Assets</th>
<th>Loans</th>
<th>Shares</th>
<th>Reserves</th>
<th>Savings</th>
<th>P/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LTFJA KKS &quot;Jurnieku forums&quot; (Seamen SCU)</td>
<td>2,474</td>
<td>4,863,588</td>
<td>3,362,334</td>
<td>541,300</td>
<td>262,530</td>
<td>3,789,767</td>
<td>43,433</td>
</tr>
<tr>
<td>2</td>
<td>KKS &quot;Dzelzceļnieks KS&quot; (Railroad SCU)</td>
<td>12,394</td>
<td>4,047,432</td>
<td>3,016,794</td>
<td>631,595</td>
<td>176,134</td>
<td>2,829,562</td>
<td>81,629</td>
</tr>
<tr>
<td>3</td>
<td>Metalurgu KKS (Metallurgist SCU)</td>
<td>635</td>
<td>228,599</td>
<td>167,968</td>
<td>49,150</td>
<td>7,241</td>
<td>157,720</td>
<td>-1,561</td>
</tr>
<tr>
<td>4</td>
<td>KKS &quot;Dzese pluss&quot;</td>
<td>198</td>
<td>157,641</td>
<td>156,155</td>
<td>55,541</td>
<td>2,545</td>
<td>18,000</td>
<td>1,165</td>
</tr>
<tr>
<td>5</td>
<td>KKS &quot;LAKRS KS&quot;</td>
<td>569</td>
<td>127,127</td>
<td>95,025</td>
<td>23,465</td>
<td>5,238</td>
<td>83,726</td>
<td>-2,496</td>
</tr>
<tr>
<td>6</td>
<td>KS &quot;Skolu KS&quot; (Teachers SCU)</td>
<td>891</td>
<td>80,964</td>
<td>55,518</td>
<td>8,663</td>
<td>5,224</td>
<td>68,878</td>
<td>-603</td>
</tr>
<tr>
<td>7</td>
<td>LPNA KKS</td>
<td>1,327</td>
<td>38,658</td>
<td>6,727</td>
<td>26,735</td>
<td>2,680</td>
<td>5,366</td>
<td>11,717</td>
</tr>
<tr>
<td>8</td>
<td>LV SADA KKS</td>
<td>285</td>
<td>32,370</td>
<td>26,776</td>
<td>11,590</td>
<td>1,324</td>
<td>17,346</td>
<td>-280</td>
</tr>
</tbody>
</table>

### SCUs based on interest unity principle

<table>
<thead>
<tr>
<th>SCUs based on interest unity principle</th>
<th>Subtotal (SCUs based on interest principle):</th>
<th>% from Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>KKS &quot;Allazu saime&quot;</td>
<td>18,773</td>
</tr>
<tr>
<td>2</td>
<td>Kaukur KKS</td>
<td>74</td>
</tr>
</tbody>
</table>

### SCUs based on territory principle

<table>
<thead>
<tr>
<th>SCUs based on territory principle</th>
<th>Subtotal (SCUs based on territory principle):</th>
<th>% from Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>KKS &quot;Avots 37&quot;</td>
<td>126</td>
</tr>
<tr>
<td>2</td>
<td>Taurenes KKS</td>
<td>466</td>
</tr>
<tr>
<td>3</td>
<td>KKS &quot;Ligatnes druva&quot;</td>
<td>396</td>
</tr>
<tr>
<td>4</td>
<td>Pures KKS</td>
<td>451</td>
</tr>
<tr>
<td>5</td>
<td>KKS &quot;Skilbeni&quot;</td>
<td>198</td>
</tr>
<tr>
<td>6</td>
<td>KKS &quot;Avots 37&quot;</td>
<td>126</td>
</tr>
<tr>
<td>7</td>
<td>Taurenes KKS</td>
<td>466</td>
</tr>
<tr>
<td>8</td>
<td>Kuns KKS</td>
<td>287</td>
</tr>
<tr>
<td>9</td>
<td>Puin KKS</td>
<td>374</td>
</tr>
<tr>
<td>10</td>
<td>Veselavas KKS</td>
<td>177</td>
</tr>
<tr>
<td>11</td>
<td>Vecpiebalgas KKS</td>
<td>230</td>
</tr>
<tr>
<td>12</td>
<td>Nitaures KKS</td>
<td>198</td>
</tr>
<tr>
<td>13</td>
<td>Lievalde KKS</td>
<td>240</td>
</tr>
<tr>
<td>14</td>
<td>Straupes KKS</td>
<td>120</td>
</tr>
<tr>
<td>15</td>
<td>Rundales KKS</td>
<td>224</td>
</tr>
<tr>
<td>16</td>
<td>Vecumnieku KKS</td>
<td>313</td>
</tr>
<tr>
<td>17</td>
<td>Cesu KKS</td>
<td>181</td>
</tr>
<tr>
<td>18</td>
<td>Rujienas KKS</td>
<td>390</td>
</tr>
<tr>
<td>19</td>
<td>KS &quot;Rucavas KS&quot;</td>
<td>208</td>
</tr>
<tr>
<td>20</td>
<td>KKS &quot;Nigrande&quot;</td>
<td>73</td>
</tr>
<tr>
<td>21</td>
<td>KKS &quot;Skilbeni&quot;</td>
<td>91</td>
</tr>
<tr>
<td>22</td>
<td>Subtotal (SCUs based on territory principle):</td>
<td>6,750</td>
</tr>
<tr>
<td>23</td>
<td>% from Total</td>
<td>26</td>
</tr>
</tbody>
</table>

### Total LACSCU SCUs

| Total LACSCU SCUs | 25,523 | 11,605 | 172 | 8,550,122 | 1,656,002 | 555,513 | 7,936,630 | 157,592 |
There is an obvious disproportion in development of SCUs inside the network. Interest unity-based SCUs represent 74% of the total membership, 83% of total assets, 81% of total outstanding loans and total shares, 83% of total reserves and 88% of total savings. Territory-based SCUs represent only 26% of the total membership of the network, 17% of total assets and total reserves, 19% of total outstanding loans and total share capital, 12% of total savings. The first group of SCUs is mostly represented by trade union SCUs, including two the biggest ones in the network – Seamen and Railroad SCUs in Riga; the second group is represented mostly by rural SCUs. Big difference in size, location, membership peculiarities, growth strategies and future potential development – all these factors do not let Latvian SCUs to get really united, in the result each SCU is mostly working on its own, and role of LACSCU is rather weak and just formal. The biggest SCU by assets is Seamen SCU with 4,8 MLVL, the smallest one – KKS Skilbeni with only 6395 LVL in assets. 14 from 30 SCUs have closed the year 2010 with losses. The author has calculated that in order to be self-sufficient, to work full-time and without losses, SCU should have at least 500 000 LVL in outstanding loans. In this case SCU will be able to keep 4 full-time employees, pay market price for the rent of premises, acquire its own equipment and software, and afford marketing and employee training. As it is shown in Table 1, only two – the biggest ones SCUs – are able to fulfil this minimum requirement. Other SCUs have to cut costs. Usually they are open just 1 or 2 days a week, benefit from support of the uniting organisation or self-government, for example, use their premises, equipment, labour force at low or with no costs.

The author has developed SWOT analysis of Latvian SCU network, based on information received from LACSCU and SCU members’ survey, which is shown in Table 2.

Table 2

<table>
<thead>
<tr>
<th>SWOT Analysis of Latvian SCUs, December 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Environment</strong></td>
</tr>
<tr>
<td>- Political and financial support to microfinance all around the world</td>
</tr>
<tr>
<td>- Strong global SCUs network</td>
</tr>
<tr>
<td>- Strong lobby of SCUs on international level</td>
</tr>
<tr>
<td>- Separate law on SCUs in Latvia</td>
</tr>
<tr>
<td>- Constant search for new tools in combating social problems</td>
</tr>
<tr>
<td>- EU is promoting and financing Microfinance activities</td>
</tr>
<tr>
<td>- European Investment Fund is providing financing to Microfinance development</td>
</tr>
<tr>
<td>- State strategic development documents include necessity for solving social problems, development of social capital, development of Microenterprises</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Internal Environment</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Latvian SCU network has long history, constant growth trend since re-establishing of the network in 1995, good reputation</td>
<td>- Latvian SCUs network is not homogenous, there are 2 big SCUs and 32 small SCUs</td>
</tr>
<tr>
<td>- Latvian Association of Cooperative SCUs unites 30 SCUs from 34, represents most of the network</td>
<td>- Trade Union-based SCUs and rural SCUs are not able to put and move forward common goals, as their work volumes and development goals are extremely different</td>
</tr>
<tr>
<td>- SCUs are regulated by Commission on Financial and Capital Market</td>
<td>- There is no one strong leader in Latvian SCUs who could be followed by most number of SCUs</td>
</tr>
<tr>
<td>- Savings in SCUs are guaranteed by the state</td>
<td>- 14 SCUs from ACSCU members finished the year 2010 with losses</td>
</tr>
<tr>
<td>- WOCCU and International Development Desjardins institutional development and technical assistance projects were implemented in Latvia, providing support and training for staff, elected bodies</td>
<td>- SCU network is so different by members, that at this moment it was not possible to launch a uniting</td>
</tr>
</tbody>
</table>
Latvian SCUs have good opportunities to strengthen their positions and become involved in microfinance, as also network has enough strength to be a serious player on financial market. Still broad political support is needed to foster development of SCUs network all around the country. SCUs need to grow faster, plan higher growth and become self-sufficient as soon as possible. In the author’s opinion all mentioned threats and weaknesses can be diminished if SCUs will get serious support from government, self-governments and other uniting organisations, as also put their own efforts in pro-growth planning and marketing.

Results of SCU members’ survey

First time LACSCU evaluated income of SCU members in 2002. Results of the survey 2002 showed that monthly net income per family member was very low. 64.1% respondents indicated monthly net income less than 100 LVL per family member. 39.9% with monthly net income 50-70 LVL were already living at poverty line. 30.9% members indicated monthly net income 101-300 LVL per family member, 1% showed more than 301 LVL. 4% of respondents preferred not to indicate their income in the survey (LACSCU survey 2002). Results of the author’s survey conducted in July-December 2010 show that income level of SCU members is growing. In 2010 only 8% of respondent indicated monthly net income less that 100 LVL per family member; 64% showed 101-300 LVL, 27% - more than 301 LVL, 1% did not answer the question.

Income level of SCU members is growing, but in comparison with 2002, costs of life became higher and still these amounts are considered to be at the survival minimum level. SCUs were and are still serving people with low income and can be treated as real microfinance institutions.

The results of Survey 2010 helped the author to get and understand the profile of SCU members and main trends inside the SCU network. Families involved in SCU network are closely linked to their SCUs. 22% respondents have more than 1 SCU member in the family, at the same time 75% respondents are the only SCU members in their families, and they use SCU services for the needs of the whole family. 11% of respondents live alone, 33% live in families of two people, and 54% live in families of three and more people. 32% respondents have children, 11% - pensioners, 47% are working people, 4% need to take care about other family member. SCU first of all is associated with borrowing opportunities for 14% of respondents, with savings opportunities – for 2% of respondents, both borrowing and savings opportunities – for 17%, emergency help in hard time – for 22%, 10% of respondents treat their SCU as their own bank, 7% - as a members’ organisation, 1% is sure that SCU is a people-oriented organisation. 62% of respondents first time got information about SCU from membership defining organisations – self-governments, initiative groups and trade unions, while 26% of respondents have got to know about SCU from their friends, and only 1% of respondents have got information about SCUs from advertisement. As a reason to join SCU 64% of respondents mentioned necessity to borrow for consumption needs, 2% wanted to borrow for entrepreneurship needs, 9% of respondents wanted to start savings, 8% wanted to be socially active, 8% believed in cooperation values, 1% wanted to receive salary to account in SCU. As the main reason why they have chosen SCU, not other credit institution or financial organisation, 26% of respondents mentioned mistrust to banks, 12% liked that SCU is situated close to their place of work or living, for 25% it was important that they are personally acquainted with SCU employees and elected bodies, 18% appreciated the opportunity to be involved in SCU decision-making, 4% find interest rates in SCU more profitable, 6% liked the quality of services, 1% felt strongly related to the membership of SCU. 68% members as a priority use consumer credit opportunities, 2% - mortgage loans, 17% - savings opportunities, 6% - consultations, 2% - other services, 2% have salary account in SCU. At the same time 55% of respondents have no idea what kind of other services they would like to have at SCU. In the closest future 9% of respondents were going to borrow, 2% - both borrow and save, 11% - just save, 2% would like to use debit and credit cards, 15% will continue to use already existing services, 2% would like to get mortgage loan, 1% would like to use internet bank. Satisfaction ratio with SCU services was very high. 88% of respondents were totally satisfied with
lending services in their SCUs, 91% was satisfied with lending process, 87% were satisfied with loan amount, 90% were satisfied with loan repayment procedure, 92% liked the working style of SCU employees, 91% was satisfied with availability of information about their SCUs services, 64% of respondents were satisfied with savings opportunities in SCU (36% did not use yet this service). Traditionally SCU members need funds for improvement of their life conditions. 2% of respondents needed funds for agriculture purposes, 32% - for construction, purchasing or maintenance of dwelling, 30% - purchasing of furniture, equipment, PC or car, 1% - to pay for facilities, 9% - to pay for studies, 8% - for travelling, 3% for family events and 9% for medical services. 29% of respondents would like to borrow for the above mentioned needs, 18% - to save for these purposes, 22% - both to save and to borrow, 27% - still do not know how to finance their needs, 4% do not need anything in the closest future. As additional SCU services 27% respondents would like to get insurance services, 26% - credit and debit cards, 27% - financial consultations. Summarising the survey results, it can be said that SCU members are family people with low income, who are interested to use financial services, but mistrust banks and prefer to use services at “their own banks” – SCUs. They like to be involved in SCU decision-making, they want to be socially active, to improve their living conditions, spending funds in change, purchasing or maintenance of dwelling, buying necessary equipment, paying for travelling, studies and medical services. They feel safe and trust their SCU, highly evaluate quality of SCU services. They are not interested only to borrow; they like to save for definite purposes or use both possibilities – save and borrow. SCU members are also interested to use insurance and financial consultancies. SCU members are active clients, who know what they want and they are definite in their choice – to use SCU services. This is valuable information for SCUs. They should continue the work they do, keep the same high standards of services, but simultaneously be more active in marketing their services, developing special products and providing their members with additional training and consultations. To foster development of SCUs in Latvia, the big work should be done on three levels – macro or national, mezo or self-governments, micro or SCU level. Only joint work on all three levels will give positive and sustainable results.

Key conclusions and suggestion
The author has made the following key conclusions:
Microfinance is a development tool, which promotes provision of safe basic financial services – loans, savings and insurance – by formal financial institution at reasonable price to households or micro and small enterprises with low or unstable income.

Microfinance institution should be self-sufficient and socially-oriented at the same time.

SCU is the best option to become a microfinance institution in the country because it is a formal institution, serves definite membership with low income, accumulates the so called “national capital” and lend it inside the country; is socially oriented and promotes mutual help, participatory and inclusive financial principles.

The Latvian SCU network is stable, but not homogeneous, it hides huge potential, which is still not fully recognised and used.

The Latvian SCUs are operating on their own, but more coordinated pro-growth development is needed. The SCUs members use their services because of big trust to SCUs, deep believe in cooperative values and high satisfaction with SCU services.

If strong support will not be provided to SCUs on macro, mezo and micro level, SCUs will continue their operations in the current level and will not achieve significant changes in economy and social development of the country.

The author provides the following suggestions for the further development of SCUs as microfinance institutions in Latvia:
Microfinance as a development tool should be included in the state strategic documents and legal acts.

The Latvian SCUs should be legally recognised to be microfinance institutions and necessary corrections should be made in the state strategic documents and legal acts.

Self-governments should support SCUs operating on their territories with official positioning of SCUs as local financial and social centres.

Self-governments should continue to support their SCUs with provision of premises, equipment, and workforce until SCUs will become self-sufficient institutions.

Association of Cooperative Savings and Credit Unions should be more active in promotion of SCUs in the country, develop SCUs network’s development plan, how the network will expand in the next years.
SCUs should develop pro-growth plans and enforce their marketing activities to grow faster and become self-sufficient.

SCU network should attract EU funds for microfinance needs in the country.

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ORIGINATION OF DUE DILIGENCE AND SCOPE OF ITS APPLICATION

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Abstract
Companies that develop in international public space, with traditional financial analysis, where various financial coefficients from the balance sheet, profit and loss account and cash flow statement are analysed, remain less and less. In order to assess a financial condition and results of economic activities and its development trends, it is necessary to use different methods of analysis. By using the methods of analysis of due diligence, a wide range of sources of information is used and from the result of the analysis one can obtain both qualitative and quantitative indicators, which are the basis for creditors and potential investors in decision-making.

The aim of the article is to explore the theoretical aspects of due diligence and develop proposals for its use in business environment. The article explores the essence of due diligence and origination of its history, forms of due diligence and major components that are significant for each group of users of analysis. The author examines in detail the procedures of due diligence and reveals the differences from audit procedures. The article is prepared on the basis of foreign scientific and economic literature, publications of scientists and materials of international conferences.

Keywords: due diligence, financial analysts, auditors, lawyers.

Introduction
Currently, for an enterprise, which develops internationally, simple financial analysis consisting of financial indices only is not sufficient. To find out the real situation of enterprise, an analysis from various angles is required, not only from the financial one. Therefore the author offers to use due diligence analysis, which gives information about the enterprise from various angles and multiple sources.

Many of us have been asked to perform due diligence assignments late in the acquisition cycle. The most important objective is to identify potential risks not apparent from the offering and to verify information provided by sellers or their representatives.

Executives sponsoring potential acquisitions face an uphill battle with their board, shareholders and peers. Merger and acquisition risks include: paying too much, the inability of the companies to combine in a positive manner, inability to manage the combined company, and surprises. Due diligence assignment is to quantify risks and minimise its consequences. One major challenge is managing buyers’ expectations [1].

What is due diligence and history of its origin?
Due diligence – (literally it means assurance of adequate good faith, diligence), is a versatile investigation and inspection of the financial operation of a company and inspection of its situation in a market. This procedure allows finding legal, commercial, financial and operational risks in business.

The term appeared in the USA in 1930s of the previous century and it was related to the requirement for adjustment of relationships between investor and issuer in the securities market.

It should be noted that an issuer is a company, which has issued its securities in circulation. It means that development of a company needs funding. For implementation of the planned one, the fixed capital is increased and new shares or stocks are sold, what also means issue of securities in circulation. However, not all business plans are successful, sometimes losses occur. In such cases, investors who have invested money, i.e., bought securities issued in circulation, began to search for the perpetrator. It would not be correct to shift the blame to the merchant, because any business contains elements of success and risk. Therefore many issues, which defend investors’ rights, have emerged:

• Was the investor provided with all required information for assessment of investment risks?
Was this information correct?
Was there all the most important information provided?
Was no information hidden and was no investor deceived?

From these questions it can be established that only from questions, which are posed to parties: issuer and investor, a wide area for disputes and legal proceedings arises [2].

Therefore, to decrease and prevent potential conflict situations between a person, who gave money, and a person, who received it, in Article 11 of the USA Law on Securities of 1933 protection from investors’ money requirements against those issuers, who performed independent inspection and reflected information in issue prospect, was determined. From the time, when the respective article in the Law was approved, the identified investigation process in the USA has obtained the title “due diligence”, until then the term was not explicitly determined.

According to the decision of the Terminology Commission of the Latvian Academy of Sciences, appropriate translation for the English term due diligence into Latvian was made. The English term has received double translation in Latvian – pienācīgā uzmanība (due attention), uzticamības pārbaude (inspection of reliability). The respective terms are intended for joint practical usage in official Latvian language, for which agreement was reached between specialists of Legal Bureau of Parliament of the Republic of Latvia, European Integration Bureau, the State Chancellery, the Ministry of Justice of the Republic of Latvia, LU Faculty of Law, Translation and Terminology Centre of the Latvian Academy of Sciences [3].

From the examination of the opinions of several authors it can be concluded that due diligence is directed to versatile inspection of legality and commercial attraction of planned transaction or investment project.

Completeness of information, which arises in the way of due diligence inspection, allows investors and business partners to assess all advantages and shortages of cooperation in a more detailed manner.

Due diligence is based on interview data, which is obtained as a result of investigation of internal documents, operative and financial report data, sector specifics and legislation of appropriate field. By analysing the enterprise, it is possible to determine risk zones and to increase attractiveness in the eyes of an investor or potential customer.

In most cases the term is being used in finances and law. Abbreviated forms are DueD and DDG. Basically the method consists of totality of information analysis, taken decisions and their usefulness, when getting involved in mutual relationships of business partners [4].

Any kind of information is taken into account while collecting information, regardless of origin of sources. Investigation of obtained information is performed by various specialists separately; afterwards the summary analysis is performed.

Several arguments for the performance of due diligence analysis can be mentioned.

Firstly, information that is disclosed by the seller to establish warranties will be the only officially available material for a customer that can be taken into account when making a decision on acquisition of an enterprise.

However, to rely only on warranties and bails is not a good practice. Firstly, the offered protection can be limited or impractical for implementation. Also, in case a seller is openly dishonest, which is not completely known only by accepting warranties and bails without additional investigation, it will be difficult to disclose fraud or other illegalities. Due diligence sometimes can identify suspicious actions.

The second true value of due diligence is what is best characterized with its comfort factor. Everything in this universe is relative. Services of accountants and lawyers can be expensive, but not in comparison with costs of proceedings. In comparison, in terms of costs the application of due diligence is cheaper than legal proceedings, which are implemented in practice. Because of this reason, the majority of customers feel more comfortable by knowing about problems in advance, rather than remaining with an opportunity, although small one, to issue claims of warranty or bail or to start proceedings against a seller after completion of a project.

Due diligence is not simply a tool for discovering black holes, not only for provision of useful information in negotiations. It ensures both, but it also should be used as a tool for longer term [5].

Finally, knowledge is power. Due diligence provides an armament for negotiations with potential seller in both ways, physically and psychologically.
Where and for what purposes due diligence method is used nowadays

Generally, a due diligence procedure means performance of comprehensive analysis of a company based on financial analysts, conclusions of auditors and lawyers. In addition, each group of specialists prepares a detailed report on situation in an enterprise for a customer.

The aim of the due diligence procedure is to avoid and minimise the respective business risks (economical, juridical, tax, political, marketing risks). Among the most important risks are:

- risk of enterprise acquisition (shareholdings) on increased price;
- risk of non-execution of enterprise debtor’s liabilities;
- risk of property loss;
- risk of creating losses, incl. intangible assets such as reputation;
- risk of legal proceedings and negative consequences;
- risks of seizure and implementation of other security enforcement measures;
- risk of acknowledgement of transaction as invalid;
- risk of application of recovery mark on property, securities (shares);
- risk of prosecution of tax, administrative and criminal liability;
- risk of occurrence of corporative conflicts (occupation, negative undertaking, legal proceedings);
- risk of intellectual property loss (trademarks, industrial samples, inventions, know-how, commercial ideas, business plan, etc.);
- political risks and risk of loss of administrative resource (amendments of legislation, change of officials, on whom the success of project depends on, prosecution);
- risk of unfair competitors' activity (secret agreement with counterparties, initiated inspection of taxes, operative inspection, pricing policy, lobbying etc.);
- risk of non-obtaining respective permissions, licences, agreements, things, from which the project or transaction depends on [6].

Both parties involved in a transaction (customer and seller) are interested in objective and competent performance of these procedures.

As the most typical situations, which characterise due diligence, the following can be mentioned:

- purchase of operating business;
- restructuring of company;
- optimisation of costs;
- increase of a company’s legal protection;
- expected tax inspection;
- reducing the risks of litigation;
- loss of financial management;
- Involvement of company in new markets [6].

Due diligence allows:

- For a proprietor: to check reliability of data provided by management; to ensure on existence/ non-existence of personal responsibility in company operation; to determine value of his/her business;
- For an investor: to find weak sides, about which the seller has not been informed; to assess further risks of business operation; to obtain protection from possible negative financial events;
- For management: to assess operation of their own accountancy and financial office; to involve tax and financial planning schemes; to obtain recommendations for decrease of financial risks; to improve manageability and transparency of financial risks [7].

The due diligence procedure begins in a moment, when a customer starts to plan a purchase of investment object.

The due diligence procedure takes from few weeks to a year, depending on structure and amount of business.

Due diligence is obviously only one part of an acquisition or investment exercise. In order to understand where it fits into the overall acquisition process, for convenience, assume the process falls neatly into the four generic categories shown in Figure 1.

Stage one is about identifying an acquisition target and making an approach. This can only be done by sensibly following a proper strategic review in which the acquisition has been identified as a logical strategic tool. If the approach leads to an agreement to take things further, the deal enters the second stage.

The two parties sketch out the broad terms of the deal and the buyer will begin due diligence. Successful due diligence leads to negotiations and, in case of a positive outcome, to completion of a deal. Then the
buyer enters stage four, in many ways the most important stage of all, where the acquisition must be bedded in and made to pay its way [6].

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
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<tbody>
<tr>
<td>2. Systematic search</td>
<td>2. Due diligence</td>
<td>2. Completion</td>
<td></td>
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<tr>
<td>3. Approach</td>
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</table>

Figure 1. The acquisition process [6]

If an approach leads to mutual interest, both parties will want to begin serious negotiations. Heads of Agreement/Heads of Terms/Letter of Intent is the document which records an agreement to negotiate the purchase of a business. It is a non-binding agreement which sets out the main points on which the parties to a transaction have agreed and the basis on which they are prepared to proceed.

As far as the *due diligence* is concerned, the critical thing about signing Heads of Agreement is that there is a deal underway. Drawing up the document usually focuses minds of both parties. The buyer will now have assured the seller of its seriousness, both parties will have decided that there is sufficient agreement between them to continue and both can draw comfort that the deal will proceed, because they can indicate a document setting out the fundamental issues. Due diligence can therefore begin.

Due diligence is not simply a tool to unearth black holes. Nor is it just to provide ammunition for negotiations. It reaches both of these aims, but should also be used as a tool for the longer term.

**Due diligence components**

*Due diligence* consists of many components, but it would be good to separate the most important of them: commercial, financial and legal due diligence. These are the three main types, which will most often be addressed prior to making an acquisition, but other areas may be covered as well.

The first group consists of financial analysts (Financial Due Diligence), their task is to determine fair value of investment object, to determine range of value for customer in different variants of its future usage [7].

There can be determined value of market, investments and liquidation depending on whether there is bought functioning enterprise for complete re-profiling or for being merged with the client. Financial analysts offer the client several value standards, operating with definite range of prices, for taking decision on enterprise acquisition.

Because the majority of enterprises use audited reports, it can seem a little bit surprising that so much time, efforts, concerns and costs are intended for financial due diligence (FDD). It has two reasons. Firstly, opposite to common opinion, the accountancy is not a science. It means that even in audited reports there are a lot of uncertainties, how far the customer is involved:

- all reports are subject to several assessments. Some of them, such as assessment of stocks and depreciation policy, can create large differences in the rate of profitability. Also, the time, when incomes are acknowledged, can differ, depending on accounting policy or assessments. As a result, the tendencies of income can be distorted.
- reports can possibly contain several extraordinary incomes of costs, which distorts profitability of a business, and which should be excluded from calculations [8].

So, one of the main meanings of audited reports is confirmation of what is done by accountants.

According to historical information, financial due diligence is tended to future. In the framework of financial due diligence various methods of economic analysis are applied. As the main ones can be mentioned:

- analysis of dynamics and structure;
- analysis of creditor and debtor debts;
- structural analysis of income;
- analysis of actual costs and operational costs of structure;
- profitability analysis;
- factor analysis
  - cash flow analysis;
  - analysis of standard registry payments;
  - compliance analysis of financial reports.
A report on the complex assessment of analysed company is the result made by a given group of specialists.

Financial due diligence also includes detailed analysis on business specifics, which is obtained from interviews with main specialists of sectors. It is important to emphasise that access to due diligence is rather different from procedures of common audit. Because the aim of financial due diligence is to explain why the results are what they are, and the analyst has more to do with finding reasons which seem to have negative changes, not like the financial results.

The second group – they are auditors (Commercial due diligence) CDD, their aim is performance of financial inspection, expertise of company’s operation, as well as determination of possible risks [3].

- An enterprise gains benefit not from past achievements, but from ability to create a profit in future. Commercial due diligence CDD is intended for assessment of future achievements. CDD receives information from published sources, but, what is more important, from speaking with leading specialists in the same market as the target market is. Traditionally, the commercial due diligence has three aims:
  - Reduction of risk. A price of enterprise is the ratio of current profit, but, in case further profit can be endangered, if the enterprise is ready to decline from its aims, then customer should know it, and they should agree on lower price correspondingly.
  - Helps determine the actual value. Business planning for future ten years is complicated; it is required for prediction of cash flows. Of course, it cannot be done by using previous financial reports only.
  - Allows for better planned integration. Weak integration is the main reason why the benefits cannot be obtained. Commercial due diligence checks the target markets and trade activities. In doing so, one can establish strong and weak sides which should be taken as the part of integration process [5].

The income and cost analysis of enterprise structure should be completed at this stage, as well as assessment of internal control system, assessment of fixed assets, financial investments, debts of creditors and debtors, reserves; as well as there is performed analysis of credit contracts and liabilities, amount and reliability analysis for assets and liabilities. The final stage of work – determination of potential risks and benefits, as well as disclosure expression of company’s taxes, and liabilities in numerical form.

The result of auditors’ work is a report of financial expertise.

Commercial due diligence is an investigative process of audit markets of companies. The relation between legal and financial due diligence is generally poor. As a discipline, which can give the best available forward-looking information on business to the rights hands, it is required for appropriate due diligence process. It depends highly on primary sources to obtain the most of new facts on markets and their participants. In ideal case it should search for immediate transactions for future of competition in merged enterprise [6].

**Table1**

<table>
<thead>
<tr>
<th></th>
<th>Audit</th>
<th>Due diligence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aim</strong></td>
<td>To check and show true data</td>
<td>To determine the basic profit, to eliminate doubts on controversial points</td>
</tr>
<tr>
<td><strong>Focused on</strong></td>
<td><strong>Past</strong>, Independent inspection of data to allow providing warranties in relation to fairness and authenticity of financial information.</td>
<td><strong>Past and Future</strong>, To analyse and understand why the data is what they are, and to analyse them, To point attention to the main moments.</td>
</tr>
<tr>
<td><strong>Sector</strong></td>
<td>Determined by articles of association</td>
<td>Very often is limited only with main issues.</td>
</tr>
<tr>
<td><strong>Availability of information</strong></td>
<td>Unlimited</td>
<td>Can be limited</td>
</tr>
<tr>
<td><strong>Data</strong></td>
<td>Testing and verification of original data.</td>
<td>On the base of interview data.</td>
</tr>
</tbody>
</table>
Table 1 shows the main differences between audit and due diligence. They have differences in aims, sectors and availability of information, as well as data analysed and performable procedures.

The third group of specialists – lawyers (Legal Due Diligence). Their task is performance of juridical and legal expertise of company with the aim to determine maximal risks, related with acquisition [5].

Lawyers perform investigation of establishment documents, corporative management documents, the main powers and collegial decisions of management organs. They analyse the main transactions with shares, data on shareholders, their property and non-property rights. They also investigated state regulation in operation of company, the main contracts and property rights of company, labour relations and operation of claims-petitions.

For history of company or group establishment the main aspect is focused on such issues as:
- legal purity of transactions with shares/stocks;
- corporative management;
- kinds of business which correspond to special state regulations;
- justification of property rights to fixed assets, unfinished construction, intangible assets, financial investments;
- rights on intellectual property and other intangible assets;
- debtors’ and creditors’ debt structure;
- security liabilities;
- personnel management, including relationships with trade union bodies.
- juridical disputes and petitions of counterparties, including analysis of possible prosecution [6].

Legal due diligence includes many specialisations, as well as several obvious juridical forms, for example, property rights, acceptance to liabilities and discharge from them, and normative issues. The legal firm itself’s able to ensure some or all of them. If there are involved also other specialists, lawyers should act in close cooperation with them because it could make important contribution in final agreement. Because of the same reason, even if lawyers ensure all “legal” disciplines, they should cooperate also with other advisors and foreign lawyers where their local consultation is required in cross-border issues. When it comes to reporting, you should ensure they maintain contacts with you during whole time of operation and you should ensure they give summary where the main commercial issues are emphasised. Demand also to show conclusions. Mainly, you should ask and receive opinions.

The result of lawyers’ work is report on juridical expertise of company.

The recommendation for the use a due diligence programme is likely to involve a number of different advisers. Even when the target is a business the acquirer knows well, perhaps competing in the same industry and sharing the same distributors, external advice can add a lot of value to a transaction. How much value they add will be heavily influenced by how well due diligence is managed. Planning, coordination and communication are as important as any other input and project management should be given top priority.

Conclusions

1. Initially, the due diligence was related to the arrangement requirement of relationships between investor and issuer in security market.
2. Completeness of information, which occurs in the form of due diligence, allows investors and business partners to assess all advantages and shortages of cooperation in a more detailed way.
3. Due diligence does not have unambiguous translation in Latvian. LZA TK (Terminology Commission of the Latvian Academy of Sciences) accepted the terms – “pienācīga uzmanība” (due attention), “uzticamības pārbaude” (inspection of reliability).
4. By investigating due diligence from theoretical viewpoint, it can be concluded that it is a tool, which allows:
   - For proprietor: to check reliability of data provided by management; to ensure existence/ non-existence of personal responsibility in a company’s operation; to determine value of his/her business;
   - For investor: to find weak sides, on which the seller has not informed; to assess further risks of business operation; to obtain protection from possible negative financial events.
5. For management: to assess operation of their own accountancy and financial office; to involve tax and financial planning schemes; to obtain recommendations to decrease financial risks; to improve manageability and transparency of financial risks.

6. Due diligence it is a compliance verification of prepared information. It is a process, which is important for potential investors, company owners and management.

8. The task of financial analysts (Financial Due Diligence, FDD) is to determine a fair value of investment object, to determine the value range for customers in different variants of its future usage.

9. The task of auditors (Commercial due diligence, CDD) is performance of financial inspection, expertise of company’s operation, as well as determination of possible risks.

10. The task of lawyers (Legal Due Diligence, LDD) is performance of juridical and legal expertise of a company with the aim to determine maximal risks, related to acquisition.

11. It is useful to investigate the elements of Due diligence and opportunities of their application to the analysis of economic activity of a company more precisely.

References
BANKS, KNOWLEDGE AND COMPLIANCE: CHALLENGES FOR LATVIAN EDUCATIONAL SYSTEM

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Abstract  
Compliance in general terms is the adherence to existing rules and regulations laid down by those in authority. In the new regulatory environment, knowledge of compliance is becoming increasingly important across all areas of business. But according to EU Commission, present sanctioning regimes are often weak and quite heterogeneous. In addition, research studies and review of Latvia’s laws that regulate banking industry confirm very low level of sanctions in Latvia. These above-mentioned findings should urge Latvia’s banking sector to pay greater attention to the issues of compliance risk management. To ensure compliance knowledge, an appropriate specialised department should be organised in commercial banks and staff of such department should have respective knowledge.

Keywords: compliance, banks, knowledge, educational system, Latvia.

Introduction  
Over the last five years compliance function has changed and its role has increased significantly. Until 2003 the interpretation of compliance function was different, then Basel Committee introduced several documents to ensure compliance function inclusion into business processes. Latvia faced with compliance function in 2007, when banking regulator (The Financial and Capital Market Commission, Republic of Latvia) published banks’ internal control rules where Basel Committee’s recommendations and definitions of compliance were used. Issues of compliance in commercial banks are also on the agenda of academic research: Verhage (2009), Ludwick (2006), Carreta et al. (2010), Birindelli (2008), Biegelman (2008) have examined different aspects of compliance. In Latvia there is still not enough academic research done on compliance problems. Besides it is noticed that practical work in commercial banks of Latvia is not very much concerned about the issues of compliance; not enough attention is paid to these issues in educational establishments preparing bank specialists.

The aim of the paper is to analyse if compliance knowledge needed for banking sector could be ensured by higher education in Latvia.

The research tasks:
- systemise research findings around compliance in commercial banks;
- evaluate practical importance of compliance knowledge;
- evaluate level of compliance knowledge provided by Latvia’s higher education establishments and the accredited study programs in law and finance.

The research methods involve analysis of the research results of studies on compliance issues, analysis of EU policy documents and research of Latvia’s accredited study programmes in law and finance using content analysis.

Compliance knowledge and theoretical background  
Compliance is a core to operation and well-being of the financial services sector and the consumer. Compliance includes concepts of obedience, observance, deference, governable, amenable, passive, non-resistance and submission. Aspects of duty that include doing what ought to be done, moral obligation,
accountability, propriety, fitness, to be on one’s good behaviour, answerable, to act morally and ethically are closely linked to the issue. A difficulty of defining compliance with any real precision is noted by Parker [7].

Compliance is defined as a state of being in accordance with established legislation, guidelines, standards or specifications [2]. Regulators for financial services have framed compliance within a number of terms and concepts. The key regulatory concepts that comprise compliance are defined by Mills (2008) as:

- compliance risk;
- reputational risk;
- regulatory sanctions;
- compliance laws, rules and standards;
- compliance function;
- compliance universe;
- compliance department;
- compliance officer;
- compliance culture;
- cost of compliance [12].

In a globalised financial services industry, the regulations driving compliance include those regulations that are imposed at the international level and at the EU level. Basel Committee on Banking Supervision is the leading international institution setting up high-level compliance principles on bank’s management of compliance risk [5]. In 2005 Basel Committee provided definition of compliance risk, which is defined as the risk of legal or regulatory sanctions, material financial loss, or loss to reputation a bank may suffer as a result of its failure to comply with laws, regulations, rules, related self-regulatory organisation standards, and codes of conduct applicable to its banking activities (together, “compliance laws, rules and standards”) [16].

In 2008 Basel Committee organised a survey “Implementation of the compliance principles”. Eight Committee member countries and 16 countries that are not members of the Committee participated in the survey. Respondents from 21 jurisdictions underlined two major issues they had to face when implementing compliance framework. One of these issues, which relates to small and medium-size institutions in particular, was how banks should organise their compliance function. This includes, for instance, the determination of what are appropriate resources for compliance function in relation to the size, complexity and nature of the business; the relationship between internal audit and compliance; the independence of the compliance function. Another issue was the scope of compliance function [9].

Basel Committee urged also other countries to assess implementation of compliance principles. Latvia implemented Basel Committee principles and introduced the definition of compliance risk in May, 2007 [18]. Birindelli (2008) confirmed hypothesis about greater development of compliance risk management in foreign banks as in domestic banks [3]. Sathye (2008) found empirical evidence suggesting that owing to scale economies in regulatory compliance, the burden has fallen more heavily on smaller financial institutions [14].

In October 2010 Basel Committee issued Principles for enhancing corporate governance. The bank should maintain sound control functions, including an effective compliance function that, among other things, routinely monitor compliance with laws, corporate governance rules, regulations, codes and policies to which the bank is subject and ensure that deviations are reported to an appropriate level of management and, in case of material deviations, to the board. Committee noted that in some cases, banks’ compliance functions have been designed to address only anti-money laundering issues, which is inconsistent with Basel Committee guidance. The compliance function should have a broader scope and address the areas indicated in this document and in the Basel Committee guidance [16].

Compliance laws, rules and standards generally cover matters such as observing proper standards of market conduct, managing conflicts of interest, treating customers fairly, and ensuring the suitability of customer advice. Compliance laws, rules and standards have various sources, including primary legislation, rules and standards issued by legislators and supervisors, market conventions, codes of practice promoted by industry associations, and internal codes of conduct applicable to the staff members of the bank. For the reasons mentioned above, these are likely to go beyond what is legally binding and embrace broader standards of integrity and ethical conduct. In a context of EU some particularly important FSAP (Financial Sector Assessment Program) measures (the Selected Directives) that are making compliance landscape:

- the Prospectus Directive;
- the Financial Conglomerates Directive;
- the Capital Requirements Directives (the CRDs);
• the Transparency Directive; the Markets in Financial Instruments Directive (MiFID);
• the Third Anti-Money Laundering Directive (3AMLD) [15].

It is important to review EU regulation for financial sector alongside with the abovementioned background. FSAP was endorsed at Lisbon European Council of 2000, and has laid the legislative foundations for the EU financial services industry: banking, insurance, securities and asset management. It detailed 42 measures of four types: directives, regulations, communications and recommendations. In 2001 and 2002 FSAP was added with Lamfalussy Process covering securities market, banking and insurance. The Lamfalussy Process involves a four – level approach to the implementation of EU financial services legislation:
• Level 1 – The European Commission and the European Council agree on basic framework of the legislation being considered.
• Level 2 – The European Commission specifies the technical details of the framework agreed at Level 1.
• Level 3 – Each member state implements the measures taken at Level 1 and 2. Guidelines and best practice standards are issued in order to bring about uniform implementation.
• Level 4 – this will involve the European Commission checking member states’ compliance with the FSAP measures, with the threat of enforcement action for any that are “under-performing” [12].

At present, sanctioning regimes are often weak and quite heterogeneous. Legal framework covering sanctions provided in the national legislation for the violations of EU financial services rules - including: type (administrative and criminal, pecuniary and non-pecuniary) and level of sanctions, addressees of sanctions, factors to be taken into account in the application of sanctions - and actual enforcement of sanctions.

In the light of this review, Commission will make proposals on how Member State sanctions should be strengthened and adequately enforced.

Based on research studies, on the level of fines and its relation to the level of enforcement, the EU commission made an impact assessment that defines the problem and explains the need for and the objectives of EU level action in the field of sanctioning regimes. It also provides an analysis of rationale, the alternative and the impact of the Commission proposals on how sanctioning regimes may be approximated at the EU level, which are presented in the Communication on sanctions [4].

The specific problems can result in wider problems, in a lack of compliance with EU financial services rules, such as prudential rules, conduct of business obligations, transparency obligations, etc. For example, when the maximum amount of the pecuniary sanctions is very low, even for the most serious infringements, there is a high risk that sanctions will not have a sufficiently dissuasive effect, as the perceived reward from such behaviour will far outweigh the real risk.

Those divergences and weaknesses of sanctioning regimes can also have a negative impact on the trust between national supervisors and, hence, on cross-border financial supervision.

Levels of administrative pecuniary sanctions (fines) vary widely across Member States and seem insufficient, or too low, in some Member States, including the same type of infringement. For instance, regarding the level of administrative pecuniary sanctions, the maximum levels provided for in the national legislations diverge very widely; in the banking sector, the maximum amount of fines provided for in case of violation is unlimited or variable in 5 Member States, more than 1 million EUR in 9 Member States, less than 150 000 EUR in 7 Member States [16].

Figure Nr. 1, compiled from data of the Member States, gives an overview of the amount of administrative financial sanctions imposed in the banking sector (compared with the range of sanctions that is the minimum and maximum levels provided for in the legislation). The figure demonstrates that the majority of Member States imposed little or no sanctions during that period. It also shows that in most cases, where a wide range of sanctions are allowed in the statute book, including very high sanctions, that range of sanctions is not effectively imposed. Only in three Member States significant amount of sanctions can be observed, which totalled over 1 million EUR, imposed in the banking sector during that period.

Recent observations [2; 4; 6; 10; 18] suggest that in the new regulatory environment knowledge of compliance was becoming increasingly important across all areas of business. Bank regulation models and supervisory approaches have changed significantly. The new role of the supervisory bodies requires significant consistency between the knowledge bases and supervised entities [4].

The compliance departments should not ring-fence knowledge and operate more as internal consultants [11]. Holland (2010) noted that the lack of basic knowledge of banking risks and value drivers by the board
and senior managers was implicated in the banking crises. He concluded that by ensuring greater bank learning, knowledge creation, and knowledge use, governments and regulators could help to reduce individual bank risk and the likelihood of future crises. At the same time, he admitted that, given the history of bank learning, incentives to learn and implement knowledge effectively are only to arise at the top of banks with clear regulation and tough sanctions [8].

Figure 1. Range of (financial) administrative sanctions against legal persons, and sanctions applied from 2005 to 2007 (in EUR)


In Latvia, like in Belgium, certification of compliance profession is still under discussion [18]. Birindelli (2008) suggested that highly skilled resources, competences and experiences are the essentials to discharge compliance liabilities effectively [3].

Edwards (2006) has established a compliance competence partnership model where the regulator and regulated need to work together in a proactive partnership in order to achieve compliance competent organisation [7]. The appropriate specialised department is the main element of Compliance Risk Management [13]. Obviously, an effective compliance department has to feature quality and quantity of HR and material structure (including IT support) corresponding to the size and complexity of the bank, whereas “qualitaty” refers to a personality profile of an ideal compliance officer (and a manager of department, in particular) with extensive knowledge.

Aligned with this background, further research and discussion would be needed regarding education, professional examination and certification for the compliance specialists in Latvia. Interviews with experts from commercial banks and Latvian Commercial Banking Association have confirmed the need for that. In order to prepare more detailed training program on compliance issues in commercial banks, the authors of this article and management of the Latvian Commercial Banking Association have decided to conduct a survey to evaluate the real situation and needs for training on compliance issues. The survey topics for compliance issues investigations in commercial banks in Latvia have been negotiated with Latvian Commercial Banking Association – survey is at the preparation stage. First drafts of questionnaire are accepted by Latvian Commercial Banking Association. In this paper, education on compliance issues is observed and evaluated.

Compliance issues in accredited higher education study programmes in Latvia

The aim of empirical research was to estimate if compliance knowledge needed for banking sector could be ensured by the higher education in Latvia. The research was performed in February 2011: 33 accredited finance and law study programmes were studied (by degree – Bachelor Studies, Professional Bachelor Studies, Master Studies, Professional Master Studies, Doctoral Studies, 1st Level Higher Professional Education Studies, and Professional Studies). The information source was Higher Education Quality Evaluation Centre of the Republic of Latvia, where information on all accredited study programs: self-
evaluation reports, expert evaluations and decision on accreditation are published (available on http://www.aiknc.lv/). The research was made in all 33 accredited finance and law programmes. The key words were compliance, money laundering, consumer protection. The results of the respective investigation are included in Table 1.

The Inclusion of Compliance concept in Accredited Study Programmes in Latvia (as of February 2011)

<table>
<thead>
<tr>
<th>University</th>
<th>Study programme</th>
<th>Accredited</th>
<th>Accreditation period ends</th>
<th>Study course</th>
<th>Keyword</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Latvia</td>
<td>Law science 43380 (bachelor studies, 180 ECTS)</td>
<td>30.06.2010</td>
<td>31.12.2016</td>
<td>Rights of consumer protection (3 ECTS)</td>
<td>Consumer protection</td>
</tr>
<tr>
<td>University of Latvia</td>
<td>Finance management 42343 (professional bachelor studies, 240 ECTS)</td>
<td>16.06.2010</td>
<td>31.12.2016</td>
<td>Economic rights (6 ECTS)</td>
<td>Consumer protection</td>
</tr>
<tr>
<td>Riga Graduate School of Law</td>
<td>Law and finance 45380 (master studies, 72 ECTS)</td>
<td>10.12.2008</td>
<td>31.12.2014</td>
<td>Investment Firms &amp; Regulatory Compliance (3 ECTS)</td>
<td>Compliance</td>
</tr>
<tr>
<td>BA School of Business and Finance</td>
<td>Finance 4634300 (professional master studies, 240 ECTS)</td>
<td>08.06.2005</td>
<td>31.12.2011</td>
<td>Tax economics (1.5 ECTS)</td>
<td>Compliance</td>
</tr>
</tbody>
</table>


The data in Table 1 indicates there are only 4 accredited programmes in Latvia’s higher education establishments where the compliance concept is mentioned: two study programs of University of Latvia – Law Studies (bachelor) and Finance Management programmes (professional bachelor), in Riga Graduate School of Law – Law and Finance programme (master) and in BA - School of Business and Finance – Finance programme (professional master). Interviews of representatives from the commercial banks in Latvia as well as Latvian Commercial Banking Association have emphasised that specialists familiar with compliance issues are in shortage in Latvia, therefore it would be necessary to strengthen existing accredited study programmes with compliance topics as well as organise training on compliance issues for specialists in commercial banks. Since there are several higher education establishments in Latvia providing education in finances and law, we would recommend BA School of Business and Finance to develop training courses together with Latvian Commercial Banking Association and offer them to specialists from commercial banks in Latvia. First steps in this direction are already negotiated and suggested.

Out of 33 accredited study programmes including around 1085 study courses, only in 4 study programmes (4 courses) compliance or consumer protection, which corresponds to 13.5 ECTS or 9 credit points, was mentioned. It indicates that in higher education establishments not enough attention is paid to compliance issues and some steps to improve the situation have to be taken. It means that professional organisations related to commercial bank operations have to require higher education study programs to include compliance issues – the professional standards have to be updated. It is recommended to discuss theoretical findings as well as practical experience of commercial banks in compliance on a regular basis, for example, to host international conferences.

Conclusions and suggestions
1. In the new regulatory environment knowledge of compliance is becoming increasingly important across all areas of business.
2. The new regulatory environment will require original ideas, new methods and approaches to the knowledge concerning the compliance risk management.
3. Latvia’s banking sector has to pay greater attention to the issues of compliance risk management.
4. Appropriate specialised department should be integrated into commercial banks as a main element for Compliance Risk Management.
5. A survey of Latvian Commercial Banking Association (LCBA) members should be conducted with the goal to understand how compliance function is set up and how many banks have an independent compliance department.

6. The staff of such department should have an appropriate education and knowledge. The abovementioned survey could also provide information regarding a bank’s top compliance manager.

7. There are no accredited study programmes in Latvia that ensure compliance knowledge on internationally required level.

8. As the compliance role in financial sector is increasing, the employers (banks, insurance companies and asset management companies) and their associations could urge to include compliance knowledge and skills development of study programmes related to the financial services, as well as to evaluate the possibility to organise special study courses on compliance issues.

9. Compliance Competence Centre could be developed in a partnership between LCBA and BA School of Business and Finance, to encourage discussions about compliance knowledge.

10. At least once a year discussions about compliance knowledge in Latvia and Baltic States, gathering experts from Nordic Countries and other countries present in the Latvian banking sector, must be organised. This would promote coordination in using common terms at least in Baltic States.

References

EVALUATION OF RISK DURING THE RESTRUCTURING PROGRAM

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Abstract
Motives of restructuring vary significantly; still the target is one – an increase of company’s market value and raise of effectiveness as a result of implementing the company's restructuring program. Thereby these processes are crucial for stimulating entrepreneurship. During restructuring of the company, negative results are also possible. Several significant risks are known being able to impact the implementation of the restructuring program negatively. Apparently, the analysis of failure causes and offering techniques to decrease existing business risks are necessary.

Keywords: business restructuring, restructuring results, risk, risk premium, restructuring failures.

Introduction
Due to the impact of inconsistent economical environment and processes of globalisation, the life cycle of companies has shrunken and business has become more dynamic, which has encouraged processes of restructuring companies. Motives of restructuring vary significantly; still the target is one – an increase of a company’s market value and raise of efficiency as a result of implementing the company's restructuring program. Thereby these processes are crucial both for stimulating entrepreneurship and development of the national economy in general.

Reorganisation is considered as the main stage of restructuring company to implement further activities of attracting investments and establishing optimal owner structure. However it is important to remember that positive results of restructuring company can be achieved given the following conditions: production and investment programs are developed; grounds for financial and economical determination are established in order to create new structures; potential investors are found; legal rights of movable property and real estate are executed; chosen alternatives of reorganisation are supported by owners of a company.

The objective of the paper is to analyse risks related to restructuring and offer methods to manage them.

Generally accepted quantitative and qualitative methods of research in management science were used, including induction and deduction, analysis and synthesis, logically constructive and statistical methods, economic mathematical simulation, description and display methods of numeral information.

Classification of risks
During restructuring of an enterprise, negative results are also possible. Several significant risks are known being able to impact the implementation of the restructuring program negatively.

Risk number one is related to incorrect choice of the restructuring technique. As mentioned above, the choice of the restructuring technique is determined by a strategy, targets and condition of the enterprise itself.

If a decision about performing operative restructuring is made, application of several techniques is possible. Firstly, it may be restructuring of assets, like rental, conservation, liquidation, writing off assets, selling assets. Secondly, restructuring of accounts payable, like invalidating debts, lengthening debts, dividing debts with a following refund, refunding debts by minimising costs, redemption of creditors’ payment rights with a following prosecution, etc. Thirdly, restructuring of accounts payable which provides for gaining maximal economic effect, invalidating the debt and forms of dismissing or cutting personnel.

Risk number two is premature evaluation of restructuring results. In practice it is hard to determine, when the actual results of structural changes will appear. Temporary negative effects of the restructuring are often considered as the final result. In this case all the actions may be interrupted without achieving the strategic targets. The risk can be minimised by establishing a competent restructuring programme containing a detailed description of temporary results and target indicators, as well as by determining the long-term targets.

Risk number three is insufficient qualification of the enterprise managers. In order to reduce the risk, two techniques may be applied: firstly, dismissal of the company’s managerial staff and formation of a new team or, secondly, organising different seminars and lectures for the managers, in order to explain the targets.
and main directions of the restructuring. To determine and skilfully handle the possible risk, professional specialists are involved.

**Risk number four** is incorrect evaluation of the restructuring resources necessary. Usually in enterprises the restructuring complexity level is evaluated inadequately, thus the implementation time limit is restricted, the number of the specialists involved is small and the funding is insufficient.

**Risk number five** is related to insufficient motivation of the participants involved in the restructuring process. It is not only different levels of interest in structural changes of the employees, but also a conflict of interests between enterprise managers and owners that can influence their motivation negatively during the restructuring process. In order to eliminate the risk, the restructuring must be initiated “from the top down” and not vice versa.

**Risk number six** is emergence of negative social consequences during the implementation of restructuring, which is considered a completely usual practice in countries of market economy. It manifests as a reduced personnel and a mass dismissal in the enterprises being liquidated, as well as shutting down the social enterprises.

Reducing personnel and cutting off social assets in enterprises was common in Latvia during the middle nineties of the last century.

**Risk number seven** is low quality of the restructuring project’s legal ensuring. During restructuring process it is often necessary to make legal changes. In Latvia the most common legal changes are establishing one or more subsidiary companies on the basis of the existing company, establishing new enterprise together with owners of a bankrupting company, bankruptcy of an enterprise, restructuring by dividing the enterprise or separation.

By studying the process of forming cash flow during the enactment of restructuring program, it becomes clear that the value of money depends on the timing, respectively, it is impossible to link cash flows applying to different time periods of the program enactment. In author’s opinion, discounting (determining the present value of the future money) should be used in order to adjust the cash flow amount (Van Horne and Vachowicz, 2008).

The interest rate is called the discount rate when calculating present value. It can be determined in two ways:

1. The discount rate is the rate of return or the profitability acquired from alternative investments – it is the value of an alternative exploitation of the company’s capital.
2. The discount rate is the profitability rate expected by the buyers of securities – it is the value of the alternative exploitation of an investor’s capital.

The discount rate used to determine the present value of money in the obstacles of economic reformation is composed of three parts:

1. Cost for refusing to use the money alternatively.
2. Inflation premium.
3. Cost for risk.

Using these indicators is also typical for businesses in Latvia.

When scheduling the cash flow during restructuring, the discount rate is understood as the expected profitability rate of the capital invested in objects comparable by the risk level or as the expected profitability rate of the existing alternative investments comparable by the risk level during the evaluation. Discount rate is used to determine the amount of money, which the investor would have paid today for the rights to receive the expected future income.

The basis of cash flow calculation is also the basis of discount rate calculation. The discount rate equals to the rate of return on invested capital demanded by the owners is applied to the equity’s cash flow. In the discounting process WACC (Weighted Average Cost of Capital) is typically used as a discount rate for total cash flow, where WACC is a weighted average cost of equity price and the price of borrowed capital.

The discount rate is a ratio of capital investment efficiency when investing capital in the company, making decisions about purchasing the future income today and considering the acquisition risk. In order to make the right decision about investing capital in the company with analogical cash flows, the discount rate anticipates the risks related to capital investment in this kind of entrepreneurship. The discount rate assumed by the evaluator has to comply with the type of cash flow. Total cash flow complies with discount rate calculated by WACC method.

Equity’s cash flow complies with the cumulative discount rate calculation or calculation by CAPM (Capital Asset Pricing Model). Discount rate including inflation in case of an actual use of the cash flow
must be adjusted by the inflation rate according to the Fischer model, expressed by a following equation (Fuller Russell and Chi-Cheng Hsia, 1984):

\[ r = \frac{R - i}{1 + i} \quad (1), \]

where

- \( r \) – actual discount rate, non-including inflation,
- \( R \) – nominal discount rate,
- \( i \) – the level of inflation.

If the inflation rate does not exceed 10%, a simplified formula of the Fischer model has to be applied (Fuller Russell and Chi-Cheng Hsia, 1984):

\[ r = R - i \quad (2) \]

When applying the cumulative discount rate calculation, evaluation of factors able to cause failure of receiving the planned future income is scheduled. Non-risk profitability rate summed with profitability rate on total investment risk of the enterprise is assumed as the basis.

Cumulative method most completely includes all the investment risks related to economics’ and industry’s factors of general characteristics and the specifics of the enterprise being evaluated.

Determining discount rate by the cumulative method is based on the expert evaluation of the risks related to investing in the business being evaluated. The discount rate is calculated by summing up all the defined risk values and then adding the risk-free rate of return.

**Factors determining the amount of risk premium**

<table>
<thead>
<tr>
<th>Risks</th>
<th>Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager and quality of management</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>Level of enterprise</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>Financial structure of enterprise</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>Diversification of customers</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>Diversification of clients</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>Return on sales and forecasts</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>Risk of industry</td>
<td>0 – 5%</td>
</tr>
</tbody>
</table>

In order to guarantee the reliability of calculations, discount rate can be calculated by another method – the CAPM. This method is based on assumption that the investor aims at gaining additional revenue in comparison to the revenue guaranteed from the risk-free investments. Gaining the additional revenue is related to a high risk level. CAPM allows determining the expected additional return on assets and schedules determining discount rate by the following pattern (Sharpe, 1964):

\[ K_E = R_F + (R_M - R_F) \times \beta_E \quad (3), \]

where

- \( K_E \) – rate of return on equity
- \( \beta_E \) – beta coefficient
- \( R_F \) – risk-free rate
- \( R_M \) – risk premium of industry.

CAPM is widely used worldwide and it is considered to be one of the most equitable methods, since it is based on the informational data of the real market. In order to apply this method in Latvia, necessary corrections have to be performed.

In the developed countries with balanced market the most reliable liability guarantor is the government. Interest rate of the government securities is usually determined as the risk-free rate.

When calculating premium and beta, usually data obtained by analysing investment market of corporations with stocks quoted in stock exchange are used, and only afterwards the premium of small enterprises is adjusted.

The specific business activity related risk of the particular enterprise being evaluated is added to the premium as a risk typical only to the particular enterprise.

Considering quotation of additional changes, calculation of discount rate by CAPM can be expressed as the following pattern:

\[ K_E = R_F + (R_M - R_F) \times \beta_E + S1 + S2 + S3 \quad (4), \]

where

- \( K_E \) – rate of return on equity,
- \( \beta_E \) – beta coefficient,
\( R_F \) – risk-free rate,
\( R_M \) – risk premium of industry,
\( S_1 \) – risk premium of small enterprise,
\( S_2 \) – risk premium of the particular enterprise,
\( S_3 \) – risk premium of country.

Beta coefficient is assumed to be the limit of the systematic risk, indicating the sensibility of securities concerning the future market fluctuations. Average beta coefficient draws closer to 1 for all enterprises. The coefficient is greater than 1 for securities with value greater than the average fluctuation, and less than 1 for securities with smaller fluctuation value. Securities with the beta coefficient greater than 1 possess greater risk level, while securities with the beta coefficient smaller than 1 possess risk level smaller than average. If the beta coefficient equals 0, the investment risk of the securities also is close to 0, but the profitability of securities is relieved form the risk.

Due to the increasing number and range of restructuring operations, as well as profitable opportunities during the last decade, a concept of obvious advantages of this kind of enterprise development may appear. However there are many studies proving that this assumption is false. The majority of enterprise restructuring techniques do not help to achieve the targets desired. The results of studies performed by independent experts are displayed in Table 2.

Table 2

<table>
<thead>
<tr>
<th>Source</th>
<th>Date of publication</th>
<th>Country</th>
<th>Research limitation</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Successes</td>
<td>Neutral</td>
</tr>
<tr>
<td>Measured by the amount of deals</td>
<td></td>
<td></td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>Jansen/Koemer</td>
<td>2000</td>
<td>Germany</td>
<td>103 internal and external mergers 1994 – 1999</td>
<td></td>
</tr>
<tr>
<td>Measured by achievement of goal</td>
<td></td>
<td></td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>Booz-Allen Hamilton</td>
<td>1998</td>
<td>World</td>
<td>150 Companies</td>
<td></td>
</tr>
<tr>
<td>Measured by increasing company’s market value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jansen/Koemer</td>
<td>2000</td>
<td>Germany</td>
<td>103 internal and external mergers 1994 – 1999</td>
<td>24%</td>
</tr>
<tr>
<td>McKinsey</td>
<td>2000</td>
<td>World</td>
<td>507 mergers/acquisitions</td>
<td>50%</td>
</tr>
<tr>
<td>KPMG</td>
<td>2000</td>
<td>World</td>
<td>107 - 700 international mergers/acquisitions 1996 – 1998</td>
<td>16% 30% 54%</td>
</tr>
<tr>
<td>A.T. Kearney</td>
<td>1999</td>
<td>America, Europe, Asia</td>
<td>115 mergers 1993 – 1996</td>
<td>58%</td>
</tr>
</tbody>
</table>

Independent experts have stated that 76% of restructuring operations are unsuccessful (PricewaterhouseCoopers, 2008). Of course, separate studies are hard to compare, since interpretation of methods and scope of gathering statistical data necessary, techniques of analysis and understanding of the term successful business differs. The studies performed enable to conclude that restructuring is related to a high level of risk. Furthermore, the number of unsuccessful businesses does not decrease over the time, which may be surprising, since enterprises having experienced failure should be more careful in future and specialists and consultants participating in the businesses should become more experienced by taking into consideration mistakes made in past in order to succeed with upcoming projects. Unfortunately, statistics does not approve this assumption. One of explanations of this phenomenon can be continuous changes of external conditions determining that the experience obtained cannot be used in relation with changes of general conditions. The second explanation – the experience obtained is not systematised and recorded.
Unfortunately, the great number of failures does not decrease the amount of restructuring businesses performed, since restructuring possesses obvious potential advantages compared to traditional techniques of expanding business. Apparently, the analysis of causes of failure and offering techniques to decrease similar business risks is necessary.

Analysis of the restructuring failure causes

The following reasons may be identified within the task mentioned above:

1. Increase in labour turnover. One of the most significant issues when merging or incorporating enterprises by force is an increase of staff fluctuation, which is particularly significant in the forced merger cases, since the restructuring process demands a serious personnel cutting in order to centralise and eliminate the overlapping functions. However, usually the desirable fluctuation differs from the real one. Most of personnel begin searching for a new job, since they are not sure about their existing position. Another reason for searching a new job is moral causes or unwillingness to work for “strangers”, which is particularly attributed to managerial staff.

   It should also be admitted that during this kind of fluctuations, the majority of highly qualified staff and high-level managers leave the enterprise, and there are no difficulties for them to find a better job opportunity. Together with them, the enterprise loses not only its “know how”, but also a part of clientele, which has been in friendly long-term relationships with those, who left.

   The enterprise’s costs are sharply increased by the fluctuation due to increasing sum of total allowance for quitting, as well as increasing costs of advertising for new, qualified staff and its training. The lack of qualified personnel negatively impacts the business, the image of the company deteriorates, customers leave and conception of unsuccessful restructuring arises.

2. Absence of strategy. After overcoming all the difficulties (looking for adequate applicants, managing negotiations, going through formalities necessary for signing the agreement) it often turns out that managers have no further ideas and resources to implement further integration. This is typical for enterprises in subordination to forced mergers for the purpose of diversification. Restructuring without strategic consideration often results in selling the purchased assets after unsuccessful efforts of trying to adapt to new conditions. Besides, outflow of the resources necessary for traditional business may cause a decrease in overall profitability indicators and liquidation of the business itself. According to the survey conducted by independent experts, one third part of enterprises perform restructuring without detailed analysis of strategic future advantages. Also advantages of quick decision making are supplemented with drawbacks related to significant waste of resources. For example, Deutsche Telekom purchased part of Barak company, even though Israel was not considered as a prior market. Consequently the holding company suffered significant amount of losses due to the unconsidered decision, and it is still unable to dispose of the unnecessary purchase.

3. Insufficient evaluation of costs. Insufficient evaluation of costs of integration, new image development and restructuring of marketing and sales departments is a very common mistake, which, according to different calculations, can add up to one third of the total sum of the business.

   Integration costs exceed the planned costs three times; in addition, the time limits usually are not complied with. During the cost evaluation process previous experience in mergers (benchmarking) is ignored, no actions for unexpected circumstances are planned, and all the actions are performed based on unrealistic conceptions.

   A large amount of components are not included within the total cost evaluation: renewal of personnel during the fluctuation, costs of corporate culture uniting actions, costs of organising “know how” exchange and establishing new management techniques.

4. Intentional biased evaluation. Employees developing a business plan are often the persons concerned, therefore using unrealistic and too optimistic parameters while performing the job. The desire of first level management to increase salary by increasing total value of the business and to obtain greater power is possible as well. The second reason may lie in efforts to gain business restructuring experience.

5. Lack of the necessary control. Another significant problem is the lack of systemic indicators necessary to evaluate the restructuring process’ success and the level of achieving targets. In order to evaluate restructuring results, aggregate financial results of a merged enterprise are usually used, which is not sufficient to determine the “bottlenecks” and perform necessary adjustments on time.

   This problem is linked with the fact that no particular restructuring plan is established, which includes integration plan and schedules additional processes, executives, targets chosen, qualification and continuous control of gaining the results. In practice all the problems are usually dealt with, when they arise.
Furthermore, an executive is chosen (often without the qualification necessary), who fights the consequences instead of finding the causes, since he/she does not control the general situation. Thus significant losses of time and money arise, if strategic control of the whole restructuring process is not established.

6. Slow decision making and uncertainty of competency limits. Restructuring process is often moved from one department to another due to uncertain limits of competency. There are a significant number of hierarchy levels of operational staff and decision making committees holding back the process and impacting negatively the general atmosphere. Information and suggestions for board of management are presented once a month or even more infrequently, and that holds back the work, since the committee deals not only with strategic and tactical, but also operational issues. Slow decision making during such a dynamic process as restructuring not only delays it, but also provokes the loss of various opportunities.

Often new job positions are being divided, while restructuring process is still not finished. Besides, the struggle absorbs much more energy than creative activities of integration establishment and profit making.

7. Barriers of cultural differences. Insufficient evaluation of cultural differences causes hardly predictable obstacles during negotiations and integration process. For example, criticism about changes of circumstances expressed during the forced merger of the company Matav was received as an attempt to offend, therefore, the negotiation process extended significantly. Basically the Hungarian company discussed all the criticised statements beyond the frames of the main negotiations, which filed only the basic agreements. Emotional behaviour during negotiations is characteristic to representatives from Southern countries – they perceive criticism as an aggression or personal antipathy.

Not only nationality is counted as a cultural difference – it also includes corporate culture of the merged enterprises. After Latvia joined European Union many enterprises were purchased by the enterprising neighbours, but the majority of employees perceived the dynamic managers from Western countries negatively – they were blamed to be arrogant and willing to change the usual, slow routine. Under the mentioned influence many Latvian managers were constrained to leave the enterprises or to adapt to the new circumstances.

8. The lack of managerial experience. Restructuring projects are very different from simple, though important businesses, therefore, managers must possess particular qualities. The large number of failures appears in circumstances, when a manager lacks experience of restructuring establishment, but during the process relies only on herself/himself. Optimisation tasks of ongoing processes are very different from their development tasks. Techniques and the manner of managerial thinking previously approbated and proven to deliver positive results in business stabilisation circumstances, may not be optimal or is even completely unacceptable. A project manager meets circumstances with significantly greater number of unknown measures compared to usual circumstances. Even if understanding the scope of the task and his/her incapability to deal with it, he/she does not admit it, thus worsening the situation even more.

Conclusion

The performed research allows making a conclusion that restructuring of a company is related to high risk level.

- Moreover the amount of unsuccessful transactions do not decrease, therefore the companies with negative experience should be more careful in future, while participating specialists and consultants have to obtain the necessary experience in order to succeed in consideration of the mistakes made.
- Unfortunately statistics do not confirm the assumption. One of the explanations could be that the external conditions change constantly, and consequently the experience obtained cannot be used because of the changes in general conditions. The second reason – the previously obtained experience is not being systematised and accumulated.
- Foreign scientists and specialists have admitted that a particular restructuring program has to be developed, however, the author concluded that in foreign literature on management conventional methodology of organising and enacting the restructuring cannot be found. The author offers using the established step-by-step enactment program of the restructuring.
- The great amount of unsuccessful restructuring cases does not decrease the amount of performed restructuring projects because of their potential advantages when compared to the traditional methods of business extension. Therefore the factors causing failures should be identified during the restructuring and risks of enacting the restructuring have to be evaluated. One of the alternatives is the systemic analysis of main risks and related factors identification offered in this article.
References
POSSIBLE ENTERPRISE STRATEGIES AFTER THE ECONOMIC CRISIS

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Abstract
The paper explores characteristics of the present economic crisis at enterprise level and its consequences for possible growth after the crisis. The study builds on international experiences concerning recovery from the crisis during previous economic downturns between 1980 and 2002.

Survey results in Hungary and Slovakia are presented with a special attention to how companies tried to react to the present economic recession. The study analyses possible consequences of strategies followed by Slovakian and Hungarian firms during the crisis period from the point of view of capabilities for utilising the options for growth when demand will start to increase.

Introduction
The present worldwide economic crisis has drastic consequences for most of economies in the world. Cross-border business and international trade declined in 2009 by about 9%, and foreign direct investment dropped by more than 40% in the same year (Ghemawat, 2010:56). While the leading nations of the world economy were phased with recession, countries like China and India have progressed further on their growth path. China realised 66% of global growth in GDP, and India 11% in 2009 (Ghemawat, 2010:56). The projected high growth rate of the BRIC8 countries will lead to radical restructuring in the world economy where North America and Europe will lose its previous political and economic influence. According to the Goldman Sachs forecast, „by 2020 the BRICs will account for a third of the global economy and contribute about 49.0% of global GDP growth” (BRICS Monthly, May 20, 2010).

The crisis has influenced enormously the transforming Central and Eastern European economies as well. Some of these countries like Hungary, Romania and Bulgaria had serious difficulties due to macroeconomic imbalance and increasing inflation (Muraközy, 2010). These countries were not prepared for the consequences of the rapidly spreading crisis, and – contributing to the difficulties – seriously underestimated the possible extent of the crisis. In Hungary, for example, the official opinion of the Hungarian National Bank in early October 2008 was that the crisis will not have relevant consequences for the economy. Two months later the National Bank and the Hungarian Government started intensive work on preparing a plan to prevent the Hungarian economy from collapse. The financial aid of the IMF was necessary for the survival of Hungary in 2009 and 2010.

As we arrive closer and closer to the end of the crisis period, the really interesting strategic question is what will be happening after the crisis. Whether the development path will repeat the tendencies before the crisis or totally new directions of development will emerge. We have rather limited research evidence to answer this question properly. Scholars try to get answers by studying consequences of the previous crisis periods (Gulati, Nohria and Wohlgezogen, 2010). But the present crisis is unique in its nature, expansion and rather accelerated spread all over the world.

The present paper tries to analyse the above issue from a company angle. We are interested in learning what has happened during the crisis, what the reactions of companies were to the emerging new economic, technological and social conditions, and what tendencies of development may be identified at the present stage of the crisis. The author has been involved in studies of the above areas for some years and has conducted empirical studies in Hungary and the Slovak Republic. The empirical background of the paper includes analysis of publications of researchers engaged in doing surveys in the field (e.g. Ringland, Sparrow and Lusteig, 2000; Waldman, 2010), as well as primary data collections though questionnaire surveys and interviews conducted in Hungary and the Slovak Republic.

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8 Brazil, Russia, India and China
Macroeconomic background

Hungary and Slovakia has a lot of similarities concerning the social, economic and political heritage dating back to the period before the political changes around 1990 (Kiezun, 1991). But behind these similarities there are interesting alterations in patterns of development, especially after 1990 (Balaton, 2007).

Hungary was rather successful in hosting relatively large volume of foreign direct investments (FDI) during the first half of the 1990s. The Hungarian Government decided to adapt the sales type of privatisation. It meant that state owned firms were offered for sales for those who could offer acceptable prices for the companies. As capital inside the country was rather limited, that type of privatisation resulted in the overwhelming role of foreign investors in the ownership structure of enterprises located in Hungary by the end of the century. The accumulated high debt at the time of the political turnaround urged for the sales type of privatisation and it was the only possibility to pay back the loans from the income of privatisation.

Slovakia (and until January 1993 Czechoslovakia) followed different economic policy concerning privatisation. Vouchers were distributed among the population and these vouchers could be changed into shares of state owned enterprises. The shares were then purchased by investment funds owned by state banks. So the privatisation had resulted in restored state ownership of enterprises by the mid 1990s. No relevant structural changes were implemented during the first half of the 1990s (Clark and Soulsby, 1999). This policy had temporary macroeconomic advantages compared to Hungary. While in Hungary the restructuring was relatively accelerated it resulted in high level of inflation (about 39% in 1993), great depression (38% GDP decline between 1989 and 1993 measured by comparable prices, and about 17% unemployment rate) (Kornai, 1993), in the Czech Republic and Slovakia there were no such radical consequences. Economic restructuring had taken a major step in Slovakia after the involvement of foreign direct investors during the second half of the 1990s. The necessary restructuring resulted in economic slowdown, inflation and increasing unemployment as well, but these consequences were moderate in their extent compared to that of Hungary.

Slovakia was rather successful since the second half of the 1990s in inviting foreign direct investors especially in the motorcar industry. This fact has contributed to the relatively fast growth rate of the Slovak Republic around the turn of the century and helped the integration of Slovakia into the European Union. The growth rate of the country has even accelerated after the integration and it has resulted in the capability to change to euro as the national currency in 2009.

In the same period Hungary became less attractive for foreign investors, partially due to high tax rates and increasing level of macroeconomic instability and forecastability, parallel with rapidly spreading corruption. During the period between 2002 and 2010 the economic stability of Hungary has eroded and the country became incapable of introducing euro. State expenditures had exceeded the level of incomes and the country was close to bankruptcy during the summer of 2010. The newly elected Government has introduced radical measures to restore the balance and the first results of it may be observed at the beginning of 2011.

Previous research evidence on strategic consequences of the crisis at enterprise level

The start of the present economic crisis has been marked by filing for Chapter 11 bankruptcy protection by Lehman Brothers on September 15, 2008. Within six months the crisis has spread throughout the world and endangered many previously successful economies like Ireland. Even economically stable economies like the US, Germany and France were hit seriously and the consequences will influence the coming years in nearly all countries of the world.

As the crisis today is becoming closer to its end, more and more scholars are interested in discovering what will happen after the crisis. Harvard Business Review has published a series of three papers in the March 2010 issue, dealing with „Strategy in a Weak Recovery“. The articles signed by influential authors like Pankaj Ghemawat, Ranjay Gulati, Nitin Nohria and others agree that rather limited research evidence is available in the field and they tried to get ideas by studying the experiences of the previous crises since 1980. Although the authors admit that the previous crises were much more limited in their expansion and were also different in their origin and nature, they have arrived at some conclusions worth of having in mind when thinking about possible future enterprise strategies after the present economic crisis. One of the important conclusions drawn by Gulati, Nohria and Wohlgemogen (2010) is that concentration only on cost-cutting during the crisis will hardly lead to successful expansion after the crisis (Gulati et al., 2010:65). The authors have found that emphasis on operational efficiency parallel with concentration on market development and asset investment have resulted in the best results measured by increase in sales income and EBITDA (Gulati et al., 2010:67). Mere concentration on reduction of employment level and cost cutting have not resulted in successful recovery after the crisis.
It is also noteworthy from their studies that concentration only on innovation and asset investment during the crisis was not connected to successful enterprise performance after the crisis. Thus, neither restriction, nor mere innovation itself did not seem to be the proper cure during the economic crises. Parallel efforts of economic stabilisation and renewal seem to be the advisable solution based on the examples of the three crisis periods between 1980 and 2002.

In developing such solutions organisations may probably learn useful lessons from the idea of combining exploration with exploitation (March, 1991). It is also a lesson to bear in mind that rapid, short-term solutions often have disadvantages evaluated by taking into account consequences on the long-run (March, 2003). Another framework to discuss the necessary changes during crisis is to get engaged in first-order or second-order changes. Bakacsi argues that „it is the leader’s responsibility to decide whether the system needs first-order or second-order change, and therefore initiate rather double-loop learning, instead of single-loop” (Bakacsi, 2010:7).

Ghemawat (2010:57) has forecasted the possibly of more important role to adapt to local norms and the growing organisational power of the local country. Parallel with increased pressures on pricing, multinationals have to be sensitive to regional varieties of their offering, as local differences will become more important (Ghemawat, 2010:589). These organisational changes will increase diversity within multinational firms, but at the same time create the need for cohesive corporate cultures and tightening talent management practices (Ghemawat, 2010:60).

Rapid development in IT systems has continued even during the crisis. Companies planning their new strategies for the period after the crisis have to bear in mind that their rivals have invested a lot during the last years in technologies and applications, and in order to be able to maintain advantageous competitive position it is necessary to use the opportunities of real-time data and reports, and have ambitious, flexible managers in key positions throughout the organisation (Sull, 2010:73).

As a consequence of the accelerated changes and turbulence during the last few years some authors speak about the next wave of creative disruption. Waldman in his recent book postulates: „in fact, the growth of the mobile internet, the return of economic growth after 2012, and the constant potential for entrepreneurs to come up with products and services that satisfy fundamental consumer needs are, I believe, going to drive another great wave of creative disruption in the near future. …I predict that the era of creative disruption has only really just begun.” (Waldman, 2010:46-48).

The radical strategic changes possibly emerging during the coming years will probably have an influence on the organisational structures and processes companies will be adopting. Ringland et al. (2010:90-92) speak about double-cone organisations where traditional hierarchy dealing with specified and routine activities will be existing parallel with activities characterised by lack of clarity, ad hoc solutions, private inspiration, and luck. The well-known structures and mechanisms of control systems, governance and asset allocation have to live together with spreading ad hoc mechanisms and organisational structures described as adhocracies (Mintzberg, 1983).

Summarising the above discussed predictions for the after-crisis situation it may be stated that there seems to be limited possibility for using previously prescribed solutions. Learning, adaptation to emerging new situations and flexibility may be regarded as crucial capabilities organisation of the future will need in order to be competitive. Bahrami and Evans have formulated that requirement as follows: „the object of becoming super-flexible is to be able to either intentionally precipitate a transformation, or to make modifications in response to changing situations. Adaptation occurs either during the course of, or after, an unfolding change episode, and may simply be random in that one may be just at the right place at the right time” (Bahrami and Evans, 2005:22).

**Research methods and samples**

Research methods utilised in both countries included questionnaire surveys. Interviews with top managers, analysis of company documents and case study development were carried out in Slovakia. In Hungary interviews and case study research will be done later this year. In Slovakia both the questionnaire survey, the case studies and the interviews were conducted by graduating students at master level under the supervision of the present author. Findings have been summarised in Master theses defended at Selye János University in years 2009 and 2010. The questionnaire survey included 200 companies in Slovakia. Distribution according to the number of employees were as follows: below 10 employees: 34%, between 10 and 49: 39%, between 50 and 99: 14%, between 100 and 249: 13%. 49% of the firms belonged to the service sector, 34% to industry, 4% to agriculture, and 12% to public administration (Muraközy, 2009:40-41).
The Hungarian survey was part of a larger research endeavour aiming at studying the competitiveness of Hungarian enterprises. The author was responsible for coordinating the research work related to enterprise strategies. The survey was conducted in Hungary between April and November 2009. The survey collected answers from 1246 top managers working in 313 enterprises, belonging mainly to the SME sector. Distribution of firms according to the number of employees was as follows: 47% of the firms had employees between 50 and 99, 21% below 50, 20% between 100 and 29, and only 2% had more than 1000 employees. Manufacturing industry companies represented 42.4% of the sample. Service firms had a ratio of 23.0%, and trading companies 19.1%. The empirical findings used in the present paper have been published in the Preliminary Report of the survey (Chikán, Czakó and Zoltyáné Paprika, [eds.], 2010).

Reactions of enterprises to the crisis in Hungary and Slovakia

Hungarian experiences

Our empirical evidences from the questionnaire survey in Hungary show that the first – and most frequently observable – reaction of enterprises were to reduce cost levels, to downsize operations and reshape organisational structures towards more simple and less expensive management systems. This is the traditionally observable reaction of companies and this strategy is most frequently advised for executives by standard textbooks of economics and management. This strategy has resulted in many cases in capabilities to survive the crisis situation and preserve condition for continuing business activities when the crisis would have reached it’s end.

Our sample shows that 34.6% of the companies suffered more than 10% decrease in domestic sales turnover in 2009 compared to the previous year, while 20.3% experienced less than 10% decrease. 24.5% of the firms reported stagnation in their domestic sales. 35.9% realised less that 10% growth, and 15.0% managed to increase domestic sales turnover by more than 10%.

In export sales 40.4% of the companies reported more than 10% annual decrease, and 20.2% less than 10% decrease. 18% of the firms in our sample experienced stagnation in exports, and 13.5% managed to realise modest growth bellow 10%, and only 7.9% were capable to increase export sales by more than 10%.

The crisis resulted in relevant changes in company strategies. While during the previous surveys in 2004, 1999, and 1996 realisation of profit was the most important target, in the 2009 survey 170 companies (60.3%) gave the answer that surviving the crises was the most important aim, and 123 mentioned profit realisation as the no.1 strategic goal. The most frequently followed strategy was defensive (26% of firms), and shrinking strategy proved to be no.2 (20% of companies). In 2008 growth oriented strategies were the most frequently observable ones (43%), and defensive strategies were followed by less than 10% of the firms. In 2009 companies mainly used their resources to defend their existing market positions. The defensive strategy in many cases was not the consequence of a purposeful strategy, but more as a result of lack of strategy and a situation which might be described as muddling-through.

It was a clear sign of defensive enterprise strategies that R&D was evaluated as the less important functional area within the company. 43% of the firms have not had branded products. The companies in our sample more frequently used the company name as brand name, and only one fifth of the sample firms had independent product brand names. The ratio of companies introducing new products and technologies has decreased compared to the previous survey in 2004. Companies generally complained that they got limited state support for innovation and lack of adequate financial resources was mentioned as a major reason behind the limited innovation. The importance of organisation development was also under-evaluated by the responding managers. Modernisation of organisational and management structures got rather limited importance among the priorities of top managers.

The overall picture observable in the survey of 2009 shows a rather defensive management approach where companies concentrate only on survival. They generally did not have strategies concerning how to start development, had rather restricted information on their future possibilities, and in many cases have not had clear strategic direction. We could hardly observe conscious steps to improve existing products and even more to develop new ones, and upgrade existing technologies. The marketing efforts only concentrated on maintaining existing market shares and there were hardly any signs of trying to enter into new markets and develop products to be sold on new markets.

The characteristics of strategies of the Hungarian enterprises in 2009 do not offer real hopes for getting out of the crisis within a short period of time as the necessary preparatory actions were missing in the practices of the companies. We could not find any signs of managerial awareness related to the need for innovation even during the crisis period in order to improve the prospects of the firm to realise growth when market demand will start to grow.
Connections to other enterprises and participation in networks can be regarded as a relevant factor of enterprise development from the point of view of the present paper. The questionnaire survey provides some information on network relationships of enterprises. The survey of 2009 shows that Hungarian enterprises preferred short-term contract relations instead of longer-term ones. It was explained by top managers as an intention to increase flexibility (Chikán et al., 2010:46). It is a positive feature of inter-company relationships that cooperation in research and development has started to grow. The ratio of R&D cooperation was the highest compared to the previous surveys within the competitiveness research. This is somehow a contradictory feature as other characteristics of enterprise activity do not show clear signs of recognition of the need for innovation.

**Slovakian experiences**

The questionnaire survey in Slovakia was conducted between September 2008 and February 2009, a few months before the Hungarian survey. The overall picture of the survey reveals that companies stagnated or decreased the volume of their output. A majority of the responding managers (59%) shared the view that the crises will last for about 2 to 3 years (end of the crisis was connected to starting increase of the GDP in the country).

Labour costs were unchanged in 51% of the companies, while 26% reported decrease, and another 15% forecasted changes during the coming months. Possible increase in wage level was mentioned by 5% of the respondents. Expenditure related to education and training was unchanged in 33% of the firms, it decreased in 31%, and 21% of the managers expected decrease during 2009. 12% forecasted increase in educational expenditures.

Costs related to advertisement and communication remained unchanged in 34% of the firms, it decreased in 29%, and expected decrease was reported by 17% of the respondents. Expected growth of costs was mentioned by 13% of the companies in the sample. Overall marketing expenditures were unchanged in the practice of 60% of the firms, decrease was reported by 14%, and expected decrease by another 14%. Possible increase of marketing cost was mentioned by 9% of the answers.

Investments were reduced in 32% of the companies, 27% reported no changes, and 28% mentioned possible decrease during the coming months. Increase in investments was forecasted by 12% of the firms.

Introduction of new technologies were reported as being unchanged in its intensity after the crisis by 56%, and decrease was mentioned by 13%. Possible decrease was the experience of 12%, and possible increase was reported by 15% of the managers. Increase in the intensity of introducing new technologies was characteristic for 4% of the firms.

It can be seen from the above data that innovation and growth was less characteristic for Slovakian firms during the crisis period. However there were some examples showing company strategies different from the generally observable ones. Let us introduce the example of an internet service providing company is Southern Slovakia (Csiba, 2010). The firm has been set up in 1997 by Slovakian private persons. Today it is owned by one Slovakian entrepreneur. The firm started its activity in wireless access provision and became the member of the European Coordination Centre in 2000. The company continued its expansion strategy during the early 2000s by expanding its products portfolio and geographical coverage. The strategy followed may be described as a typical diversification strategy and it proved to be rather successful. Meeting customer expectations and flexible adaptation to changes in the market is a strong element in the strategy of the firm.

The company continuously invested in upgrading and extending its service providing network during the crisis period. The firm did not change the previously followed differentiation strategy and introduced new services called FiberHome and PanelNet Max. The optical network of the firm had been extended in years 2009 and 2010. At the beginning of 2010 the company defined its strategy as aiming at continuous growth by providing high quality services taking into account the environment protection criteria and extending the services towards new regions in Southern Slovakia. The emerging major profile of the firm in the future is defined as extending access to the Internet (Csiba, 2010).

**Comparison of the Hungarian and Slovakian experiences during the crisis**

Empirical evidence summarised above concerning the strategies of Hungarian and Slovakian companies during the crisis period shows that in both countries defensive strategies aiming at reducing costs of operation by laying off employees and reducing production and service provision capacities had dominant roles. Innovation and preparation for growth after the crisis was hardly observable in the practice of

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9 This section is based on Muraközy (2009).
companies we analysed. Comparing the Hungarian and Slovakian data we may observe however that the Hungarian companies were even less innovation oriented than the Slovakian firms. Data on growth, innovation and expansion showed somewhat higher values in the Slovakian survey. The example of the innovative Slovakian internet service providing company clearly shows the possibility to go ahead even in a period of economic downturn. Using Internet may be regarded as a relevant element of future development either at private individual and enterprise levels. The owner of the Slovakian firm had understood this challenge and gave adequate answer to the opportunity. The latter example shows that perception and attitude of owners and executives can make a difference. As Leavitt has described it, path-finding managers can open the road towards innovation and growth (Leavitt, 1986).

Discussion
The surveys during the period of economic crisis show that survival and short-term orientation was characteristic for most of the enterprises. Goals related to innovation and growth were hardly present in the strategies of enterprises. While the general picture is rather negative from the point of view of preparation for the period after the recession, there are some examples showing that there are possibilities for other ways of thinking. The case of the innovative Slovakian internet service providing firm shows that when ownership and top management aspirations are motivated by longer-term considerations, innovation may have a stake in shorter-term enterprise strategies as well.

The above consideration shows that executive orientation and way of strategic thinking has a decisive role in company strategies during the crisis period. Another important influencing factor behind was the available financial resources which provided possibility for executives to think ahead and start preparations for the possible growth period after the crisis. Our empirical studies show that this way of thinking was observable at the minority of enterprises especially in case of SMEs.

The entrepreneurially minded managers of the latter group of firms shared the view that the crisis period is not only an area with difficult problems to be solved in a short period of time, but at the same time it is a period of unprecedented opportunities to move forward and develop competitive advantages when increase in demands will have been arriving (Waldman, 2010). These companies started to develop new R&D projects, invested in broader areas of innovation and now they are more or less prepared to launch their new products and services which represent a higher level of technological development and meet customer needs at a higher level compared to the period before the crisis.

Based on his previous experiences and insights concerning the future possible directions of strategic development the present author is convinced the success stories after the crises will be connected to enterprises following the innovation trajectory during the years of crisis.

Another field of development observable in our empirical studies is related to the increasing role of inter-organisational relationships through different forms of strategic alliances and emergence of clusters. The permanently prevailing need for cost efficiency and improvement of innovation capabilities drives companies towards new forms of strategic alliances enhancing the capabilities of business firms to accelerate innovation, develop new capabilities though co-operation, share risks and make costly innovation projects financially realisable. The above development tendencies were observable especially in industries characterised by severe competition, high technological development rates and needs for meeting new customer expectations (Hokansson and Lind, 2004).

Conclusions and further research options
We have to admit that the available empirical evidences are rather limited from the point of view of making general forecasts for the future development tendencies. Additional research work is needed covering broader areas of enterprises and a more concentrated focus on the connections between innovation and future growth options of enterprises. Special attention should be devoted to the SME sector as it has an important role in future economic growth. But the observable intentions of the enterprises in our surveys probably provide possibilities for drawing attention to the emerging new tendencies and new strategic logics developed by enterprise managers.

It can be seen that managerial behaviour concentrating on short-term survival is not favourable for realising the possibilities of growth which will be provided when the crisis will have been finished. Increasing demand for products and services parallel with starting economic growth will offer outstanding growth option for those companies which have made the necessary preparatory steps during the crisis years. It seems to be clear that enterprises capable of offering new products and services representing higher level
of technological capabilities and better adjustment to customer requirements will have the winning position after the crisis. This forecast is supported by the observable fact that during the crisis period in Hungary companies concentrating on R&D had the possibility for increasing their sales turnover.

Further and more extended studies will be necessary to check whether the above sketched directions of development are broadly observable new tendencies of enterprise level strategic management, or they are only examples observable locally. The present author and his colleagues have been working on this research question.

References


LATVIAN EXPORT OF GOODS: PROBLEMS AND SOLUTIONS

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Abstract

Purpose – To determine the role of government and factors that foster and hinder Latvian exports the most, which have to be taken into account to improve the situation, by analysing the Latvian export of goods and export experience of specific enterprises.

Design/ methodology/ approach – Literature studies, analysis of statistical information (Central Statistical Bureau of Latvia), interviews with entrepreneurs and experts.

Findings – The main factors fostering and hindering export at the micro and macro level.

Research limitations/ implications – Research is based on experience of entrepreneurs and experts of two branches - Agriculture and food, wood and wood production.

Practical implications – The paper may serve as a basis for policy makers.

Originality/ value – The research reveals factors fostering and hindering export at the macro level as well as focuses on micro level factors at the enterprise level.

Keywords: export of goods, promotion of export, factors hindering export.

Introduction

More and more attention is paid to export as a driving force of the Latvian economy in times of economic crisis when domestic consumption tends to decrease. Branches directed to domestic demand, oriented to consumption – trade, construction, business - showed a growth in 2007 – 2008, but the structure of Latvian economy changed with decrease in demand.

According to Central Statistical Bureau data, Gross Domestic Product (GDP) in Latvia in the 1st quarter of 2011 increased by 0.2% compared to the previous quarter, but it has increased by 3.4% since the 1st quarter of 2010. The improvement in the economic situation is mainly associated with the increase in export volumes and growth of export-related industries.

Currently the government offers a wide range of activities to promote export, but it is necessary to evaluate which activities are really essential for enterprises who export their goods and which probably are not necessary at all. To provide an efficient and expedient support and to achieve the expected results it is necessary to research entrepreneurs’ problems related to export and factors fostering and hindering export.

Research revealed in this paper is based on the analysis of statistical information, publications about export issues and interviews of entrepreneurs and experts. To get primary data two seminars with participation of entrepreneurs and experts were held as well.

Results and Discussions

1. Latvian export of goods in 2007-2010

Statistical information about Latvian export of goods in 2007 – 2010 (Figure 1) demonstrates its growth last year which is the highest growth during the last 4 years.

Probably export can be one of the driving forces of the Latvian economy and points to economic recovery, though some questions can be raised regarding the validity of the existing data.

Firstly, the statistical information includes not only export of goods produced in Latvia over a definite period of time but also re-export at the same time as well. Central Statistical Bureau had gathered information about 100 largest exporters of goods. The data showed that they were exported half of total goods exported, but some of them are traders and intermediaries with warehouses here in Latvia. For

\[CSB \text{ data}\]
example, Samsung, Roche, LG Electronics Latvija are enterprises which supply goods to retail chain networks in the Baltic countries. Yet another example is the enterprise Do It, which supplies goods to retail chains – Yysk and The Pier in Baltic countries and also in Bulgaria and Rumania [21].

Secondly, the large share of export in 2010 can be related to the increase in prices on the global market. Prices of some products have increased by several tens of percentage points - skimmed milk powder - by 49%, and butter – by 47% [11].

Since the accession of Latvia to the EU the largest share of export has been to countries of EU, which increased or decreased proportional to the total export of goods (Figure 2).

![Figure 1. Latvian export of goods in 2007-2010 (million LVL)](chart1.png)

Source: CSB data

![Figure 2. Latvian export of goods by groups of countries in 2007-2010 (mil. LVL)](chart2.png)

Source: CSB data

Orientation mainly towards only one export market increases the risk, and therefore an increase in diversification at both levels – the country as well as the enterprise – is necessary, for example, increasing exports to CIS and other countries. Export changes in absolute figures show a dramatic reduction in export in 2009 - 3.6 billion LVL. Compared to 2008, the reduction is more than 20%. This is due to the impact of the economic crisis and therefore a sound reason and justification for the need for export diversification.

The main export partners in terms of countries during the 1st part of 2010 was Lithuania – 15.4% of total export (16.6% in 2009), Estonia – 13.9% (13.8%), Russia – 9.7% (8.3%), Germany – 8.9% (8.7%), Sweden – 6.7% (6.3%). The largest growth in 2010 was attributed to CIS countries.[11]

Latvia significantly increased exports to Armenia, China and Russia. In the first quarter of this year (compared to the same period in 2009) Latvian export to Armenia increased by 46%, to China - by 42% and to Russia - by 36%. The amount of Latvian export of goods to the following countries also increased: to Kyrgyzstan (by 12%), to Ukraine (by 6%) and to Tajikistan (by 2%) as well. Amount of export decreased to Kazakhstan (by 57%), to Turkmenistan (by 50%), to Uzbekistan (by 37%), to Moldova (par 17%), to Georgia (by 14%), Belorussia (by 11%) and to Azerbaijan (by 6%) [15].
The TOP 3 Latvian export positions have not changed over the last four years (2007 – 2010). Wood and wood production, Agriculture and food and Metals and metal production have all been in the TOP 3 all these years. These branches just changed their positions in the TOP 3. As an exception, export of Metals and metal production lost its positions in 2009, and Machinery, appliances and electrical equipment penetrated the TOP 3.\(^\text{12}\)

The dominant groups in the Latvian export of goods are the groups where resources are the most available in Latvia – wood and wood production, agriculture and food. We can conclude that natural resources are one of the main factors which determine relationships between international trade and branches. Both groups mentioned above have developed and strengthened over a long period of time. But why does such group as metalworking take such a large share of Latvian export of goods when metal ore mining does not exist here in Latvia? The geographic position of Latvia may be a decisive factor in this case because Latvia is situated near countries where there are natural resources and near countries which are the main markets for this production – Estonia, Lithuania, Germany, United Kingdom, Sweden etc. Metal castings, rods, farm machinery, port facilities etc. are exported to these countries. Changes in the TOP3 exports are related to changes in the main markets of export. The largest reduction - 40% (in 2009, compared to the situation in 2008) – was in the export of base metals and its production. This was due to a significant reduction in the amount of construction in Europe and the USA. It is necessary to point out that export of agricultural and food products remained stable.

We can observe that goods with low added value dominate in the Latvian export. This situation is just in contrast to that in most developed European countries whose industries are oriented towards production of goods with high added value: chemical industry, transport, optical equipment, etc.

The Bank of Latvia underlines serious risks for growth of export and even forecasts a reduction in exports that can be related to [18]:

- uncertainty regarding global economic prospects;
- capacity utilisation in the industry (as a result – rise in production and export will depend on new investments in expanding production, but it cannot continue over a long period as it is impossible to increase production endlessly due to increased capacity utilisation);

Additional risks:

- Russia’s decision on the reduction of a number of transport permits for European Transport Conference (ETC) leading to a reduction of Latvian cargo carriers’ opportunities of cooperation with Russia by at least one third;
- proposals of European Commission on reduction of fishing quotas for the catch of herrings and sprats in the Baltic Sea by 10-28%, beginning from 2011 leading to possible reductions in the export of food [18].

Experts of the Bank of Latvia point out the significance of using new technologies and production of innovative products to maintain the Latvian export.

2. Exports in agriculture and food

Exports of agricultural and food products have been on TOP3 list of Latvian exports of goods for the past four years and it was at its highest level in 2010 over the last four years (Figure 3).

Export of some products has increased significantly over the last year (in 2010 compared to the previous year –2009): export of milk products increased by 48%, oils and fats - by 23%, fruits and vegetables – by 16%, fishes – by 16%, oil seeds - by 12%, sugar - by 8%, coarse grains – by 5%, wheat – by 1%, rice –by 10% (including re-export, because rice is not grown in Latvia) [28].

It is necessary to evaluate statistical information because prices of main agricultural products rose very fast which is one of the main factors making statistical data for agriculture and food larger.

The main markets for agro-industrial sector are the Baltic countries, then other new EU countries, EU – 15, CIS, high developed countries and other countries. There are different problems related to every market. The main problems related to the Baltic countries market are: small capacity of the market, slow growth, and concentration of retailers and competitiveness of domestic producers. The main problems related to export to EU-15 are higher requirements of consumers and demand for goods with high added value, which is very low in Latvia. Very often producers consider goods with just some modifications, for example, a yogurt with another taste as a new product. Very seldom are new products created, for example, Lakto (different cultured milk product). There is high concentration of retailers in EU – 15 countries as well, and shops try to ensure

\(^{12}\) CSB data
distribution of stock for the whole trade network, but producers from Latvia are unable to ensure the necessary amount of goods. Problems of CIS countries market are related to undeveloped infrastructure which makes supply more expensive. There are certain barriers for entry into this market too, for example, a special certificate of Veterinary Service is required. The market is protected by quotas, requirements of quality and customs [28].

![Figure 3. Export of Agriculture goods and food in 2007 - 2010 (mil. LVL) [7, 8]](image)

According to information included in the plan "on promotion of food production to Russia"[2] 64% of agriculture and food product export to third countries in 2010 was exported to Russia. The main products exported to Russia were:

- Alcoholic and non-alcoholic drinks (growth in export by 122% compared to export in 2009);
- Milk products (growth – by 202%);
- Wastes of the Food industry, including food for animals (decrease in export in 2010 compared to 2009 – by 33%);
- Meat and fish products (increase in export – by 31%).[2]

Structure of food production has not changed significantly in the past years (share of meat and meat production – 23%, share of milk products – 19% and production of drinks – 17%).[5]

Agriculture and food production is mainly exported to Russia and Lithuania (similar shares for both countries) 117.3 million LVL to Russia and 113.4 million LVL to Lithuania respectively. If we look at the share of export to different countries, then the share of Lithuania is 21% and the export value increased by 25%. Exports to Russia have increased by 60%, and the share has increased to 22%. The most important countries – importers of agriculture and food production are Lithuania – imports of 167.6 million LVL, Poland – 67.8 million LVL and Estonia – 60.1 million LVL. [5]

**Opportunities for export of agriculture and food production [30]:**

1. Positive trends in the world market. Stable growth in demand also leads to a growth in prices. Forecasts – these trends will remain stable in the long-term and will determine the sustainability of agriculture and food production.

2. Coordinated actions of state institutions (Ministry of Agriculture, Ministry of Economics, Ministry of Defence etc.) play an important role in fostering export. The task is to help to promote production in perspective markets. Currently enterprises export their production form informal associations, and therefore there is a lack of coordination and sometimes even opposing actions among promoters of different projects (trade marks) can be observed.

3. Strategically important issue - equal distribution of grants among EU countries as grants among “new” and “old” EU member states sometimes can vary up to several times, but differences in prices of resources are not so large. This leads to an unfavourable situation in the resources market as well as while competing with the old EU countries.

**Main problems regarding export of agriculture and food production [30]**

1. High costs which depend on:
   a) Price of resources;
   b) Unutilised capacity;

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2. Fragmentation of agricultural production is one of the reasons for reduction in export opportunities. Solution - cooperation. Cooperation success stories - "Latraps“ and "Vidzeme agro-economic co-operative society”.

3. Milk is sold to Lithuania resulting in job losses in dairy farms [16].

3. Role of government and government institutions in fostering export

Government institutions: The Ministry of Economics and Investment and Development Agency of Latvia (LIAA) which is under the authority of Ministry of Economics; Ministry of Foreign Affairs, Ministry of Agriculture and Rural Support Service and Latvian State Institute of Agrarian Economics under the authority of Ministry of Agriculture, and non-governmental institutions: associations of industries, Latvian Chamber of Commerce (Figure 4).

The Ministry of Economy (ME) has the most important role in fostering export; they develop guidelines for fostering export and attraction of foreign investment including guidelines for 2010 – 2016 (approved by decree of Cabinet of Ministers No 413 (19th June, 2009)) [3] and annual plans of action for fostering export of goods and services of Latvia [1].

Unfortunately, evaluating the guidelines, we can see that goal of the policy is "to increase and diversify the export of goods and services" and sub-goals - creation and export of goods with high added value, increasing the competitiveness of entrepreneurs in global markets and attraction of foreign investments in industries of high technologies [3], are too general and no priority industries have been named for the creation of goods with high added value or for increase in competitiveness of entrepreneurs. Following such aims it is difficult to imagine strictly defined, goal oriented and effective development of export. M. Porter in his „Diamond" theory emphasises the role of government in providing support for certain sectors and fostering export and competitiveness.

Evaluating the institutional structure of Latvian economy it is possible to draw the conclusion, that this structure is fragmented. It is horizontal (Figure 4) but not vertical. An institution that would monitor all issues related to export is missing. Ministries have an essential role and they monitor other institutions, but every ministry operates in its area of competence and does not relate its operations with operations of other ministries and institutions monitored by other ministries. Consequently, the promotion of export is more episodic rather than focused and unified. We can also observe the ineffective use of resources.

Do the Latvian foreign economic representative offices really need supervision of two institutions (LIAA and Coordination Council of Latvian Foreign Economic representations founded in 2009)?

It would be advisable to consolidate embassies or diplomatic missions supervised by the Ministry of Foreign Affairs and economic representative offices supervised by Ministry of Economics thereby effectively using resources and entrepreneurs would not have any doubts regarding which institution to refer to concerning issues they may face abroad.

If we look at institutional structure for export promotion we can observe that agriculture is state priority in export, because it is supervised by one of the ministries (Ministry of Agriculture) and gets its full attention. If it is really a state priority then the expected results have been achieved as agriculture and food, wood and wood production are in the TOP 3 of Latvian exports.

Exports of all other industries are supervised by Ministry of Economics, but LIAA oversees the direct promotion. We cannot observe any priorities in this area.

It is possible to promote exports in direct and indirect way. Direct promotion is related to actions aimed at promoting enterprise exports and are directly connected with enterprises. Indirect promotion can be achieved by actions aimed at, for example, improvement of business macro-environment or development of infrastructure (Table 1).

As can be seen in Table 1, the scope of indirect promotion of exports is far wider than direct promotion.
Figure 4. Institutional structure of export promotion

*Source: based on the authors’ analysis*
Table 1

<table>
<thead>
<tr>
<th>Direct support</th>
<th>Indirect support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information &amp; consultations</td>
<td>Trans-governmental agreements</td>
</tr>
<tr>
<td>Support for cooperation</td>
<td>Tax relief</td>
</tr>
<tr>
<td>Marketing</td>
<td>Infrastructure development</td>
</tr>
<tr>
<td>Insurance of export credit risks</td>
<td>Support for R&amp;D</td>
</tr>
<tr>
<td>Legal support</td>
<td>Latvian diplomatic missions and consulates abroad</td>
</tr>
<tr>
<td>Financial support</td>
<td>Loans and guarantees, availability of financial resources</td>
</tr>
<tr>
<td></td>
<td>Training qualified specialists</td>
</tr>
</tbody>
</table>

*Source: based on the authors’ analysis*

We can divide all direct export promotion events into the following groups:
1. Information and advisory activities;
2. Networking activities;
3. Marketing activities;
4. The legal framework-building actions;
5. Financial support actions.

We can see that range of export promotion actions is very wide. There are a lot of direct actions for export promotion, but usually evaluating these actions the number of these actions rather than its quality is taken into consideration. Especially we can observe this in reports of LIAA which refer to the number of actions. It is necessary to study the quality of these actions and its effect on Latvian export promotion. It is possible that the results can show that investment is much larger than the result.

There are no priorities either for export promotion actions, or for industries. LIAA’s consultations, networks and other actions are the same for entrepreneurs of all industries.

The issue is to what extent Latvian entrepreneurs are aware of these activities and avail of those necessary for them. During the last 5 years enterprises have been acquainted with only a handful of research results conducted on export promotion.

A positive example that could be underlined regarding state priority in the field of export promotion is the plan „on food export promotion to Russia“ within the framework of which research has been carried out on the development of food industry clusters for food exports to Russia and several export promotion actions have been planned and implemented: support has been provided for participation in international exhibitions in Russia to help to overcome barriers for entry into the Russian market; the booklet *Food product certification* was published, conference *Food Products Export Promotion to Russia* was held, etc.

The result of such targeted complex actions is: „Promotion of Latvian agricultural and food product export to Russia with a positive contribution towards its growth (increase by 61% compared to 2009). Amount of enterprises exporting to Russia increased by 16.4% (71 enterprises as of 31st December 2010 compared to 61 enterprises as of 31st December 2009“ [4].

International exhibitions, which increase the visibility of Latvian entrepreneurs, are the most widely used and important export promotion activities for entrepreneurs.

Actions like brand introduction are doubtful, because brands have been created, but do not work in reality. No information on brands *Quality Product of Latvia* and *Rīgas marka* or the criteria how enterprises can avail of them is available.

It would be desirable in the present situation to develop financial instruments for export promotion, because one of the most important preconditions for export promotion is the availability of resources.

4. **Research „Analysis of Latvian entrepreneurs’ experience related to export“**

Information in press and Internet resources was summarised, entrepreneur's interviews were conducted and 2 seminars *Latvian export of goods: problems and solutions* with participation of entrepreneurs and experts were organised to evaluate the experience of entrepreneurs and to clarify factors fostering and hindering export.

All interviewed entrepreneurs are owners of small enterprises and have started export in recent years (2-5 years). Countries to which they export are quite different - Russia, Lithuania, Estonia, Germany, Sweden, Finland etc. The choice of markets depends on the demand for goods in one or the other country and the possibility to find network partners. Entrepreneurs’ interviews were aimed at clarifying 5 of the most essential issues:
1) Factors fostering export;
2) Factors hindering export;
3) Possible solutions;
4) State's role in export promotion;
5) Knowledge and skills necessary for entrepreneurs to be successful exporters.

The newspaper „Dienas Bizness” interviewed entrepreneurs exporting goods to ascertain the profile of an average exporter in Latvia. The average exporter is an entrepreneur working in one of the dominating export industries (wood and wood production; agriculture and food; metal and metal production) who is able to adapt to foreign customers’ requirements. The Latvian entrepreneur tries to respond to demands in a fast and flexible manner considering quality as an important issue (a satisfied client is one of the most important values for enterprise) to be competitive in foreign markets. Entrepreneurs answering questions of the newspaper „Dienas Bizness”, mentioned the availability of funds, shortage of highly qualified specialists, attraction of reliable sales agents etc. as the main problems concerning exports [6, 14-15].

Problems which entrepreneurs encountered while starting exports were ascertained from the entrepreneurs’ interviews. These problems are mainly related to the lack of experience because each export case is quite different and it is difficult to find instructions for each and every situation.

The most significant problems entrepreneurs face starting exports are:
- Lack of full information about foreign markets;
- Difficulty in finding appropriate partners;
- Costs (for product improvement, packaging, transport);
- Increasing production capacity etc.

Direct export promotion actions provided by the state include provision of information about foreign markets and assistance in partner finding as well. There are examples when entrepreneurs are grateful to the state for its support in networking [14], but there are radically opposing opinions when entrepreneurs name the lack of contacts and partners for starting export as the most actual problem and suggest the provision of experts with knowledge of local markets of different countries as a solution [16]. Networking and organising visits to different countries play an important role in export promotion actions carried out by LIAA. It shows either the low quality of these support actions or the lack of information about such kind of support.

Issues concerning expenditure are being resolved on a nationwide scale with the establishment of Latvian Guarantees Agency which provides exporters with guarantees for their loans. There are a lot of enterprises already using these opportunities, but the funds for guarantees is limited (20 million LVL for period 2007 – 2013) [26], and therefore requests for such guarantees are carefully evaluated. It is necessary to think about financial instruments for export promotion at the state level because funds are the basis for export opportunities.

Very often enterprises are not ready to start exports because there is lack of enterprise strategy. There is no understanding regarding which countries to export to, no vision, no plans [8]. It shows the unprofessional approach and lack of knowledge of Latvian entrepreneurs. Firstly, entrepreneurs have to set goals they wish to achieve through exports; secondly, they have to evaluate their resources - whether they have enough resources and whether their employees are competent enough [24].

Entrepreneurs consider it essential to have good technical knowledge to be successful in the particular area of export, which is decisive in being able to invent and produce new innovative products which would make the life of not only Latvian inhabitants but worldwide easier [25].

Entrepreneurs themselves mentioned the knowledge and skills required for starting exports. They consider language knowledge and communication skills as the most important ones. Table 2 shows that entrepreneurs require knowledge that they can learn themselves (languages, culture of different countries), knowledge they could gain from research results at the state level (foreign markets) and knowledge they could acquire within programmes offered by higher education institutions (marketing strategies).
Knowledge and skills essential for exporters

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Languages</td>
<td>Communication skills</td>
</tr>
<tr>
<td>Culture of other countries</td>
<td>Ability to analyse and understand situation</td>
</tr>
<tr>
<td>Foreign markets</td>
<td>Creativity</td>
</tr>
<tr>
<td>Products</td>
<td>Ability to act fast in untypical situations</td>
</tr>
<tr>
<td>Marketing strategies</td>
<td></td>
</tr>
</tbody>
</table>

Source: worked out by the authors; based on interviews with entrepreneurs

Main factors hindering exports at the at the state and enterprise level

Factors most hindering export (entrepreneurs’ opinion) at the micro level (Table 3) and macro level (Table 4) were ascertained during the entrepreneurs’ interviews.

The main factors hindering export at the macro level

<table>
<thead>
<tr>
<th>Macro level factors</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpredictable changes in taxes, tariffs</td>
<td>Taxes and tariffs are planned by government over a period of several years</td>
</tr>
<tr>
<td>Level of education</td>
<td>Education of high level specialists</td>
</tr>
</tbody>
</table>

Source: worked out by the authors; based on interviews with entrepreneurs

Entrepreneurs most critically assess the unpredictable increase of taxes and tariffs that do not provide any security and stability. Consequently, entrepreneurs are acting only in present situation without thinking about possibilities of enterprise's future development. There are entrepreneurs planning to transfer their business to other countries where there is a safe and stable base for development [26]. Entrepreneurs working in the field of agriculture consider that reduction of taxes may foster development of modern, ecological agriculture at the same time maintaining bio-agriculture [13], which could be one of niches in export markets. Entrepreneurs consider that improvement of business macro environment has to be one of the most important contributions for export promotion.

„Government with its unpredictable decisions and increasing of taxes obstruct economic development, and entrepreneurs become uncompetitive” [24].

Entrepreneurs and experts consider that there is a necessity for highly qualified specialists, professionals in production and exporting as well. It should be noted that all interviewed entrepreneurs and experts have education and experience in their respective field of work, which is one of factors for ensuring successful export. The objective of state is to provide training as a result of which enterprises would employ high level specialists.

Part of entrepreneurs mentioned protectionism of other countries by giving preference to local production as factor hindering export. Some examples are markets of Poland, Finland and Sweden [9].

Entrepreneurs note another barrier for entry into foreign markets - specific requirements for different products. For example, producers of food who want to sell their production in Russia have to go through special tests to get the certificate. Producers of ecological food have also met the same problem while trying to enter the German market [27]. These are issues to be solved at the bilateral level with cooperation agreements providing better rules for cooperating countries.

Although competitiveness is mentioned as a micro level factor, some entrepreneurs pointed out the importance of state's image and competitiveness (Table 4). Marketing activities are assessed positive, especially the creation of unified state image at international exhibitions, but entrepreneurs suggest improving the image by developing business macro environment including development of infrastructure, resolving demographic issues etc. [13].

Due to the small capacity of production, entrepreneurs are forced to look for appropriate size of partners abroad, and this factor limits their export opportunities. They lose a large part of market because foreign partners require regular supplies for their whole trade network not just for only one separate shop. This problem is very actual in the Russian market and in markets of EU countries as well where developing retail networks require large amounts of production and Latvian entrepreneurs are unable to supply such amounts of production.
Factors most hindering export (entrepreneurs' opinion) at the micro level

<table>
<thead>
<tr>
<th>Micro level factors</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small quantity of the production</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Poor competitiveness</td>
<td>Production of products with high added value</td>
</tr>
</tbody>
</table>

Source: worked out by the authors

Another essential micro level problem is the competitiveness of production. Foreign customers are becoming more and more exacting and are demanding improvement of current production and creation of new products with high added value as well. Currently Latvia is oriented towards production of goods with low added value although research carried out in Latvia show that Latvia should develop production of such industries as pharmacy, chemical industry etc.

"The more in terms of quantity and efficiency the state produces complicated and qualitative goods the more the state, enterprises and people can earn money. A state specialising in the production of simple and less qualitative goods can only compete with low-cost labour countries and has no chances to reach the level of incomes of Western countries because it can only survive by maintaining low salaries [22].

Factors fostering export

Factors fostering export were ascertained as a result of entrepreneurs' and experts' interviews (Table 5).

Factors fostering export at the macro level and micro level

<table>
<thead>
<tr>
<th>Macro level factors</th>
<th>Micro level factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable business macro environment</td>
<td>Competitive products</td>
</tr>
<tr>
<td>Foreign seed- money</td>
<td>Good knowledge about export markets</td>
</tr>
<tr>
<td>Government’s support for R&amp;D , education</td>
<td>Good sales skills</td>
</tr>
<tr>
<td>Resource accessibility</td>
<td>Flexibility</td>
</tr>
<tr>
<td>Good infrastructure</td>
<td>Cooperation</td>
</tr>
<tr>
<td>Logistics</td>
<td></td>
</tr>
<tr>
<td>State’s image</td>
<td></td>
</tr>
</tbody>
</table>

Source: worked out by the authors based on opinions of entrepreneurs

Entrepreneurs see the most important role of state not so much in direct export promotion as in formation of stable business environment and targeted policies. State must determine priority industries or priorities for export in some industries as it is being done in neighbouring countries and the state has to form favourable tax policy, incentives for investments, support for establishment of new enterprises etc. These activities must be carried out in a goal oriented and planned manner so that entrepreneurs would feel safe about future, about the situation in a month, year etc. Currently the long term policies do not list any priority industries or other industries [13].

Exports should be promoted with indirect activities oriented to research and development (R&D) and improvement of system of education too. Investments in R&D would result in production with high added value, and improvements in the system of education in highly qualified specialists. Investments in R&D would promote the production of goods that have never been produced in the world and according to P.Krugman’s theory, would be first entrants in the market. Lack of reforms in the system of education has worsened the human resources situation as a lot of educated specialists have emigrated abroad. Firstly, the state has to seriously consider how to maintain and improve the human resources situation.

State has to provide basic functions and business and profit functions have to be handed over to entrepreneurs [26].

Infrastructure has a significant role in export promotion. Information technologies are playing an ever more important role in the development of infrastructure. The largest operator of data centres in Baltic States (DEAC) has started to provide information and communication technology infrastructure for work in networks of Russia, Europe and Asia. It opens wider technological opportunities for Latvian enterprises to enter export markets [12].

Infrastructure has a significant impact on the logistics development in a state. Exports cannot exist without an improved logistics system. Just some enterprises consider logistics issues while starting exports [66], but the majority of exporters are small and medium sized enterprises which are still facing logistics...
problems. Entrepreneurs in their interviews note that logistics is yet to be developed for export of agriculture and food production. They are still using foreign logistics, not local services.

Latvia’s image in the world would be promoted with improvement of the economic situation. Entrepreneurs consider that Latvia is not well-known and not a desired partner for foreign entrepreneurs. Though the State’s image is a macro level factor, it promotes a lot of other factors like safety, stability, honesty and profitability of each and every entrepreneur.

The most important micro level factor is competitiveness of goods that depends on each and every individual entrepreneur. Some entrepreneurs create new products, some - improve products making better packaging or making the product more convenient to use etc. Added value of goods is becoming more and more important. Some examples:

- Saldus food factory produces a varied range of sweets Gotiņa, with improved packaging elements such as colours, design or even advertisement of enterprises (enterprises can order sweets in packaging with the name of their enterprise) [20].
- Kate furniture has thought about the needs of customer, producing ergonomic goods [19].

It is important that entrepreneurs understand their advantages in export markets.

Entrepreneurs producing food production consider that one of niche markets for Latvian exporters may be eco products because already currently customers appreciate taste qualities and naturalness of Latvian products [74]. Currently there are a lot of food producers who provide biological products – Anna Bergmans tees [27], Lauku tējas [17], chickens’ eggs, candied quince, honey [65], meat and others. Association of Latvian Biological Agriculture note that currently there are 3514 organic farms functioning in Latvia, but only 63 of them are processing enterprises. It means that it is possible to develop biological agriculture by developing its processing. Only 5% of production reaches the customer as biological production due to lack of processing [10]. The largest enterprises which process eco production are Lāči, Rīgas dzirnavnieks, Talsu piensaimnieks, Trikātas siers [23].

Other Latvian producers are trying to position themselves as producers of quality production and partners who are able respond to any requirement of client or even to any whim.

For example, Balticovo listens to requirements of customers and quickly responds to the demand providing the Swedish market with boiled eggs without shell, packed in small buckets, for Germany – eggs laid by chicken grown outdoors and for Estonia, Lithuania, Germany, Poland, Finland, Sweden – mass for omelettes etc. [9].

Entrepreneurs were asked to evaluate current state’s support activities for export promotion. The most positive evaluations were for marketing activities, especially, support for participation in international exhibitions. In this way small enterprises with limited finances and less experience of participation in exhibitions are supported financially and provided assistance in fulfilling the necessary documentation. It is very important for small enterprises that they can participate at a common Latvian stand and therefore be noticed by clients. It is very expensive for small enterprises to participate on their own being able to afford only small exhibition space and thereby risk not being noticed by clients at the exhibition.

In some situations assistance provided by LIAA and Latvian Export Council in finding partners [26] and trade missions were assessed very positively, but sometimes these activities were assessed just on the contrary. It is possible to find the opinions of entrepreneurs on LIAA’s homepage. Some opinions published in the media are very positive about support making network, but entrepreneurs noted that these activities are very superficial and don’t give the expected result. LIAA offered a list of contacts for some entrepreneurs, but they consider that it was difficult to select necessary contacts from this list. Consequently entrepreneurs decided to find contacts related to their needs themselves in different electronic catalogues.

Entrepreneurs believe that they are not aware of all export promotion provided by the state and know only some activities. The most mentioned activities for export promotion were consultations; support for participation in international exhibitions; support in search for partners; international missions.

Some of entrepreneurs believe that direct state’s activities for export support are not necessary at all and they see the role of state in improvement of the business macro environment.

Main conclusions

The main task of the government has to be the improvement of business environment (reduction of taxes, energy tariffs and minimum salary etc.). The state’s indirect support (forming and maintenance of stable business macro environment; training of highly qualified specialists, development of infrastructure etc.) of export is more important than a rather wide range of direct activities about which only a part of entrepreneurs were informed. Unpredictable changes of taxes and tariffs are one of the most hindering factors raising prices of production and thereby making them uncompetitive.
Government’s support for export is divided and lacks good coordination in Latvia. It is possible to observe ineffective use of resources in the institutional structure for export promotion: responsibilities overlap (Ministry of Foreign Affairs and LIAA; Council of Latvian Foreign Representative Coordination and LIAA; associations of industries and LIAA).

There is a very wide range of export promotion activities in Latvia, but nobody evaluates their effectiveness. Activities for export promotion are not aimed at priority industries or goods. The most positive activity (entrepreneurs’ opinion) is support for participation in international exhibitions.

Main problems entrepreneurs face, when starting export are:

- Lack of full information about foreign markets;
- Difficulty in finding appropriate partners;
- Costs (for product's improvement, packaging, transport);
- Increasing production capacity etc.

One of the problems indicated by entrepreneurs who export to other countries is small quantity of production. To solve this problem it is necessary to find appropriate size of partners abroad. Other solution (preferable) is cooperation between small producers.

It is possible to acquire the knowledge (languages, culture of other countries, foreign markets, products, marketing strategies) and skills (sales, communication, etc.) necessary for entrepreneurs to export goods through different forms and levels (from self-education to studies in higher education institutions). Entrepreneurs have got good export experience themselves and every individual case of export (different products to different countries) is specific, and it is necessary to organise courses for entrepreneurs where they can learn from each other’s experience (creative classes).

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Acknowledgement

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DETERMINATION OF THE TRANSIT POTENTIAL OF LATVIA IN THE TRADE BETWEEN TURKEY AND THE EU

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Abstract  
Transit has been and remains a priority sector of the economy of Latvia, since the majority of goods transported by rail, road and sea transport - it is a transit cargo. Given the level of trade with Turkey is traditionally oriented towards the Western European market and more than half of its foreign trade turnover accounted for the EU Member States, further development of the Latvian transit sector, as well as economic and partnership relations between Latvia and Turkey would contribute to an increase in turnover through Latvia. To determine the transit potential of Latvia in the trade between Turkey and the EU is the purpose of this study. To achieve this goal in the planned analysis of the foreign relations of Turkey with the EU, to identify the most important direction of trade between Turkey and the EU countries in terms of possible transit through Latvia and consider potential prospects of transit development in Latvia.

Introduction  
One of the priority directions of the national economy of Latvia is to ensure stable growth of the volume of transit cargo. That is why significant investments are made in the transportation infrastructure of ports and highways, and railways, serving the flow of transit. In addition, transit development directly depends on external economic relations with various countries.  

Given that the European Union have an important and stable place in Turkey's external trade, as well as Turkey's intention to significantly increase export volumes to these countries, further development of partnership between Latvia and Turkey would favour the increase in freight turnover through Latvia. The aim of the present article is to determine the transit potential of Latvia in the trade between Turkey and the EU.

To achieve the aim, *the tasks* can be formulated as follows:

1. To identify the most important, in terms of possible transit through Latvia, directions (countries) and volumes of trade between Turkey and the EU countries.
2. To analyse volumes of import/export freight traffic in Turkey by mode of transport.
3. To analyse possible transport routes of export/import freight traffic and evaluate them in terms of possible transit through Latvia.

The study was carried out within the bounds of project: "Potentials for Latvian-Turkish cooperation on the fields of economic development and trade: feasibility of transport routes and Latvian transit capability", developed by request of the RISEBA management and Turkish Embassy in Latvia.

The article is divided in two sections. The first section presents the analysis of Turkey’s export and import volumes and determines areas, where Latvia could be considered as a transit country that allows making estimation of the possible transit volumes through Latvia. The second section presents the analysis of Turkey’s export and import freight traffic by mode of transport and the study of trade routes from Turkey to the EU, selected as prioritised in terms of possible transit through Latvia.

During the study, interviews with experts of companies engaged in cargo transportation and dispatcher services were conducted.
Determination of possible transit volumes through Latvia in trade between Turkey and the EU countries

According to Turkish Statistical Institute (TURKSTAT), Turkey in 2009, imported goods from 233 countries and has exported its products to 239 countries. To identify the most important, in terms of possible transit through Latvia, directions of trade between Turkey and the EU countries, countries were ranked by the volume of export and import deliveries. Afterwards, a number of countries were selected that could use Latvian transport routes by implementing the trade cooperation initiative with Turkey (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Country</th>
<th>Imports to Turkey by countries</th>
<th>Exports from Turkey by countries</th>
<th>Exports + Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>1 890 994</td>
<td>1 922 782</td>
<td>1,017</td>
</tr>
<tr>
<td>Finland</td>
<td>795 959</td>
<td>1 115 496</td>
<td>1,401</td>
</tr>
<tr>
<td>Estonia</td>
<td>102 011</td>
<td>146 192</td>
<td>1,433</td>
</tr>
<tr>
<td>Sum</td>
<td>2 788 964</td>
<td>3 184 471</td>
<td>1,142</td>
</tr>
</tbody>
</table>

<table>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>748 396</td>
<td>947 363</td>
<td>1,266</td>
</tr>
<tr>
<td>Estonia</td>
<td>105 984</td>
<td>90 535</td>
<td>0,854</td>
</tr>
<tr>
<td>Finland</td>
<td>196 622</td>
<td>296 093</td>
<td>1,506</td>
</tr>
<tr>
<td>Sum</td>
<td>1 051 002</td>
<td>1 333 991</td>
<td>1,269</td>
</tr>
</tbody>
</table>

Source: Turkish Statistical Institute [1]

As can be seen from Table 1, volumes of freight transportation, feasible for Latvia, under export or import deliveries between Turkey and the selected countries (Sweden, Finland and Estonia) - are significant. In 2010, volumes of imported goods from these countries to Turkey totalled over 3 184 mln.US dollars, and exported - over 1 334 mln.US dollars. The total US dollar amount of export-import deliveries in 2010 increased by 17.7%, to more than 4 518 mln.US dollars.

Determination of the transit potential of Latvia in the trade between Turkey and EU

1. Analysis of possible transit routes

To evaluate possible transit routes through Latvia, it is necessary to identify types of transport used to export/import traffic in Turkey.

According to the Turkish Statistical Institute, the majority of imported and exported goods in Turkey are delivered by sea and by road. Dynamics of shares by mode of transport in 2000 - 2010 for import and export traffic is shown in Figure 1.

Figure 1. Dynamics of shares distribution by mode of transport 2000 - 2010 for import and export traffic

Source: Turkish Statistical Institute [1]

Figure 1 describes the structure of transportation of the last ten years - it remains unchanged, the main means of transport are sea and road transport, although it should be noted that the volume of transported
goods has increased significantly in absolute expression. Thus, the volume of imported goods transported by sea in 2010 was 112,599 mln. US dollars, and exports – 58,791 mln. US dollars, which increased more than 4 times in comparison to 2000. The volume of imported goods transported by road has increased 2.31 times and accounted for – 42,441 mln. US dollars in 2010, transportation of exported goods increased 3.83 times to total – 45,988 mln. US dollars. The volume of imported and exported goods transported by rail, for the period 2000 - 2010 increased more than 10 times to total – 2,455 and 993 mln. US dollars in 2010, respectively. The share of this mode of transport, both in export and import traffic remained low - around 1% (see Figure 2).

![Import and export traffic distribution](image)

**Figure 2.** Distribution of shares by mode of transport on import and export traffic in 2010 [1]

Over a period 2000 - 2010, the proportion of goods imported/exported by air increased 2.95 and 3.29 times respectively and reached the volume of imported goods – 17,410 mln. US dollars, and exported – 7,688 mln. US dollars.

2. **Analysis of possible transit through Latvia**

   **Shipping/ sea traffic**

   According to the data of Central Statistical Bureau of Latvia (LR CSB), 40% of all cargoes in 2009 were transported by sea, in absolute expression totalling to 61,980 tons [2]. The sea route from Turkey to the EU is shown in Figure 3 [3].

![Sea route from Turkey to EU](image)

**Figure 3.** Sea routs from Turkey to Sweden, Finland and Estonia [3]

As pointed out by experts, freight ships from Turkey follow to one of the major ports (Rotterdam, Hamburg, Antwerpen, Bremerhaven), where cargo is loaded to feeder vessels with further delivery to smaller ports. Consequently, further cargo is shipped to its destination, and there is no need to stop at ports of Latvia.
Cargo traffic by road

Under LR CSB data, in 2009 – 37 820 thsd. tonnes of cargo has been transported through Latvia, totalling to 25% of all transported cargo [2]. The dynamics of domestic and international traffic is reflected in Figure 4, which shows that domestic traffic makes up a significant share of all freight traffic by road, in 2009 - 84% and 16% is the share of international traffic, respectively.

The decline in the volume of transported cargo with the onset of economic crisis in 2007 can be distinctly traced on the diagram (see Figure 4).

Figure 4. The dynamics of domestic and international cargo traffic by road from 2000 to 2009, thsd.t [2]

Reduction of freight traffic volumes continued in 2009. To assess the situation of international road traffic in the market, the diagram of changes in the volume of transported cargo in international road traffic has been created (see Figure 5).

Figure 5. Transported cargo volume changes in international cargo traffic by road in 2009 [4]
The diagram (Figure 5) discloses that the volume of transported international cargo traffic in 2009 between Latvia and other countries dropped by 38%, which is a significant decrease in comparison with other countries.

In accordance with Latvian State Roads statistics as of the 1st of January 2011 Latvia’s total state road network is 20 150 104 km. State average road network density is 0.312 km per 1 km2 [6]. To evaluate the possibility of increasing transit traffic on the roads of Latvia, the intensity of roads usage in Latvia and the EU countries was calculated (see Figure 6).

![Goods transport by road 2009](image)

**Figure 6.** Intensity of road use in the EU countries in 2009, thsd.t/km [5], [7]

This diagram reflects that 1 km of Latvian roads accounted for 18 tons of cargo, which is the lowest compared with other EU countries; therefore, it is possible to increase the intensity of road traffic as the need arises.

Figure 7 represents the route of road freight traffic from Turkey to Scandinavia, Estonia and other EU countries.

![Cargo traffic by road from Turkey to Scandinavian countries and Estonia](image)

**Figure 7.** Cargo traffic by road from Turkey to Scandinavian countries and Estonia [10]

The map above (see Figure 7) illustrates that delivery of cargo from Turkey to the EU countries is carried out through the EU territory, owing to Turkey’s Customs Union (CU) with the European Union (EU) (since 1996), i.e. absence of customs duties and quotas on supply of goods when trading with the EU countries. Hence, transit deliveries through Latvia could rise only with an increase of delivery volumes.
between Estonia and Turkey. But because of the substantial excess in cost of the road freight traffic, in comparison, for example, with sea transport, and considerable distance between Turkey and Estonia, the use of this mode of transport in trade relations between Turkey and Estonia is not economically profitable. This was also confirmed by experts engaged into cargo transportation by road.

**Cargo traffic by rail**

As follows from LR CSB data, in 2009 35% of all freights or 53 679 thousand tons were transported to Latvia by rail [2]. The dynamics of domestic and international traffic are reflected in Figure 8. As can be seen from the diagram, international transportation is many times greater than domestic, the share in total traffic volume by rail in 2009 was more than 97% (52 380 thsd.t.), domestic, shipments slightly exceeded 2% respectively (1 299 thsd.t.).

![Figure 8. The dynamics of domestic and international transportation by rail from 2000 to 2009, thsd.t [2]](image)

If we analyse the composition of international traffic from 2000 to 2009 (see Figure 9), then change in correlation of international and transit traffic after 2002 can be noted, this is due to changes in methodology in compliance with EU definitions. Prior to 2003 freight transit also included freight transportation to the ports of Latvia.

![Figure 9. The structure of international transportation by rail from 2000 to 2009, thsd.t [2]](image)

According to the EU methodology, the definition of freight transport by rail has been changed and transit implies rail transport through the respective country without unloading or loading operations. Henceforward freight transportation from other countries to Latvian ports will be looked upon as the...
transport of imported goods but from Latvian ports to other countries - as the transport of exported goods. The data of export, import and transit traffic since 2003 are therefore not comparable with the data of previous years [2].

Figure 9 indicates that the biggest share in international freight transportation is given to transportation of imported goods.

If we analyse changes in international traffic for 2009, the significant decline in transferred cargo volumes can be observed in almost all EU countries, thus, international cargo transfers in Latvia have declined by 17% in 2009 (See Figure 10). Assessment of the railway use intensity in Latvia exposed that every kilometre of the railway accounts 28 tons of goods transported, which is one of the highest among EU countries, pointing to a quite high workload of railroad (see Figure 11).

![Figure 10. Changes in volume of transported cargo in international transportation by rail for 2009 [8]](image1)

![Figure 11. Intensity of railroad use in the EU countries 2009, thsd.t./km [5]](image2)
Looking at the routes of international railway cargo traffic (Figure 12), it is seen that the railway line, which could significantly shorten transportation of cargo by rail from south to north, comes abruptly to an end in Ukraine.

In 2009, in cooperation with Latvian, Belarusan and Estonian railway companies a container train „ZUBR” was created. It runs between the Tallinn (Estonia) - Riga (Latvia) and Minsk (Belarus). The project aimed at simplifying border crossing and customs procedures. In the near future it is intended to expand the route of the „ZUBR” container train to Ukraine and the Ukrainian ports – Odessa. Maritime Merchant Port and Illichivsk Maritime Merchant Port in Odessa region, with the possibility of further delivery of goods to Turkey and other Black Sea ports and their return to the Baltic States and Scandinavia [13].

Conclusions

Despite rather large amounts of exported/imported cargo between Turkey and the EU countries, geographically located above Latvia, the increase in transit freight traffic through Latvia is currently hampered by a number of factors.

Firstly, sea transport, the most widely used for cargo transportation, is not able to increase the transit potential of Latvia at the moment, because of the current cargo transfer practice, when goods are disbanded into smaller consignments in major ports (Rotterdam, Hamburg, Antwerpen, Bremerhaven) and follow to its destinations.

Secondly, due to large distances and high transportation costs, freight traffic by road from Turkey to the EU countries cannot be regarded as a reserve for increase in volume of transported cargo through Latvia. Although it should be noted that the level of road load enables the traffic volume increase on roads of Latvia.

Thirdly, the realisation of the project on expansion of the route of "ZUBR" container train to Ukraine and Ukrainian ports would create a possibility to attract additional volumes of cargo transit through Latvia. But for the moment the intensity of railway use in Latvia is one of the highest among the EU countries. To be able to increase volumes of cargo transit by rail, it is therefore the right time to evaluate utilisation of this direction and make necessary arrangements to increase its capacity.

References

LATVIAN MARITIME TRANSPORT SECTOR: OPPORTUNITIES FOR LATVIAN-TURKISH COOPERATION

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Abstract  
Successful overcoming of Latvian economy from the consequences of financial and economic world crises is closely related to the enhancement of national export potential and further development of national business activities on the domestic and foreign markets.

In the context mentioned Turkey as an associate member of European Union and the country with a great production potential should be considered as an attractive business partner in the field of economic, transport and trade cooperation. In the present article the experience of Latvian transport companies cooperating with Turkish entrepreneurs is analysed. The main factors encouraging and impeding further economic cooperation of both countries in the sphere of transport and transit are qualitatively assessed on the basis of the survey carried out among Latvian transport companies.

Keywords: Latvian-Turkish cooperation, maritime transport sector, EU transport policy, EU accession.

Introduction  
Success in overcoming the consequences of the financial and economic crisis in the Latvian economy depends on the increase of national export potential and further development of trade relations, both with EU partners, and with other countries. The geographical location of Latvia and the improvement in transport infrastructure play an important role in the development of national business activities on domestic and foreign markets. Therefore the necessary conditions for further economic development of the Latvian economy are the development of foreign trade relations, attraction of new economic and trade partners, and also the increase of transit through Latvia.

In this connection, Turkey, the country having large industrial potential and striving to join the European community, can be regarded as an attractive partner in the field of trade and economic cooperation not only for Latvia, but also for the Baltic region.

The present article was written within the framework of the scientific project “Potentials for Latvian – Turkish cooperation in the fields of economic development and trade: feasibility of transport routes and Latvian transit capability”, financed by the Turkish Institute of Business, Commerce and Culture (TBCCI).

Within the project research the qualitative analysis of Latvian maritime transport sector carried out with the aim to estimate the directions of the further cooperation of Latvia and Turkey on the basis of priorities and tasks of the transport policy of the EU and Latvia and to reveal existing obstacles and possibilities for Latvian - Turkish cooperation on the basis of results of the survey of representatives of Latvian transport companies delivering goods from/to Turkish by sea.

For the analysis of Latvian maritime transport sector qualitative methods of data analysis based on a questionnaire were used. The special questionnaire was developed for the assessment of obstacles and potential possibilities of Latvian-Turkish cooperation in maritime transport sector. Face-to-face interviews with the representatives of selected enterprises were conducted.

Current Latvian-Turkish cooperation in the field of sea transportation  
Cooperation in the field of transport and logistics is defined not only by the foreign trade relations between Latvia and Turkey, but also by Turkey’s desire to integrate into the Common European Transport network (Republic of Turkey Prime Ministry, 2010).
Latvia, in turn, has already integrated into the European transport system and provides transit services in transportation of passengers and cargoes (Ministry of Transport of Latvia, 2011).

Analysing the results of cooperation of both countries in the field of transport for the last three years, one can notice that the most active cooperation has developed in the areas of transportation by sea and air. In 2010 there was a substantial growth of sea transportation to Turkey, which increased more than 7 times or by 1586 thousand LVL (2257 thousand EUR) from 2009 to 2010.

In 2010, according to CSB data, there were 29 companies in Latvia conducting activity in sea and coastal freight transportation sector (NACE code - 50.20). While the wide list of companies dealing with overseas transportation in Latvia, only a few shipping companies cooperate with Turkey, carrying out cargo transportation. The main ones are MSC Latvia Ltd., Maersk Ltd., CMA-CGM Latvia Ltd., and Containerships Ltd. These are large international companies having representative offices in Latvia, carrying out forwarding and other types of services.

The two large shipping companies - MSC Latvia and Maersk cooperate with Turkey most actively and mainly dominate in this market of services.

Usually peat and wood processing products are exported from Latvia to Turkey by sea. At the same time such goods as fruit, sanitary production, building materials, clothes and textiles, industrial equipment are also imported from Turkey to Latvia by sea. Imported production is not always intended for Latvia. In many cases the cargo, which passes through the Freeport of Riga, goes further to Russia.

Transportation of cargoes from/to Latvia is carried out mainly through Turkish ports such as Istanbul, Izmir, Gemlik and Tuzla.

In Latvia cargo transportation is carried out basically through the Freeport of Riga.

It is necessary to point out that cargoes are not delivered directly from Turkish ports to Latvia. Cargoes usually pass through large European ports, such as Rotterdam, Hamburg, Bremerhaven or Antwerp, where cargo is taken from large ships to feeder ships, and then proceeds to Latvia.

Transportation of cargoes between Latvia and Turkey is basically carried out by containers. It is necessary to specify that transportation by containers develops very fast both in Turkey and in Latvia (see Figure 1). According to the World Bank, the volume of container transportation grew rapidly in the ports of Turkey until 2008 and, despite recession, grew by 13,3% in 2009, when the number of containers transported reached more than 4.5 mln TEU.

In Latvia, according to the data from the Ministry of Transport and Communications, the volume of cargo transported in containers also increased during the period 2000 to 2010 and reached 116 thousand TEU in 2010, which was 187 % more than in 2000 (Ministry of Transport of Latvia, 2011).

![Figure 1. Growth in container port traffic in Turkey and Latvia, TEU (2000=100%)](source: World Bank data, 2011; Ministry of Transport of Latvia, 2011)

It is necessary to mention that sea cargo transportation is the basic mode of export and import of cargo in Turkey. According to the Turkish Institute of Statistics, in 2010 the shares of exported and imported cargoes by sea accounted for 52% and 61% in the total amounts of export and import. In terms of value, the imported and exported cargoes transported by sea increased more than 4 times compared with 2000 (Turkish Statistical Institute, 2011).
The general development of foreign trade communications, the desire of Turkey to increase volumes of export to EU and Scandinavian countries, and a number of advantages in trade with Latvia can promote further cooperation between Latvia and Turkey in the field of sea transportation.

Latvia has three main twelve month ice-free ports as Ventspils, Riga and Liepaja. Besides, Latvia has a well-developed transport infrastructure and the necessary equipment for processing various types of cargo (Webpage “Transit Latvia”, 2011). The desire to cooperate with Latvia stresses also the fact that during their visit to Latvia (May, 2011) the Turkish delegation led by Vice State Secretary of the Ministry of Transport and Communications of Turkey, visited the Freeport of Riga. They noted that there is great opportunity for cooperation between Turkey and the Freeport of Riga and agreed to work out a specific plan of cooperation (Freeport of Riga, 2011).

**Involvement of Turkey in implementation of EU Maritime transport policy**

Development of the transport sector contributes significantly to the development of every national economy. However strengthening cooperation between different countries in the transport sector can make them economically stronger and politically more stable. It would also help them to align differences in the economic costs, competitiveness and the social agenda (EC White Paper, 2011). The transport industry itself represents an important part of the economy: in the EU it directly employs around 10 million people and accounts for about 5% of GDP.

The present EU transport policy fosters the further cooperation between EU member states and EU enlargement countries (such as Turkey, Croatia, Macedonia and Montenegro) in EU’s neighbouring regions, focusing on the creation of a Single European Transport Area having the aim of “reducing the time and resources spent on transportation of goods and services” (EC “The EU and its neighboring regions…”, 2011).

New transport patterns must emerge by which larger volumes of freight can be carried jointly to their destination by the most efficient combination of transport modes. This implies greater use of road, rail and air transport for freight, developing multi-modal solutions relying on waterborne and rail modes for long-hauls.

It is important to stress that closer integration between the transport markets of the EU and those of the enlargement and neighbouring countries can make transport connections faster, cheaper and more efficient. Prospects for closer market integration will rely on the ability and readiness of neighbouring and enlargement countries to move towards standards equivalent to those applied in the EU in areas, like safety, security, environmental protection and worker health and safety.

At the same time further integration will be carried out as part of the enlargement strategy and in the context of accession negotiations. The EU assists the enlargement countries in their alignment with the EU *acquis* to create appropriate conditions for the integration of transport markets.

The EU will continue to promote liberalisation of maritime transports services. A “Blue Belt” in the seas around Europe shall simplify the formalities for ships travelling between EU ports. This applies in particular to ongoing efforts to create a free trade area in the Mediterranean, including the freedom to provide maritime transport services.

Cooperation with the neighbouring and enlargement countries should avoid potential distortions related to the maintenance of EU and international requirements in maritime safety, security and environmental protection. For this purpose the countries should ratify and properly implement international convention in the fields mentioned as well as cooperate actively in the International Maritime Organisation (IMO). For instance, Turkey has been a member of the IMO since 1958, but Latvia joined only in 1993.

Turkey as an IMO member and one of the five major ship recycling nations in the world, has signed, subject to ratification, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships in 2009. The Convention is aimed at ensuring that ships, when being recycled after reaching the end of their operational lives; do not pose any unnecessary risk to human health and safety or to the environment (International Maritime Organisation, 2009).

In order to enhance maritime safety, security and protection of the environment the EU will continue technical assistance to the neighbour countries through the regional project SAFEMED and extend the mandate of European Maritime Safety Agency (ESMA) to provide different types of technical assistance.

Currently Turkey is one of the seven beneficiary countries of such support. Support actions include trainings on issues related to EU maritime legislation, information days in participating countries, exchange of expertise, expert visits and other technical assistance activities based on requests of the beneficiary countries.
There are no fees associated with the participation at EMSA training courses and the number of participants who are fully reimbursed by EMSA varies from country to country depending on their different interests in the maritime sector.

Further ad hoc assistance is provided by the European Commission in the implementation and monitoring of specific EU funded projects for EU neighbouring countries, such as SAFEMED II on the development of Euro-Mediterranean co-operation in the field of maritime safety and security, prevention of pollution from ships and marine environmental issues.

Between September and November 2010, the SAFEMED II Project organised three national training sessions for Port State Control Officers (PSCOs, who are dealing with the inspection of foreign-flagged ships in the ports of a State) from Egypt, Morocco and Turkey. These training sessions were delivered again by EMSA.

The three Mediterranean countries were eligible for this training as during the last few years they benefited from an EU-financed twinning program. During these training sessions, national PSCOs carried out several PSC inspections on board ships in Alexandria, Casablanca and Izmir respectively, led by EMSA officers and PSCO tutors from Cyprus, France, Italy and Malta.

Following this training, PSCOs in the three countries are in a better position to target sub-standard ships and improve the efficiency of PSC inspections. This will enhance maritime safety and security, prevent marine pollution by ships, and ensure that the working and living conditions on board ships adhere to minimum standards (Webapge of Safemed project, 2010).

In order to improve implementation of Flag State responsibilities in neighbouring countries, the blacklisted countries (listed by the Paris Memorandum of Understanding on Port State Control, MoU) should be encouraged to get benefits by applying for the IMO Member State Audit Scheme. The IMO audit is currently voluntary, but will become mandatory from 2014.

Since 2010 the EU-funded project SAFEMED II has delivered national workshops on the Voluntary IMO Member State Audit Scheme (VIMSAS) in three states: Jordan, Israel and Turkey (Webapge of Safemed project, 2010).

In 2007 Turkey moved from the “Black List” to the “Grey List”. The statistics of the Paris MoU, which aims at eliminating the operation of sub-standard ships through a harmonised system of Port State Control, highlighted the significant outcomes achieved by the project. According to the statistics, in 2001, about 25% of the Turkish fleet (211 ships) were detained at European ports, while in 2006 the share of detained Turkish ships was reduced to 7% (43 ships) (Webpage of “Turkish Maritime”, 2006). But according to commission staff working document “Turkey 2010, progress report” (EC Turkey Progress report, 2010) the detention rate of Turkish vessels was 4.2% in 2009 (5.6% during the first half of 2010) compared to 2.2% for the EU average in 2009.

Turkey has been on the white list of the Paris Memorandum of Understanding since 2009. Alignment in the maritime safety area is at a good level but the third EU Maritime Package adopted on March 11, 2009 amends some of the legislation with which Turkey has already aligned.

Seafarers of the neighbouring countries that comply with the applicable international standards (International Convention on Standards of Training, Certification and Watch keeping, STCW, for Seafarers) may work on EU ships. At the request of EU Member States and with support of EMSA, the Commission assesses seafarer certification procedures and training establishments in the neighbouring countries. Turkish regulation on seafarers was amended on 28 May 2010: graduates of the military navy schools are required to complete training and take the seafarer exam in accordance with the Convention on STCW (EC Turkey Progress report, 2010).

In the field of Turkish maritime transport according to commission staff working document (EC Turkey Progress report, 2010), some progress can be noticed, particularly in the strengthening of institutional capacity.

The under-secretariat for maritime affairs (UMA - the only institution dealing with issues related with maritime affairs in Turkey) has prepared a pre-accession sector strategy and identified priority policy areas for short-term actions.

The directorate general for coastal safety and salvage operations established a long-range identification and tracking system (LRIT) and the Turkish national LRIT data centre integrated with the International Maritime Organisation (IMO) and the International Mobile Satellite Organisation (IMSO).

Also a national assistance level, search and rescue automation system called Yakamos was put into operation in October 2009. These investments substantially enhanced UMA’s technical capacity for monitoring, pollution estimation and integrated planning in coastal zones.

Vessel traffic monitoring information systems (VTMIS) for the ports of Izmıt, İzmir, Mersin and İskenderun are being installed. UMA also initiated a comprehensive annual training programme on oil
pollution preparedness and emergency response. However, the actual physical capacity for pollution prevention and emergency response is limited.

The regulation on reception of waste from ships and waste control was amended and specific references to Marpol Annexes (International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978) were made in relation to the definition of waste. Turkey became a party to protocol on limitation of liability for maritime claims (LLMC 1996). The UMA issued an administrative instruction to comply with the anti-fouling systems convention while the ratification process is ongoing.

However there was no progress in becoming a party to SOLAS-78 and SOLAS-88 (International Convention for the Safety of Life at Sea), the Convention on facilitation of international maritime traffic (FAL), the International Convention on the control of harmful anti-fouling systems on ships (AFS) and Marpol Annexes III (Regulations for the Prevention by Harmful Substances Carried by Sea in Packaged Form) and IV (Regulations for the Prevention of Pollution by Sewage from Ships).

No particular development in the area of combined transport and satellite navigation can be reported (EC Turkey Progress report, 2010).

In conclusion it is important to stress that while legislative alignment of the Turkish maritime sector has reached an advanced level, no progress has been made on becoming a party to international conventions. The implementation capacity is limited, particularly for prevention of pollution and emergency response in the maritime area.

**Latvian maritime transport policies relevant to Latvian-Turkish cooperation**

The transport policy of Latvia defines the prospect of development of transport sector and is developed according to the European transport policy.

The overall objective of the national transport policy formulated in the Transport Development Guidelines for 2007-2013, is the creation of a qualitative and competitive transport infrastructure integrated into the transport system of Eurasia, environment for commercial activity, providing safety of transport and accessibility services of transit, logistics and public transport.

The overall objective is divided into sub-objectives each of which specifies main objective and shows the main directions of development of railway, air, sea, road transport of Latvia (Transport Development Guidelines 2007-2013, 2011).

The characteristic of directions of development of Latvian sea transport sectors and ports as well as the evaluation of possible cooperation between Latvia and Turkey in the frames of implementation of national maritime transport policy are presented below.

Development policy of sea transport of Latvia, is based on the International Maritime Organisation principles (IMO) and worked out regarding the international requirements for navigation and the EU Transport policy (Ministry of Transport of Latvia, 2011).

The main principles of development of transport for 2007-2013 (elaborated in Transport Development Guidelines for 2007-2013) comprise the following goals and objectives connected with sea transportation and the activities of ports:

- Safety of sea transport according to the requirements of international standards;
- Increase in exports of transport services and logistics to achieve more intensive growth of goods turnover in comparison with other ports in competing countries;
- Providing carrying capacity of ports corresponding to demand, as well as rendering competitive services in ports and at stages of cargo transportation to ports (in a whole transport chain).

The Maritime Department of the Ministry of Transport and Communication works out and coordinates implementation of the policy and legislative acts in the field of sea transportation. It also cooperates with the state joint stock company “Maritime Administration of Latvia“ whose aim is to promote solutions for state objectives, as well as the safety of navigation and protection of the environment.

State policy in the field of development of ports and port activity is coordinated by the Council of ports, transit and logistics of Latvia. On December 17th, 2008, it confirmed the Program of Development of Latvian Ports (2008-2013). The goal of the document is the creation of developed ports fitting to international standards, the ports which could enter the system of united transcontinental multimodal transport corridors, offering services with high additional cost and dynamically increasing volumes of processed cargoes, providing top-quality service to passengers. Implementation of the goal is provided by the Ministry of Transport as well as State joint stock companies “Latvian Railway“ and “Latvian State Roads”, which perform the necessary work for improvement of the infrastructure and build new projects for the railway and motorways. The partners of implementation of the goals defined by the policy of development of ports and their activity are the following:
Local and regional government which works out development programs and planning of territories, including development of territories of existing ports as well as the needs of sea passenger transport;

Councils of ports which provide conditions for commercial activity in ports, effective and safe processing of cargoes and highly skilled service of passengers, and also manage the appropriate European Union funds;

Investors (legal and private persons), investment companies which actively participate in creation of the infrastructure of ports.

The main lines of activity for the achievement of goals and objectives defined by development policy of sea transport and ports, are presented in Table 1.

Development of relations with Turkey in the development of transport policy in the field of sea transportations can be carried out in the following directions:

- Increase of goods turnover of container transportations and transportations of the RO-RO type in Latvian ports presumably at the expense of volumes growth of transportations in/from Turkey.
- Increase of Latvian exports attractive to the Turkish commodity market, for example, soya oil, soft drinks, pharmaceuticals, bio-cosmetics etc. that will facilitate a balance of the structure of cargoes transported through Latvian ports, at the expense of share reduction of raw materials export (Webpage of “Dienas Business”, 2010).
- Creation of logistics and a distribution centre, for example, at the Riga port. It could involve Turkish entrepreneurs interested in export of production to European countries as well as allowing increasing the volume of cargoes. The above mentioned could increase the total amount of export of both countries.
- The desire of Latvia to enter "the white" list of the Paris memorandum on ship control, can require modernisation of the shipyards which might involve experienced Turkish experts in the sphere of shipbuilding (Riga Free Port, 2011).

Table 1

<table>
<thead>
<tr>
<th>Policy directions (objectives)</th>
<th>Policy measures</th>
</tr>
</thead>
</table>
| 1. Improvement of infrastructure quality | - Modernisation of ports;  
- Development of the necessary infrastructure for the Riga port, using free territories (including Kundziņsala and Krievu sala);  
- Reconstruction of the general hydraulic engineering works in large ports and transhipment ports of local importance, which are in critical technical condition;  
- Support and financing of small transport ports (Salatsgriva, Skulte, Mersrags, Roja);  
- Setting up logistics and a distribution centre for the Riga port;  
- Building of a modern port complex and cargo terminals having developed road infrastructure facilitating access to Latvian ports. |
| 2. Increase of the level of traffic safety | - Development of Latvian ports according to the EU safety requirements and protection of environment;  
- Preparation of legislation acts necessary for assistance to register ships sailing under the Latvian flag, reduce bureaucracy connected with registration;  
- According to requirements of the EU and IMO introduction of information systems of coastal automatic identification system (AIS), united Safe Sea Net and systems of identification of ships on big distances;  
- Inclusion of Latvia in "the white" list of the Paris memorandum on ship control;  
- Introduction of the seamen identification of card with personal biometric data, corresponding to the international requirements. |
| 3. Granting of accessible and qualitative services in transportation of passengers and cargoes | - Working out of new passenger lines and increasing the transportation of passengers between the Latvian ports and other ports of the Baltic sea;  
- Building of the passenger terminal for cruise ships and necessary underwater ways in the Riga port. |
| 4. Coordination with other Ministries in the sphere of education and research | - Professional skills improvement of logistics experts;  
- Preparation of qualified experts, who are required in the field of navigation;  
- Conducting market research to reveal the possibility of creating new transport and logistical services and working out offers for their use;  
- Cooperation of state, private, educational and scientific institutions in the field of use of new transport services and logistics, development of new markets. |
Methodology applied in the research

In view of the lack of information characterising real cooperation between Latvia and Turkey on the fields of transport, transit, and logistics the method of surveying experts was used developing the questionnaire for the face-to-face interviews.

The primary selection of potential respondents in the maritime transport sector occurred on the basis of unpublished data of the Central Statistical Bureau of Latvia, specially prepared for the research. The information showed the total number of Latvian enterprises conducting sea transportation. As not all the enterprises specified by CSB, made transportation to Turkey, the final list of respondents was formed directly through a poll of representatives enterprises, who agreed to participate in the survey. Finally four transportation companies have agreed to participate in the detail interviews: “MSC Latvia” Ltd., „CMA-CGM Latvia” Ltd., „DSV Transport” Ltd., and “Containerships” Ltd. Senior executives and managers mainly participated in the interviews.

For revealing the factors influencing Latvian-Turkish cooperation in the sphere of transportation of cargoes and transit, a survey of experts was made concentrating on the following questions: 1) presence of existing modes of transportation of cargoes between Latvia and Turkey; 2) specificity and cost of cargoes deliveries; 3) possibilities for expansion of transit deliveries through Latvia; 4) identification of obstacles and opportunities for cooperative development between the two countries.

Analysis of main factors impacting Latvian-Turkish cooperation in the field of sea freight transportation

According to the data from the Central Statistical Bureau of Latvia, in 2010, 39 % of all cargoes were transported by sea, which in absolute terms made 61160 thousand tons.

According to experts participating in the survey, the greatest volume of cargoes between Latvia and Turkey were transported by sea. Figure 2 depicts the general scheme of a transportation route of cargos from Latvia to Turkey, specified by the representatives of transport companies who were interviewed.

The vessels of such large international companies as MSC Latvia Ltd., Maersk, CMA-CGM Latvia Ltd. and Containerships Ltd. actively make transportation in the direction specified in Figure 2. All these companies carry cargoes according to certain schedules and, as a rule, on the fixed routes. The frequency of sailings is defined by demand. Shipments are either made by carriers (the above mentioned companies), or by delivery of cargoes ordered by the companies-forwarding agents (for example in case of DSV Transport Ltd.).

The majority of these companies offer a full spectrum of services, including delivery, cargo handling works in ports, and also logistical services. Representatives of the company “Containerships” Ltd stated that in order to deliver cargoes to port or from port, as well as to perform cargo handling works, carriers can cooperate with other companies. Large forwarding companies have their own trucks that allow them to make DDU (“from door to door”) and DDP transportation (“with customs control and insurance”)

In characterising cargo transportation from Latvia to Turkey, respondents specified that at the Port of Riga, cargo is loaded on feeder vessels, having load-carrying capacity up to 3 000 TEU, which then proceed to one of large European ports (Rotterdam, Hamburg, Antwerp, or Bremerhaven). There the cargo is transferred to big container vessels (vessel line) which, in turn, go to Turkey, taking along the way, cargo from other ports. The return route of ships moving from Turkey to Europe/Latvia is similar.

Respondents of all companies stressed that mainly peat and wood are exported by sea transport from Latvia to Turkey and peat makes up the bulk of the export deliveries. Dried fruit and nuts, vegetables and fruit (frequently already processed), plumbing production and building materials, industrial equipment, furniture and textiles are imported from Turkey. It is necessary to point out that frequently each transport company specialises in transport of particular goods connected with needs of specific customers. Thus, the company MSC Latvia Ltd. delivers from Turkey, electrical equipment (including wires and cables), building materials (decorative tile and other floor coverings), food products and textiles. The company “Containerships” Ltd. imports plumbing production, building materials, agricultural machinery and fruits. The company “CMA-CGM Latvia” Ltd. imports textiles, decorative building tile and plumbing fixtures.
According to information provided by the experts, sea cargo from Latvia to Turkey is delivered within 21-25 days. The number of port calls, seasonality and sailing schedule significantly influence duration of transportation. All respondents pointed out, that sea transport is the cheapest when compared with other types of transport, despite rather long durations of cargo delivery. Thus, the cost of transportation of a 20-foot container from Latvia to Turkey with delivery “from port to port”, plus additional costs for delivery - "door to door" is 1100 - 1200 EUR.

The cost of road transportation can be twice as much as sea transportation. As clarified by one of interviewer, freight cost depends on the season. For example, the total cost of delivery "from door to door" from Riga to Istanbul of one TEU peat in January will cost about 2500 EUR, and in May, it will cost less than 900 EUR. Each company has its own structure for the cost of transportation of goods, but the main components of transport costs and their approximate structure are presented in Table 2.

Table 2

<table>
<thead>
<tr>
<th>No.</th>
<th>Item of expenses</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fuel</td>
<td>55-60%</td>
</tr>
<tr>
<td>2.</td>
<td>Expenses at terminals (cargo handling works) and accompanying transport (road transport or railway)</td>
<td>30%</td>
</tr>
<tr>
<td>3.</td>
<td>Fees of ports and expenses for freight</td>
<td>5-9 %</td>
</tr>
<tr>
<td>4.</td>
<td>Administrative expenses</td>
<td>5-6%</td>
</tr>
</tbody>
</table>

Source: based on the survey results

Expenses in road and rail transportation are included in the list of expenses of delivery since the majority of the shipping companies specified that they render a necessary spectrum of services to the client, including DDU and DDP transportation. Expenses in railway or road transport, and also cargo handling works, according to experts, can be 30% of the total cost of transportation. The greatest share of cost of transportation is expenses on fuel for the ships, accounting for about 55-60%.

The representative of the company “CMA-CGM Latvia” Ltd. pointed out that regarding compensation for fluctuation (instability) of fuel prices, an additional payment, the so-called BAF (Bunker Adjustment Factor), which varies in size, is taken from the consignor. Till 2008 the size BAF was defined by the Conference of carriers. Since 2008 the carriers themselves can establish BAF for each route; however their decisions are strictly supervised by the European Commission in order to avoid tacit collusions in the market of transport services.
Estimating transit transportation through Latvian ports, respondents stressed that at the moment, transit accounts for about 90% of all sea transportation. Approximately 10% of transported cargoes are destined for the internal market, and the bulk of cargo comes from the CIS countries, mostly from Russia.

A number of respondents specified that transit shipments from Turkey through Latvia were destined mainly for Russia. The Port of Riga forwards part of Turkish cargoes to Moscow and other cities of Russia such as the Port of St.-Petersburg which has limited possibilities for further expansion, and its transport infrastructure does not allow the processing of the whole volume of cargoes arriving. This fact often leads to the demurrage of vessels and, hence, increases the total cost of transportation. Delivery of Turkish cargoes from the Port of Riga is conducted by road or rail transport, depending on the type of cargo and the destination.

The representative of the company “CMA-CGM Latvia” Ltd expressed the opinion that in future, Latvia could essentially increase transit at the expense of trade between Turkey and Russia. At the same time some experts don't see a real possibility of increase in transit for the further development of trade of Turkey with Scandinavian countries as the cargoes delivered from Turkey to large ports of Europe go further to their direct destinations without calling in at the Latvian ports. Now they do not see the economic preconditions for changing this practice.

According to respondents, despite the wide use of international sea transport, the transportation of cargoes between Latvia and Turkey is complicated by a number of factors.

One of the factors that makes cooperation in sea transportation complicated is the fairly extended sea route between countries, due to the geographical location of the countries which increases time and cost of delivery of cargoes.

Also, technical characteristics of moorings in the Riga Free port, limiting the sizes of vessels, which can call in the port, makes direct deliveries on such vessels from Latvia to Turkey economically unviable (vessels maximum draft at mooring – 12.5 meters, maximum permeable length of vessels coming into the water area is 298 meters, width - 33 meters).

Characterising obstacles to development of cooperation and trade relations between Latvia and Turkey, all respondents specified the limited capacity of the Latvian market, which has low demand for the Turkish goods (and, as consequence, for sea transportation) and on the necessity of using containers for general cargoes, especially, from Turkey to Latvia.

A number of respondents pointed out the strong competition among companies which carry out sea transportation. Due to such strong competition, it is frequently difficult to define precisely the market share of sea transportation for each company as the market share can essentially vary in the frames of a small period of time (a month or even a week) depending on volumes of orders and the number of clients.

Respondents also stressed the problems of conducting business on the territory of the Free Port of Riga. For example, the introduction of unplanned restrictions in the use of infrastructure of the port and rendering services, refusal to sign new contracts with new companies, which have the intention to render various services in the port, the desire of port management to control the business of others, and, at times, the wish of port management to participate in their business activities not only reduces the efficiency of the performance of the Port of Riga as a whole, but also blocks its development. However, through the Port of Riga, the main traffic of goods between Latvia and Turkey goes, the above mentioned problems can interfere in further development of trade relations between the two countries.

Another factor negatively influencing development of cooperation which a number of respondents pointed out, is the instability of the tax system of Latvia, and, especially tax rate increases, which cause price rises in services, cost of transport and logistical companies and, hence, reduces their competitiveness in comparison, for example, with Lithuanian business.

As a deterrent many respondents pointed out the insufficient exchange of information between actors of the market of sea transportation and the organisations, regulating this market. The majority of respondents stressed the absence of any real cooperation with the Latvian Ministry of Transport, or other national ministries and professional associations.

In the interview respondents of the companies also evaluated the prospects and possibilities of stimulation of further cooperation with Turkey.

The representative of the forwarding company “DSV Transport” Ltd. specified the necessity of active participation in international exhibitions and business forums, for the purpose of carrying out advertising actions by enterprises involved in Latvian-Turkish cooperation for promotion of goods in the markets of both countries and the expansion of demand.

Many respondents pointed out that growth of efficiency of sea transportation and logistical services including the companies, which provide delivery of cargoes to Turkey, depends on the harmonious organisation of management of ports, improvement in infrastructure of ports and development of business...
The necessity of change in the attitude of port management to the companies working on its territory, namely providing favourable conditions for business activities and creation of real competitive environment was specified.

In the opinion of experts a real-life possibility of development of relations between Latvia and Turkey is the expansion of transit deliveries through the territory of Latvia from Turkey to the Russian market. In comparison with demand of the Latvian market, the volumes of the Russian - Turkish commodity turnover are very large. For example, in 2010, Russia took 2nd place in the volume of imports to Turkey (Ls 11,4 bln or 16,3 bln EUR), and on export volume – 3rd place (Ls 2,5 bln or 3,5 bln EUR) (Eurostat, 2011).

In the opinion of respondents, part of the Russian cargoes already goes through the Latvian ports. Therefore in increasing volumes of trade between Russia and Turkey, there is a possibility of growth in transit deliveries through Latvia as well.

Experts expressed opinions on possibility of increasing transit through Latvian ports, and implementing the projects connected with multimodal transportations. However such projects should be carried out at the state and interstate levels, under conditions of real integration of large Latvian ports into the general transport system of the country (Дубков, 2011). Now, experts also stress sufficient apartness of each Latvian port and competition among them. Therefore coordination of major directions of port development will create conditions for development of multimodal systems of cargo transportation which will also involve trade flows between Latvia and Turkey.

Conclusions

The results of the research provide an opportunity to draw the following conclusions:

1. The largest share of export and import deliveries between Latvia and Turkey is held by sea transport that might be attributed to lower delivery costs (compared with other transportation modes - road, rail or air) and the ability to tranship large amounts of cargos. Transshipment of goods between Latvia and Turkey is mainly carried out by means of container carriage. The main enterprises specialising in transportation of goods between Latvia and Turkey are the major international shipping companies such as Maersk, MSC, CMA-CGM and Containership Ltd, that have representative bodies in Latvia. Other transportation companies of Latvia provide mainly freight forwarding and related services in the field of maritime transport.

2. Practical implementation of European transport policy provides conditions for strengthening of cooperation between Latvia and Turkey in the sphere of cargo transportation and trade, as it facilitates the creation of a Single European Transport Space with enlargement countries and the EU’s neighbouring countries and regions with the aim to eliminate barriers and reduce the time and resources required for transportation of goods and services. In this regard, particular attention should be paid to the development of transport infrastructure and efficient combination of different transport modes. This implies greater use of road, rail and air transport for freight, developing the multimodal solutions relying on waterborne and rail modes for long-hauls.

3. Closer integration of transport markets should be based on the ability and willingness of the enlargement countries (particularly Turkey) to follow European standards of safety, security, environmental protection and worker health and safety. Moreover, further integration with enlargement countries should be implemented as part of the enlargement strategy and in the context of accession negotiations. The EU assists the enlargement countries in their alignment with the EU acquis to create appropriate conditions for transport market integration. Turkey has made essential progress in aligning its legislative differences to the acquis requirements within the chapter "Transport policy", in order to be the integrated part of a Single European Transport Area. However, negotiations on Turkey's EU accession in the mentioned part (chapter "Transport policy") have not been opened yet.

4. Further development of relations between Latvia and Turkey in the field of transport will depend on the demand for goods and services within both countries. Development of transport sector is largely determined by the capacity of the domestic market, the level of business activity and demand for transit services. Limited capacity of Latvian national market in terms of volumes of the consumed goods and services, as well as the availability of economically viable alternative transport routes (bypassing Latvia) for cargo transportation to Nordic countries and Russia, does not foster an increase in cargo traffic between Latvia and Turkey in future. However, business activity growth in the post-crisis period may significantly increase the freight turnover between the two countries.

5. According to experts, stability of Latvia's fiscal policy, tax rebates, promotion of Latvian goods in Turkey and the development of trade of goods with high added value might facilitate cargo flow growth. Specifically, the Ministry of Transport of Latvia should coordinate the operation of transport sector with the aim to implement an integrated approach to development of transport system based on coordination of
activities of various organisations and government bodies. Establishment of the international distribution centre for packaging and redistribution of goods in the territory of Latvia, as well as the development of overall national transport concept based on the principle "The whole territory of Latvia – a single logistics centre" would significantly increase the efficiency of the entire national transport system and the specific modes of transportation, including the ones of Turkish route.

References
THE CHANGING LANDSCAPE OF PORT GOVERNANCE: CASE OF BALTIC STATES

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Abstract
Global changes in transportation sector and technological development have outlined the recent worldwide trend towards port devolution, which, in turn, has generated researchers’ interest in studying port governance models and their implications for improving port performance. There are many measurable indicators of port performance, but not many researchers analysed how port governance models impact these indicators. Therefore this research delivers a conceptual framework which integrates various relevant port performance indicators, such as efficiency and effectiveness that could be used for a comprehensive port governance models evaluation and improvement of existing port governance models afterwards.

Aim of the study – The aim of this research is to explore changes in global economy landscape and how they have impacted port governance models worldwide, to analyse current port governance models in the Baltics, identify key challenges and propose possible solutions for sustainable port governance models and development.

Materials and methods – Theoretical scope of the paper includes international researcher’s insights on different strategic port governance models. Empirical part gives an insight into the existing models of port governance in Baltic States and worldwide. The main methods used for achieving research goals involve: theoretical – literature analysis; empirical - observation; monographic or descriptive method. Description method is based on the framework to assess congruence of the port governance models in Baltic States and the global trends on port governance.

Main results – Different port governance models within Baltic States identified and analysed in correlation with port performance components. Key challenges and proposed possible solutions for economically viable and efficient and effective model development are explored. Lithuania and Estonia, major seaports, have followed a corporatisation or commercialisation path leading to decentralised government involvement and transformed port authorities into institutions which are commercially efficient and effectively responsive to market conditions and trends. Meanwhile, port governance models in Latvia are one of the few that has not been substantially modified and improved following modern market economy and regional development trends and thus limiting port performance results.

Conclusions – This research, along with the empirical evidence provided by port authorities, leads to the conclusion that port governance decisions are based on very little or no assessment of port performance.

Keywords: port governance, shipping, logistics, port economics, reform.

Introduction
Global economic changes, technological development in transport sector and the consequent restructuring of fundamental transportation processes through advanced logistics and supply chain management highlights substantial immerses on port governance and policies. Worldwide industry replication is reforming port governance structures, aiming to enable ports to provide specialised services, integrate in even more complex supply chains, and efficiently execute both public and private responsibilities. The several distinctive variables of the increased commonality of the problems faced by international ports leads various institutions, including inter-governmental organisations like the World Bank, to recommend prototype practices that may be employed by all (World Bank, 2007). Scientists advise that public agencies, port authorities and relevant municipality, government managing bodies often apply generic solutions, distinctive from those occurring in other sectors of the economy on the basis of unique characteristics of the port sector (Notteboom, Winkelmans, 2001; Brooks and Cullinane, 2007). Port reforms, including governance models, are recent phenomenon, propelled by indirect factors such as changing economic situation and due to new technological solutions and improved processes (Blauwens, Baere, Voorde, 2005). According to Brooks (2004, 2006, 2007) scientifically proved theories, it is the existing economic situation in the shipping and logistics sector which forms the fundament for structural changes from state or municipality governed ones to more efficient modes of port governance.
Aim of the study
Provide the result of a synthesis of the literature on port governance models worldwide, port performance and insight about the existing situation in Baltic States. In order to achieve these aims, the research provides the outcome of a synthesis of the literature on port governance, port performance effectiveness and efficiency measures. Port governance models are mainly based on assessment of port performance or its effectiveness, neglecting the need for increased efficiency or port reform. This paper aims to measure port governance reform effectiveness as a trigger to port efficiency.

Materials and methods
The present paper is based on bibliometric tools, publicly available data from the Baltic ports to provide quantitative and qualitative information on port governance and its efficient and effective management. For achieving settled aims authors used research papers dealing with port economics, policy and management, the role of ports in maritime, logistics and intermodal transport networks, ports logistics functions, clustering of activities in ports, spatial developments in port regions, studies of port performance and market structures in ports. Research papers on port engineering, terminal equipment, waterfront development, port history, terminal operations management, terminal lay-out and other technical development articles were not analysed due to distinctive differences to prior research field.

From empirical standpoint the authors narrowed our scope to port governance in main European ports, especially analysing latest industry trends within Baltic Sea, Mediterranean region and Benelux, as a result of this process, 79 articles on ports governance and management were analysed and 43 ports examined.

1. Port performance correlation with port governance
Port concept as seen today has developed throughout the second half of the 20th century (UNCTAD, 1992) into four generations. Generation approach provides useful knowledge in the development of the 21st century free market trade ports or multi-purpose gateway ports, despite industry evolvement, elements of previous generations are still present at vast majority of Baltic State and other ports worldwide (Table 1).

<table>
<thead>
<tr>
<th>UNCTAD generations of ports</th>
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</thead>
<tbody>
<tr>
<td><strong>Generation</strong></td>
</tr>
<tr>
<td>First generation</td>
</tr>
<tr>
<td>Second generation</td>
</tr>
<tr>
<td>Third generation</td>
</tr>
<tr>
<td>Fourth generation</td>
</tr>
</tbody>
</table>

Source: UNCTAD (1992, 1999)

According to UCTAD, since 1980’s ports have evolved from locations where transfer of goods and temporary storage takes place into complex business hubs. In addition, the claim referring to third generation ports whereas ports have strengthened ties with town, for instance, in case of Baltic States, the state involvement also has to be noted, since ports of Klaipeda and Tallinn are 100% state owned enterprises, and ports of Latvia, Ventspils and Riga, have both mix of city and state governance foothold.

Competitiveness and sustainability of a port are not only referred to operational elements, but also depend on integration of operational, spatial and societal factors such as ecosystems and human factors. The interaction between operational, spatial and societal factors may nevertheless generate various forms of conflict which are essentially the result of conflicting dimensions between the stakeholders involved (De Langen, 2007). Treating a port as a single unit would indeed lead to partial and even wrong conclusions (Slack, 2007).

Due to significant input of port terminal operators to overhaul growth, port performance indicators are one of the triggers for changes in port governance. Notably, in 1976 UNCTAD invented two categories of
port performance: macro performance indicators quantifying aggregate port impacts on economic activity and micro performance indicators evaluating input and output ratio measurements of port operations. UNCTAD monographs deliver a range of port indicators by ratio type and category of port operations, for example, on port performance indicators included revenue per ton of cargo, capital equipment expenditure per ton of cargo, berth occupancy, turn-around time and number of gangs employed within port (UNCTAD, 1969). In a recent decade, the situation has changed dramatically. Nowadays operational efficiency of terminals is the most important factor (Heaver, 1996), as they stand as one of the key pillars of port function in transport chain and port performance indicators such as physical indicators, factor productivity indicators, economic and financial indicators (Trujillo and Nombela, 1999), normally calculated as operational deliverable to a board of port authorities and their economical impact in accordance with an overhaul port management.

Table 2

<table>
<thead>
<tr>
<th>Port</th>
<th>Cargo turnover th./tonnes</th>
<th>Total terminal capacity th./tonnes</th>
<th>Terminal capacity utilisation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventspils (LV)</td>
<td>28570</td>
<td>26640</td>
<td>24815</td>
</tr>
<tr>
<td>Klaipeda (LT)</td>
<td>29887</td>
<td>27966</td>
<td>31273</td>
</tr>
<tr>
<td>Riga (LV)</td>
<td>29566</td>
<td>29723</td>
<td>30476</td>
</tr>
</tbody>
</table>

Source: based on the authors’ analysis

Port efficiency measures pertain to physical terminal capacity utilisation, evaluated by dividing port total cargo turnover with total terminal capacity. For instance (Table 2), ports of Klaipeda and Riga are using its capacity to acceptable industry standards and port authorities should focus on different scale development plans to avoid costly vessels downtimes resulting in financial losses for cargo and ship owners, and terminal operators should seek ways how to increase terminal capacity. Eventually, both ports, Riga and Klaipeda, have enough capacity to grow cargo volumes for the next years to come, but crucial development plans of new infrastructure projects should be assessed today and implemented within the near future to avoid drop in ports efficiency and maintain customers’ satisfaction. Port of Ventspils has enough terminal capacity to at least double its existing total cargo turnover, but in line with statistics the port is facing decline in cargo turnover. Landlord port authorities leave port related commercial activities to the private sector; thereof Ventspils port authority has to strategically solve problems to stop cargo decline, stabilise existing situation and increase turnover by attracting new cargo volumes. Collective action has to be initiated in order to result in positive common benefits, port authorities are in the right institutional position to create and stimulate collective action (De Langen, 2004). Port authorities can do this by creating platforms that facilitate collective action, or by joint investment in collective action activities (Lugt, 2006).

Port terminal efficiency performance measures pertain to physical quantities of cargo loaded, shifted, moved, etc. per quantity of energy used in correlation with minimum of waste products or physical moves. Assets utilisation is the key factor to foster the greatest financial returns; the aim of improved operations is to expand the gross margin extracted, increase port competitiveness and market awareness. From the port governance perspective effectiveness is measured from accomplishment of targets or ability to accomplish them with a minimum expenditure of time and effort. Measurements of performance for efficiency focused ports benchmark financial, production and marketing activities against prior year performance and against competitor performance in order to deliver efficiency objectives (Brooks, Cullinane, 2007).

According to professor of maritime studies Koi Yu Adolf NG (2006), improved efficiency does not necessarily lead to improved competitiveness, for competitiveness is a product of effectiveness in delivering a desired services to users. Efficiency and effectiveness are related concepts, for example, if a terminal operator wishes to improve its cargo-handling efficiency so as to improve berth utilisation through faster vessel turnaround, it may also improve its effectiveness as vessel time at berth drops and the customer may be more satisfied. However, if a terminal operator improves its asset utilisation by leaving more vessels at

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13 Source: Ventspils Freeport terminal capacity from Latvian port development program 2008-2013
14 Source: Klaipeda Freeport official statistics yearbook
15 Source: Riga Freeport official statistics yearbook
anchor so as to minimise downtime, its utilisation is improved but the customer’s service expectations may not have been met. In this case efficiency has come at the expense of effectiveness. Various stakeholders may have different performance objectives in this illustration. Effectiveness is related to the objectives of those seeking it (Brooks and Pallis, 2008).

On the contrary from terminal operators effectiveness-oriented port authorities aim to be more customer-focused as stipulated by European Commission in 1997 which has put the improvement of port efficiency as the major goal of the EU port policy (Chlomoudis and Pallis, 2002). In such scenario effectiveness measures relate to how well the port authority uses its strategies, structures, and task environment to meet its mission and stated goals. If one of the goals is increased cargo throughput, value added cargo operations or profit-maximising in effectiveness-oriented port authorities, there will be a companion goal of developing and retaining those customers who generate the greatest margins, while cancelling cooperation contracts with those who are not profitable or meeting settled goals.

In conclusion, the process of evaluating port performance depends on objectives of both the port and its sustainable development from government and municipal perspective and the objectives of port authority. By linking outcomes to the objectives it may enable us to assess whether settled goals have been met. In case of dissatisfaction from either government or municipal perspective, there might be an interest in making changes to government policy or existing port governance model to meet effectiveness objectives. Port performance is a dynamic attribute, which has to be assessed on regular bases taking into account numerous external factors, such as political regime changes in consignor country or any other major events which may disturb cargo flow. Performance of the ports is a complex issue which could be measured against identified shareholders goals and ambitions or against performance of other ports, and particularly those ports which are seen as direct competitors and act within the same regional geographical boundaries and markets.

2. Changing port governance landscape

Traditionally, port authorities have assumed three typical functions: landlord, regulator and operator (Baird, 1995), which corresponds to the legal status of port authorities (Van Hooydonk, 2003). Port authorities which are distinguished as being as a landlord type ports of public nature and own the infrastructure of the port which is in most of scenarios leased out to terminal operators. Namely, in respect to “landlord ports” there are also “service or tool ports” which on the contrary owns also terminal superstructure and leases it to private service providers or terminal operators. Tool ports or comprehensive ports as often mentioned within literature (Winkelmans, 2006) can be either privately owned or in public ownership.

<table>
<thead>
<tr>
<th>Models</th>
<th>Port functions</th>
<th>Landowner</th>
<th>Regulator</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure public sector</td>
<td></td>
<td>Public sector</td>
<td>Public sector</td>
<td>Public sector</td>
</tr>
<tr>
<td>Public/private</td>
<td></td>
<td>Public sector</td>
<td>Public sector</td>
<td>Private sector</td>
</tr>
<tr>
<td>Private/public</td>
<td></td>
<td>Private sector</td>
<td>Public sector</td>
<td>Private sector</td>
</tr>
<tr>
<td>Pure private sector</td>
<td></td>
<td>Private sector</td>
<td>Private sector</td>
<td>Private sector</td>
</tr>
</tbody>
</table>

Source: Baird (1995)

Baird distinguishes four main types of port governance models (Table 3), by allocating utility cargo handling function within the port, the regulatory function and question of land ownership within the port (Baird, 1995). Usually ports are owned and managed by the public sector whether it would be directly by government departments or indirectly by public port authorities. Institutional reform of seaports by shifting from government governed entities to more enterprise-based systems, allows greater flexibility and efficiency in the market and a better response to consumer demands (Notteboom, Winkelmans, 2001). Port management reform is motivated by reasons of economic efficiency with the objective of reinforcing the port authority as an entity which reconciles private and public interests (Verhoeven, 2006). Pursuing economic efficiency is not the only element determining port reform – ports are places where social utility and private profitability are both present.

Port governance decentralisation often referred to as reform is frequently presented as “privatisation” of port authorities, however this term can be interpreted widely and therefore causes misapprehensions. Privatisation means the transfer of public assets to the private sector, in case of ports, it can encompass the whole port, a certain port service or a specific set of port operations (Notteboom, 2001). Privatisation most often refers to the bringing in of the private sector in operational matters, mainly cargo handling and
terminal operators, it is rarely used to privatising the port wholly and notably the landowner and regulatory functions (Baird, 1995).

Reforms of the landowner and regulatory functions of ports are more often a matter of corporatisation and commercialisation whereby the actual management of ports remains in public hands. These models aim to make public port authorities act on commercial criteria and make them responsive to changing market conditions (Heaver, 1995). Corporatisation introduces professional management structures and comes down to a shift from public sector organisations to autonomous companies owned by the public sector but with accounting procedures and legal requirements similar to the private sector and with very limited direct government control. In case of commercialisation, government retains control of the port organisation, but in a business-like environment with some management autonomy and accountability (Notteboom, 2001).

Port reform, whether it would be through corporatisation, commercialisation or privatisation, aims to decentralise direct government involvement and transform port authorities into institutions which are commercially efficient and effectively responsive to market conditions and trends.

<table>
<thead>
<tr>
<th>Country</th>
<th>Government level</th>
<th>Port Governance</th>
<th>Govt. direct</th>
<th>Public entity</th>
<th>Private entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Municipal/regional</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cyprus</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Estonia</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Latvia</td>
<td>National/Municipal</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lithuania</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>Municipal</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Netherlands</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Portugal</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Slovenia</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Spain</td>
<td>National</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sweden</td>
<td>Municipal</td>
<td>x</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: ESPO (2008)

The table above reveals port governance models by the example of particular countries. It shows that none of the examined countries handed over port governance and port authority’s functions in particular into the private sector explaining it with the ports’ import role in the economy. Meanwhile, the table above indicates that many of governance models have remained under the influence of national governments or local municipalities, except Latvia and partly Belgium, which uses the mixed model of national and municipal government level collaboration, where political influence is inevitable given the fact that owner or shareholder consists of government and municipality.

Regarding political influence, a scrupulous analysis should be made to assess whether the port authority follows technocratic or political management style. As it is indicated in the relevant ports, legislation which envisages that in main ports of Latvia the port board should constitute of four officials from the relevant local government or municipality and four officials from different ministries or national government. A board should act as a trigger to implement legislative changes in existing policy to move ports towards sustainable development and shift from national and municipal mixed port governance model to industry acceptable standards.

In general, port governance models reform tends to focus on retreat of direct government involvement as this is proved to create greater efficiency. From the perspective of port authorities, governance reform is essential to obtain strong and independent position to meet the challenges delivered by logistics and social environment. Governance reform schemes must be accompanied by an adequate legal framework that creates certainty about the institutional positions of port authority, whose responsibilities need to match public and commercial interests (Verhoeven, 2006). Researchers suggest that a corporatised port authority shifted from public sector organisations to autonomous companies owned by the public sector with accounting procedures and legal requirements similar to the private sector and with very limited direct government control, are the best possible option not only from economical perspective but also social and environment perspective. A good example in Baltic States is the port of Tallinn which has evolved from a traditional municipal and national port to a port which is being operated firmly independently as a limited liability company and at some point its shares were traded at the Baltic Stock Exchange (Table 5).
### Table 5

Degree of corporatisation / commercialisation in Baltic States seaports

<table>
<thead>
<tr>
<th>Country</th>
<th>Port</th>
<th>Owner</th>
<th>Legal form</th>
<th>Political board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia (EE)</td>
<td>Tallinn</td>
<td>State</td>
<td>State enterprise, LLC</td>
<td>No</td>
</tr>
<tr>
<td>Latvia (LV)</td>
<td>Riga and Ventspils</td>
<td>Self-owned</td>
<td>Public body under city and state control</td>
<td>Yes</td>
</tr>
<tr>
<td>Lithuania (LT)</td>
<td>Klaipeda</td>
<td>State</td>
<td>State enterprise, LLC</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: ESPO (2008)

On the contrary, from Port of Tallinn (EE) which has followed corporatisation model, Port of Klaipeda (LT) has implemented the similar reform scheme to the one examined in Port of Tallinn, where cargo handling has been privatised and ports have conformed to landlord model. But instead of corporatisation it has moved towards commercialisation, where government retains control of ports organisation, but in a business-like environment with some management autonomy and accountability.

Further research on the existing port governance model in Latvia would be desirable before drawing general conclusions, but following empirical evidence and internationally recognised port expert’s recommendations, it shows us that port governance system in Latvia should be re-reformed and shifted towards corporatisation model with little or no government influence on port governance. For instance, present legislation system in Latvia defines that parliament and municipal elections are each after every two years, which impacts the structure of port boards and thus consistency of decision implementation, port management directly and the political portfolio within, which, on the contrary, delivers fragmented system and is not following sustainable development trends. According to Brooks (et al., 2007), the port governance system which is fragmented between municipal and national political opponents does not allow ports to sustain long-term investment plans and is not allowing port authorities to act efficiently and effectively as possible. Therefore, in case of Latvia, there should be additional research conducted to assess whether it is efficient to reform the port according to commercialisation schemes or corporatisation ones. Following existing theories and best practices, we may conclude that existing system needs fundamental changes to implement industry standards.

**Conclusions**

This paper describes an integrated framework on port governance reform models and fundamental differences among them. The port governance reform aim is to improve the economic attractiveness of a port by integrating spatial, socio-economic, ecological and political aspects. Only by combining these pillars, the economic port development can take into account the changed demand of the port world and ports actors as well as preconditions of nature, social aspects, logistics and mobility.

Technological and economic progress as well as political culture has led to commercialisation or corporatisation of ports, implementing adjustments with different institutional framework, governance structure and aiming at financial and political autonomy from state or municipality. Namely, every seaport has its own cultural, historical and political heritage therefore there is no single governance system which suits all, nevertheless ports tend to reform their structures and move away from models with strong political governance impact, which traditionally has been key pillars influencing directly port management and strategic development. The recent researches on port governance have identified a number of different port governance configurations ranging from private and public partnership to solely municipal or national. Governments have to assess whether they have achieved their objectives that have been set for ports and to discuss if there is a need for re-reform stage to facilitate port development and meet settled goals. Certainly each port has its own uniqueness and therefore we may not generally assess that only one reform model is most efficient. But in order to do so, we have to measure port performance through efficiency and effectiveness paradigm, and associate different types of performance measurement with different modes of port governance.
References
NEW SUPPLY CHAIN CREATION FOR LOGISTICS CENTRE WORK OPTIMISATION

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Abstract
In this paper the problem of decision-making process for creation of the new supply channel of the Logistic centre was observed.

The task lies in decision-making regarding the way selection from choosing raw materials until final product creation that allows a company getting maximum profits.

This task could be solved by using the method of dynamic programming. In this case it means to make a decision for each unit individually.

The solution of the real task for Logistics centre in Latvia is observed in this paper as the numerical sample of the decision-making process for the new supply and sales channel development for the Logistics centre in order to get the maximum profit.

Keywords: decision-making, supply chain, dynamic programming.

1. Introduction
During the last years, several tendencies have been developing in the world transport area. The transport systems are going through certain transition such as acquisitions and mergers and it is evident that the number of service providers will be further reduced.

At the same time there are substantial changes in the nature of transport business: 10 – 15 years ago sea transport was based on the point-to-point service in geographically defined areas connected by certain hubs.

Today that is a global service network covering the whole world and the transport companies can offer true global coverage. However this can lead to overcapacity in certain areas.

General trends in the transport industry are:
- The transport companies increasingly participate in the logistics chain of their customers and must understand their requirements. This requires strategic partnership with systematic integration of main business processes of a supply chain.
- IT systems and continuous flow of information supposed to be the base for efficient transport and inventory control.
- Clients get access to new technology and better utilisation of capital.
- Logistics costs tend to be variable, but not fixed for clients.

Logistics and supply chain management continue to transform the competitive landscape and have become one of today’s key business issues. Competitive advantage comes from responding to and serving the needs of end-customers. Logistics has a vital role in delivering this advantage, through the supply chain, in terms of short- to medium-term management tasks and longer-term strategic plans.

The objective is to simplify the supply chain, minimise storage time and volume and maximise the speed and efficiency of deliveries. The essential part is information technology and efficient flow of information between members of the chain as well as understanding the business and needs of clients. The main disadvantage of such approach is its long-run effect. It is a real paradigm shift not only for the company, but also for all its clients and suppliers. This approach is actually based on trust and common values of the partnering companies.

The contribution of logistics to competitiveness and value creation is a prime topic in today’s market. A practical, integrated and international strategy (approach) to logistics includes:
- Competing through logistics - an introduction to logistics and its contribution to competitiveness and value creation.
- Leveraging logistics operations in a customer context.
- Working together - supplier partnerships, interfaces and the challenges of integration.
- Changing the future - leading-edge thinking in logistics and the future challenges ahead.

Successful development of the logistics processes of any company is defined by the well-organised supply chain.
2. Problem setting

Let us look at the sample when, in order to optimise the supply chain process, the management of Production Company Logistic Centre makes a decision to create a new supply channel for basic materials and sales of ready-made goods.

It is necessary to make certain decisions regarding related parts of supply chain process such as purchase and delivery of raw materials, production and sales of ready products. Therefore the model with different possible scenarios of development has been created.

The first stage is choosing the producer of basic material. There are offers from three main production companies. The first of them offers high technological and specialised materials of the best quality according to existing market prices. The second one is ready to supply widely used material of good quality with a discount of 15% from market price. The third producer makes middle class materials of lower quality according to confirmed standards and gives a discount of 20% from market price. It is necessary to foresee three scenarios of development for each producer that are 1) materials will be produced in time; 2) materials will not be produced by any reason; 3) materials will be produced with delays. Two months are planned to spend for material production.

The second stage is delivery of materials to the final goods production place. When choosing the way of transportation, it is important to pay attention to delivery time, safety and transport rates. Transportation could be provided by shipping line using combined cargos sea container, by air, by road and using the express delivery by courier mail. If materials are produced in time, the low cost transportation ways are preferable, for example, delivery by sea as the cheapest, but demanding certain time. Aircraft delivery usually is chosen for quick deliveries. Delivery by road is effective for rather short destinations. In case of time shortage, priority of delivery belongs to express service of courier mail as the quickest possible, however the most expensive as usual.

Following the delivery cargo could appear in three conditions:
1) materials are delivered to final destination and come to production process;
2) cargo is delivered to a transit terminal (cargo warehouse, sea port airport) and further delivery to a production place is necessary. At the same time, perhaps part of materials could be stocked temporarily in terminal by any reasons;
3) there is a probability of cargo damages and shortage.

The third stage is sales of the ready-made goods. There are three current channels of goods realisation:
1) through a company’s own sales net;
2) through wholesalers;
3) through foreign distributors.

Each products realisation scenario features one of three uncertain results:
1) goods have high demand that create successful sales and high profit,
2) goods take middle market position and taking into account costs for goods creation they are not profitable, but sales cover the losses,
3) in spite of all efforts, products do not attract customers, sales figures are very low, and company has losses.

Let’s consider the following effectiveness criteria of making decisions:
1) maximum probability of the best effect achievement
2) average profit maximisation.

In the best-case scenario, with high demand and successful sales, the goods collection should be performed in the minimum time.

Consequently, the task lies in making a decision regarding the basic materials suppliers, transport way selection and sales channel. In other words, it is necessary to choose the way from selecting the raw materials until final products creation that allows getting the maximum profits to the company.

3. Construction of the mathematic model of the decision choice

The concerned decision-making process could be presented as a net structure $T$, as it is shown on the Figure 1. “Taking decision tree” images the immediate and future decisions regarding materials supply and goods realisation channel. The net includes arcs and vertices of two kinds.
Figure 1. Net structure “Decision-making tree”
Circle points describe the system’s state after a decision is made. All circle points have the ordinal numbers from 0 to 10. Then state without entering arcs is called a “source point” and corresponds to the initial moment of the decision-making process. Further vertices 1, 2, 3 describe the condition related to suppliers. For instance, state 1 – the most successful status, to be exact, materials produced in time.

At least one or more arcs enter all states except 0. The arcs correspond to transitions from one state to others. Terminals are the states without running out arcs. They correspond to the final moments of decision-making. Table 1 provides the description of all 10 states.

### Status description

<table>
<thead>
<tr>
<th>State number</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Initial moment of decision-making process</td>
</tr>
<tr>
<td>1</td>
<td>Basic materials are produced in time</td>
</tr>
<tr>
<td>2</td>
<td>Basic materials are not produced by any reason</td>
</tr>
<tr>
<td>3</td>
<td>Basic materials are produced but with delay</td>
</tr>
<tr>
<td>4</td>
<td>Basic materials are delivered to destination point and given to further production</td>
</tr>
<tr>
<td>5</td>
<td>Basic materials are delivered to transit terminal (cargo warehouse, sea port, airport) and demand further delivery till production place</td>
</tr>
<tr>
<td>6</td>
<td>Destroying or missing of basic materials</td>
</tr>
<tr>
<td>7</td>
<td>Part of basic materials is put on stock for future production</td>
</tr>
<tr>
<td>8</td>
<td>Ready goods have high demand that create successful sales and high profit</td>
</tr>
<tr>
<td>9</td>
<td>Ready goods take middle market position and taking into account the costs for goods creation they are not profitable but sales cover the losses</td>
</tr>
<tr>
<td>10</td>
<td>In spite of all efforts, products are not interested the customers, sales figures are very low, and company has losses</td>
</tr>
</tbody>
</table>

Diamond vertex corresponds to making a decision. Diamonds 0, 1, 2 correspond to producer’s choice. For example, the vertex 0 is the 1st above described producer. The equivalence between vertex number and the above mentioned decision is presented in Table 2

### Vertexes allocation of a decision-making tree

<table>
<thead>
<tr>
<th>State number</th>
<th>Development stages</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st stage: choosing of producer</td>
<td></td>
<td>Producer of the high technological and specialised basic materials of the best quality according to existing market prices</td>
<td>Producer of basic material of good quality with discount of 15% from market price</td>
<td>Producer of middle class basic materials of lower quality according to confirmed standards and gives discount of 20% from market price</td>
<td>-</td>
</tr>
<tr>
<td>2nd stage: choosing of transport</td>
<td>Delivery by sea as the cheapest but time- consuming</td>
<td>Air delivery as more expensive but rather quick</td>
<td>Express service of courier mail as the quickest possible, however the most expensive</td>
<td>Delivery by road is effective for rather short destinations</td>
<td></td>
</tr>
<tr>
<td>3rd stage: choosing of realisation way</td>
<td>Through own sales net</td>
<td>Through the wholesalers</td>
<td>Through the foreign distributors</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

A diamond entering an arc shows the concrete decision-making. The running out arc shows possible state of the system after this decision-making.

Making a concrete decision does not mean getting a single result. On the vertex running out arcs probabilities of possible state are mentioned. In total, the sum of probabilities equals 1. For instance, after choosing the producer of basic materials, the system could be found in the state 1 with probability 0.1, if the first producer is chosen. In case the second producer is chosen, it will be there with probability 0.5. The system can be in the same state 1 with probability 0.8, if the third producer is chosen. State 2 is final as the activities come to unsuccessful result and have no further development. Hence two states with further
development are left.

The next row of diamonds (2\textsuperscript{nd} stage) shows the choice of a transport company and delivery way from production of basic materials to a place of further processing. Diamond numbers indicate the choice of abovementioned transporters.

The last, third row, of diamonds (3\textsuperscript{rd} stage) presents the choice of sales ways of ready-made goods.

Let us describe the mathematic view (conception) of the initial data.

The states are known for each position following the previous ones. For example, they are presented by matrix $T$, shown on Table 3. Rows of the matrix correspond to current states, columns correspond to different decisions. Matrix elements show numbers of future states. Here, the symbol –1 means the absence of future state.

Table 3

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>4</td>
<td>-1</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>6</td>
<td>-1</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>-1</td>
<td>-1</td>
<td>6</td>
<td>10</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
</tr>
</tbody>
</table>

One single decision should be made out of several ones in each state, except terminal. The probability of transition to the next state changes depending on the taken decision. Let $Pr_{j_{ik}}$ be a probability of a transition from state $i$ to state $k$, if a decision $j$ has been chosen. The corresponding matrix is called $Pr_j$. For instance, the matrix $Pr0$ in Table 4 below. Rows of the matrix $Pr_j$ correspond to different vertexes, columns corresponds to different states. Matrix $Pr_j$ elements show the corresponding probabilities. The number of states is determined by matrix $T$.

Table 4

$Pr0 := \begin{pmatrix} 0.1 & 0.7 & 0.2 \\ 0.5 & 0 & 0.5 \\ 0.8 & 0.1 & 0.1 \end{pmatrix}$

We expect certain revenue amounts for achieving each state. They are represented by vector $c$. Table 5 illustrates the corresponding example.

Table 5

<table>
<thead>
<tr>
<th>State, j</th>
<th>Profit, $c_j$</th>
<th>Probability Coefficients, $\xi_j$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>-2000</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>-100</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>-2400</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>-1000</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>4000</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>-1000</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>4000</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>60000</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>80000</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>120000</td>
<td>1</td>
</tr>
</tbody>
</table>

There are several criteria for the decision-making effectiveness that could be offered:
1) maximum probability of the best effect achievement,
2) average profit maximisation.
Rewards of different states sum up together. The total value is a random variable as result of random transition. The task is to choose a decision for each state in such a way that the average amount of total profits reaches maximum.

The Method of Dynamic Programming will be used to achieve this.

4. Method of Dynamic Programming

The dynamic programming assumes a step-by-step decision-making. In our case it means the decision-making for each state individually. Let’s consider the moment of time, when it is need to make a decision for state $j$. Here it is important to mention that if state $j$ is not terminal, the states with bigger then $j$ numbers should be checked until that moment.

Let’s enter Bellman function $F(j)$, it is the maximum average profit, which could be received starting from state $j$ until the end moment of the decision-making process. To calculate these functions we have the following Bellman equations:

$$ F(j) = \max_{k \in D(j)} \left\{ c_j + \sum_{i \in S_{jk}} \Pr_{j,k} F(i) \right\}, \tag{1} $$

where

$S_{jk}$ – set of state numbers, following the state $j$ if decision $k$ is taken

$D(j)$ – a set of possible decisions in state $j$.

These equations should be used starting from the terminal states to the root (initial state). The terminal states are final, so the first item stays in brackets in the formula (1). At the same time, a decision $k^*$ is fixed for each state as the optimal one. For this decision the value in brackets coincides with $F(j)$ in the formula (1). Therefore this procedure is called the inverse running of dynamic programming.

Direct running gives the quantities (order) of optimal decisions for all states. It is realised in opposite direction of the abovementioned inverse running – from the root to the end units, each time moving from state $j$ to one of the following states that correspond to optimal decision $k^*$ in the state $j$. Direct algorithm is finished, when all the states are calculated until the ones, which have no future states.

5. Computer realisation

The described algorithm is used by the program OptValue. This programme gives out a matrix that has two columns: the first one corresponds to maximum profits $F(j)$, the second one corresponds to optimal decisions $k^*$ for each position $j$. This programme was created by using the mathematical package MathCAD 14.

The primary data put in the programme is the following:

- Matrix $T$, describing the examined net. Rows of the matrix correspond to net states, rows elements show numbers of the further states. Value – 1 means the absence of the next states.
- Vector $c$ describes profit that comes for achieving each state.
- Matrix $Prj$ of transit probabilities for state $j$. Rows of the matrix correspond to different decisions $k$, but columns correspond to the next state (with respect to the matrix $T$).

The main program OptValue uses the auxiliary program Pr(j) that gives the matrix Prj according to number $j$.

6. Numerical results

For our example, we have the numerical data mentioned in Tables 3, 5, 6. As the criteria, we choose optimisation of achieving the state 10, as the profit vector $\mathbf{c} = (0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 1)^T$.

The next step is application of the program OptValue, to make the calculation for optimal decisions and maximum average profit, in line with the rules known as Markov chains. Table 7 shows the results of calculations.
Probability matrixes

\[
\begin{align*}
\text{Pr}0 & := \begin{pmatrix} 0.1 & 0.7 & 0.2 \\ 0.5 & 0 & 0.5 \\ 0.8 & 0.1 & 0.1 \end{pmatrix} \\
\text{Pr}1 & := \begin{pmatrix} 0.7 & 0.3 \\ 0.8 & 0.2 \end{pmatrix} \\
\text{Pr}2 & := 1 \\
\text{Pr}3 & := \begin{pmatrix} 0.5 & 0.4 & 0.1 \\ 0.4 & 0.4 & 0.2 \\ 0.3 & 0.6 & 0.1 \\ 0.8 & 0.2 & 0 \end{pmatrix} \\
\text{Pr}4 & := \begin{pmatrix} 0.5 & 0.3 & 0.2 \\ 0.5 & 0.4 & 0.1 \\ 0.6 & 0.3 & 0.1 \end{pmatrix} \\
\text{Pr}5 & := (0.7, 0.3)
\end{align*}
\]

Table 6

Maximum probability of the best effect achievement

<table>
<thead>
<tr>
<th>State number</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit</td>
<td>0.16</td>
<td>0.16</td>
<td>0</td>
<td>0.16</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Making decision</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Using the data from Table 5 we calculate the average profit maximisation in terms of money. Here the profit vector is \( C = (0, -2000, -100, -24000, -1000, 4000, -1000, 4000, 60000, 80000, 120000) \).

Table 7

Maximum average profit for vector C

<table>
<thead>
<tr>
<th>State number</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit in money term</td>
<td>52710</td>
<td>26360</td>
<td>-100</td>
<td>263600</td>
<td>259000</td>
<td>8000</td>
<td>-1000</td>
<td>4000</td>
<td>60000</td>
<td>80000</td>
<td>120000</td>
</tr>
<tr>
<td>Making decision</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

7. Conclusions

The task of the decision-making process for Logistics Centre Supply Chain optimisation through creation of new supply and sales channel in optimal way was described. Various decisions could be taken at each stage of the process development. The ways differ from each other by necessary resources and profits. Two aspects, such as maximum probability of the best effect achievement and average profit maximisation, are taken as the criteria for the decision-making effectiveness.

The task can be solved by using the method of dynamic programming, created by Richard Bellman. Using the MathCAD 14 package, the special programme, which helps to make the necessary calculations, was created.

Using the dynamic programming method, the formulated task of decision-making process for the new supply and sales channel development for the Logistics Centre in Latvia is solved and the solution for getting the optimal profit is found.
References

Acknowledgement
The author expresses sincere gratitude to her scientific supervisor Dr.hab.sc.ing., Professor Aleksandrs Andronovs for his valuable advices during preparation of this paper.
MODELLING OF BALTIC SUPPLY CHAIN FOR CONSUMER GOODS

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Abstract
The current economic crisis has emphasised the importance of efficient operation of the Baltic distribution network for consumer goods. To a large extent, it concerns beverages, i.e. goods characterised by the fast cargo turnover, high competition and low margins. In this article, the impact of crisis on volumes and sales prices is analysed, and the influence of quantity and location of production factories and distribution centres on costs of Fast Moving Consumer Goods is studied. Baltic Supply Chain logistics model is developed, with one producing plant and one distribution centre per Baltic country. The relevant mathematical model is based on the mixed integer linear programming method. The results of calculations based on the developed model are in line with practice of the large international company dealing with beverages in the Baltics. In the research, operational parameters for optimal Baltic Supply Chain configuration have been evaluated and possibilities for more detailed modelling considered. The findings could be useful for Supply Chain Management of other consumer goods.

Keywords: supply chain, Baltic distribution network, logistics, beverages, consumer goods.

The subject of the study is production and distribution system of Fast Moving Consumer Goods (FMCG) in the Baltics, mathematically modelled on the basis of Coca-Cola logistics system. The paper is structured as follows:

A. The Baltic market of non-alcoholic drinks and the economic crisis.
B. Logistics model of Baltic Supply Chain (BSC).
C. Mathematical model of BSC.
D. Validation of the model by practical data.
E. Future development of BSC model.
F. Conclusions.

A. The Baltic market of non-alcoholic drinks and the economic crisis

Fast Moving Consumer Goods (FMCG) are daily products with large turnover, small profit and high competition. All three Baltic countries – Estonia, Latvia and Lithuania – have many common features: similar level of economic development, comparable consumption, similar same consumption habits and established trade structure. The Baltic States FMCG manufacturing and trade chains have many common features that are the reasons, why almost all international companies perceive the Baltics as a united market now (Agafonov & Bitinas, 2010). Beverages are an example of FMCG and their BSC features are valid also for other FMCG – hence we can apply this approach to a wide range of daily products.

An assortment of beverages in the Baltics is also similar to other European countries, with minor consumption differences due to national behaviour. All drinks are divided into two large groups – with and without alcohol. The latter consists of two main categories of non-alcoholic drinks: without sugar - mineral water and aerated water, unsweetened (NACE version 2 code 1170 1130) and water with added sugar, other sweetening matter or flavoured, i.e. soft drinks, including mineral and aerated (NACE version 2 code 1170 1930). The World Customs Organization (WCO) uses similar classification in the International Harmonized System (HS) goods nomenclature (Chapter 22: Beverages, spirits and vinegar). Eurostat provides statistics of beverages consumption data in the Manufactured Goods chapter (Prodcom). Table 1 and Table 2 show the sold beverages in metric volumes and EUR for the Baltics and Poland (to benchmark with), a neighbour country with similar economic development, as well as for the total consumption of 27 European Union countries (EU27TOTALS).

The global economic crisis of 2008-2009 has given a blow to the trade of all daily products. At that time consumption of beverages in Europe on the whole had not been in a noticeable decline, and by now this FMCG market has practically overcome the economic crisis level: the sold production by quantity expressed in litres and EUR are close to the-crisis indicators. The Baltic countries, which were affected by the crisis harder, are still in the decline stage and below the 2007 year’s results (see Figure 1). The hot summer of 2009 did not help much to keep the sales volumes. It should be noted that at the time of writing this paper the operative non-statistical Baltic consumption data showed a recovery of the beverages market. The calculation of individual consumption was made according to the year 2010 population of areas.
Consumption of soft drinks was much greater than that of non-sugar drinks before the economic crisis, but after that the Baltic consumption of beverages became equal for both main groups. The crisis also influenced the proportion for beverages consumed in various countries. Consumption of more expensive drinks was reduced and the gap between consumption levels in the Baltics and in Poland became wider. This

<table>
<thead>
<tr>
<th>Year</th>
<th>Estonia</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Poland</th>
<th>EU27TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>25 890</td>
<td>70 872</td>
<td>56 080</td>
<td>1 811 295</td>
<td>45 431 238</td>
</tr>
<tr>
<td>2005</td>
<td>25 501</td>
<td>68 280</td>
<td>82 605</td>
<td>2 291 862</td>
<td>43 444 343</td>
</tr>
<tr>
<td>2006</td>
<td>31 772</td>
<td>81 944</td>
<td>108 627</td>
<td>2 557 591</td>
<td>49 644 479</td>
</tr>
<tr>
<td>2007</td>
<td>37 709</td>
<td>68 041</td>
<td>122 591</td>
<td>2 621 668</td>
<td>54 000 000</td>
</tr>
<tr>
<td>2008</td>
<td>37 634</td>
<td>55 526</td>
<td>123 584</td>
<td>2 575 020</td>
<td>45 000 000</td>
</tr>
<tr>
<td>2009</td>
<td>29 091</td>
<td>44 499</td>
<td>114 596</td>
<td>2 676 221</td>
<td>45 000 000</td>
</tr>
</tbody>
</table>

**Source:** Eurostat, PRODCOM ANNUAL SOLD, NACE Rev. 2., DS-066341, viewed: 01.06.2011. Available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/prodcom/data/database

### Table 2

Consumption of soft drinks was much greater than that of non-sugar drinks before the economic crisis, but after that the Baltic consumption of beverages became equal for both main groups. The crisis also influenced the proportion for beverages consumed in various countries. Consumption of more expensive drinks was reduced and the gap between consumption levels in the Baltics and in Poland became wider. This

<table>
<thead>
<tr>
<th>Year</th>
<th>Estonia</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Poland</th>
<th>EU27TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>7 267</td>
<td>9 911</td>
<td>9 010</td>
<td>210 633</td>
<td>8 936 949</td>
</tr>
<tr>
<td>2005</td>
<td>5 450</td>
<td>9 339</td>
<td>13 200</td>
<td>309 431</td>
<td>9 311 717</td>
</tr>
<tr>
<td>2006</td>
<td>8 142</td>
<td>11 676</td>
<td>18 673</td>
<td>382 133</td>
<td>9 702 615</td>
</tr>
<tr>
<td>2007</td>
<td>9 671</td>
<td>24 157</td>
<td>24 013</td>
<td>404 652</td>
<td>9 877 082</td>
</tr>
<tr>
<td>2008</td>
<td>9 363</td>
<td>28 383</td>
<td>28 013</td>
<td>440 013</td>
<td>9 391 774</td>
</tr>
<tr>
<td>2009</td>
<td>8 705</td>
<td>25 524</td>
<td>25 242</td>
<td>327 427</td>
<td>9 044 083</td>
</tr>
</tbody>
</table>

**Source:** Eurostat, PRODCOM ANNUAL SOLD, NACE Rev. 2., DS-066341, viewed: 01.06.2011. Available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/prodcom/data/database
however forms a basis for faster consumption growth in future, which will require corresponding resources of production and distribution systems.

It is interesting that the crisis has equalised the Baltic consumption of drinks with and without sugar. Supposedly, there is a minimal level of consumption for consumer goods, below which the sales would not fall.

From Figure 2 and Figure 3 we can see that trade companies responded to the crisis with the decreased volumes. In Poland and EU on the whole the prices were going down to keep the volumes. At the same time, in the Baltic countries prices for both groups of beverages were raised. Particularly it was connected with raised state taxes. Also the group’s price changes were caused by changes of product mix in the beverage group.

The raised retail prices of beverages (as well as of other consumer goods) led to the inflation growth in the Baltics. It means that the crisis trade policy in the EU was directed to keeping the market size and share, whereas in the Baltics – to keeping profits. The Baltic market was able to adopt such a strategy, which means that competition in FMCG is not so strong and there are opportunities for development. In particular, the average unit price for the Baltic non-sugar beverages group became higher than that in EU27 and much higher than in Poland.

The unit price of beverages from the two groups (Figure 2 and Figure 3) is averaged over those of many various products; however, the tendency is evident due to the statistically large volume of data. It is necessary to note that the precision observed in Figure 1 – Figure 3 is connected with differences in the national statistics rules, product classifications and custom procedures.
The transportation costs usually make up a small proportion in the COGS of beverages. Therefore, the import of beverages is an attractive option, since prices (especially for non-sugar waters) are higher in the Baltic than in the EU27. Poland geographically and economically neighbouring with the Baltic countries is more ready to approach the EU27 Supply Chain parameters. Evidently, the large EU27 market is more stable than our small, the Baltics, with the population ~ 1% of that in EU27. The market of Poland, with its population 5.5 times greater than in the Baltics, also has fewer fluctuations.

B. Logistics model of Baltic Supply Chain (BSC)

The Baltic Supply Chain (BSC) for consumer goods consists of the three countries’ logistics centres as a practical standard. Many traders follow such a structure (Круминьш & Витолиньш, 2007) in their Supply Chain Management (SCM). The reason is that the economic potential of all the countries: Estonia, Latvia and Lithuania − is about the same. Estonia, being the smallest in terms of territory, has a more developed economy. Lithuania has the largest territory in the Baltics, but has no higher level of economy. In addition about 2/3 of the consumer goods consumption in the Baltics are concentrated in the capitals: Tallinn, Riga and Vilnius (in a conglomerate with Kaunas). The maximum distance from these logistics centres to the farthest country destination is within one day transportation.

Foodstuffs usually are goods with large cargo turnover. Due to this, the manufacturing plants should preferably be located close to the customer concentration areas and in the vicinity of a distribution centre (DC). The BSC logistics model of three DCs and three manufacturing plants is presented in Figure 4.

![Figure 4: Logistics model of Baltic Supply Chain for consumer goods](image)

Each DC can be supplied from three plants depending on demand as well as on production and transportation costs. Additionally, due to assortment needs and limitations on production capacities, import from the Baltics abroad is needed. The import volume is often limited by HQ due to strategic and state requirement reasons.

The plant-to-warehouse transportation of products is usually called haulage, which is performed by 20 t trailers with full trailer load (FTL) as a standard. From DC, including cross-docking operations, the products are delivered to retailers or Key Account customers by distribution trucks with a capacity of up to 10 tons.

C. Mathematical model of Baltic Supply Chain

The BSC logistics model considered above was described in mixed-integer linear programming terms (Shapiro, 2007) and used for FMCG BSC analysis. This method gives more precise results than widely used in practise the examination of a restricted number of BSC configuration. Especially it is useful in developing the Greenfield solutions.

The objective function COGSb is the minimum cost of goods sold delivered to an end-user through the Baltics. It can be calculated as

\[
\text{COGSb} = \text{COGSt} + \text{COGSr} + \text{COGSk}
\]  

We denote the country cost of goods sold as COGSt for Estonia, COGSr for Latvia and COGSk for Lithuania, where index (small letter) means location name: i = k, r or t (Kaunas, Riga or Tallinn), see definitions (2) – (4). Supply to end-users should be only from a domestic country DC, where costs are the
same for various distribution network scenarios, so we are neglecting them in the calculations; transport costs are only of haulage between three logistics centres. The country cost of goods sold depends on:

- CMk, CMr and CMt – costs of product manufactured at plants in Kaunas, Riga and Tallinn are different.
- CI – costs of imported products is with practical accuracy the same for each country DC (CI is including the import delivery tariff).
- CDij – costs of delivery from “i” factory to “j” DC is a fixed transport tariff, depending on the distance only, so CDij = CDji.
- CSi – storage costs are different at Kaunas, Riga and Tallinn warehouses.

\[
\text{COGSk} = M\text{Ck} \ast (Q_{kk} \ast \text{CMk} + Q_{kr} \ast (\text{CMr} + \text{CDrk}) + Q_{kt} \ast (\text{CMt} + \text{CDtk}) + Q_{Ik} \ast \text{CI} + Q_{ka} \ast \text{CSk}) \\
\text{COGSr} = M\text{Cr} \ast (Q_{rk} \ast (\text{CMk} + \text{CDrk}) + Q_{rr} \ast \text{CMr} + Q_{rt} \ast (\text{CMt} + \text{CDtr}) + Q_{Ir} \ast \text{CI} + Q_{ra} \ast \text{CSr}) \\
\text{COGSt} = M\text{Cr} \ast (Q_{tk} \ast (\text{CMk} + \text{CDtk}) + Q_{rt} \ast (\text{CMr} + \text{CDtr}) + Q_{tt} \ast \text{CMt} + Q_{It} \ast \text{CI} + Q_{ta} \ast \text{CS}t)
\]

The variables in equations (2) – (4) are:

- \(Q_i = (Q_{ik} + Q_{ir} + Q_{it} + Q_{Ii})\) – product quantity delivered to each DC from three manufacturing plants and imported. Product quantity manufactured is equal to \(Q_Mi = Q_{ki} + Q_{ri} + Q_{ti}\).
- \(Q_{Ib} = (Q_{Ik} + Q_{ir} + Q_{It})\) – product quantity imported from abroad to each DC. By managerial decision \(Q_{Ib}\) should be less than 30% of product produced in the Baltics: \(Q_b = Q_k + Q_r + Q_t\).
- MCi – practical market coefficient, \(0 < MCi < 1\).
- Wi – workload of plants in Kaunas, Riga and Tallinn has value in interval – (0,1). In the limiting case the value should be binary (1 or 0) and match the fully operated or closed manufactures.
- QWi – warehouse capacity in Kaunas, Riga and Tallinn (taking into account the option of rented premises the value can be variable).
- Qka, Qra and Qta – average inventory level in country storages.

The fixed parameters of mathematical model are:

- Fk, Fr and Ft – forecast of demand per country.
- QSi – safety stock in Kaunas, Riga and Tallinn DCs.
- CSi – storage costs in Kaunas, Riga and Tallinn warehouses.
- Mk, Mr and Mt – manufacture capacity in Kaunas, Riga and Tallinn (\(Q_Mi = M_i \ast W_i\)).
- CMi – manufacture costs at Kaunas, Riga and Tallinn plants.

The constraints for (2) – (4) are:

- \(Q_{Ei} = (Q_{Bi} + Q_{Ii} - F_i)\) – ending inventory should be larger than or equal to the safety stock, where \(Q_{Bi}\) is an opening inventory.
- The work load of plants in Kaunas, Riga and Tallinn cannot exceed the nominal capacity – no overtime is allowed.
- The country warehouse capacity has to be larger than a safety stock and less than the maximum allowed.

The developed software program has a number of reports and graphs.

**D. Validation of the model by practical data**

The mathematical model allows calculating the influence of cost changes on the manufacturing, haulage, storage, distribution and import at operations of a production plant and a distribution centre in each of the Baltic countries. As an example, using the developed model the BSC for Coca Cola products has been investigated.

The Baltic region is a part of the territory under the exclusive operations of one of the world’s largest Coca-Cola bottlers - Coca-Cola Hellenic Bottling Company (CCHBC), which, as a multinational company, has well-developed standards of the business process. The Baltic Supply Chain in CCHBC means manufacturing, warehousing, distribution, transportation, quality assurance, planning and procurement.
CCHBC, according to the company standards, measure the turnover in unit cases equal to 5.678 litres or 24 servings (single food or drink portion) or in pallets of about 800 litres. Figure 5 shows the current structure of CCHBC BSC, which fits well into the developed model. Currently, there are: one producing plant in the vicinity of Kaunas, three DCs in each capital of Baltic States, three per country cross-docking points without storage facilities, and import (mainly from Poland now).

Hence operation mode of CCHBC is a particular case of the developed model that allows analysing and optimising the BSC. An example of calculation, based on one of the possible scenarios, made by mixed integer linear programming technology is given in Table 3.

The parameters of logistics centres volume flows and costs mean the country total. Change of variables, fixed parameters and constraints determine optimal flows from production plants and import size. Varying of parameters gives the limit values, when, for example, production in factory is not profitable. Also, the model allows easy evaluation of the influence of raising the fuel prices on changing the optimal product flows.

Figure 5. Baltic Supply Chain for Coca Cola products

### Table 3

<table>
<thead>
<tr>
<th>Demand (forecast)</th>
<th>Cost of product manufactured</th>
<th>Storage costs</th>
<th>Delivery cost to Kaunas</th>
<th>Delivery cost to Riga</th>
<th>Delivery cost to Tallinn</th>
<th>Safety stock</th>
<th>Manufacturing capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaunas DC</td>
<td>9 200</td>
<td>0.74</td>
<td>0.21</td>
<td>x</td>
<td>0.105</td>
<td>0.200</td>
<td>200</td>
</tr>
<tr>
<td>Riga DC</td>
<td>4 000</td>
<td>0.58</td>
<td>0.19</td>
<td>0.105</td>
<td>x</td>
<td>0.110</td>
<td>200</td>
</tr>
<tr>
<td>Tallinn DC</td>
<td>4 700</td>
<td>0.68</td>
<td>0.23</td>
<td>0.200</td>
<td>0.110</td>
<td>x</td>
<td>150</td>
</tr>
<tr>
<td>Baltic</td>
<td>17 900</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workload</th>
<th>Delivered from Kaunas</th>
<th>Delivered from Riga</th>
<th>Delivered from Tallinn</th>
<th>Imported</th>
<th>Delivered total</th>
<th>Ending inventory</th>
<th>BSC costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaunas DC</td>
<td>0%</td>
<td>3 830</td>
<td>0</td>
<td>5 370</td>
<td>9 200</td>
<td>200</td>
<td>3 251</td>
</tr>
<tr>
<td>Riga DC</td>
<td>65%</td>
<td>0</td>
<td>4 000</td>
<td>0</td>
<td>4 000</td>
<td>200</td>
<td>1 219</td>
</tr>
<tr>
<td>Tallinn DC</td>
<td>78%</td>
<td>0</td>
<td>4 700</td>
<td>0</td>
<td>4 700</td>
<td>150</td>
<td>1 662</td>
</tr>
<tr>
<td>Baltic</td>
<td>48%</td>
<td>7 830</td>
<td>4 700</td>
<td>5 370</td>
<td>17 900</td>
<td>550</td>
<td>6 132</td>
</tr>
</tbody>
</table>

Calculation example
E. Future development of BSC model

The developed model reflects the main operational features of FMCG BSC and gives quantitative optimal parameters for SCM. The calculations have been done for a one year period. Results for longer time spans are achievable using the long-term demand forecasts. The multi-period planning methodology of the kind was developed in various works (e.g. Shapiro, 2007).

The results of calculations shown in Table 3 give an integral scope of BSC operations. More detailed BSC analyses can be obtained by synthesis of the developed model with a specific transport routing software by including costs of distribution to the end users. Such an approach can also help to optimise the distribution by taking into consideration direct deliveries from a DC or a factory of one country to the end users of another country, for example in the border areas.

An important direction for better control over the BSC is evaluation of the influence exerted by changes in the capacity and location of manufacturing plants and DCs. Nowadays, this task is a challenge for BSC of various consumer goods. Historically chosen locations of producing plants and DCs are not always corresponding to the today best terms. The calculations by discrete integer linear programming can help to choose the optimal configurations between various possibilities. For this purpose, the model has to be supplemented by financial parameters of fixed and variables costs for closing old facilities and opening new ones. All this is achievable using the technology of discrete-event simulation (Verma & Boyer, 2010).

In the paper the integer parameters of two large beverage groups consisting of many products have been analysed. The practical optimisation of BSC for a specific company needs taking into account the whole assortment of products. In the first approximation this can be done by selecting the most valuable product (ABC classification method based on the 20/80 Pareto principle) and optimising sums of objective functions for each product.

These are the tasks for future investigations.

F. Conclusions

1. The logistics and mathematical models of Baltic Supply Chain for consumer goods have been created that describes the FMCG distribution operations in three countries. The calculation model is based on mixed-integer linear programming and can give optimal parameters of SC.
2. The developed BSC model has been verified by CCHBC data and has shown the satisfactory accuracy. It is concluded that the model is capable of producing the practical recommendations for optimal FMCG distribution network.
3. Various scenarios of SC structure have been calculated by variation of fuel price, storage and manufacturing capacities. Optimal Baltic Supply Chain network configuration for one soft drink product manufacturing is evaluated with one plant located in Latvia. More precise results need more Supply Chain parameters consideration – full range of assortment and longer time span.

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PERFORMANCE MANAGEMENT OF EMPLOYEES IN PUBLIC ADMINISTRATION OF LATVIA AND OPPORTUNITIES FOR ITS IMPROVEMENT

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Abstract  
The purpose of this article is to present main results of the research that was carried out in the public sector of Latvia on existing practice of performance management. Changes required in the system and competencies of employees and managers in the public sector as well as suggestions are proposed for its improvement either in Latvia or in other countries with similar history.

Methodology and approach – The research data was gathered using the method of structured individual interviews, as well as electronic online survey. The basic elements of performance management system were examined (e.g. goal setting, performance evaluation, connection with other human resource management process like development and reward) to find out the main deficiencies of existing practice and to formulate suggestions for improvement.

Findings – The research revealed that there are two kinds of drawbacks within the existing system:
  • contextual drawbacks (e.g., performance criteria an rating scale);
  • implementation drawbacks (proficiency of managers, rating inflation).

Practical implications – The results and main findings of the research will be taken as a basis for performance management system improvement project, planned to be implemented during 2011.

Originality/value -- The research and the following project represent a unique scientific and practical activity within public administration of Latvia. It is highly important to the enhancement of efficiency and effectiveness of Latvian public administration and its management.

Keywords: performance management, human resources, public administration, performance criteria, remuneration.

Introduction  
The individual performance assessment of employees in the Latvian public administration was started in 2001, when together with the new Law of State Civil Service coming into effect a requirement was introduced to carry out annual performance assessment of civil servants [1]. The aim of the performance management system was to facilitate professional development of civil servants, to encourage self-development and develop communication between line managers, to determine training and career development needs of civil servants, in order to improve and advance performance of civil servants in achieving the aims of organisation and implementing functions [5]. It was not planned then that assessment results will be linked to pay system.

In 2007, when the new pay system was introduced in public administration, defining an individual pay level, it was linked to assessment without reviewing assessment criteria, which originally were elaborated for performance assessment of civil servants (around 12 000 employees), whereas the new pay system was applied to much wider scope of employees, who were implementing much more diverse functions than civil servants (initially approximately 65 000 employees, now - approximately 38 000 employees) [4].

In order to clarify the problems of employee performance management system in the Latvian public administration and to elaborate recommendations on its improvement, the authors carried out the research in January and February 2011 [6; 7]. The main results, conclusions and recommendations are summarised in this article.
Research methodology
The aim of the research
The aims of the research were the following:
  ● to identify the development of existing performance management system and possible problems in the aspects concerning the:
    - individual performance;
    - quality of management;
    - quality of performance assessment interviews;
    - components of performance management system and assessment criteria.
  ● to clarify what requirements are put forward to public administration employees by their senior management and stakeholders: political management, members of parliament, social partners, supervising institutions and analysts specialising in public administration operation;
  ● on the basis of summarised information, to formulate recommendations on improvement of performance management system.

Methods used
In order to achieve the aims of the research the following methods were used:
  ● Opinion survey of employees. The survey was carried out electronically by sending the internet link to divisions of personnel management of ministries, which sent it further to employees of the ministries and subordinate institutions. 1521 fully completed questionnaires were received and analysed [6].
  ● Structured interviews with senior managers of public administration institutions. Senior managers of all ministries and State Chancellery, as well as 5 subordinate institutions were interviewed, 19 interviews in total [7].
  ● Structured interviews with employees dealing with human resources policy planning issues of public administration. Officials responsible for the human resource policy planning were interviewed, 4 interviews in total [7];
  ● Structured interviews with stakeholders. The representatives of organisations, which are related to public administration as supervising institutions, co-operation partners or analysts (further in the text - stakeholders), (representatives of the Prime Minister’s Office, Employers’ Confederation of Latvia, Chamber of Trade and Commerce of Latvia, Free Trade Union Confederation of Latvia, University of Latvia, Parliament, Commission of Strategic Analyses of the President of Latvia, Society for Transparency “Delna”, State Audit Office, Ombudsman and Latvian Association of Local Governments) 11 interviews in total [7];
  ● Focus group discussion with State Secretaries (administrative heads of ministries) at a state secretary meeting [7];
  ● Focus group discussion with managers of personnel divisions of ministries at the meeting of personnel managers [7].

The research results
Research results show that the performance management system in force has several drawbacks, which can be subdivided in two groups:
  ● contextual drawbacks. They are related to the system structure, its elements – assessment criteria and their relative importance (weight) in determining the total evaluation rating, as well as a linkage of evaluation results with the pay system. The following contextual drawbacks can be distinguished:
    - incomplete evaluation criteria: there is an evaluation of tasks and competencies, but part of job responsibilities are routine recurrent works;
    - “universal” competence model for all job families (groups): there is an evaluation of common competencies for all, but specific competencies, which differentiate job families, are ignored;
    - questionable link between performance assessment rating and pay, which stimulates a tendency to determine the highest ratings.
  ● implementation drawbacks. They are related to the way, how the present system is implemented in practise in personnel management in different institutions of public administration, how managers
carry out performance evaluation and appraisal interviews, as well as how performance evaluation ratings are determined according to the set standards. The following implementation drawbacks can be distinguished:

- offset of evaluation scale – too high share of highest ratings;
- differences of evaluation practice and requirements among institutions – frequently observed formal approach, emphasis on determination of ratings and not on analyses of performance;
- low level of managerial skills;
- use of commissions when carrying out appraisal interviews;
- lack of training programmes and methodological material on the role of managers in managing employee performance.

The analysis of contextual drawbacks

- Incomplete evaluation criteria

When analysing viewpoints from survey and interviews, it can be concluded, that it is necessary to review evaluation criteria in order to ensure valuable and comprehensive analyses of work performance. The criteria used in the present system are evaluation of previously set tasks and competencies, the majority of which are behavioural competencies and only one competency refers to professional knowledge. The representative comments from employees, which confirm that, are the following: [6 (not available for public view)]:

- “Additional criteria should be included, which reflect better individual performance of each employee with regard to tasks to be performed”;
- “Too much emphasis on personality and skills, but not on work results”;
- “Professional competence could be subdivided in more detail and it should account for at least 50% from a total evaluation”.

It can be said that the analysis of performance in present system is not sufficient, because not all of the responsibilities performed by employees can be defined in a form of tasks for specific term, and tasks which are of routine character or have to be performed on regular basis are ignored in the system. In Figure 1 the views of employees on what additional criteria should be assessed in annual performance assessment are reflected. The majority of respondents believes that it is necessary to elaborate additional competences, but 40% thinks that assessment criteria should be supplemented with assessment of job qualification requirements and required quality standards of the job [6].

What additional aspects of performance should be evaluated?

![Figure 1. Results of employee survey. Distribution of additional performance aspects that needs to be evaluated.]

- “Universal” competency model

Within the existing performance evaluation system, annual performance assessment covers 38 000 employees from 52 job families [3], but all employees are assessed against the same competencies (in addition managers get assessment on personnel management competency). Employee survey shows that it is necessary to significantly increase the amount of competencies to be assessed and adjust them to the requirements of specific job family groups. In order to find out, which competencies are essential at present
moment and which ones will be important in future - at interviews and in the survey, the competencies’ list consisting of 26 most widespread competence titles was used. Employees estimated the importance of these competencies at their job, but managers, human resources policy planners and stakeholders pointed out 7 the most important competencies today and in future. The assessment of importance of competencies given by the employees is shown in Figure 2. It demonstrates that all the competencies included in the list are very important at least for the part of jobs in public administration, and the competency, which is very important for most of interviewed employees, is „Accuracy‖. The survey results allow distinguishing, which competencies are more important to certain job family groups [6].

![Evaluation of importance of competencies](image)

**Figure 2. Results of employee survey.**
The number of respondents, who identified the competency as very important.

The most important competencies in public administration in accordance with the evaluation by senior lever managers, human resource policy planners and stakeholders are summarised in Table 1. When comparing the views, it can be observed, that senior level managers and human resource policy planners consider different aspects of management skills as most actual ones at the present moment, whereas stakeholders think that the most important competencies are „Achievement‖, „Customer orientation‖, „Analytical thinking‖ and planning skills. In turn, those, who assessed competencies important in future context, named „Ethics‖ as an important competence, but such competencies as „Ability to pass decisions and take up responsibility‖, „Planning and control‖, „Communication‖, „Analytical thinking and problem solving‖ and „Personnel management skills‖ are the most important only in view of the senior level managers [7].

Within the present system, the rating of performance determines 23% of the total amount of an employee’s monthly salary [2; 4]. The performance assessment rating (on the scale A, B, C, D, E) is used in
the formula of individual monthly salary [4]. The majority of interviewed persons regard the link between pay and assessment as not motivating and think it has to be reviewed [6; 7].

**The analysis of implementation drawbacks**

In general, the implementation drawbacks, which are revealed by the survey and interviews, indicate that at present the system does not reach the goals it was initially created for. It can be stated that the performance management system is now used mainly for determining individual salary level. Although there are institutions, where the annual performance assessment interviews are used for development and motivation of employees, bearing in mind the economic downturn, when there was a significant decrease in possibilities for institutions to find means for employee development, the motivating potential of performance analysis and assessment is used at a minimum. Still, the linkage between remuneration and assessment results is not perceived as motivating by more than 40% of the interviewed public administration representatives [6].

Although in its creation process, the system was targeted at improvement of performance quality, the evaluation is critical in this area too. 52% of the survey participants do not agree with the statement that the performance evaluation system helps to ensure high performance quality in public administration [6].

Comments provided by the employees indicate that “...performance appraisal does not stipulate improvement of quality, especially at a moment, when after reductions of staff there is an increase of work load” [6 (not available for public view)]. Thus, when evaluating opinions of employees and interview results, not only the present performance evaluation system should be analysed, but also the changes in public sector which happened as a result of economic downturn and their potential impact on work of managers, employee motivation and attitude towards performance assessment and determination of pay.

**The impact of recent change management process in public administration on opportunities to introduce new management tools**

The public sector in Latvia has undergone a significant process of change during the 3 recent years. The crisis period required to implement a range of measures with the aim to decrease the public sector

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**Table 1**

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<tr>
<th>View of senior level managers and human resource policy planners</th>
<th>View of stakeholders</th>
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<tr>
<td><strong>The most important competencies at present moment</strong></td>
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<td>● Ability to pass decisions and take up responsibility</td>
<td>● Achievement</td>
</tr>
<tr>
<td>● Strategic thinking</td>
<td>● Analytical thinking, problem solving</td>
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<tr>
<td>● Planning and control</td>
<td>● Cooperation</td>
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<tr>
<td>● Communication</td>
<td>● Planning and control</td>
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<tr>
<td>● Personnel management skills</td>
<td>● Ability to pass decisions and take up responsibility</td>
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<td>● Analytical thinking, problem solving</td>
<td>● Customer orientation</td>
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<td>● Change management</td>
<td>● Team working</td>
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<td>● Flexibility</td>
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<td>● Creative thinking and innovation</td>
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- Questionable link between performance assessment rating and pay.

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expenditures and increase efficiency of public administration. The main activities implemented by the public sector were significant cuts of salaries of public sector employees, redundancies and restructuring.

The change process took place in a very short period of time with significant pressure from stakeholders and media.

It was pointed out by the interviewed respondents that managers very often lacked information passed by the senior management teams, which resulted in sometimes very hectic process of managing change without proper tools and communication.

This fast, chaotic, not properly implemented change management process and threats of potential further redundancies in public administration in many cases created such disbenefits as:

- significant decrease of employees’ motivation, increased work load;
- “brain drain” from public administration;
- due to badly planned and managed restructurings, the threat of decrease of the quality of public services;
- public administration has lost the image of good employer;
- the lack of stability does not allow for efforts to increase productivity – the main idea is to “survive”;
- due to the intense attention from the side of society and media, public administration is reluctant to introduce tools of good management practice as, for example, the performance related pay.

At the same time, there were some benefits of the rapid changes, for instance:

- necessity to implement radical changes, which in normal circumstances would take very long time;
- large scale measures to ensure revision of resource planning and savings;
- decreased number of public sector employees;
- restructurings, which allowed for getting rid of employees with low performance results;
- increase of transparency with regard to public sector expenditures.

Although these benefits are important, the common message among the interviewed respondents was: “there were opportunities missed and change process could have produced much more significant results” [7].

Another significant problem was too much time and effort spent on revision of functions, which did not provide the expected results with respect to savings. It has resulted in the situation, when the reduced staff has to cope with the same amount of “production” of legal acts and document processing.

In such situation, employees and middle level managers are not very motivated to come up with new initiatives or introduce new management tools, even if they agree it is necessary to.

**Conclusions and recommendations**

According to the data obtained as a result of the employee survey, the most essential aspect, which has to be improved in the performance management system, is the link between performance assessment and pay (Figure 3). This result largely reflects the fact that the system mainly operates as a tool for determination of the individual pay level. However, planning of training and professional development is one of the constituencies, the improvement of which should be prioritised. The system, in turn, has a potential for improvement of performance quality, which is not utilised at the moment [6].

The performance evaluation system at present is not achieving those aims it was initially created for. It can be explained by the contextual drawbacks which characterise the present system, but also by a pattern, how the system is implemented in practice in everyday personal management of institutions and a way, how managers use this management tool. Therefore, in order to correct the system’s faults and to facilitate more successful operation of the system, it is necessary to make essential improvements in the system itself and in the way of its implementation.

In order to ensure contextual improvements of the system, it can be suggested:

- to elaborate specific guidelines on defining and measuring performance results, paying particular attention to defining and assessing the individual performance results. When elaborating the guidelines, the specific character of intellectual work should be taken into account;
- for jobs which are of a recurrent nature, evaluation of performance of job responsibilities should be made aligned with the standards (quality requirements);
- to replace the criterion “Professional knowledge” with criterion “Professional qualification”, by including it into the assessment parameters of education, professional experience, professional and general skills. To determine higher proportion of weight of this criterion in the total performance rating;
to elaborate the competency dictionary, incorporating all competencies essential for public administration at the present moment and in future;

to establish opportunity for institutions to create independent competency models (combinations of competencies), which corresponds to specific requirements of jobs in these institutions;

to develop competency descriptions in the way, which ensures unified approach to the evaluation - to describe 4-5 levels of expression for each competency;

a special attention should be paid to elaboration of competencies for managers of different levels, in order to facilitate development of managerial and leadership skills within public administration;

evaluation of performance results should be linked to the variable part of remuneration (bonus system) and the basic part should be detached from ratings.

**What aspects of the existing performance appraisal system should be improved?**

![Survey Results](image)

![Figure 3: Results of employee survey](image)

While in order to ensure the valuable system’s introduction, it can be suggested:

- to organise comprehensive training for managers and employees on performance management planning and evaluation, while paying special attention to requirements of management of intellectual employees;

- to elaborate IT tools for planning and evaluation of performance (while retaining annual performance assessment interviews) in order to reduce the time spent by employees and managers on performance planning and assessment and to ensure possibility to create online reports on performance and evaluation results;

- to introduce a moderation process for assessment results and elements of 360 degree evaluation in order to ensure that distribution of assessment ratings correspond to normal distribution curve and provides more objective evaluation results.

When implementing the changes, it is important to be aware that the established evaluation practice is stably rooted; therefore, the solution will take time and will require more resources than the solution of contextual problems to be implemented. It may be said that there is a need for a new management culture within the Latvian public administration, but changes of organisation culture is a time-consuming process. At the same time, it is one of the most important preconditions to achieve real improvements of performance quality in future.

Considering the experience with the latest crisis that provoked the change process, while introducing the change into performance management system, it is crucial to provide support and training to managers and employees, when starting to introduce the new performance management system. Even more important is to have a gradual introduction of the system with pilot phases and having no link into the pay system at least for one year. It is very essential especially at the present moment, when employees can perceive introduction of any new managerial system as yet another tool for the next wave of cuts or radical changes.
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EVALUATION OF DESIGN APPLICATION LEVEL FOR ENSURING SUSTAINABLE COMPETITIVENESS: CASE OF LATVIA

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Abstract

Purpose – the increasing importance is given to the new, unfolded sources of competitive advantage of companies in the fast changing business environment. The stage of design application level in business is directly correlated to the greater strategic importance given to design in strategic business management and respective demand of professional design by business management in various industries. The aim of this paper is to evaluate the stage of design application in public and private sectors in Latvia and explore the most crucial factors, which influence its potential.

Design/methodology/approach – Survey-based primary research was conducted in companies providing professional services of design to various organisations in various sectors. By analysing data from 85 respondents or 39 % of companies in design industry, summarised results are applied into Design Ladder framework (DDC, 2003) in order to evaluate whether design and its application in broader sense leading to design thinking is perceived as strategically important source of better organisation performance and competitive advantage.

Findings – the main findings of the study indicate that such concepts as strategic design, design management and design thinking are notably entering business environment by having conceptually new applications. However, due to domination of short-term business models, low public awareness of broader forms of design application, design is mainly considered as a form of art or visual element and there is a very limited place in management practices yet in Latvia. Public awareness, innovation policies, education systems have not yet caught up with these developments and these are the problems for further challenges and subject for research in this emerging area.

Research limitations/implications – the research is based on evaluation of design awareness, forms of applications in business management from perspectives of design industry professionals and their experience of design application in the private and public sectors.

Practical implications – this work is useful for executives, who search for development of new sources of competitive advantage to sustain competitiveness in emerging future.

Originality/Value – this is one of the first studies of design awareness, forms of application in management using Design Ladder framework in Latvia.

Keywords: design, design thinking, sustainable competitiveness, innovation methods, Latvia.

1. Introduction

Over last few decades, business environment has changed dramatically, bringing on surface such factors like globalisation, fluctuations of economy, scarcity of material resources, more demanding customers, severe competition, and shorter product life cycles. These aspects have influenced any company across the industries worldwide. Consequently, existing management practices and thinking models valid in different business environment settings can’t bring expected business performance results in fast changing emerging future thus creating rapidly growing needs for seeking for new sources of innovation and competitive advantage. Many of these new methods and tools appropriate for new conditions are not sufficiently recognised yet by managers and there are still a lot of unfolded areas, like application of design in a broader sense and understanding the essence and role of design thinking in strategic management of business.

Design as a form of art or slight visual differentiator of a product is a traditional role of design in business what brings limited economic benefits to the company for a relatively short period of time (Verganti, 2009). However, design and design thinking as integrative part of company’s processes, innovation and strategy are new sources of organisations capabilities, bringing potential ability to create
higher added value, to improve company’s performance results, to increase export perspectives and competitiveness in these turbulent market conditions. In this aspect, Tony Blair claimed: “Good design is not simply about aesthetics or making a product easier to use. It is a central part of the business process, adding value to products, and creating new markets (Design Council, UK and CBI, 2002).

The aim of this paper is to analyse awareness level of design and its broader application in strategic management of business, to evaluate the stage of design application in various sectors in Latvia and explore the most crucial factors which influence its potentials.

2. Theoretical background

2.1 Design as a new source of competitive advantage

Over last few years, there is increased attention in business and research literature about design as a new powerful driver of competitive advantage in the changing business landscape. Hirschman (1982) recognises that product innovations come from two independent sources - technology (tangible) and symbolism (intangible) resource. Accordingly to Verganti (2009), symbolism or symbolic innovations are related to social meaning of product, while technological innovations “spring from the addition or alteration of tangible features in a product, helping distinguish it from prior models”. Furthermore, in a sense of a source for innovation, many researchers underlined the importance of design and designers in successful companies (Krippendorff, 1989; Gotzsch, 2000; Lloyd and Snelders, 2003; Verganti 2003, 2006, 2009; Bertola and Texeira, 2003; Austin and Devin, 2010; Sunley, Pinch and Macmillen, 2010) to create higher added value along with economic value to sustain competitive advantage in the market.

In terms of design, many authors have used different descriptions of “product’s communicative qualities” (Verganti, 2009). For example, “emotional domain” and “soft function” is used by McDonagh-Philp and Lebon (2000), “product soul” is called by Durgee (2001) and “product experience” is named by Marzano (2000), “aesthetic coherence” is a term used by Austin and Devin (2010). However, as it is claimed by Verganti (2009), these are semantic meaning of the products and this let companies to innovate in a new direction what is based on socio-cultural model. In a traditional business approach relevant to Industrial economy stage of development the high priority in innovation is given to modification of functions or technological features of a product. Nevertheless, as a sole focused approach to technological features might lead to a version of the product which is not “user friendly” and thus giving full satisfaction of customers. In other words, functionality tries to satisfy user’s practical needs, while product meanings or design helps to solve emotional and socio-cultural requirements (Margolin and Buchanan, 1995; Verganti, 2009). A lot of studies identify that these aspects are of growing significant importance for customers whether these are goods or services (Schmitt and Simonson, 1997; Postrel, 2001, 2003; Bloch, 2003; Crilly, 2004. Fraser, 2007; Kess, Belt, Harkonen, 2009). Furthermore, dialectic of “function vs form” is developed by Verganti (2003) in a framework suggesting that symbolic and emotional values of a product is in addition to its functionality and this is a powerful source of creating also radical meanings of the product in “design-driven innovation”.

2.2 Evaluation of design application level

As a business activity, design is not only a tool to modify form and function of the products but “directly influences commercial constraints such as manufacturability, safety, and marketability. By creating new concepts, simplifying process to reduce cost, streamlining product function, or transforming business practice, designers create new experiences, add value, and sometimes give birth to new markets”(Heskett, 2004). Design activities, linked to the objectives, form three major design usage levels: “design as a product, design as a process and design as a transformation” (Friis, 2006). Very similar formulation of design application stages in the companies is used by Danish design Centre in their framework “Design Ladder” (DDC, 2003). The principal role of the framework is to measure design maturity level and usage in the companies. The higher a company is up the ladder, the greater strategic importance and economic benefits design brings to the company. In the 1st step design is a negligible part of the product development and there is no need for services of professional designer; 2nd step design is seen only in the final physical form of the product in terms of styling or visual decorations. This step basically relates to mature industries when design is a decorative element with a purpose to differentiation in some way the product from rival products. There are no any long-lasting economic benefits of design in this level. This might be work of designer, but more frequently this “improvement” is performed by other employees of the company. Design thinking is used in very basic aspects with no integrative approach to the entire product portfolio. The 3rd step is considered not as a result but “as a method that is integrated early on in the development process” (SVID, 2004). In the top of “Design ladder” is a 4th step in which design is integrated into organisation in the strategic sets of
direction and as a renewal of the business concepts leading to necessary preconditions for innovation and competitive advantage. It is claimed by Le Masson (2006) in regard of core assumption that design leads to the next level in the organisation towards a better understanding of innovation itself. In the highest steps of “Design ladder” there is a substantial need of design thinking from business strategic management perspective. “Design is the bridge between the consumer questing for the experiential and the company trying to meet that appetite with an offer that presents the new in a user-friendly and innovative way. It is at the core of the knowledge economy, and one of the cornerstones of an innovation system” (Hutton, 2010).

![Design Ladder framework](source: adapted by authors (2011) from framework developed by Danish Design Centre (2003))

In business, political and academic arenas design is increasingly considered as a tool to ensure innovative business solutions and a vital source of distinctive competencies in the rapidly changing environment, the role of designer in a close cooperation with all stakeholders providing necessary input becomes increasingly crucial for the future of any organisation. As it is stated in the recent political guidelines of European Commission (COM (2010) 2020), “to remain competitive in this challenging global environment, it needs to put in place right conditions for creativity and innovation to flourish in a new entrepreneurial culture”. Therefore, it is particularly important to find out the factors and conditions preventing design development to the levels of integrative forms in organisations that this new source of innovation and competitive advantage can bring economic added value for the companies and competitiveness and wealth for the region.

2.3 Design application perspectives

Many studies (DDC, (2003 and 2007); DIP, 2008, SVID, (2004); Design Council, UK (2007), ) prove that extent of design application in business is directly correlated with a level of creativity and innovation of the company and consequently with better business performance results, increased export and competitiveness. These studies indicate the following patterns:

- companies investing in design have increase in profit of 22% compare with ones which don’t invest (DDC, 2003),
- companies which both employ in-house designers and outsource design services export 40% of their turnover while other companies export only 18% of their turnover (SVID, 2004),
- companies which actively make use of design in their processes had twice the level of innovation of other companies, across all business sectors and four times as many design users applied for patent protection, compared with companies which don’t use design in their innovation processes (Norwegian Design council, DIP (2008),
- more than half of the UK companies are looking for design as a way out of downturn to maintain competitiveness in the severe economic climate and the same number of companies strongly agreed that design is integral part of country’s future economic performance (UK Design council, 2010).

The European Union survey Innobarometer (2007) presents the following results of their studies in the EU context:

- innovative companies across the EU considered that design staff had been a major source of ideas for their innovative activities, what is slightly ahead of RD staff (25%).
- in more than 50% of the innovative companies the innovation process comes from non-RD functions; moreover, as a common sign is that non-technological innovation enterprises are smaller in sizes, with limited resources of investments (basically these are SMEs) and non-technological innovations tend to develop at the same rate as technological innovations.

All these indicated studies tend to confirm that the principal role of design is not merely a form of art or visual decoration of particular products in matured markets, but lead to confirmation that the principal role of design is to create an economic value to organisations. “Applied efficiently, design does more than improve the single product or service. Design is a strategic development process, and it is a way of seeing problems and their solutions” (Mollerup Designlab, 2004).

3. Research process and methodology
The authors’ research is based on the survey method. The aim of the survey was to analyse the design application level in Latvia and identify main drivers and obstacles of the broader usage of design as a strategic tool and integrative part in organisational processes. For this purpose, the extended questionnaire was designed consisting of 19 different questions to identify current business models in companies, strategic management thinking patterns, attitude towards design and its usage, awareness of design in broader application perspective as a strategic tool in order to unfold organisations’ capabilities to create a higher added value, innovations, to ensure sustainable profitability and overall competitiveness. Companies providing professional design services in Latvia were taken as target group of the survey, and respondents were representatives of these companies. According to the Enterprise Register represented in Lursoft database (2011), there are 218 companies which provide design services to public and private sectors, e.g. free-lancers, design consultancies, digital, multimedia, interior, product, fashion and industrial designers. The valid survey data were received from 85 respondents or 39% of the total sample size. This let us generalise the received findings about current situation of design awareness, application forms and factors influencing potential development of broader design usage in companies’ processes and strategy from professional designers perspective. Further, the results of survey are applied in Design Ladder framework described in the previous paragraph to evaluate economic benefits what design application brings to Latvia.

4. Research results
As previously mentioned paper aims to analyse the application of design as a new, unfolded source of competitive advantage of the companies in the fast changing business environment, explore design usage level in Latvia and determine the most crucial factors which influence its potentials. This paragraph is structured in three parts grouped according to main research questions previously described: 1) identification of the current main forms of business model in the companies; 2) design application awareness in the society and entrepreneurs; 3) design development preventing factors for broader application perspective as a strategic tool.

4.1 Main forms of business model in Latvia
In order to explore the design application perspectives in Latvia, we focused some of the questions in our questionnaire on identification of what is business model in companies across multiple industries in public and private sectors. As it is seen in Figure 2, vast majority or 82.5% of respondents identified that current business model is focused on short-term business problem solutions and the primary goal is to find ways of further cost reductions in the production process of mass products.

Nevertheless, 12.7% of design industry representing respondents marked that the business model of their clients is based on a long-term vision for their company along with seeking the ways of high-value creation, usage of good quality materials, qualified workforce and design is an integral part of their business process; this kind of business model also joined 4.8% of respondents which identified trend that long-term business concepts overtakes a short-term business model approach in the companies. Nevertheless, even summarising these two groups of respondents, it is less than 1/5 of the companies searching systematically new ways of competitive advantage through value creation what would be based on their vision of the company and long-term business concept.

4.2 Awareness stage of design application in Latvia
The next series of questions were aimed to evaluate a design in a broader understanding by society in Latvia treating design not only as a pure aesthetical decoration, but also as a crucial element of their everyday life and recognise perspectives that design gives to society in terms of socio-cultural aspects of products equally important as technological and functional characteristics (Verganti, 2009). This attitude
gives a potential birth for design innovations and sustainable competitiveness in the changing economic conditions.

Based on multiple-choice questions mentioned in Figure 3, the respondents have identified that 29.7% of the general society and entrepreneurs see design as an element of luxury goods. It follows by 37.5% of respondents, who identify the level of design awareness and perception in a form of visual element with decoration purpose of the product, for example, in packaging. Summarising these both forms of replies, 67.2% of respondents indicate that society and entrepreneurs in Latvia see design only in a very basic level of design application, when design is considered as unimportant in the business processes as the integrative part, and consequently design is not seen as a tool of innovation and value creation.

Figure 2. Structure of business models in Latvia

![Figure 2. Structure of business models in Latvia](image)

Figure 3. Design application awareness in Latvia

![Figure 3. Design application awareness in Latvia](image)

Although so numerous amount of respondents identified low understanding of design application, almost 25% of received replies figured out that society and entrepreneurs are aware of design usage perspectives and see it as a crucial part of their process of creating products and a crucial factor in innovation. 20.3% of respondents identified that there is a growing potential of collaboration between professional designers and business management in order to place design into the entire product development process. Moreover, 12.5% of respondents recognised that design is considered as a powerful tool of innovation in the organisation to ensure sustainable competitiveness of business. This significant part of responses let us think that a considerable part of society realises the crucial role of design in product development and innovation, however, the majority is still seeing it as a “form of art” in the limited scope of application.

4.3 Identification of main factors preventing design broader application forms

Further research was focused on identification of factors influencing design usage in a broader scope in the business processes, model and innovation.

We have identified six major aspects, which directly affect the design application: traditional business thinking model, level of design policies in the country, education of designers, business management education, network development level of designers and general public awareness of design usage. Figure 4 identifies relative strength of these factors. As the most significant barriers to design broader usage in public and private sectors the respondents have mentioned limited public awareness of design as a vital source of improvement of their life through innovation instead of narrow application in the form of art and traditional management thinking model, this was stated in almost 70% and over 60% of responses, respectively. In our
opinion, this is related to the fact that for so many decades the industrial era with the requirement of pure efficiency measures were recognised as a single driver of any business to competitiveness and this heritage in education and management practice is still cultivated in the current era of innovation, when the drivers are creativity and all sources of innovation, including non-technological forms as design (Hamel 2007, Verganti 2009). In innovation society people require fundamentally new thinking, competencies and skills to generate creative and innovative results, not limited by excellency in certain function, but in the ability to design better products and provide even breakthrough results (Gray, 2010).

![Figure 4. Main factors preventing broader application of design.](image)

Creativity, design and invention are still considered as a function separated from the entire business process and not understood as an integrative part of the organisation’s strategic management. “We [business people] expect that designers, inventors and creative people “go into the room with a goal” and will come out with creative solutions (Gray et al., 2010). However, complex and dynamic innovation economy requires different approach that these qualities first of all are a part of management thinking further fostering to open powerful gateway in the processes of any organisation thus creating sustainable competitive advantage of the organisation. The business model based on single analytical data considerations of the past events does not provide crucial insights in the future business perspectives and can lead to short-term business problem solutions, but not enhance competitiveness in the long-term (Hamel, 2007). That is why it is increasingly crucial to recognise new tools and means in the management practice to create an economic value to products, services and organisations.

5. Conclusions

In order to evaluate design application level and potential economic benefits to the organisations, we have applied our research data to the framework of Design Ladder (DDC, 2003). This gave us the summarised view that design in Latvia is in the first, early development stages (Figure 1) and design is mostly applied as a styling, solely for the final physical form of the product, but not yet entering the next stages of the Design Ladder with design as a process and design as innovation in an organisation. This leads to think that there is no strategic importance of design seen in the business management practice in Latvia and thus design does not bring sustainable economic benefit to the companies. These are potentials to be unfolded and applied in a broad sense through renewal of existing business models, design thinking and modification of entire organisation culture to enhance multi-functional activities, capabilities of flexible adoption to specific external factors along with unique inputs of tacit knowledge of social-cultural trends brought by professional designers would give organisations sustainable competitive advantage for emerging future. The current economic downturn has emphasised even more crucial necessities for these changes, identifying hidden weaknesses and problems of the organisations. “21st-century challenges are testing the design limits of organisations around the world and are exposing the limitations of a management model that has failed to keep pace with the times” (Hamel, 2007) and this is primarily related to the industrial economy’s thinking model, when business was mainly driven by optimisation of existing resources. External environment have changed dramatically in the last decades, however the existing management practices are still lagging behind. Such concepts as strategic design, design management, design thinking and design driven innovations are notably entering business environment providing new gateways to enhancement of
competitive advantage of the companies. Innovation policies, design education, management education and practical management have not yet caught up with these changes in Latvia and these are the areas of further research in the emerging fields.

References
OPPORTUNITIES AND PROBLEMS OF BALTIC REGIONAL AIRPORTS DEVELOPMENT

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1. Two models of regional airports development

Airports privatisation and commercialisation are processes, which happen in many EU countries now, and for several countries problems related to airport system development are important. The first fundamental question of the airport system development for the Baltic countries is the base model question - one central airport or several equally developed in the regional airport network. Both possibilities have arguments pro and contra and opinions here are different.

Question about model of regional airports development is very similar to more general question about the state economic and social development model – monocentric, “one strong region around capital”, or polycentric, “several developed regions in country”. In Lithuania two regional development centres around Vilnius and Kaunas exist and polycentric model of state development has historical foundations. For Latvia and Estonia state capitals play dominating economic role and discussions about monocentric or polycentric models are more intensive. The problem is that different model supporters use different kinds of arguments. Monocentric model supporters argue that financial investments in the capital region give much better results than same investments in regions. Polycentric model supporters argue that it is necessary to ensure the same prosperity level in capital and regions. Discussions where one side uses economic arguments and other side uses social arguments rarely are finished with mutually acceptable solutions. As a result, Latvian National Development Plan at present time contains both the elements of polycentric model, including the development of regional economical centres, and the elements of monocentric model, including special development of the Riga region.

In case of the polycentric model acceptance, the necessity of regional airports system, as part of the transport infrastructure, stems from the necessity of regional social and economic development. In case of the monocentric model acceptance, there is no real need for a regional airports network. The problem is that due to different reasons state level planning documents are not certain enough to make decision about monocentric or polycentric model of state development and it is necessary to find other arguments for regional airports development model choice. These additional arguments can be found from analogy with European countries, considering statistical data about factors influencing a number of airports in a given country.

2. Regional airports amount evaluation

The number of airports in the European countries depends on spatial, demographic, economic and other factors. The relative significance of different factors can be evaluated using correlation coefficient – the higher is correlation, the higher is the factor significance. The number of airports in the European countries has significant correlation coefficients $R$ with the country areas ($R=0.64$), population ($R=0.87$), number of cities with population over 1 million ($R=0.78$). Correlation with GDP per capita ($R=0.12$) is less than correlation with space and population factors, correlation with population density is negative ($R=-0.017$) which means that an increase of country area with the same population raises the need for airports too. Table 1 contains statistical data about population, population density, GDP per capita, number of cities with population over 1 million, amount of accessible airports for passengers (airports, where it was possible to buy tickets in years 2008-2011) of the EU-27 countries.

Using a regression analysis, it is possible to evaluate an expected amount of airports for the Baltic countries. Supposing that the number of airports accessible for passengers $Z$ is a linear function of an area $A$,
population P, number of cities with population over 1 million C and GDP per capita G, Z = c0 + c1*A + c2*P + c3*C + c4*G. Using the least squares method, it is possible to calculate that c0 = -1.832; c1 = 0.0000034; c2 = 0.00029; c3 = 2.542; c4 = 0.00016.

The numbers of airports calculated using this formula Z = -1, 832 + 0.0000034*A + 0.00029*P + 2.542*C + 0.00016*G are Z = 1.88 for Latvia, Z = 2.37 for Lithuania and 2.03 for Estonia.

Looking at these results, it is possible to make several conclusions. Firstly, the calculated data are in the evident correspondence with the real situation. Secondly, constant c0 is negative and large. It means that strong scaling effect exists in the model and for a virtual country, which is as large as Latvia, Lithuania and Estonia together, the calculated number of airports Z = 9.95 is almost two times higher than the sum of number of airports in separate countries. The reason of this scaling effect is simple – when we calculate the number of airports in the joint country, we add the big negative constant one time, but calculating it for each country and adding together, we sum this big negative country three times. Thirdly, the calculated number of airports Z = 9.95 for the Baltic countries explicitly shows that the model of “several developed regional airport network” better corresponds with the European statistical data, than “one heady central airport” model. Fourthly, this simple regressive model in a very clear way demonstrates the necessity of close collaboration between the Baltic countries in the field of aviation. Modern airport is a complicated and expensive technical system and for a country with small area, population and GDP per capita the regression formula gives a negative value of Z meaning that such objects as airports are too expensive for small countries. Small countries can develop aviation infrastructure only when they join their efforts. If we suppose that transport infrastructure of the Baltic countries should correspond to the average European standards, it should be approximately 3 airports in Latvia, 3 in Estonia and 4 in Lithuania.
3. Evaluation of present situation in the Baltic airports

The development of regional airports in the Baltic countries over the last 20 years can be described as “patching up” the old infrastructures and permanent struggle for state and municipal financing. Unfortunately, in the Baltic countries there is no opportunity to find a successful example to those regional airports which would be privatised or their funds would be shared with a private investor. As unsuccessful examples in Latvia we can mention airport projects in Daugavpils and Jelgava. In Latvia only Tukums airport is developed by privately owned company at present time, but public resistance due to environmental risks can harm further growth of this airport.

It is evident today that in several cases certain regress in airports development can be expected, because handing the regional airports to private industries was done without necessary preparation - organisation of infrastructure and workspace appropriate for industrial operations, selection of collaboration partners. As a result, the aim of collaboration projects were in general less connected to the aviation infrastructure creation, but directed to flinging away the rest of airport resources and credit resources attracting for activities with the high short-term profitability.

More successful are the regional airports in the Baltic countries that have completely or partly saved the status of state or self-governmental enterprise. In this case Lithuanian and Estonian airport development models should be recognised as more successful than Latvian, because by adopting the airport infrastructure the state organisational structure was saved and adapted to the new economical environment. In Latvia effective airports have been separated from the state interest and were given to existed municipal governments, which, due to financial reasons, could not provide those airports with effective service. In some cases at the beginning of 90-ies, those airports were not even guarded, which led to the entire destruction and plunder in the short-term. A part of these airports was used for military purposes and after leaving the USSR, the army was not ready to use civil aviation.

There are only two regional airports in the Baltic countries, where the number of passengers exceeds 10000 – these are “Kaunas” and “Palanga” in Lithuania. It confirms that in Lithuania the regional airport development policy is realised more subsequently than in Latvia and Estonia. Of course, there are positive tendencies of aviation development in Latvia and Estonia too. For instance, in Latvia, in 2000 Ventspils airport was restored, and in Estonia, with the current airport bases, there are good possibilities to attract structural funds to finance air-traffic to the region and islands after entering the EU.

3. Strategic planning of airport development

The main goal of strategic planning of the airport development is to promote state economic development providing access to regional centres of economic growth for human resources and cargo flows. A strategic plan of the airport development contains a description of organisational structure, management team, financial and personnel planning issues, description of future infrastructure and material resources development, conception of flight organisation. It is necessary to underline that the strategic plan of airport development is not only the list of actions, but also includes a description of demanded resources.

Unfortunately, at present the strategic planning of the Baltic regional airport development is out of government attention. The principles of regional traffic network forming and development are not defined and aims are not formulated. The lack of regional airports development strategy makes it difficult to attract investments and airport owners at present time are the initiators of negotiations with governments on issues related to transport policy.

4. Airport collaboration with air-companies

The necessity to increase the competitiveness of airports makes it necessary to pay special attention to a financial viability of airports and ensure necessary long-term investments. To successfully fulfil investors’ strategic aims, strategic development plans should take into account relations between airports and airlines.

For example, Vilnius airport is still suffering from the collapse of national airline FlyLal. In this situation AirBaltic has used fully the domination in the Baltics. AirBaltic as provided the policy of redirecting passenger flow via Riga. As result, Vilnius and Tallinn are only commuters for the Riga airport and feeding AirBaltic transit routes.

The purpose of airports is to provide reliable and sufficient air-traffic infrastructure to airport clients. Growing passenger and cargo flows provide increasing load on infrastructure and make it necessary to coordinate airports and air-companies collaboration better. One of strategic mistakes in the regional airport development planning is connected with the incorrect definition of airport users – main clients of airports are not passengers, but air-companies and special attention should be paid to collaboration with them.
The first problem here is related to the different time scales - the average planning cycle for airports is 10 – 15 years, but for air-companies it is from 5 to 7 years. It is partly connected with circulation cycles of financial resources, and partly with the infrastructure amortisation. As a result, during one planning cycle of an airport, air-companies can influence it several times causing additional difficulties for the airport planning.

The second problem here is the fact that with the EU expanding its airspace expands too. During last 10 years the whole set of processes was performed with the main task to unify the air-traffic rules and substitute the government regulations used before step by step. Regional airports should provide services for air-companies in accordance with the unified rules in many cases requiring additional expenses.

The third problem is complicated relations between collaboration and competition in aviation. For example, transit passengers flow is a backbone for the airport commercial development and transit passengers should be served almost free of charge for competition reasons. Airport charges are the effective way to attract new airlines and build up regional network, but such discounts can decrease income and make the airport growth slower.

5. What can regional airports expect from the EU?

The most important factor among the economic ones influencing airport strategic development is the passenger flow. According to the inquiries of the international air industry long-term development during the period until 2020, the annual growth is expected at 4-5%. Nevertheless new statistical data show that the existing decrease of industry seriously exceeds the one predicted before. The economic crisis, terrorism threats, weather impact, SARS, political conflicts and other reasons heavily influenced the aviation transport. The situation is better in big companies, which were able to regain sufficient level of profitability to compensate losses of the previous years. With middle and small air companies (below 10 units of the air fleet), the situation is more complicated and in many cases such companies will have to choose, whether to decrease an air fleet, or to go to new transportation markets. The goodwill of the bank sector to airlines in terms of availability of short-term financial resources and long-term development projects of the planes purchase and leasing affect this choice.

In accordance with the airline industry regression features, the sector of low-cost carriers (LCC) is growing at present time. This sector is significant and interesting for the regional airports, because the LCC work is enlightened to the outside central airline operations network. The companies of the LCC have initiated the new concept in the transportation market that is based on optimisation of the non-stop transportations and simplification of service. There are certain differences between LCC and full service companies in business functions performing.

Differences between LCC and full service companies

<table>
<thead>
<tr>
<th>Features</th>
<th>Companies of LCC</th>
<th>Companies of the full service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air fleet</td>
<td>Smooth. The aircrafts of one and the same class and type. Uniform service.</td>
<td>Combine. Airline companies can flexibly change aircraft types in transportation lines accordingly dynamics of the passengers stream.</td>
</tr>
<tr>
<td>Tickets</td>
<td>Only e-ticket (electronic) system is used. Tourism firms don’t sell the tickets</td>
<td>Standardized tickets. The tickets are sold in specialized reservation systems. The sale of tickets is assured with help of IATA agent network</td>
</tr>
<tr>
<td>Airports</td>
<td>Airports with the low service rates are chosen. In some cases carriers are fully free of the airport costs.</td>
<td>Destination airports are the central airline hubs.</td>
</tr>
<tr>
<td>Transportations</td>
<td>Alliances aren’t formed. Mainly the “flights of one shoulder” are provided.</td>
<td>Transportation nets are formed in connection with the alliances</td>
</tr>
<tr>
<td>Rates</td>
<td>The rates are established accordingly airline charging. Alliances aren’t formed. Mainly the “flights of one shoulder” are provided and are not structured.</td>
<td>The rates are structured accordingly to particular manuals and don’t depend on the Alliances aren’t formed. Mainly the “flights of one shoulder” are provided.</td>
</tr>
<tr>
<td>Service</td>
<td>Minimal service. Only flight is provided.</td>
<td>Multilevel service structure.</td>
</tr>
<tr>
<td>The plan of flight</td>
<td>Till 90% of air fleet are busy in regular flights.</td>
<td>Ratings of flight capacity are reserved.</td>
</tr>
</tbody>
</table>
It is necessary to underline that at present time companies of full service also start to use methods of the LCC companies. The possibility to attract LCC companies is very interesting for the Latvian regional airports, but it is required to make necessary preparation for such activities. At present time there are no regional airports in the Baltic countries, which are able to attract 200 000 passengers per year, the minimal quantity for LCC work in the airport.

6. Regional airports safety
The regional airports safety is one of the most significant problems and obstacles in the regional airports development. High costs of security equipment and necessity to use specially educated personnel for security control makes the security service very expensive especially in airports with little movement of passengers. ICAO recommendations and practice that are directed through CAA state institutions, constantly define new and higher security demands. If these demands are not satisfied, the airport operations can be limited or certification can be cancelled. For regional airports, it is a complicated problem, which could be possibly solved by the government undertaking a responsibility to partly cover security costs, since in every airport, where international flights are served, the state safety interests are secured.

7. Conclusions
1. The polycentric model of regional airport development is more appropriated for the Baltic countries than the monocentric model.
2. Close collaboration between the Baltic countries airports is the necessary condition for successful regional airport development.
3. The strategic plan of the Baltic airports development should be worked out and approved on the state level.

References
CONTEMPORARY APPROACHES TO ENTREPRENEURSHIP EDUCATION

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Abstract
Over the last decade entrepreneurship education has become an increasingly vital area of research, practice and policy regulations.
The primary aim of this article is to explore contemporary approaches towards entrepreneurship education in order to depict frameworks and methods that are acknowledged by renowned experts. The secondary aim is to assess their relevance for the Latvian entrepreneurship education at present.

Throughout the research, the author analyses the newest frameworks of entrepreneurship education by reviewing scientific articles published in Europe, dated no earlier than 2009; explores practical models successfully applied in Europe; examines results of Flash Eurobarometer Surveys No.260 (2009), No.283 (2010) and the Special Global Entrepreneurship Monitor Report (2010); compares results of the scientific articles overview and the surveys, and identifies prospects for further research.

This research applies general scientific research methods, including modeling, monographic and logical construction methods, and is based on a pure literature review.

The analysis of the modern practice-based approaches to entrepreneurship education revealed the major shift from passive/formal modes of learning and teaching towards experiential/social forms as the rationale underpinning the emergence, development and usefulness of such frameworks as: Education FOR Entrepreneurship and Experiential Learning Theory, Learning by Developing, Authentic Competence-Based Learning Theory, which are closely interrelated with each other, being conceptually similar, but contextually different. Pedagogical methods related to these frameworks are of an interactive nature and targeted to develop multiple social dimensions, such as employability, intrapreneurship and venture creation. The principle of “learning by doing” is fundamental to these methods. As opposed to theoretical approach, which provides only book knowledge of management issues, holistic/dynamic approach targets a change in individuals’ “know-how”.

Examination of Flash Eurobarometer survey results highlighted a number of deficiencies in the entrepreneurial environment and entrepreneurship education system of Latvia: the lack of information and skills, small number of startups versus high proportion of individuals trained in starting a business, wide gap between intentions and start-ups, low level of cooperation between universities and businesses, and decreasing entrepreneurial activity, institutional and administrative barriers to entrepreneurship.

The author concludes that there is an ample market for quality entrepreneurship education and the discussed contemporary approaches are of a very high relevance for the Latvian entrepreneurship education system.

The major challenge for universities at present is to shift from passive modes of learning and teaching towards experiential forms establishing closer contact between students and the business world. The author suggests this can be achieved by refocusing the existing curriculum and transferring successful practice-based models from other countries.

In view of the fact that the topic has not been widely researched in Latvia yet, the results, ideas and concepts can be useful for academics, practitioners and other involved stakeholders.

Keywords: entrepreneurship education, experiential learning theory, authentic competence-based learning, cooperation of universities and businesses, Latvia.

Introduction
Over the last decade entrepreneurship education has become an increasingly vital area of research, practice and policy regulations. The number of scientific publications on entrepreneurship education soared by over 300% in 2010 as compared to 2000, whereas articles focused on Europe represent 1/5th of the total number of publications (Rizza & Varum, 2011)16. H. Haase and A. Lautenschläger (Germany), M. Raposo (Portugal), D. Higgins and C. Elliott (UK), J. Nab, A. Pilot, S. Brinkkemper and H. Ten Berge (the Netherlands) are some of the bright contributors to the formation of contemporary approaches to

16 Based on a bibliometric study carried out through SCOPUS, Science Citation Index Expanded (SCI) and Social Sciences Citation Index (SSCI).
entrepreneurship education comprising authentic competence-based learning, experiential learning, education FOR entrepreneurship, and other applicable frameworks. In contrast, very few researchers from Latvia have analysed the topic, e.g. V. Bikse, T. Koke and N. Lace.

Implementation of basic provisions of the Lisbon Strategy aimed “to make the EU the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion” between 2000 and 2010 (European Union Parliament Website, 2010) and the Latvian national programmes based on the Lisbon Strategy (Ministry of Economics of the Republic of Latvia, 2009) mostly depended on increasing the quality of entrepreneurship education (Bikse, 2009). By 2010, most of the set strategic aims were not achieved, and “the strategy should be rebooted” (EurActive, 2009). In March 2010, the new Europe 2020 strategy was launched, which affirms “education and entrepreneurship have a critical role to play in maintaining and further enhancing Europe’s position as a key global player in the coming years” (World Economic Forum, 2010). The new strategy reiterates conceptual frameworks from the Oslo Agenda for Entrepreneurship Education worked out in the end of 2006 by the European Commission and the Norwegian Government putting a clear emphasis on promoting entrepreneurial mindsets, involving students in enterprise projects, innovative pedagogies to build an entrepreneurial spirit, development of creativity, initiative, self-confidence (European Commission, 2006).

Nowadays in Latvia, the crucial problems as stated by the European Commission and Global Entrepreneurship Monitor reports (2008) are weak entrepreneurial environment and low level of entrepreneurial activity as compared to other EU Member States; the overall assessment of business programmes deficient in interdisciplinary approach is also weak (European Commission, 2009). There is no united system of entrepreneurship education management on a national level (Bikse, 2009). The most evident is the socio-economic rationale, because entrepreneurship as such started to develop only in 1990s. At the same time, these weaknesses, once recognised, open new opportunities for development and improvement.

The majority of scientific researches on entrepreneurship education originate from innovation-driven economies coinciding with the Global Entrepreneurship Monitor classification (2010), e.g. Australia (Asia Pacific), Finland, Germany, the Netherlands, Spain, United Kingdom (Western Europe), amongst others. These researches are generally based on sound practical examples. Latvia, in turn, has been identified as an efficiency-driven economy in transition to the innovation stage. Still, there are a limited number of good-practice examples here, one of them being the Riga Business School (EC, 2008).

To sum up, the topicality of researching contemporary approaches and methods of entrepreneurship education is conditioned by the escalating attention of the scientific world to the issue and the EC-initiated strategies as the external reasons as well as weak entrepreneurial environment, activity and overall assessment of entrepreneurship education in Latvia as the local (internal) reasons.

This article primarily aims to explore contemporary approaches towards entrepreneurship education in order to depict frameworks and methods that are acknowledged by renowned experts. The secondary aim is to assess their relevance for the Latvian entrepreneurship education at present.

The study focuses on entrepreneurship education as the research object and its contemporary frameworks as the research subject. The ensuing tasks are as follows:

a) To analyse the newest frameworks of entrepreneurship education by reviewing scientific articles published in Europe, dated no earlier than 2009.
b) To explore sample practical models of entrepreneurship education applied in the European innovation-driven countries having generated positive academic results.
c) To examine results of Flash Eurobarometer Surveys No.260 (2009), No.283 (2010) and the Special Global Entrepreneurship Monitor Report (2010) underpinning the current entrepreneurship education tendencies in the EU in general and in Latvia specifically.
d) To contrast results of the scientific articles overview and the surveys.
e) To make the research-based conclusions and recommendations; to identify prospects for further, more detailed and deeper, research of the issue.

This research applies general scientific research methods, including modeling, monographic and logical construction methods, and is based on a pure literature review. The researched content though provided sufficient data to make general conclusions and recommendations applicable to entrepreneurship education in Latvia, which has naturally narrowed the study, as well as the chosen time scale, representing the research delimitations.
1. Overview of entrepreneurship education frameworks

The overview of entrepreneurship education frameworks addresses definitions and aims, teaching methods and impact indicators of entrepreneurship education based on the latest scientific publications.

Definition and aims of entrepreneurship education

One of the most precise definitions of entrepreneurship in educational context is “the ability of an individual possessing a range of essential skills and attributes, to make a unique, innovative and creative contribution in the world of work, whether in employment or self-employment” (the Northern Ireland Government's “Entrepreneurship and Education Action Plan”, 2002; cited in Bridge et al., 2010). Very close interpretation refers entrepreneurship “to an individual’s ability to turn ideas into actions. It includes creativity, innovation and risk-taking as well as the ability to plan and manage projects in order to achieve objectives” (Curavic, 2011).

Mwasalwiba (2010) identified key terms in the meaning of entrepreneurship education having analysed over 20 scientific articles with this particular purpose, and these are: attitude, values, intentions and behavior (32%); personal skills (32%); new business (18%); opportunity recognition (9%), managing existing firms (9%). The abovementioned, more up-to-date, definitions are conceptually similar referring to an individual’s ability, skills, creativity, and work.

Raposo and do Paco (2011) cite the US Consortium for Entrepreneurship Education 2008 Report suggesting that the core knowledge created via entrepreneurship education includes:
- the ability to recognise and pursue opportunities by generating new ideas and attracting required resources
- the ability to create and operate a new firm
- the ability to think in a creative and critical manner.

The most usually referred aims of entrepreneurship education are:

- to develop entrepreneurial drive among students (raising awareness, motivation), to promote new start-ups and other ventures
- to identify and train students in the skills they need to set up a business and manage its growth
- to acquire relevant knowledge
- to increase capacities in the use of techniques, examination of business situations, creation of action plans
- to enable to deal with the changing environment


The analysis of Mwasalwiba (2010) also showed that entrepreneurship education is generally aimed at creating or increasing entrepreneurial attitudes, spirit and culture among individuals in the general community (34%); other scholars associate it with new venture and job creation (27%), contribution to the community (24%), and stimulating entrepreneurial skills (15%).

The broader approach to entrepreneurship education is brought by the Northern Ireland Centre for Entrepreneurship (NICENT), formed as a partnership of the University of Ulster and Queen’s University Belfast. From the very beginning the project adopted the approach of encouraging the development of enterprise attributes and competences rather than focusing on business start-up having opposed the widely spread view with a narrow focus on business creation to maximise personal profit (Bridge et al., 2010).

Within the project, entrepreneurship education had three targets developing multiple social dimensions:

1. Employability (being able to get a job):
   - to prepare for working for other people
   - to be able to “sell” oneself to employers
   - to contribute once in employment with appropriate skills and knowledge.

2. Intrapreneurship (preparing to create a venture):
   - to be an entrepreneurial employee
   - to develop skills of a social entrepreneur
   - to learn to respond positively to change
   - to develop own business ideas for later spin-out.

3. Venture creation (being able to start a business):
   - to set business creation targets
   - to acquire business planning.
Some scholars (Garavan & O’Cinneide, 1994; Jones & English, 2004; Gibb, 199; cited in Mwasalwiba, 2010; Kontio, 2010) can be considered as participants of the debate in application of terms, such as “entrepreneurial or enterprise” versus “entrepreneurship” education, which has both geographic and conceptual grounds. For example, “entrepreneurship education” could be regarded as the term mostly used in the USA and Canada, whilst “enterprise education” in the UK and Ireland. The former was concerned with creating an attitude of self-reliance and the latter was for creating opportunity-seeking individuals. “Entrepreneurial education” could apply to all forms of education, while “entrepreneurship education” to new venture creation and innovation. The author questions rhetorically how it is possible to distinguish between entrepreneurial and entrepreneurship education in the real-life context of educational programmes. Irrespective of these contrasting views, “entrepreneurship education” is the widely accepted term at present, used in the majority of articles and European Commission reports. Otherwise, the abovementioned terms are used interchangeably.

To sum up, entrepreneurship education has two simultaneous directions: to produce entrepreneurs per se and/or entrepreneurial personalities.

Methods of teaching entrepreneurship
The current understanding of entrepreneurial learning in the context of higher education is much broader, more competitive and challenging as compared to traditional, formal modes of passive education. Higgins and Elliott (2010) as well as Haase and Lautenschläger (2010) suggest that entrepreneurship education should desist from teaching knowledge on business creation and focus on experiencing entrepreneurship and developing practitioners. These authors contribute to the Experiential Learning Theory, which is an established and effective alternative methodology for linking theory and practice (Govekar & Rishi, 2007; cited in Lee et al., 2010).

Experiential Learning Theory is an active learning pedagogy, where experiences are transformed and create implicit knowledge as a collection of social practices (Kolb & Kolb, 2005, cited in Lee et al., 2010). It comprises problem-based learning and scholarly engagement taking place beyond the domain of classroom meetings through experiential and discovery-based assessments. The form of scholarly engagement is community-based learning comprising work-based learning, group work-based learning and curricular engagement. Cooperative student placement is an example of curricular engagement, where students work with industry partners on specific projects to benefit themselves, academic institutions and the community. Experiential learning can include such techniques as case studies, action researches, problem solving, and learning by doing (Lee et al., 2010). The development of experiential knowledge in this context is an incremental process that can evolve over time (Higgins & Elliott, 2010).

On the contrary, traditional approaches to learning assume that knowledge must be transmitted and received in the form of explicit information and applied by learners afterwards (ibid, 2010). This teaching scheme was teaching-oriented, aimed at imparting theoretical and specialist knowledge (Haase & Lautenschläger, 2010). However, Higgins and Elliott (2010) argue that, who are exposed to this kind of passive learning, are spectators rather than active participators on the outcome students. And the Experiential Learning Theory explains, why.

Figure 1 shows classification of experiential learning methods coupled with some modal characteristics. Explicit information about entrepreneurship is a weak motivational driver to transform hard facts into action and tangible results. Haase and Lautenschläger (2010) acknowledge that there is no need to explicitly teach “know-what” within entrepreneurship education, which must primarily target a change in the individual’s “know-how”, whereas the latter is the ability to view an opportunity by observing the practice – this refers to education for entrepreneurship, where it coincides with the cognitive theory that is concerned with the nature of human knowing (Higgins & Elliott, 2010).

Education for entrepreneurship takes the hard facts about business creation and management, including accountancy, finance and marketing, for granted. However, without an entrepreneurial conviction – the right mindset, awareness, motivation and attitudes, which are formed by soft skills, such as creativity, proactiveness, leadership, risk taking propensity – it is unfeasible to undertake sustainable affords towards business creation. These constituencies can also be grouped into entrepreneurial “know-what”, “know-how” and “know-why”. It is quite evident that hard facts can be easily taught, while experience-based soft skills are rather difficult to impart or develop, but they are much more important (Haase & Lautenschläger, 2010).

Figure 2 summarises the frameworks of education for vs about entrepreneurship and passive vs dynamic approaches to teaching and learning, its objectives and outcomes as building blocks of entrepreneurship education.
Another conceptual framework is Authentic Competence-Based Learning, which overlaps with the experiential learning in its essence. The authenticity refers to a degree of similarity between educational and professional tasks. The concept of authentic learning is an integral part of competence-based learning. The concept of competences, in turn, integrates personality and behavioural perspectives, the learning environment and cognitive approaches to entrepreneurship. Competences comprise several entrepreneurial elements that can be learned and taught: motives and intentions, attributes, self-concept (attitudes), traits, knowledge and skills (Nab et al., 2010; Sanchez, 2010).

Laurea University of Applied Science (Finland) has introduced the concept of Learning by Developing, a pedagogical and collective approach to learning, in which learning is linked to an applied research and development culture. This refers to learning expertise that arises from social interaction, the sharing of knowledge and competence arising from, research and problem solving related to authentic objectives (Pirinen, 2009).

It is evident that both Learning by Developing and Authentic Competence-Based Learning are very similar to Education FOR Entrepreneurship and Experiential Learning Theory. In fact, all these frameworks are conceptually similar, although can be contextually different. For instance, competence-based learning is more related to cognitive and behavioural theories developed by Ajzen, I. and Shapero, A. in the end of the 1980s.

The empirical evidence suggests that students generally have little contact with the business world and key stakeholders influencing the business environment. They lack the relevant social capital. Even if students are entrepreneurially ready, they are not business savvy (Bridge et al., 2010). Entrepreneurial intentions among youngsters are high, but not actions, while these intentions tend to be higher in developing countries. Furthermore, economic and institutional frameworks are unfavourable to entrepreneurial activity (Nabi & Linan, 2011). Therefore, the present challenge for higher education is to move from an imposed curriculum to realise the opportunities facilitated by cooperation of universities and businesses (Rossin & Hyland, 2003; cited in Lee et al., 2010).

Figure 1. Experiential learning methods
(Source: devised by the author based on Lee et al. (2010))
Figure 2. Building blocks of entrepreneurship education

Source: based on Haase & Lautenschläger (2010); Higgins & Elliott (2010)
‘The teachability dilemma’ of entrepreneurship and measurement of educational impact

Entrepreneurship education development emanated from the Anglo-Saxon regions (Lee et al., 2010). Indeed, according to the QS World University Rankings 2011/12, all universities from top 15 are the UK and US ones (with Cambridge – 1st, Harvard – 2nd, Massachusetts – 3rd, Yale – 4th and Oxford – 5th) (TopUniversities Website, 2011).

At the same time, it was stated in the Global Entrepreneurship Monitor Report 2010 that all innovation-driven economies not surprisingly dominate the business services sector. This sector tends to rely on highly educated human capital, which is more widely available in these regions, and supplied by a well-established higher education system. The report also communicates that in Latvia three entrepreneurship framework conditions valued most negative are: finance, national policy regulation and government programmes.

However, there are two fundamental questions linked to the topic: whether an individual needs to get higher education or study entrepreneurship to become an entrepreneur or skilled manager, on one hand, and whether entrepreneurship is teachable, on the other.

The recent survey by Paris Tech University (MINES Paris Tech, 2011) addresses these questions directly. The researchers have analysed 500 largest international companies managed by 508 people. They have gathered information about 487 of them and found out that only 13 do not have higher education, whilst there is no data about 21 managers. This leads us to a proportional range from 2.7% to 7% of non-educated top-managers within the Paris Tech research (2011). The top 5 entrepreneurship education universities according to Paris Tech are: 1. Harvard University (USA), 2. Tokyo University (Japan), 3. Keio University (Japan), 4. HEC (France), 5. Kyoto University (Japan) and University Oxford (UK).

Furthermore, the studies have shown that individuals with a university degree are more inclined towards starting their own business. Some authors proved that enterprises originated from the academic environment have a greater growth and innovation potential (Sternberg et al., 2007; Steffensen et al., 2000; cited in Haase & Lautenschläger, 2010; Johansen, 2010). On the other hand, Wennberg et al. (2011) found out that firms started by university-educated entrepreneurs as commercial spinoffs perform better than firms started by university-educated entrepreneurs as university spinoffs in terms of growth in sales revenue and survivability. Firms started by university-educated entrepreneurs as university spinoffs benefit more from the knowledge sources by years of experience in the same sector in terms of survival and employment growth than firms started by university-educated entrepreneurs as commercial spinoffs.

Impact assessment of entrepreneurship education is one of the most challenging issues in the themed scientific literature at present. Usually entrepreneurial intentions and graduate start-ups are used as success indicators. For instance, Johansen (2010) and Sanchez (2010) come to similar conclusions that young people who participate in specialised educational programmes are more likely to become entrepreneurs, in other words, intentions to become self-employed increase by the end of the programme. The research of Mwasalwiba (2010) proves that the number of graduate start-ups is the highest ranked success indicator followed by academic results and change in entrepreneurial intentions.

Nevertheless, along with the emergence of social entrepreneurship and broader view on entrepreneurship education objectives, the rate of new business creation is not any more the most suitable indicator to evaluate results of entrepreneurship programmes as the respective literature has been suggesting. The results are not immediate requiring longitudinal studies (Raposo & do Paco, 2011). As far as the contemporary approaches to entrepreneurship education are concerned, intentions to start-up can evolve over time and one of the primary objectives is not to promote the start-ups but to develop entrepreneurial personalities.

2. Successful practical models from Finland and the Netherlands

The theoretical frameworks discussed in the preceding section are all practice-based, i.e. it is practice at first instance that has determined development of approaches evolved into theories by Haase and Lautenschläger (2010), Higgins and Elliott (2010), Lee et al. (2010). Some of the bright examples of entrepreneurship education in context are the cases of Turku University of Applied Sciences (Finland) and the University of Twente (the Netherlands). Being based on the discussed theories, these practical examples demonstrate the applicability of introduced models and positive results that their application can bring as an academic outcome.

The strategy of Turku University of Applied Sciences (TUAS) connects entrepreneurship, applied R&D and teaching together. The University tries to actively inspire inner entrepreneurs in students and increase number of enterprises. The TUAS model for entrepreneurship education consists of three phases as shown on Figure 3 (Kontio, 2010).
On the first phase “What is entrepreneurship?” students acquire the basics of business operations in small multidisciplinary groups using problem-based learning. The project is called Practice Enterprise. It lasts for one year and gives 15 credit points. The established practice enterprises operate in a virtual enterprise network, which models the real life. Instead of just sitting on lectures students learn basic laws of business in a pragmatic way, at the same time they work in teams, develop self-discipline, learn to plan their work and deal with risks. A series of lectures is an essential part of the project that supports practical learning. At this stage, students can also run a real-life project as an alternative.

In the second phase “Learn real entrepreneurship in safe environment” students establish or join existing co-operatives and run a business for real. They can also joint support centres on Microsoft server products or Cisco network equipment and work with real customer problems. At this stage the business is for real – salaries, value-added taxes, products and services, subordination, etc. A student can get a maximum of 90 credits by working and studying in a cooperative. Reading literature, making reports and presentations increase the number of credits. The co-operative reduces risks for students, who want to experience real entrepreneurship. This option is not compulsory. Another possibility is to join an Educational Support Centre run together with Microsoft Finland and Faculty of Telecommunication and e-Business as an employee. The faculty offers premises and tutors for the centre.

On the third phase “Become an entrepreneur” students can exploit business ideas they have and start their own business under guidance of a personal mentor. To support initiation of new ideas the university runs specialised student competitions.

![Diagram](image-url)

**Figure 3. Entrepreneurship education in Turku University of Applied Sciences (Finland)**

*Source: devised by the author based on Kontio (2010)*

All the phases can be integrated into a student’s study plan, if he/she decides to focus on entrepreneurship.

In 2009, Finland had the highest rate of entrepreneurial activity of 25%, according to Eurobarometer.

Another successful example is the University of Twente practical model. The model comprises three programmes: “BTC-Twente”, “TOP” and “Become your own Boss” (Sijde & Ridder, 2008) (see Figure 4).

The business incubator BTC (Business and Technology Centre) was created for young companies originated from the university in 1980s providing flexible office hours and production space. Over time, it expanded onto the 40 ha Business & Science Park Twente and Knowledge Park for SMEs to take tenancy. The space is also equipped with special facilities for high-tech companies (Innovation Lab).

The start-up programme TOP (Temporary Entrepreneurial Positions) was established in 1984 to enable graduates to start a company with the university support consisting of an interest free loan, office space, access to the university’s networks and training for 1 year. In the 1990s, University Student Enterprises (USE) was formed to support students via training, networks and office facilities. Another TOP project –
“Successfully your own Boss” – is aimed at motivating potential entrepreneurs and helping them to identify a business idea within 6 months. Venture Lab Twente project has started recently to assist high-tech and high-potentials. Through TOP programme, the university creates an entrepreneurial climate by engaging researchers, PhDs and executive staff in tailor-made courses. The programme has already given start to over 500 companies.

An elective training course “Become your own Boss” was developed at the same time with BTC to teach students how to write and present a business plan. The course was primarily developed for owner-managers of companies as Growth Programme, but later the students were involved to do the “leg work” – finding information, writing sections of a business plan thus getting an insight into operations of SMEs. The programme also provides options of proceeding into MA courses.

As a result of these programmes, about 70% of involved students become economically active, i.e. start a company or find a job.

![Diagram of entrepreneurship education in the University of Twente](source)

3. Latvia: entrepreneurship education survey results

At present, there are 58 universities, university-colleges and colleges in Latvia. However, the number of students has been decreasing since 2006/2007, including those, who study social disciplines (see Figure 5). The latter has reached its minimum in the last academic year (2010/2011), according to the Central Statistical Bureau of Latvia.

In terms of entrepreneurship education quality assessed from the viewpoint of contemporary frameworks, the overall situation is generally weak, as in other new Member States (European Commission, 2009). Interdisciplinary approaches are rare, preferences of self-employment among young people are low, the entrepreneurial activity is decreasing (ibid). At a positive side of the spectrum is the social understanding of the situation that should be established concerning study programmes and its purposes, cooperation of businesses and universities (ibid).

This section explores results of Flash Eurobarometer surveys No.260 “Students in Higher Education Reform” (2009), No.283 “Entrepreneurship in the EU and Beyond” (2010), as well as “Global Perspective on Entrepreneurship Education and Training” report (2010) in relation to Latvia revealing the abovementioned tendencies, amongst others.

The survey No.260 (hereinafter referred to as Survey I) was conducted by Latvian Facts from 12 to 20 February 2009 using WebCATI (web-based computer assisted telephone interviewing) and face-to-face (F2F) methodology. It targeted HEIs specifically and used a sample of 525 students aged from 18 to 25+, all in higher education on BA level or above and various fields of study, mostly – social sciences.

The survey No.283 (hereinafter referred to as Survey II) was conducted from 10 December 2009 to 16 January 2010. It consisted of random telephone (70%) and face-to-face (30%) interviews targeting the sample of 504, various socio-demographic groups aged from 15 to 55+, educated or still in education, representing different income groups. In order to compute a marginal total, where Latvia contributes to the
EU result, a weighting factor was applied to the national results. The population weighted number of interviews equaled 92, or 0.5% of total EU 27 weighted (19635) in case of Latvia. The number of interviews actually carried out represented 1.9% of total 26168.

A margin of error at 95% confidence interval did not exceed 4.5%. A margin of no more than 3% would require a sample of 1000. To reduce the margin to 1.5% would require a sample size of 4000, which is more costly and time-consuming.

The special report by Global Entrepreneurship Monitor (2010) communicates results of its annual Adult Population Survey (APS) (hereinafter referred to as Survey III) of at least 2000 individuals aged between 18 and 64 in each participating country to show the relationship between training in starting a business and entrepreneurship. In Latvia, fixed-line phone and mobile phone surveys were conducted having reached 2001 respondents by random digit dialing and random dial from list.

Results of Survey I provide the opinion of respondents towards composition of study programmes, aims of higher education as well as cooperation of universities and businesses. First of all, an absolute majority (86%) of respondents agreed that study programmes should include communication skills, teamwork, and “learning to learn” techniques. Half of the interviewed students agreed with this statement, roughly a third rather agreed (36%), and 12% disagreed. 78% agreed that HEIs should ensure that a variety of social and cultural backgrounds are represented at universities, while 85% considered that HEIs should provide more life-long learning courses. 19% disagreed with the former and 12% with the latter. In addition, 99% of respondents supported the importance of providing students with the knowledge and skills necessary to be successful in the labour market, 93% consider enhancement of personal development as a crucial purpose of education, 91% also value the development of critical mind.

A vast majority of respondents considered there should be a possibility to undertake work placements in private enterprises as part of a study programme and HEIs should provide tailor-made study programmes for enterprises to upgrade their workforce – 87% per each statement. 91% agreed that HEIs should foster innovation and entrepreneurial mindset among students and staff. 83% agreed that enterprises should be more involved in higher education management, curricula design and funding. As compared to the previous sections, the statements about cooperation of universities and businesses received more supporting percentage points than the EU average.

Survey II conveys information on preferences and feasibility of being self-employed, image of entrepreneurs in society, entrepreneurial activity, experiences in setting up a business, perceived barriers to entrepreneurship, attitudes and personality characteristics of entrepreneurs, and the impact of school education.

Latvia remains among the EU countries, where citizens appear to be almost evenly divided in their preference for being self-employed or having an employee status – 45% versus 48% in 2009, respectively – quite the same as in the EU on average. However, in Latvia 29% of respondents, who do not consider self-employment feasible (68% of respondents), mentioned their lack of requisite skills to become self-employed (see Figure 6) as compared to just 5% in the Netherlands, for example. If added on with 10% lacking business idea, it results in 39% of people, who presumably did not experience an appropriate business education. 31% of these respondents were aged below 40, 23% were highly educated or have a qualification, 9% were still in education, 21% lived comfortably and 28% got by.
Reflecting the average EU results, 50% of respondents agreed that entrepreneurs think only about their own wallet, while the other half does not agree with this statement. 55% think that entrepreneurs exploit other people’s work. In general, the image of entrepreneurs in Latvia is quite positive considering its Soviet past.

Irrespective of the high percentage of Latvians, who never thought about starting up a business – 45% as seen on Figure 7, the EU-level results showed 50%. Simultaneously, 24% of the Latvian interviewees were attracted by this idea. 28% of respondents were aged below 40, 37% were whether in education or already graduated, 22% lived comfortably and 45% got by.

Interestingly enough that 72% of Latvian respondents among those, who were thinking about starting-up, thought about it but gave up and were taking steps to start up, considered dissatisfaction with regard to previous results as an important and rather important factor when starting-up a business, while contact with an appropriate business partner hit the record of 86%. At the same time, a considerable proportion of interviewees (around 21%) gave a “don’t know” response evaluating such an important factor as addressing an unmet social or ecological need.

According to Survey II, Latvia demonstrated one of the largest decreases in entrepreneurial activity in 2009, to around 10% of respondents, who started up (from 18% in 2007). If compared to the GEM Global Report 2010 related to APS conducted in 2008, it showed 21.4% of entrepreneurial intentions, being very close to Eurobarometer’s 24% thinking of starting up. Hence, there is a clear gap between intentions and real start-ups.
When assessing barriers to entrepreneurship, many Latvians seemed well-informed about the process of starting up, 33% still agreed that it was difficult to obtain sufficient information. Complex administrative procedures (77%) and the lack of financial support (92%) remained the major obstacles. According to GEM Global Report (2010), entrepreneurship framework conditions valued most negative in Latvia are: finance, national policy regulation and government programmes.

Slightly over a half of respondents (52%) assessed their willingness to take risks positively, although less Latvians preferred to compete with others (44%) – 13% and 11% below the EU average. 64% considered themselves to be inventive and full of ideas, while 73% changed things they did not like (17% and 11% below the average). The possibility of being rejected by others for standing up for their decisions would not stop 67% of the respondents. Latvians also appeared to be self-assured (87%) and rather optimistic about their future (67%). At the same time, the greatest fears when starting up a business were: the possibility of going bankrupt (50%), the uncertainty of income (44%) and the risk of losing property (43%).

According to Survey III, 28% of Latvian individuals aged 18-64 were trained in starting a business (whereas 39% were trained in HEIs) and 42% are trained among early-stage entrepreneurs. Yet, by mapping percentage points related to efficiency-driven economies, GEM found out that there may be diminishing returns to training in terms of conversion to entrepreneurial activity as training becomes widespread.

The core measure of the relationship between training in starting a business and entrepreneurship used by GEM is “gain from training”. In Latvia, the gain from training in early-stage entrepreneurial activity was equal to 1.2, i.e. an individual’s chances of starting own company were 1.2 times higher, if he/she underwent compulsory business training. Intentions featured the 3.2 gain, attitudes – 1.3 on average, and awareness – 1.6.

While Survey I targeted students in higher education, mostly acquiring social sciences, the Latvian population represented in Survey II was selected randomly. Nevertheless, the socio-demographic characteristics provided in the report allow distinguishing the relevant population group in the latter. The results could be more valuable if the sample was increased from 500 to 1000, reducing a margin of error from 4.5% to 3.0% in both surveys. The special GEM report used the results of Adult Population Survey conducted in 2008 – the data could have evidently modified by this time. GEM also employed the random sampling method.

These survey results do provide an overall picture of downsides of entrepreneurship education in Latvia, but do not provide information on concrete experiences across the existing 58 institutions, which presumably vary. For example, Riga Business School (RBS), an independent management education institution within Riga Technical University, is acknowledged as the good-practice example based on “Survey of Entrepreneurship in Higher Education in Europe” (European Commission, 2008). The primary emphasis in RBS is on the process of starting a venture; entrepreneurs meet with classes and share their experiences; Harvard Business School case studies are part of the course, etc., but its entrepreneurship programmes are for prospective MBA students. The survey report also states that “entrepreneurship is a totally new field in Latvia, and there is no word for entrepreneurship – there is so to speak a complete lack of culture in the field. This means that the framework conditions of entrepreneurship education in general are weak and making things happen and bringing this area forward is person-driven” (European Commission, 2008).

4. Discussion of results

The survey results clearly indicate on problem areas in the Latvian entrepreneurship education in terms of insufficient cooperation of universities and businesses, composition of study programmes, decreasing entrepreneurial activity among trained citizens, risk-averse and uncompetitive profiles, in other words, quality, applicability and returns of education. Some questions in the surveys cannot be directly applied to education. Nonetheless, taking into account the socio-demographic profile of respondents, they can be generalised to the discussed issues.

Notwithstanding the relatively high proportion of individuals trained in starting a business (28%, or 560 per 2001), while 39% of them underwent formal training at tertiary level, the overall entrepreneurial activity has experienced a considerable decrease from 18% in 2007 to 10% in 2009. On average, 21% of Latvians have entrepreneurial intentions, but only half of them actually start-up, which confirms the conclusion of Nabi and Linan (2011). The wide gap between intentions and start-ups proves that the former is not an appropriate indicator for measuring the impact of entrepreneurship education and corresponds with the research of Mwasalwiba (2010) suggesting the number of graduate start-ups as the highest ranked success indicator.
When assessing barriers to entrepreneurship, 33% (166 per 504) agreed that it was difficult to obtain sufficient information about the process of starting up. Thus, on one hand, there is a considerable quantity of trained individuals, but on the other – they are not sufficiently informed, and 45% of Latvian respondents never thought of starting a business at all. Other barriers included complex administrative procedures and lack of financial support overlapping with the most negatively valued entrepreneurship framework conditions identified in GEM Global Report (2010), as well as with Nabi and Linan (2011), who also acknowledged that economic and institutional frameworks are unfavourable to entrepreneurial activity.

Preferences of being self-employed or work for an employer are almost evenly divided in Latvia. However, over a half of respondents not considering self-employment feasible for various reasons, including lack of financing and current economic climate, mentioned lack of requisite skills and business ideas to become self-employed.

Among those individuals, who were thinking about starting-up, thought about it or gave up and were taking steps to start up (44%), two thirds regarded dissatisfaction with previous results as a vital factor to start up a business, while addressing an unmet social or ecological need remained in the “don’t know” area for 21% of respondents instead of being considered as an important innovation-led factor. This result signifies that entrepreneurship in Latvia is rather necessity- than opportunity-based and that social entrepreneurship has not developed yet.

Confirming the acknowledgments of Haase & Lautenschläger (2010), Johansen (2010), Sanchez (2010) that participation in specialised educational programmes increases the likelihood of becoming an entrepreneur, and such companies have a greater growth and innovation potential, Martinez et al (2010) employed “gain from training” in early stage entrepreneurial activity, which is a core measure of the relationship between training in starting a business and entrepreneurship introduced by GEM, at the level of 1.2 for Latvia and an average of 1.8 for 16 efficiency-driven economies included in the report. Most of innovation-driven economies feature higher gains, e.g. 2.1 in Japan, 2.4 in the UK and 4.3 in France, adding value to the MINES Paris Tech research (2011) described in section 1.

The entrepreneurial profile of Latvians deserves special attention. In general, Latvians were 13% and 11% less risky and competitive in comparison to the EU average (52% and 44%). Most of respondents considered themselves inventive (64%) and ready to change things they did not like (73%), but it was still 17% and 11% below the average. Self-assured and optimistic about their future, but in fear of going bankrupt (50%), risk of losing property (43%) and uncertainty of income (44%), when assessing the option to start up. Lack of competitiveness can be regarded as part of the local mentality, but it is one of the key drivers in terms of entrepreneurship and should be developed throughout training.

The literature review suggested that the major problem and challenge for universities at present is to establish closer contact between students and the business world. The survey results also show that respondents perceive possibility to undertake work placements in private enterprises integrated into a study programme as a necessity. They also think that one of the key aims of universities is to foster innovation and entrepreneurial mindset among students and staff, which is among the goals of entrepreneurship education, discussed earlier referring to Raposo and do Paco (2011), Kontio (2010), Lee et al. (2010) and other authors. Provision of tailor-made study programmes for enterprises to upgrade their workforce and involvement of enterprises into higher education management, curricula design and funding can be regarded as the means of facilitating the nexus of universities and work organizations. The whole section on cooperation of universities and businesses proves that the programmes have to focus more on experiencing entrepreneurship so that to enable participants with the demanded social practices as the Experiential Learning Theory suggests.

Communication and team working skills, “learning to learn” techniques, and life-long learning courses appeared to be demanded by young and adult Latvians. The skills and competences acquired through education should make them competitive in the labour market, enhance their personal development and develop a critical mind, amongst other requirements. In other words, the model described in Figure 1 of the first section can be very useful, if applied in Latvia – problem-based learning, cooperative work placements, curricular engagements, etc. Reiterating the first section, without the right mindset, awareness, motivation and attitudes, which are formed by soft skills, such as creativity, proactiveness, leadership, risk taking propensity – it is unfeasible to create a sustainable business.

Another key conclusion from the first section related to the explored results is that there are two types of entrepreneurship education “products”: entrepreneurs per se and/or entrepreneurial personalities. Referring to the authentic competence-based learning theory, an entrepreneurial personalities possess competences that can be learned and taught (motives and intentions, attributes, traits, knowledge and skill) and evolve over time (Nab et al., 2010; Sanchez, 2010; Higgins and Elliott, 2010). For this reason when measuring the impact...
of entrepreneurship education it would be more valuable to consider both elements, not only the number of graduate start ups.

The lack of information and skills, small number of start-ups versus high proportion of individuals trained in starting a business, low level of cooperation between universities and businesses are the indicators of drawbacks of the current entrepreneurship education system. Furthermore, these results address both passive/formative learning and experiential/social learning and demonstrate there is an ample market for quality entrepreneurship education. Referring back to Higgins and Elliott (2010), Haase and Lautenschläger (2010), Lee et al. (2010) and other key authors, who contributed to the development of contemporary frameworks, practical results reflect the identified theoretical conclusions implying that the Latvian entrepreneurship education system should focus on education FOR entrepreneurship (Figure 2) and restructure its curriculum to meet the demand and the ongoing European practices.

These findings imply a number of other vital recommendations. The central one is to transfer the contemporary practice-based theoretical frameworks to Latvia. For instance, there are no or very few projects, gathering multidisciplinary teams and using problem-based learning. The task is not to copy the experience of TUAS or TWENTE, which is not possible due to economic differences, but to focus on experiential learning methodologies and to establish closer cooperation with businesses. This kind of project can become an example for further replications and can be introduced in the curriculum as a compulsory course as a beneficial outcome. It is quite evident, that Latvian HEIs do not have such broad technological capacities, as in the innovation-driven countries, however, the idea of venture labs and technological parks could be implemented in the mid-term perspective.

5. Conclusions, recommendations and directions for further research

The analysis of the modern practice-based approaches to entrepreneurship education revealed the major shift from passive/formal modes of learning and teaching towards experiential/social forms as the rationale underpinning the emergence, development and usefulness of such frameworks as: Education FOR Entrepreneurship and Experiential Learning Theory, Learning by Developing, Authentic Competence-Based Learning Theory, which are closely interrelated with each other, being conceptually similar, but contextually different.

The pedagogical methods related to these frameworks are of an interactive nature and targeted to develop multiple social dimensions, such as employability, intrapreneurship and venture creation. The principle of “learning by doing” is fundamental to these methods. As opposed to theoretical approach, which provides only book knowledge of management issues, holistic/dynamic approach targets a change in the individuals’ “know-how”.

Classified into problem-based learning and scholarly engagement comprising work-based learning, group work-based learning and curricular engagement, involving such techniques as behavioural simulations, business and investment games, job shadowing, internships and corporate placements, interdisciplinary work-based projects, start-up development, action research and fieldwork, business visits, these methods are acknowledged by the prominent experts in the field, e.g. Haase and Lautenschläger (2010), Higgins and Elliott (2010), Bridge et al. (2010), Lee et al. (2010), Kontio (2010), Nab, Pilot, Brinkkemper and Ten Berge (2010).

The literature review also revealed that entrepreneurship education has two simultaneous directions: to produce entrepreneurs per se (training real entrepreneurs) and entrepreneurial personalities (molding entrepreneurial individuals). If the first group tend to include nascent entrepreneurs, than the second – has the potential and require “know-why” techniques, or the stronger conviction to be instilled. At the same time, development of authentic entrepreneurial competencies is crucial for both groups. It is also worth to notice that the experiential learning framework does not deny teaching hard facts, per contra – it implies a combination of theory and practice meant by the learning authenticity.

The empirical evidence (Bridge et al., 2010; Higgins & Elliott, 2010) suggested that experiential knowledge is an incremental process that can evolve over time and that entrepreneurship is teachable (MINES ParisTech, 2011), although it is hard to measure. Measurement of educational impact should be focused not only on graduate start-ups, but also on ‘a degree of personal entrepreneurial development’ (Raposo & do Paco, 2011; Mwasalwiba, 2010).

Examination of Flash Eurobarometer survey results highlighted the problems mentioned in the European Commission reports – weak entrepreneurial environment and assessment of business programmes deficient in interdisciplinary approach; low level of entrepreneurial activity. It appeared that the lack of information and skills, small number of start-ups versus high proportion of individuals trained in starting a business, wide
gap between intentions and start-ups, low level of cooperation between universities and businesses, and decreasing entrepreneurial activity are other indicators of drawbacks of the current entrepreneurship education system, its quality, applicability and returns. This conclusion addresses both passive/formative learning and experiential/social learning and demonstrates there is an ample market for quality entrepreneurship education. Consequently, the discussed contemporary approaches are of a very high relevance for the Latvian entrepreneurship education.

The survey results do provide an overall picture of downsides of entrepreneurship education in Latvia, but do not provide information on concrete experiences across the existing 58 institutions, which most probably vary. Nevertheless, they allowed formulating general research-based recommendations.

The main problem and challenge for universities remains the establishment of closer long-term cooperation between students and the business world (Lee et. al, 2010). The survey results also indicated the importance of work placements in private enterprises integrated into business programmes, long-life learning courses, tailor-made study programmes for enterprises to upgrade their workforce, and involvement of enterprises into higher education management, curricula design and funding. The author concludes that the existing entrepreneurship curriculum should be refocused in line with the experiential learning rationale to meet the demand and Europe 2020 strategy.

National policy regulation and government programmes unfavourable to entrepreneurial activity were admitted as other barriers to entrepreneurship by the respondents and in the literature (GEM, 2010; Nabi and Linan, 2011). Hence, the Latvian Government, as a stakeholder possessing executive power, should address these issues in its policies, and as an option – to initiate and support establishment of the united entrepreneurship education system.

The introduced sample practical models applied in the Netherlands and Finland, having brought positive academic and practical outcomes, suggest that implementation of similar projects in Latvia could significantly benefit the local community. The idea of venture labs and technological parks as well as a university-based centre for entrepreneurship is an open opportunity that has not been explored yet.

Along with these conclusions, the conducted analysis requires further research. For instance, broader time scale of the literature review would deepen the theoretical outcomes allowing to identify interrelations of the newly-formed and preceding frameworks. Additional analysis of the influence of economic conditions could add value to the results. Deeper research across the Latvian universities involving analysis of actual provision of entrepreneurship programmes and methods applied at present could justify and clarify the required and beneficial improvements.

Transference of frameworks from innovation-driven countries as success examples is an adjacent part of further research, which should include a real-life project gathering multidisciplinary teams and using problem-based learning in the Latvian entrepreneurship conditions. That would allow including economic factors into the research and testing the idea of transference as such. The ideal outcome of this research would be an inclusion of real-life projects into curriculum of some or all Latvian universities offering entrepreneurship programmes.

Considering that the topic has not been well-researched in Latvia, the results can be useful for academics, practitioners, policy makers and other interested stakeholders.

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MANAGEMENT TRAINING EVALUATION: A CASE STUDY OF A RETAIL STORE CHAIN

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Abstract

Objectives of the paper are: 1. to compare the theoretical concept of effective management training evaluation with obvious practice in one of the largest retail store chains in Latvia; 2. to identify the main strengths and weaknesses in training process implementation in practice; 3. to study the employee attitude (assessment) to the training provided.

The research question: what are the main differences between theory and practice in organising management training? What are the causes of these differences and how to resolve them?

The methodological base of the paper consists of literature analysis of training concept and efficiency criteria. The main theoretical base is Donald L. Kirkpatrick’s 4 level training evaluation model.

The research methods: literature analysis, in-depth interviews with company executives and training providers, the employee survey, statistical methods of data analysis.

In the research the authors are investigating the training process from the theoretical and practical point of view. The main attention is given to the successive stages of training process: making decision to provide training; identification of training needs, objectives, tasks; expected results and determination of the effectiveness criteria of training, the training provider’s choice and training programme development. At the end of training, participants’ reaction or attitude to training is measured. This study does not cover the research of employees’ behaviour or job performance changes as training results.

The originality/value of the paper – the authors use training research methodology based on Donald L. Kirkpatrick’s model. It is the first practical impact study of such nature and scope in the Latvian supermarket network.

Introduction

As a result of socio-economic crisis, many companies in Latvia experienced significant changes in several areas, including the human resource management. Although the practice of leading world economies has proved that an effective employee training system is one of the cornerstones of business development, 52% of enterprises in Latvia reduced their training budget in 2009 (Lavian Bussines Consultant Association), 2009). Also in 2010, the report of The Latvian Association of Business Consultants “Personnel Development in 2010” shows that 50% of respondents have admitted that the training budget in 2010 continued reduction, if compared with 2009 (Locāns, 2010).

What are the motives for such an action? It is possible that company managers do not understand and do not evaluate a positive impact of motivated employees, possessing appropriate knowledge and skills, on development strategy of an enterprise. Currently managers are thinking more about short-term strategies, but it can negatively affect the company’s operations in future. Perhaps company managers are not satisfied with training outcomes in the so-called ‘rich’ years? Then training was of an occasional character often; it was not systematically implemented, and in most cases the training outcomes were evaluated formally and superficially. Sometimes there was an uncritical following what the trainer provided and management training was organised based on the principle: everyone does it this way. Although in 2000-2008 enterprises were developing, were profitable and allocated a significant amount of the turnover to employee training, Eurostat data of 2008 about the efficiency per one employee indicate that in Latvia it was the third lowest – 51.5 in the European Union after Bulgaria and Rumania (Eurostat, 2009).

Irrespective of the reduction of the number of employees and their salaries, the role of personnel as the most important resource is increasing (Locāns, 2010). A significant criterion for enterprise competitiveness is employees’ professional competence. Nowadays enterprises are stricter following that resources allocated for training and development enhancement are used at maximum efficiency (Locāns, 2010). Is the training appropriately evaluated nowadays? Do the training expenses justify themselves, and is the “training considered an investment not a cost?” (Strategic Human Resource Management, 2001). resources, neither the training evaluation criteria, nor methods, with which to evaluate training, are determined. Tennat et al.
(2002) research that only 35% of companies measure the effectiveness of the provided training (Tennat et al., 2002).

The goal of this research is to compare the evaluation of the theoretical concept for training process with practice. The research questions are: What are the main differences between theory and practice, evaluating management training? What are the strengths and weaknesses of training evaluation in an enterprise? What are the causes and how to resolve them? In the present paper the authors study the training process and the trainees’ attitude to training, using the review of theoretical literature, in-depth interviews and the training participants’ survey. The research pays attention to successive stages of the training process: making a decision about the need for training, identifying the training needs, goals, objectives, planned outcomes and training efficiency criteria, choice of the trainer, developing the training programme. At the end of the training participants’ reaction or satisfaction with the training is evaluated, i.e. their attitude. This research does not comprise the research of the changes of employee behaviour or work results as a result of training.

The research basis is one of the largest retail chains in Latvia, where general management training was held from December 2010 until February 2011.

The idea and initiative about organising training come from the company manager, as a response to the employee survey about job satisfaction in the autumn of 2010. The correlation analysis of the evaluation of the satisfaction aspects indicated close and very significant relation between leadership and planning, organisational culture, internal communication and the employee role and self-sentiment in the company. In all cases the correlation coefficient \( r \) was \( \geq 0.6 \) (Rendeniece, 2010). Therefore the company management decided to organise training for managers, offering a wide training programme that included the basics of management, communication and quality management. Training participants were different level managers – 18 administrative staff, 16 store managers, 15 goods managers and 26 senior shift managers – 75 employees all together. The training was organised in 4 groups, according to the management level; 9 days for every group.

**Literature review**

In the study of theoretical literature the authors are analyzing training efficiency criteria and the most recognised methods for measuring effectiveness since effective and reliable evaluation allows explain the value of training and development.

Effectiveness [German *Effektivität* < fr. < lat. *effectivus* effective] – 1; it is how easy, fast and cheap the determined goal can be attained with the chosen means, method or action; 2. *ec.* maximum yield of resources, their use with minimum losses (Andersone, 2005).

Effective [lat. *effectivus*] – such a means, method, type of action with the help of which the determined goal can be easily, fast and cheaply attained; such that offers the necessary result (ibid, 2005) instead.

Researchers and practitioners Gordon, A., Koul, J., Armstrong, M. consider that training will be effective, if the training needs are correctly determined, and they help to achieve strategic goals of an organisation (Gordon, 2006, Koyu, 2004). It means that before starting training, the company should study and analyse employee job performance. Choice of an appropriate type and method of training – formal or informal, internal or external, for the training needs – is one of the factors that enhance training effectiveness (reference?). Such authors as Tabbassi, Bakar, and Davenport have indicated advantages and disadvantages of the types and methods of training, which have to be taken into consideration when organising training (Tabbassi, Bakar, 2009).

Michael Armstrong (2004) emphasises that training should correspond to certain requirements. A trainee’s motivation and a company’s management support to training are significant criteria of training effectiveness. Training will be more effective, if it also corresponds to the trainee’s needs. People can learn in different conditions, if they expect that it will allow satisfying their need for achievement, growth, recognition and professional demand (Армстронг, 2004).

Durcan, Kirkbride (1987) and Gitomer (2010) indicate importance of a training programme content and professionalism of a trainer. They recommend demanding training evaluation – it is necessary to find a tested programme and trainer, who would be ready to evaluate the success of the training programme. However, company managers do not devote sufficient time to evaluate employee training programmes (Gitomer, 2010). This is a big mistake, because ineffective training hinders work flow and employee costs continue to grow. Therefore, it should be ensured that training programmes work according to the appropriately determined requirements.

Two aspects can be distinguished in evaluating the training effectiveness: evaluation of the training process as such and evaluation of the training end product or training results. However, it has to be admitted that evaluation of training effectiveness means completely different things for the various involved groups.
The response depends on who asks and from what perspective of interests the questions are asked and why (Gordon 2006).

For the company’s management, evaluation of training effectiveness can answer the following questions: “Will the training help me to solve my problems? Will it achieve the defined goals? Is it worth the invested money and is it worth to invest in training programmes in future?” The essence for evaluating training effectiveness is absolutely different for a trainer, whose questions are: “Have the defined goals been achieved? Was the training effective?” Employees, who have participated in training, ask: “Will the training help me to execute my work responsibilities better, faster and more qualitatively? Will it affect my career growth opportunities? What am I doing? Why do I need it?” (Scmalenbach, 2005).

To perform a successful evaluation of training effectiveness, all three categories should be involved in discussing this issue and the most optimal method of evaluation should be chosen. One of the wellknown approaches is the multi-factor approach, which includes several separate evaluation methods. Evaluation methods can be divided as described by the researchers Hamblin and Kirkpatrick, who described the impact of training at different levels, from an individual’s to an organisation’s indicators (O’Connor et al., 2008).

Kirkpatrick’s hierarchy model offers a useful framework for evaluating the training results and process taking into consideration training evaluation at four levels: Reaction – how training participants react to the training process; Learning – to what extent trainees acquire knowledge and skills; Performance – the ability to exhibit the acquired skills at work; Impact – includes such units as money, effectiveness, moral, etc. Figure 1 presents how these four levels are interconnected.

![Figure 1. Connection of training evaluation levels. (Source: http://www.nwlink.com/~donclark/hrd/isd/kirkpatrick.html)](http://www.nwlink.com/~donclark/hrd/isd/kirkpatrick.html)

The model clearly defines how the “performance changes as a result of training” appear (Global Learning Alliance and Knowledge Advisors, 2004).

In line with the research object – a training process – the authors paid more attention to training evaluation at the first two levels – Reaction and Learning. Donald L. Kirkpatrick indicated that “evaluation of reaction is the same as client satisfaction evaluation. If the training is effective, it is important that the trainees react to them favourably.” Likewise, it is emphasised that “it is important to evaluate training, because you cannot expect performance change, if one or several of the training goals have not been achieved” (Kirkpatrick, 1994).

1. Reaction level. At this training evaluation level how trainees react to training is evaluated. Questionnaires filled in at the end of the training are often used as a research tool. At this level, trainees may say, whether the course content and delivery can satisfy their needs. This level does not prove the training
performance potential as it is impossible to measure whether trainees have obtained new knowledge and skills that will be used in the work environment. Therefore some researchers do not consider reaction level measurements significant. However, trainees’ interest, attitude and motivation often are critical for a success of any training process. When training is presented, every employee decides and assesses, whether it is important and attainable. The consequence of this assessment is the trainee’s motivation (Markus & Ruvulo, 1990).

2. Learning level. It has to be evaluated to what extent participants have changed their attitude, improved their knowledge and skills as a result of training. The question whether the employee has learned anything should be answered. It means applying different kinds of post-testing to find out what skills employees have acquired. To measure what exactly the training participants have acquired, pre-testing should be used prior to training. Only then it is possible to state what the employees knew and could do before the training and what exactly they have acquired during the training.

When measuring Learning, it is important to define the training goal. Usually training evaluation is performed answering the following questions: what knowledge has been obtained? What skills have been developed or improved? How has the attitude changed? At this stage training evaluation takes place through trainee evaluation. At this level evaluation tools that measure the trainees, not the particular training process, are used. Evaluation of the training results for a particular trainee should not be mixed with the evaluation of the training process (Tovey, 2004). Changes in the trainee skills, knowledge and attitude often poorly correlate with the performance (Clark, 2008). Therefore, at the next training evaluation level - Performance level – it has to be proved that the acquired knowledge and skills are applied in practice. However, it happens very seldom, when evaluating training.

3. Performance level – changes in the performance as a result of attended training. At this level employees’ ability to use the obtained knowledge at work is evaluated. Measuring takes place at work, not in the classroom. Formal and informal methods of measurement can be used. Answering to the question whether people use their newly acquired knowledge about work, with the help of testing or observation it is determined, whether now employees exhibit the desirable performance, whether the newly acquired skills and knowledge are used at their work performance. At this level the evaluation is critical – if the training is effectively managed, the evaluation will show whether the knowledge and skills are transferred to the work environment or not, and if not, then why.

4. Impact level. It is the highest evaluation level in Kirkpatrick’s hierarchy. At this level the effectiveness of the training programme is evaluated, measuring the gains in the units of money, effectiveness, moral, team work.

Moving from the first to the next levels, the training evaluation process becomes more complicated and time-consuming, but the evaluation at a higher level offers more valuable information. The fourth level is the most significant, and perhaps also the most complicated step because the fourth level evaluates business results achieved in relation with the employee training (Clark, 2008).

In reality the first level evaluation is most frequently performed, because it is easier. However, it is not right to evaluate training at the level of Impact without performing the analysis of the previous levels. Don Kirkpatrick’s follower and his son Jim Kirkpatrick affirmed: “It is the statement of me and my farther, in cooperation with personnel management specialists, that then and only then (after evaluating the previous levels), when the value of training for business can be started to be justified. Unfortunately, many organisations understand science, but are far from success in evaluation. It is because they have no competence in training evaluation” (Kirkpatriks, 2008).

Using the model for determining the training effectiveness, any organisation both in private and public sector can obtain detailed information about the impact of employee training on the company’s performance and the defined goals. Analysing the information obtained at each level, it is possible to work out further action plans for the company development and to make a decision about adjusting the employee training in future. Learning Resources Network research data indicate that 77% of enterprises evaluate training at the Reaction level analysis; 36% evaluate a degree, to which the material has been acquired, 15% evaluate changes in employee performance at the workplace and only 8% evaluate results of changes in business operations (Hevfilda, 2008).

Irrespective of the previous criticism, Kirkpatrick’s (1976) model is still the leading one among the training evaluation systems. This model can be considered the basis for training evaluation, using which the modern evaluation procedure mechanism is being developed (O’Connor et al., 2008).
Research methods

When designing the research tools for evaluating training in a retail store chain, the authors mainly based them on the results of the Level 1 and 2 analysis of Kirkpatrick’s model. But Kirkpatrick’s Reaction and Learning levels concentrate on evaluation of an individual’s motivation, needs and interests. If this training evaluation model is applied to training evaluation in a company, the authors consider not relating every trainee’s needs and motivation with the company’s needs and goals at the Reaction level as a deficiency. Therefore, based on the opinion of other abovementioned authors, the interview and questionnaire included questions about relations between the training and company goals, about management support for training etc.

To evaluate management training in the retail store chain, the authors set the following criteria for training evaluation, on the basis of which the authors can determine the training effectiveness that influence the development of the company in the future:

1. correspondence of training to the company’s strategic goals.
2. defining the training goal and objectives.
3. choice of the training programme content, length and training methods.
4. managers’ interest in improving the employees’ professional performance.
5. testing the knowledge obtained during training.
6. application of the knowledge and skills acquired during the training to everyday work.
7. transferring the knowledge obtained during the training to the colleagues.

The present research does not comprise training evaluation at the level 3 – changes in employee performance, and 4 – changes in the work results, because it is delimitation.

The authors of the present paper used a structured in-depth interview as the first method. There were three interviews held: with the training provider (TP), with a member of the company Board (BM) and with the Human Resource Manager (HRM). Interview questions were slightly modified, depending on the role the interviewee occupies in the training process. Interviews were held during the first month after starting the training. Interviews consisted of 15-19 questions and an average length of an interview was 1.5 hours. Interview questions were designed so that the training process could be evaluated according to the conclusions about qualitative and effective management training gained from the theoretical research.

The following aspects were clarified in the interviews:

1. correspondence of training to the company strategy and needs,
2. defining of the training goals and objectives,
3. choice of the training provider,
4. selection of training participants and motivating them for training,
5. choice of the training programme content, length and training methods,
6. relation of training and performance results,
7. understanding of evaluation of training effectiveness, criteria for evaluating the training results.

Analysing the results of the survey, the authors used above mentioned criteria that were clarified in the empirical research, because these criteria give much clearer understanding of the training evaluation from trainers, managers and trainees point of view. These criteria allow to analyse and draw conclusions about the ongoing training processes in the particular retail store chain company.

The other method of empirical research was a survey, the aim of which was to evaluate the level of trainees’ reaction or attitude. The questionnaire included 10 questions, aimed to obtain information about how the participants understand training needs, goal and objectives, whether employees evaluate training as useful, what their opinion about the changes of different factors as a result of the training is. The survey was held a week before the end of the training and 67 respondents, or 89% of the 75 trainees, filled in the questionnaires. 13 administrative staff, 19 store managers and 35 shift managers and goods managers responded. Most of the respondents have a secondary or secondary vocational education – 51, or 68%, whereas there is a little number of those managers among the respondents, who have a basic school education or who hold a PhD degree. In both cases it is 1 respondent, or 1.49%, of the total number of respondents.
Results

1. Decision about training organisation. Correspondence of training to the company strategy and needs.

Both the training provider and the company Board member tell in the interview that the company goals have not been defined in writing yet. “They are in their (Board’s) heads,” says the training provider. Therefore, one of the first tasks in this training is to put company goals on the paper. The company Board member informs that to date, such a wide training has not been held, this is the first training for managers. The idea about management training has existed for long, but it has taken a long time to make the decision, because the number of employees (managers) is large and it is related with high costs, because in the “rich” years the training costs were unjustifiably high. Moreover, during the economic growth, profit and cash was realised, so there was no justified need for training. However, in the period of turnover and profit reduction it is necessary to think about improving the quality of client service, to reduce employee turnover and to increase employee motivation, when all the additional benefits were “cut”. For the company management these features were a signal for the need of management training. Also, financially it was possible to “bear” the training, because the company found partial funding from European Structural Funds (hereinafter referred to as ESF) resources for it.

The training provider (TP) indicates that already before this training, there had been a successful cooperation with the company, when performing “false customer surveys” and individual observations in the work of a store. Results indicated to a number of problems to be solved in the company. The HRM did not participate in making the decision about the training necessity. It is the company management decision, which she evaluates positively. The company top management has mainly grown out of shop-assistants; therefore this training satisfies the company need for management skills. The majority of the trainees have never studied management.

The survey of the trainees reveals differences about how the company determines the management needs: most of the respondents or 58.2% consider that managers determine the training needs. 26.9% of the respondents consider that the training need is determined based on the training plan developed during the employee performance assessment. Whereas 14.9% of the respondents emphasise that the training need was determined by the company owners. None of the respondents indicates that the training need has been determined as result of their personal initiative.

2. Defining the training goals and objectives.

The BM defines the training goal briefly: restructuring of all the processes – and names all training objectives one after another. It does not cause her any problems. The HRM gives the acquisition of management knowledge and enhancing the practical skills as the training goals. Whereas, the TP also mentions personal growth (self-analysis, development of self-confidence) in addition to what the HR manager has mentioned. Understanding about the training objectives is similar, but, in difference from the BM, the TP cannot list them briefly and in order. The narrative is long, with examples from the training process, the training objectives can be identified only when looking at the interview notes.

When asked whether they were informed about what changes or improvement in the performance is expected from the employee and whether they knew what skills and knowledge they themselves would like to obtain from the training, the training participants offered only partly affirmative answers (see Figure 2).

![Figure 2. Training participants awareness of the training objectives and expected results](image-url)
3. Choice of the training provider.

The training provider was chosen based on the previous positive cooperation experience. It was significant that the price of the offered training course satisfied both parties. The training provider agreed to participate in the ESF project. The choice of another training provider was not even considered. No market research of the management training offers was performed.

4. Choice of training participants and their motivation for training.

The opinion that, first, all level managers should study is unanimous among all the interviewees. For changes to start in a company, changes in the managers’ attitude and performance should be implemented. The HRM repeatedly emphasises that many managers have been promoted from lower level employees and they lack management skills. Trainees were divided in groups according to their positions – administration, who are the top level managers; store managers, who could relatively be called middle level managers; and first-line managers – goods managers and shift managers. The TP, the BM and the HRM indicate that starting the training, the employee professional competence was not evaluated. The BM informs that there is an idea about every employee’s competence, but the professional evaluation of the individual does not exist. The competence of a particular person is measured by performance results of the particular shop. The HRM also confirms that it is only a subjective opinion developed about the employee during the cooperation. Before the training the BM explained briefly in each group, why the training was held, but detailed training objectives were not mentioned, the training organisation was discussed more. Shift managers were informed by their supervisors. Every trainee received a set of training materials that included the training programme, in which the training goal was not stated.

Evaluating, whether the company management is interested in training the staff, 97% of the respondents replied in the affirmative, 2, or 3% of the respondents, partly agreed with the statement, which approves the role of the company management as the initiator of the training.

5. Choice of the training programme content, length and training methods.

The TP has the largest role/weight in developing the training programme content. The training programme content was designed after discussions with the company owners, and then the training programme was supplemented or narrowed down to particular themes as seen by the BM. The main themes of the programme content are reflected in the programme objectives. The programme is slightly different for top level managers; it pays more attention to defining the company mission, vision and strategic goals. When designing the training programme, the opinion of the potential trainees was not asked. The HRM does not participate in designing the programme. The TP justifies the answer to the question, why the length of training for each group was exactly 9 days with the offered training budget. Different training methods are used in the training process; the emphasis is placed on enhancing the knowledge in practice. Group work, case analysis, role plays – in all these methods examples from real work situations are used. Homework assignments, closely related with the work, are also used.

To clarify the employee evaluation of the training content and quality, the employee survey comprised the statement: “If the training that was meant for improving my professional knowledge required co-financing, I would be ready to provide it.” 73.1% of the respondents are ready to co-finance the company organised training, but 26.7% do not agree with it.

6. Relation of training and performance results.

Giving an answer to the question “Do you consider that training should be directly related to the performance result?” all the interviewees answered affirmatively. When explaining in more details, the Board member anticipates that the employee rotation should decrease as a result of training, that information exchange will improve, that individual and departmental goals will be set and negativism will decrease but team spirit will develop. The TP considers that it is not only the employees, who will acquire new knowledge and skills and who play a role in improving the training and performance results, but it is also the company management that should take care of enhancing the obtained knowledge in practice. The HRM emphasises that training participants are prepared to use all the acquired information in work processes.

Analysing the respondents’ opinion about the skills acquired during the training, it can be observed that all respondents (89.6% fully agree and 10.4% partly agree) confirm that they are useful for professional improvement and they will ensure higher professional performance results (86.6% agree and 11.9% partly agree).

To enhance the knowledge obtained during the training and to ascertain the improvement of professional knowledge and skills, 97% of the respondents have indicated that the knowledge acquired during the training was tested and that they participated in such tests. 70% of the respondents, who have participated in the knowledge test, indicate that knowledge is tested with the help of different tests. The response of the other 30% is different. It is indicated that the obtained knowledge is tested with different practical assignments,
role plays are used, problem situations are solved, as well as the acquired knowledge is evaluated when assessing the work performance process and application of the obtained knowledge to practice.

7. Training effectiveness. Training process evaluation criteria.

During the interviews the authors of the present paper were looking for answers to the questions related with the evaluation of training effectiveness. The answers are dominated by the opinion that training will be effective, if the employee performance improves after the training, if their skills and working style improves. The HRM considers that one of the criteria, whether the training has been effective, is in using and maintaining the acquired knowledge and skills at work. But all the interviewees admit that upon starting the training process specific criteria that should be improved as a result of the training were not defined.

The TP has knowledge and experience that the training results can be measured and he indicates that specific skills should be measured before the training and then measured one more time after the training. When inquired how the trainer knows that his product has been useful for the client, he states that any indicators that would prove the usefulness of the training have not been precisely defined and measured. The TP adds that if there were a particular demand from the client, it would be done, effectiveness would be measured and a method most likely would be found.

After the training, the employees were asked whether they use the obtained knowledge in everyday work, thus improving the work quality, effectiveness, efficiency, as well as successful attainment of the set goals. 98.5% (64.2% agreed and 34.3% partly agreed) of the respondents state that they use the obtained knowledge in their everyday work, while only 1 respondent or 1.5% more does not use the obtained knowledge at work than does.

An important factor that indicates to the training effectiveness is whether the respondents also transfer the obtained knowledge to the subordinates to increase their competence level, thus ensuring professional operation of the entire team. Analysing the data obtained from the survey, it can be concluded that, as a result of training, 45 respondents, or 67.2%, agree that they transfer the knowledge obtained during the training to colleagues and 22 respondents, or 32.8%, partly agree (see Figure 3).

For the colleagues to receive the necessary, topical information from the manager, who has attended training, after the training, meetings are organised, individual discussions with employees are held, the training materials are sent to the colleagues and the most important information is shared, as well as advice is offered during the work, based on the knowledge obtained during the training, to solve different issues and problems.

Within the framework of the empirical research, when evaluating the effectiveness of training, the authors clarified, whether there exists a significant correlation in the respondents’ subjective evaluation about the correspondence of the organised training for improving the knowledge and the use and transfer of the obtained knowledge and skills (see Table 1), as well as between the improvement of the professional performance as a result of training, use and transfer of the knowledge and skills obtained during the training to colleagues (see Table 2). To determine how significant this correlation is, Spearman’s correlation coefficient was calculated (Raščevska, Kristapsone, 2000).

Figure 3. Use of the knowledge obtained during the training and transferring the knowledge to the colleagues

![Figure 3](image-url)
The results depicted in Table 1 approve that there is statistically significant correlation between the application of the obtained knowledge to everyday work and transferring the obtained knowledge to colleagues with a probability 0.95 or the significance level 0.05 because the calculated correlation coefficient is 0.311. It means that the more the obtained knowledge is used in everyday work, the more it is transferred to colleagues and vice versa.

Determining the correlation based on closeness, it can be concluded that it is weak, but considerable, because the calculated correlation coefficient is between 0.2 and 0.4.

Table 1

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<tr>
<th>Spearman's rho</th>
<th>I consider the organised training corresponding to the improvement of my professional knowledge</th>
<th>I use the obtained knowledge and skills in everyday work</th>
<th>I transfer the obtained knowledge to other colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>------------------------</td>
<td>-----------------</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>1.000</td>
<td>.145</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>.145</td>
<td>1.000</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>-.020</td>
<td>-.020</td>
<td>67</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

But the results presented in Table 2 approve that an even closer and statistically more significant correlation between the increase of results of professional activities and the application of knowledge obtained during the training to everyday work exists. The calculated correlation coefficient 0.336 indicates that there is a statistically significant correlation with a probability 0.99 or the significance level 0.01.

Determining the correlation based on closeness, it can be concluded that like it was above, in this case the correlation is weak, but considerable.

Table 2

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>This training ensures higher results of professional activities</th>
<th>I use the obtained knowledge and skills in everyday work</th>
<th>I transfer the obtained knowledge to other colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>1.000</td>
<td>.336</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>.336</td>
<td>1.000</td>
<td>67</td>
</tr>
</tbody>
</table>
Answers to the last question of the questionnaire inform, according to respondents, what factors will change as a result of the provided training. Respondents ranked the factors according to their importance, where 1 is the most important and 7 – the least important factor. Respondents’ answers reveal that the most important factor that could change due to the provided training is the increase of work efficiency, whereas the least important is the decrease of employee turnover (see Table 3).

### Table 3

<table>
<thead>
<tr>
<th>Factors that will change as a result of training</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work efficiency increases</td>
<td>1</td>
</tr>
<tr>
<td>Quality of work improves</td>
<td>2</td>
</tr>
<tr>
<td>Number of admitted mistakes during execution</td>
<td>3</td>
</tr>
<tr>
<td>of work responsibilities decreases</td>
<td></td>
</tr>
<tr>
<td>Inexpedient use of resources decreases</td>
<td>4</td>
</tr>
<tr>
<td>Relations among colleagues improve</td>
<td>5</td>
</tr>
<tr>
<td>Number of complaints decreases</td>
<td>6</td>
</tr>
<tr>
<td>Employee turnover decreases</td>
<td>7</td>
</tr>
</tbody>
</table>

Indicating to the increase of work efficiency and improvement of the quality of work as the most important factors, the others are subordinated to the two, because increasing the work efficiency and improving the level of work quality, the number of admitted mistakes and inexpedient use of resources, as well as the number of received complaints should decrease.

### Conclusions

In the present research management training was evaluated both at the preparation stage, in which the correspondence of training to the company strategic goals and needs is determined, the training content, the type of training, training methods and the training provider are chosen and at the Reaction and Learning levels of Kirkpatrick’s model.

The strategic goals of a retail company have not been defined before starting the training, which hinders defining the particular training goals, objectives and the anticipated training results. Employees were not asked about their desires regarding the training. The decision and initiative about organising the training comes from the company management, based on two previously performed surveys in the company, and the company financial information. Thus, the training has the company management support, which facilitates employee motivation for training. The training provider is selected based on the positive cooperation experience, positive references and mutually beneficial terms; the market research is not performed. The interviewees agree about the choice of the training participants – to improve the company performance, training should begin with managers, in addition, at all structural levels. The training programme content is similar to other training programmes offered in the market, the goal of which is the improvement of management skills. Participants are divided into groups and the programme is slightly differentiated according to the management level in the company. The length of training is justified by the training budget, not by the fact that this length is necessary to enhance the obtained knowledge, so that it could be used at work.
Understanding about the training need is similar to all the parties involved in training. The company manager can very precisely define it at the strategic objectives and the HRM – at the tactical tasks. The TP answers are rather vague. Although the TP and the BM have discussed the training goal, it is not defined equally. The BM concentrates on the process improvement but the TP – on the improvement of skills and personal development. The HRM understands the goal similarly to the TP. Not to allow deviations and interpretations, the training goal, objectives and needs should be fixed in writing. If before the training all the involved parties have a unified definition of the training objectives, it eases the evaluation of the training outcomes.

Neither the TP, nor the company employees hold a common opinion about what skills and knowledge the training participants should obtain, what competences should be developed and what performance should be changed. The level of employees’ individual competence was not determined before the training. It makes the development of the training programme and later also the evaluation of training outcomes more difficult. Kirkpatrick’s training evaluation model allows measuring, whether the employee performance has changed with the help of observations and attitude research at the Level 3 – Performance, but it is impossible to determine the extent, if no pre-testing is performed.

The correlation between the training process and the results is related with a successful attainment of the training goals. The BM defines the anticipated training outcomes most specifically, but it has to be concluded that there is a lack of conformity between the TP, BM and the HRM views. The authors of the present paper did not receive an answer to the question, how the training effectiveness will be measured. Not setting the testing criteria can be related to both the general processes that could improve as a result of the training, e.g. employee rotation, improvement of the information flow, team work skills, and to the development of specific employee skills. Irrespective of the fact that the training provider understands measurement of training effectiveness, in this case it was not planned to be measured.

Based on the company practice in training evaluation, it can be concluded that the company manager and the training provider lack competence in training evaluation. Although the company management is interested in organising training, understands its importance and allocates large financial resources for it, the preparation stage is for training, during which the correspondence of the training to the company goals and the training objectives is determined. The correlation analysis of the respondents’ answers indicated to a significant correlation between the training process and the results is related with a successful attainment of the training goals. The BM defines the anticipated training outcomes most specifically, but it has to be concluded that there is a lack of conformity between the TP, BM and the HRM views. The answers of the training participants allow concluding that the company organises qualitative and effective training that ensures improvement of managements’ knowledge and skills, the use of this knowledge and skills in everyday work and transferred to other colleagues. It indicates how important the preparation stage is for training, during which the correspondence of the training to the company goals and the training objectives is determined.

Irrespective of the drawbacks in the training preparation stage, employees positively evaluate the training. They admit that the knowledge and skills acquired during the training improve their professional level. Testing of the obtained knowledge proved that managers acquired the study material. However, the training effectiveness is determined by application of the obtained knowledge and skills to everyday work, ensuring better and better performance. Training has even greater significance, if the obtained knowledge is transferred to the subordinates to increase their competence level, thus ensuring the professional work of the entire team. The correlation analysis of the respondents’ answers indicated to a significant correlation between the use of knowledge and skills in everyday work and their transfer to other colleagues (see Table 1), as well as between the improvement of professional performance as a result of training and the use of the obtained knowledge and skills in everyday work (see Table 2). Thus, the more employees will evaluate that training improves professional knowledge and provides higher professional performance results, the more knowledge and skills will be used in everyday work and transferred to other colleagues. It indicates how important the preparation stage is for training, during which the correspondence of the training to the company goals and the training objectives is determined.

The correlation revealed in this case approves that there is a close relationship between the training evaluation levels in Kirkpatrick’s model: the way, how Learning takes place, affects whether the knowledge is used and transferred to others (Behaviour/Performance), whereas changes in the employee performance change the Result/Impact.

**Input for future research**

The answers of the training participants allow concluding that the company organises qualitative and effective training that ensures improvement of managements’ knowledge and skills, the use of this knowledge and skills in work processes and their transfer to colleagues, as a result providing the increase of the overall performance outcomes of the respective structural unit and the entire company, as well as the improvement of the total business indicators. This is the employee opinion, but to evaluate the management training effectiveness objectively, the evaluation should be continued at the Behaviour and Results level.

Management training in the retail shops chain is the company management’s initiative and the training has the management support. The company management understands and justifies the need for management training, can define the training goals and expected outcomes, but the training evaluation is not performed in the company, because there is no sufficient competence. Although the tendencies in human resource management
management field in Latvia in 2009-2010 (Locāns, 2010) indicate that the evaluation of the yield from personnel training and development activities increases, detailed research is necessary about how qualitative and extended the training evaluation in companies is.

References

IMPACT OF REINSURANCE ON LIABILITY INSURANCE IN LATVIA*

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Abstract  
Liability insurance demands careful underwriting due to its specific exposure. Meanwhile, the total Latvian liability insurance market is relatively small. Consequently substantial reinsurance assistance is required to underwrite and handle risks. Inadequate and constant reinsurance programme can reduce the liability insurer’s portfolio profitability and competitiveness. This paper aims to determine factors having the largest impact on reinsurer choice among the Latvian liability insurers and suggest optimal reinsurance scenarios under different market conditions. In order to achieve this, the analysis of theoretical literature, statistical data and scenarios is performed, as well as results of the survey conducted among local and foreign liability (re)insurance professionals are summarised. It is concluded that reinsurance has a direct impact on liability insurance in Latvia, reinsurance treaties have to be reviewed on a regular basis and reinsurance programme has to enhance profitability and competitiveness of primary insurer’s liability insurance portfolio.

Keywords: reinsurance, proportional/non-proportional, liability insurance, profitability, competitiveness.

1. Introduction  
Liability insurance demands extremely careful underwriting due to its exposure in terms of both long-tail nature and legacy business. At the same time, it is hardly the most popular insurance product and almost never a prior one (by liability insurance in this paper general liability insurance is meant - as a separate class of business). Therefore, it is obvious that insurers have to be able to provide highly competitive liability insurance proposals in order to attract new and retain existing business. Bearing this in mind, market and its capacity should be considered. Liability insurance market in Latvia constitutes on average (during last ten years - period of research: 2000 – 2009, inclusive) 6.4% of the whole local insurance market (6.19% when 2010 is taken into account, although the full data is still not available for this particular year). Meanwhile, the insurance companies undertake obligations, when the insuring liability exceeds the total amount of gross written premiums for this product almost 90 times. Thus, it becomes unequivocal that reinsurance is like a bloodstream to liability insurance in Latvia. However, taking advantage of capacity and protection provided by reinsurance means that insurance companies in Latvia have to share the premiums received for liability insurance policies with reinsurers. This has a direct effect on profitability of the insurance product, net earned premium amount, and technical result. Furthermore, considering the fact that at the moment insurance market in Latvia can be characterised as a soft market (supply exceeds demand thus applying pressure on premium levels), it is crucial to cooperate with reinsurers having a similar strategic approach to risk pricing as the primary insurers. Otherwise, competitiveness of insurance company can suffer leading to further decline of gross written premiums (GWP) amount and even deterioration of reputation. Hence, the choice of an adequate and commensurate reinsurance programme for a liability insurance portfolio is of an utmost importance to insurance companies in Latvia.

2. The aim  
This paper analyses interrelation of reinsurance and liability insurance in the Latvian insurance companies. It also considers the impact of various reinsurance programmes on the local liability insurer’s portfolio profitability and product competitiveness in different market conditions.

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The following assumption is made: liability insurers in Latvia can enhance their product competitiveness and profitability in any market conditions by choosing an appropriate reinsurance programme offered by a reinsurer with similar underwriting strategy and reassessing this programme on a regular basis.

Consequently, this paper aims to determine factors having the largest impact on the reinsurer’s choice among local liability insurers and to suggest optimal reinsurance scenarios for the Latvian liability insurers under different market conditions.

3. Materials and methods of the work

In order to achieve the aim of this paper, several tasks were performed, characterising the stages and scope of the research conducted: theoretical literature is analysed to identify peculiarities of liability insurance as a product (insurance line of business) and to determine functioning of conventional reinsurance types that are being considered appropriate for liability insurance portfolio; Latvian liability insurance market and its development during the last ten years (2000 – 2009, inclusive, with a view at preliminary 2010 data) is analysed, as well as the liability insurance portfolio positions most affected by reinsurance are determined (taking into account survey results); currently most widespread reinsurance types for liability insurance portfolio are established by summarising survey results, as well as comparative scenario analyses applying each of them to a fictitious liability insurance portfolio (non-technical or investment activities are not considered) are performed; general perception and comprehension of reinsurance in the Latvian liability insurance market is evaluated by summarising survey results. The survey conducted as part of the research was based on a specifically prepared questionnaire, which consists of 18 questions and it was distributed to liability (re)insurance professionals in Latvia and abroad (total 153 respondents) to compare the trends and practice applied in the Latvian and foreign insurance industries. All respondents are liability insurance industry experts working in either Latvia or Western Europe and Scandinavia and representing the target group. In Latvia the questionnaire was distributed to the target group via Latvian Insurers Association (LIA) and insurance brokers. Apart from the insurance companies in Latvia, the questionnaire was distributed to several European insurance/reinsurance companies, among them: ACE Europe, Chubb Insurance Company of Europe SE, DEVK, Fennia, Gen Re, Gothaer, HDI-Gerling Industrie Versicherung AG, HDI-Gerling Industrial Insurance Company - UK Branch, Munich Re, Tapiola General Mutual Insurance Company, Topdanmark, Travelers, and XL Insurance Company Limited.

4. Results

The function of liability insurance follows that of a civil liability itself – indemnify the losses sustained by a third party or, in other words, compensate for the actual damage caused. Civil liability is a form of legal liability and it is the only one that can be insured. Further in this paper, the terms liability and liability insurance refer to civil liability and civil liability insurance. There are also other forms of legal liability – criminal, administrative, and disciplinary liability – however, these forms cannot be insured. Moreover, the law “On Insurance Contracts” of the Republic of Latvia stipulates that liability insurance indemnity does not cover pecuniary penalties and other similar charges.

Liability insurance in Latvia is based on civil liability resulting from the civil law; therefore, in liability insurance an insured risk is the risk that an insured person becomes liable. It means that under a liability insurance policy, an insured event is a situation when the insured person is liable for losses sustained by a third party. Whether this event is covered by the respective policy depends on terms and conditions of an insurance contract. Liability insurance is very different from any other non-life insurance line of business, because the insured – the client, who buys the insurance policy – is not the beneficiary of insurance indemnity. In fact, the client buys the insurance protection against the losses that he/she might cause others to incur – losses sustained by third parties. This paper deals only with what is commonly regarded as a separate line of business – general liability insurance in its broader meaning, therefore, when referring to a liability insurance portfolio the following is understood: a liability portfolio consisting of two big subgroups – general liability (GL) and professional indemnity (PI) insurance, each of these consisting of several smaller types of products, for example, professional indemnity insurance for accountants or landlord liability insurance under a general liability insurance group.

Various authors offer different definitions of the term reinsurance, yet the main idea remains – the task of reinsurance is to protect the insurer from accumulation of many relatively small homogenous losses or from catastrophic consequences of one large loss. Reinsurance is an insurance for insurance companies (Sūniņa-Markēviča, 2003). Definition of reinsurance in the “Reinsurance Law” (came into effect on 16 July 2008) of the Republic of Latvia is as follows: “reinsurance – acceptance of the ceded risks from insurance
company, reinsurance company, or private pension fund”. Reinsurance allows an insurance company to diversify its risks, resulting from underwritten policies, by means of spreading it among other institutions (reinsurers). Such diversification decreases probability of incurring large losses for the insurer. Hence, reinsurer receives parts of the risk (undertakes part of the initial obligations) in exchange for part of the premium that the insurance company received for underwriting the risk. In a long-term, reinsurance helps insurance companies to avoid excessive profit/loss fluctuations by means of undertaking part of the obligations and therefore ensuring a more solid balance sheet structure. As a result – reinsurance supports general financial stability of insurance companies. Hence, insurers need reinsurance not only to be able to underwrite some new particular risks obtaining the required additional capital and insurance experience, but also to protect their portfolios and themselves from sudden adverse fluctuations. Benefits that a primary insurer receives from a reinsurer (Patrik, 2001) can be summarised as follows: capacity – reinsurance provides additional capacity, therefore, allowing the insurer to underwrite policies with higher limits and yet maintaining the risk on a manageable level. This grants a competitive advantage to smaller insurers and enhances competitiveness of the primary insurer in general; hence, well-considered choice of reinsurance is of an utmost importance; stabilisation – reinsurance allows the primary insurer to retain only the smaller, well-known and homogenous risks, while ceding the atypical, rare and hard to forecast risks that can cause an adverse effect on the insurer’s portfolio. Thus, the underwriting and financial effects of large losses/accumulation of losses are mitigated, thereby decreasing probability of the primary insurer’s financial ruin; financial results management – reinsurance can enhance profitability of primary insurer’s portfolio, it can alter various financial ratios, by which the insurer is measured and evaluated (for example, loss ratio); advice – professional reinsurers usually have a wide range of experiences and knowledge in the related risk evaluation, underwriting, pricing, etc. They often arrange workshops and seminars for their clients – primary insurers. They also can provide a general overview of different trends on similar markets due to their contact with other primary insurers.

This paper considers conventional reinsurance types: proportional (surplus, quota share) and non-proportional (XL – excess of loss, stop loss). Furthermore, treaty reinsurance is applied, when performing scenario analyses, while facultative reinsurance is mentioned with regard to the survey results. It is worth mentioning here that based on the reinsurance related theory regarding traditional reinsurance covers, it is considered that normally from non-proportional reinsurance types XL is used for liability insurance, while from proportional reinsurance types – quota share.

Liability insurance market in Latvia (along with the whole insurance) decreased substantially in 2009 – a 31.1% drop compared with 2008. Illustration is provided in Table 1.

Table 1

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GWP ('000)</td>
<td>278,127</td>
<td>432,105</td>
<td>384,305</td>
<td>257,231</td>
<td>198,633</td>
<td>173,605</td>
<td>159,848</td>
<td>135,265</td>
<td>127,893</td>
<td>129,816</td>
</tr>
<tr>
<td>Liability GWP ('000)</td>
<td>8,167</td>
<td>11,851</td>
<td>10,906</td>
<td>8,096</td>
<td>9,229</td>
<td>11,527</td>
<td>16,770</td>
<td>12,129</td>
<td>12,077</td>
<td>16,278</td>
</tr>
<tr>
<td>Liability proportion</td>
<td>2.94%</td>
<td>2.74%</td>
<td>2.84%</td>
<td>3.15%</td>
<td>4.65%</td>
<td>6.64%</td>
<td>10.49%</td>
<td>8.97%</td>
<td>9.44%</td>
<td>12.54%</td>
</tr>
<tr>
<td>Gross losses paid ('000)</td>
<td>1,574</td>
<td>2,408</td>
<td>2,053</td>
<td>1,199</td>
<td>810</td>
<td>618</td>
<td>605</td>
<td>598</td>
<td>552</td>
<td>634</td>
</tr>
<tr>
<td>Policies written</td>
<td>45,890</td>
<td>53,972</td>
<td>47,350</td>
<td>37,170</td>
<td>24,603</td>
<td>13,445</td>
<td>12,347</td>
<td>11,133</td>
<td>9,412</td>
<td>8,404</td>
</tr>
<tr>
<td>Re* share in premiums</td>
<td>26.70%</td>
<td>28.40%</td>
<td>25.10%</td>
<td>31.90%</td>
<td>58.30%</td>
<td>78.30%</td>
<td>79.30%</td>
<td>82.80%</td>
<td>81.60%</td>
<td>84.44%</td>
</tr>
<tr>
<td>Re share in losses</td>
<td>21.40%</td>
<td>11.20%</td>
<td>25.60%</td>
<td>27.10%</td>
<td>36.20%</td>
<td>36.60%</td>
<td>28.00%</td>
<td>27.20%</td>
<td>39.10%</td>
<td>34.00%</td>
</tr>
</tbody>
</table>

*a* Re*a* stands for “reinsurers”

Table 1 shows that general tendency changed in 2005 – in terms of almost all indicators: liability insurance GWP (-20%), number of policies written (+83%), reinsurers share in GWP (-20%). In part, this can be explained by a turning point in the history of Latvia – on 1 May 2004 Latvia became a member of the European Union. In 2010, which is not included in the table due to the lack of complete market data, total GWP amount was 224,000,000.00 EUR (-19.5% to 2009) and total liability insurance GWP was 8,221,000.00 EUR (+0.7% to 2009), with proportion increasing to 3.7%, while gross losses paid decreased by 8.7% compared to 2009\(^{18}\). Table 1 demonstrates that the total amount of gross losses paid was increasing steadily until 2009 when there was a 34.63% decline. It can be explained by the growing number of policies written, which implies that insurers underwrite more risks in quantitative terms, and by general development of national economy, which implies that there is a growing demand for insurance, thus leading to more frequent/larger losses (in qualitative terms). Nevertheless, it should be taken into consideration that sometimes a single or few claims constitute a significant part of the total gross losses paid. For example, in 2009 the largest liability claim in Latvia amounted to 1 million EUR while in 2010 it was 200 000 EUR. Certainly, these are amounts of claims, not the actual gross losses paid, yet they play a significant role in the Latvian liability insurance market statistics. It is important to emphasise that reinsurers share in GWP is constantly bigger than their participation in the total amount of paid losses (with exception of 2007, when both ratios were almost equal). This gives an idea of the general claims mentality in Latvia. If the reinsurers’ share in premiums is larger than their share in losses, it implies that the sum of each individual loss paid by the primary insurer often does not exceed its retention (or the insurer’s share is big enough to cover substantial part of the loss in case of quota share reinsurance). It means that most of the claims made by third parties under liability insurance policies in Latvia does not exceed the insurer’s retention or is slightly above (in monetary means).

When choosing reinsurance for a liability insurance portfolio, it is important to reflect, which reinsurance company would be most suitable for the respective primary insurer. Each reinsurer is most likely to provide different reinsurance offers for the same portfolio simply because each company has its own approach and strategic goals. One of the first considerations should be the reinsurer’s financial strength. It is crucial for the primary insurer to receive large claims payments from reinsurer in due course. Furthermore, the insurer has to be certain that the reinsurer will participate in claims reported several months/years from termination of the subject policy. It should be the matter of a great concern for liability insurers in Latvia because liability insurance is a long tail business and statutory limitation for claims is currently 10 years, which can only sometimes be limited to 3 years. Therefore, the insurer’s solvency can be severely affected by poor financial condition of its reinsurer.

As part of the survey conducted, respondents of the questionnaire were asked to evaluate significance of seven factors characterising reinsurer and assuming a reinsurer is financially stable, if they had to choose a company, where to place the liability portfolio reinsurance. The seven factors provided are as follows: adjusts - reinsurer adjusts itself to the needs of insurer, when developing reinsurance programme conditions and, if necessary, provides facultative reinsurance for particular risks / includes particular risks in the treaty through special acceptances; partner - reinsurer offering the programme is already a well-known partner, with whom the insurer has established good business relations in other lines; strategy - reinsurer offering the programme has a similar business strategy and „risk appetite” as the insurer itself; price - reinsurance programme is offered for a competitive price; experience – the reinsurer has substantial experience and specialisation/knowledge of liability reinsurance; rating – the reinsurer has a high rating, for example S&P AAA etc.; related – the reinsurer offering a programme is a related/mother company etc. In addition to evaluation of the factors described above, the respondents were asked to share their opinion on what is the determinant criterion / what should be the determinant criterion, when choosing the reinsurance programme for the liability insurance portfolio. Results are summarised in Table 2.

| Reinsurance choice priority table – Latvian liability insurers\(^{19}\) |
|-----------------|----------------|---------------|---------------|
| **Factor**      | **Priority Level** | **High** | **Medium** | **Low** |
| Adjusts         | –               | – | – | – |
| Partner         | –               | – | – | – |


\(^{19}\) Created based on survey results
It is clear that the Latvian liability insurers expect from the reinsurer their portfolio protection, indirect assistance in market position improvement as well as experienced and useful advice – service. Respondents were also asked to choose the reinsurance programme, which is the most appropriate for the liability insurance portfolio, in their opinion (in general). Besides showing the most popular reinsurance types among local and foreign liability professionals, the results also highlighted an alerting feature among the local liability insurance professionals: a third of respondents stated that they lack knowledge / experience to answer this question. The results are summarised in Figure 1.

![Figure 1. Most popular reinsurance types in Latvian liability insurance market and abroad](image)

Figure 1 shows that the most popular reinsurance type for the liability portfolio is non-proportional reinsurance, namely XL – both in Latvia and abroad. Stop loss has not gained any popularity among Latvian liability insurers, while it is equally popular among foreign colleagues as the proportional reinsurance types. Quota share and surplus are more often considered appropriate for the liability portfolio reinsurance in the Latvian market than abroad. None of the foreign respondents chose to answer “lack of knowledge”, while this answer was the second most popular among the Latvian liability insurers. Some foreign liability insurers chose “other type” as an answer, yet without specifying, which type exactly. Although the local liability insurers admit they lack knowledge/experience to properly answer this question, other two most popular reinsurance types for liability portfolio in Latvia are surplus and quota share.

A fictitious liability insurance portfolio was created and several scenario analyses were conducted (with surplus, quota share and XL treaties). The portfolio was structured to be in line with the current Latvian liability insurance market regarding it as a soft market scenario. The same portfolio was adjusted to be in line with the local liability insurance market of 2008 regarding it as a hard market scenario – total amount of GWP was increased by 50%, total amount of claims by 40% and RBNS reserves by 25% comparing with the respective amount in a soft market. Several other assumptions were made (maximum capacity of 2 000 000 EUR during a soft market and 3 000 000 EUR during a hard market, the insurer’s retention is 200 000 EUR during a soft market and 350 000 EUR during a hard market etc.). A simplified model of the liability insurer’s portfolio technical summary was developed for illustrative purposes.

Illustration of the soft market scenario (with all positions) is provided in Table 3.

Table 3 shows that the largest net incurred claims and operating expenses are under XL treaty. However, the total amount of net earned premiums is substantially bigger under XL than under proportional reinsurance treaties, therefore demonstrating that the given portfolio is able to generate best technical result without sharing a portion of premiums and claims. A technical result under XL exceeds those under proportional reinsurance by 31% (quota share) and 16% (surplus). If an insurer manages to negotiate reinsurance premium rate lower than 12% (XL premium chosen in this example corresponds to 70 497.19

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Based on survey results.

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Table 3

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Price</th>
<th>Related</th>
<th>Experience</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

20
EUR or 12% of GWP, which is a rather considerable rate and thus can be regarded as a maximum amount), this difference will increase in favour of XL. The portfolio generates the lowest technical result under the quota share. This is explained by the lowest amount of net earned premiums due to the biggest sum of ceded written premiums. The quota share allows decreasing the insurer’s net operating expenses to the smallest level mainly owing to the highest reinsurance commission income. Surplus is in the middle allowing the portfolio to generate the lowest net incurred claims mostly due to the highest level of ceded paid claims. The illustration of portfolio net ratios (after allowing for reinsurance) under the soft market scenario is provided in Table 4.

### Liability insurance portfolio technical summary – soft market scenario (EUR)\(^{21}\)

<table>
<thead>
<tr>
<th>Position</th>
<th>Position Code</th>
<th>Liability Insurance Portfolio - Soft Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earned premiums, net (101-102-103+104)</td>
<td>100</td>
<td>490,016</td>
</tr>
<tr>
<td>Gross written premiums</td>
<td>101</td>
<td>587,477</td>
</tr>
<tr>
<td>Ceded written premiums</td>
<td>102</td>
<td>161,376</td>
</tr>
<tr>
<td>Change in gross unearned premium reserves (+/-)</td>
<td>103</td>
<td>-88,122</td>
</tr>
<tr>
<td>Change in ceded unearned premium reserves (+/-)</td>
<td>104</td>
<td>-24,206</td>
</tr>
<tr>
<td>Incurred claims, net (210+220)</td>
<td>200</td>
<td>126,889</td>
</tr>
<tr>
<td>Paid claims, net (211-216)</td>
<td>210</td>
<td>30,988</td>
</tr>
<tr>
<td>Paid claims, gross (212+213+214-215)</td>
<td>211</td>
<td>60,342</td>
</tr>
<tr>
<td>Claims</td>
<td>212</td>
<td>55,519</td>
</tr>
<tr>
<td>Loss adjustment expenses</td>
<td>213</td>
<td>1,388</td>
</tr>
<tr>
<td>Loss adjustment expenses - allocated</td>
<td>214</td>
<td>3,435</td>
</tr>
<tr>
<td>Recovered losses</td>
<td>215</td>
<td>0.00</td>
</tr>
<tr>
<td>Paid claims, ceded</td>
<td>216</td>
<td>29,355</td>
</tr>
<tr>
<td>Change in claim technical reserves, net (221-222+223)</td>
<td>220</td>
<td>95,902</td>
</tr>
<tr>
<td>Change in RBNS, gross (+/-)</td>
<td>221</td>
<td>62,372</td>
</tr>
<tr>
<td>Change in RBNS, ceded (+/-)</td>
<td>222</td>
<td>16,898</td>
</tr>
<tr>
<td>Change in IBNR, gross (+/-)</td>
<td>223</td>
<td>50,428</td>
</tr>
<tr>
<td>Operating expenses, net (301+302+303+304-305-306)</td>
<td>300</td>
<td>146,063</td>
</tr>
<tr>
<td>Client acquisition costs - direct</td>
<td>301</td>
<td>49,936</td>
</tr>
<tr>
<td>Client acquisition costs - allocated</td>
<td>302</td>
<td>92,234</td>
</tr>
<tr>
<td>Change in deferred client acquisition costs (+/-)</td>
<td>303</td>
<td>8,812</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>304</td>
<td>29,374</td>
</tr>
<tr>
<td>Reinsurance commission income</td>
<td>305</td>
<td>40,344</td>
</tr>
<tr>
<td>Change in unearned reinsurance commission (+/-)</td>
<td>306</td>
<td>-6,052</td>
</tr>
<tr>
<td>TECHNICAL RESULT (100–200–300)</td>
<td>400</td>
<td>217,064</td>
</tr>
</tbody>
</table>

### Liability insurance portfolio net ratios – soft market scenario (%)\(^{22}\)

<table>
<thead>
<tr>
<th>Position</th>
<th>Surplus</th>
<th>Quota Share</th>
<th>XL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss ratio</td>
<td>25.9%</td>
<td>29.1%</td>
<td>25.6%</td>
</tr>
<tr>
<td>Cost ratio</td>
<td>29.8%</td>
<td>30.2%</td>
<td>37.1%</td>
</tr>
<tr>
<td>Combined ratio (net)</td>
<td>55.7%</td>
<td>59.4%</td>
<td>62.8%</td>
</tr>
</tbody>
</table>

\(^{21}\) Calculated using standardised technical result form applicable to the Latvian insurance industry.

\(^{22}\) Calculated using standardised technical result form applicable in Latvian insurance industry.
Table 4 shows that both surplus and XL allow the portfolio to generate almost equal loss ratios with one under XL treaty being slightly lower (better), which implies that the insurer is capable to enhance its profitability without sharing its premiums with a reinsurer. However, there is a considerable difference in cost ratio in favour of surplus treaty. Explanation for this is a reinsurance premium payable under XL treaty that increases administrative expenses of the insurer. Similar analysis was performed after applying a large claim of 1 000 000 EUR and it was concluded that the quota share generates the worst result due to the lowest net earned premiums amount, the surplus generates a moderate profit (positive technical result), while XL generates small losses and its profitability can be improved substantially subject to the reinsurance premium rate.

The hard market scenario illustration (with main positions) is provided in Table 5.

<table>
<thead>
<tr>
<th>Liability insurance portfolio technical summary – hard market scenario (EUR)</th>
</tr>
</thead>
</table>

Table 5 shows the similar trends as the under soft market scenario. The best technical result is generated under XL treaty, surplus is the second, and quota share is the last. However, under this scenario, differences between three technical results are not as pronounced as under the soft market conditions. The best technical result exceeds the one under surplus by 15 100 EUR and the one under quota share by 29 547 EUR – the amounts approximately two times smaller than under the soft market scenario. One of explanations is that GWP has increased significantly and the insurer chose to lift its level of retention relative to the maximum capacity, which decreased the reinsurer’s share in claims and premiums. Net operating expenses and net incurred claims are at their highest levels under XL. Therefore, even though the total amount of the net earned premiums is the highest under XL reinsurance and technical result is the best of all three options, the insurer should put a considerable effort in obtaining as favourable premium rate as possible – otherwise the surplus is a more favourable option. The summary of net ratios is provided in Table 6.

| Liability insurance portfolio net ratios – hard market scenario (%) |
|-----------------|--------|--------|--------|

Table 6 demonstrates that the best net loss ratio is under XL treaty, while the best net combined ratio is under the surplus treaty. The quota share treaty provides the worst technical result and net loss ratio due to the lowest amount of net earned premiums. Net cost ratio is almost similar under the surplus and quota share, although net operating expenses are lower under the quota share. This phenomenon is explained by higher net earned premiums amount under the surplus treaty. Due to the same reason, the XL treaty allows the portfolio generating the most profitable net loss ratio. Yet, owing to the reinsurance premium rate of 10% (a rate applied under the hard market scenario due to a larger GWP amount), the net cost ratio is at its highest

Calculated using standardised technical result form applicable in Latvian insurance industry.

Calculated using standardised technical result form applicable in Latvian insurance industry.
level, contributing to the worst net combined ratio. The similar analysis was performed after applying a large claim of 1 000 000 EUR and it was concluded that all treaties generated losses with the smallest losses under surplus. Otherwise, the trend is similar to the soft market scenario with XL profitability being subject to a substantial rate deduction, which is difficult to achieve under the hard market conditions.

5. Conclusions

1. Based on the survey results, the Latvian liability insurers assign the highest priority level to four characteristics of an reinsurer evaluating them as determinative criteria when choosing reinsurance for their portfolios: similar business strategy, adjusts to the insurer’s needs, offers reinsurance for competitive price, and has substantial experience / specialisation in liability reinsurance.
2. Results of the survey imply the following: currently, among the local liability insurers there is a lack of thorough comprehension, how reinsurance can be used to improve profitability, competitiveness, and gain additional income by making use of benefits that an insurer can receive from a reinsurer.
3. XL reinsurance can be suggested to the liability insurance portfolio during the soft market period subject to commensurate reinsurance premium and adequate retention level. The alternative: due to low claims mentality, surplus reinsurance with a higher retention level than under XL, yet reasonably chosen to cover larger portion of big claims than under XL.
4. Surplus reinsurance can be suggested to the liability insurance portfolio during the hard market period subject to an adequate retention level in light of the portfolio structure and low claims mentality, so that the larger portion of big claims is covered than under XL. The alternative: XL with a lower retention level subject to low reinsurance premium.
5. Quota share reinsurance can be suggested to the liability insurance portfolio with a substantial share of ceded risk, generating additional income from reinsurance commissions, subject to the main objective being to enter a new market/underwrite a new product, while accumulating sufficient market-related data.

References