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Modern Challenges for Business and Economy in CEE Countries

edited by
Marek Szarucki

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Table of Contents

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Editorial: Modern Challenges for Business and Economy in CEE Countries

In recent years the phenomenon of globalisation has become an important issue, widely discussed in the academic literature. Debates explore globalisation intensity and its consequences for economies and businesses around the world. According to A.V. Rutkauskas (2013, p. 388), the processes of globalisation "inevitably determine the integration of countries and regions, which empowers a more economic use of natural resources, more efficient creation of new resources and the increase in the effectiveness of human resource and technology utilization". Nevertheless, in the short-range perspective, the uncontrolled processes of globalisation reveal various problems, solution of which requires extra expenditures.

Thus, looking at the process of globalisation, it is possible to notice growing number of challenges that need to be coped with by governments, businesses and societies in various parts of the world (Mascarenhas, 2009). The region of Central and Eastern Europe (CEE) is not an exception from the rule. Moreover, due to different facets of globalisation and regionalisation, some challenges are similar to those in other parts of the world, although the region has its own specific problems to solve and consider on the way to success (Klich, 2013; Renko & Knezevic, 2013).

Consequently, this issue of EBER concentrates on the modern challenges for organisations and countries' economies in the region of the CEE, particularly four countries: Lithuania, Poland, Russia and Slovakia. First part consists of three research papers related to scientific methods' utilisation, and concentrates on the following challenges: public debt management, investing on global market, and searching for better models estimating the cost of equity in emerging markets. Second part includes four articles dealing with exploration of the following topics: cooperation of businesses on international markets, collaboration between public and private sectors, peculiarities of income taxation and entrepreneurship opportunities after military service.

First paper, *Implementation of Multi-Objective Evaluation Method in Public Debt Risk Management*, prepared by Jelena Stankevičienė and Sergej Rosov is devoted to analysis and developing a public debt risk assessment model, which allows predicting country's economic well-being trends. The proposed model evaluates different aspects of public debt-related structural indicators.

Second paper, *Investment Decisions in Global Financial Markets: the Experience of Lithuania* of Aleksandras Vytautas Rutkauskas and Alina Kvietkauskienė, deals with identifying investment decision making scheme under globalisation processes in financial markets. The universal method of investment is offered in order to save the interests of investors. Moreover, the authors have argued that adequate portfolio model can be utilised in Central and Eastern Europe for investment decision-making in global financial markets.

Third article, *An Empirical Study of Unsystematic Risk Factors in the Capital Asset Pricing Model: the Case of Russian Forestry Sector* prepared by Varvara Nazarova, investigates the Capital Asset Pricing Model (CAPM), determining its most disputable aspects. The experimental part of the study has been performed by calculating models for three options of implementing the investment projects and the assessment of the total impact of reducing non-systematic risks for the Russian forestry sector.

Peculiarities of Labour Income Taxation in the Baltic States by Ilona Skačkauskienė aims at identifying the peculiarities of the taxation of labour income in the Baltic States (Lithuania, Latvia and Estonia). The outcomes of the conducted research have proven that the comparison of the basic tax indicators, such as non-taxable minimum income and standard rates, only to some extent illustrates the national level of the labour income taxation.

Collaborative Advantage in Public and Social Services: the Case of Poland by Maria Janina Szymankiewicz analyses the relationships between the third and the public sector, with a particular focus on relations with local government units (LGUs), based on the example of Poland. Moreover it also demonstrates a useful tool which facilitates the realisation of such a task – a model of strategic cross-sector collaboration.

Cooperation and Its Role in Facilitation of Foreign Expansion: Example of Slovak Enterprises by Mária Šášiková and Tatiana Hlušková concentrates on pointing out the importance of cooperation between business companies in order to facilitate the process of their internationalization, and is based on the example of Slovak-foreign joint ventures. The findings imply that the Slovak companies' cooperation with foreign enterprises can result in a successful business.

The final paper, *Entrepreneurship Opportunities after Military Career: Practice in Central and Eastern versus Western Europe* by Rasa Smaliukienė, deals with an important issue of existing practices of entrepreneurship skills development of early retired servicemen in EU member countries and evaluate the differences between Central and Eastern Europe and Western Europe practice. The findings indicate the lack of entrepreneurship development policies for early retired servicemen, in spite of the fact that service in military frequently provides very specific competencies that could be adapted as transferable expertise and knowledge for entrepreneurship.

Marek Szarucki
Issue Editor

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2013, Vol. 1, No. 4

Implementation of Multi-Objective Evaluation Method in Public Debt Risk Management

Jelena Stankevičienė, Sergej Rosov

A B S T R A C T

Objective: The paper is devoted to propose a public debt risk assessment model, which allows predicting country's economic well-being trends. The proposed model evaluates different aspects of public debt-related structural indicators.

Research Design & Methods: Introduced debt risk assessment model uses MULTIMOORA multi-objective evaluation method. Study is based on the 2005-2010 European Union macroeconomic structural indicators.

Findings: The data analysis indicates EU's ability to cope with the increasing level of public debt and predict long term fiscal consequences.

Implications & Recommendations: Evaluation of research results enables to use multi-objective evaluation method to determine the risk of public debt.

Contribution & Value Added: A ranking index which shows early warning signs of fiscal indebtedness problems for European Union countries is introduced in the paper. Periodical use of proposed model would help to predict incoming recessions and to implement specific fiscal policies in time to prevent them.

Article type: research paper

Keywords: public debt; risk; MULTIMOORA; MOORA; structural indicators; European Union

JEL codes: G11, G14, G23

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INTRODUCTION

Public debt risk management topic is one of the most relevant for European authorities and society in general, because after the recent economic crisis many countries had big deficit in their economies, so that they took large loans from different financial institutions in order to cover their outstanding liabilities. Unfortunately, for some countries the interest rate was so high, so it was difficult for them to pay debt service for their loans. Under following circumstances their credit rating dropped down even more and investors decided that it is too risky for them to invest their money in government junk bonds.

The authors have focused on developing a greater understanding of the way in which public debt risk can be evaluated and managed.

Public debt risk management issues pose society more questions than answers. Moreover, existing methods give recommendations to the governments too late. The problem indicated in the paper is lack of appropriate model of public debt risk evaluation, which would help to understand which countries are in trouble in managing their sovereign debt liabilities. Risk of the sovereign debt to the European Union countries is the object of the following research. The paper is devoted to create integrated framework, which could produce more precise findings for further action on time.

The aim of this paper is to propose a new model for evaluation of public debt risk, which will be more precise than existing ones and will show trends for country economic wellbeing for a few years in advance.

The main tasks of the study are the following: (1) to identify macroeconomic structural indicators which have positive and negative effect on public debt; (2) by using MULTIMOORA method to evaluate for each EU country its indebtedness index, rank it and analyse received results; (3) to introduce a model of assessing the risk of indebted countries.

Risk of the sovereign debt is especially crucial in Eastern and Central European countries. Eastern and Central Europe countries are one of the 28 member states of the European Union and their situation has direct economic impact. Moreover, European Union during recent years was not stable in economic terms, so it is essential to make sure in future it will have stable growth.

LITERATURE REVIEW

Scientific literature presents many different methods how to measure risk of the indebted countries and there is a debate which one is more accurate (relative to GDP, public revenues or exports). Singular ratios methods of calculating may be misleading in predicting future economic growth. That is why main idea of the following research is to introduce a new ranking measurement system, which is calculated separately from the three different methods. This method is called MULTIMOORA and it consists of three parts, namely Ratio System, Reference Point and Full Multiplicative Form.

Public debt, which is also in different context called government debt or sovereign debt, refers to liabilities incurred by governments. There are many reasons why governments are used to borrow money from external sources for such purposes as:

social service, education, health, infra-structure improvement and defence etc. There are two types of borrowing: one is consumption based, while another is made for investment purposes. Sometimes authorities borrow money to carry out expansionary fiscal policies (i.e. cutting taxes or increase in spending) in order to improve economic activity of the country, decrease unemployment and stimulate economic growth. Excessive levels of debt resulting in higher interest rates can have opposite effects on real output (Alesina *et al*., 1992). There is a common believe of many economists that in certain circumstances sovereign debt may cause a productive aspects in the economy. For instance, investments in long-term projects may improve future economic situation of the country. On the other hand, governments usually use borrowed money to cover other needs. In following cases economists suggest authorities to cut existing spending or to increase taxes on economic booms to repay its liabilities incurred from recent economic slowdowns. Wood (2012) in his research found that in periphery countries the risk of debt default is being increased by current defensive policy settings and the policy of financing budget deficits by printing new money is likely to be more effective (than "quantitative easing" and current Eurozone policy) in raising demand, output and employment without adding unnecessarily to already high levels of public debt.

Scientists also argue that such governments, which borrow for consumption needs, may have in the future difficulties when they should repay their debts, because such liabilities do not bring any economic benefits. Indebted sovereigns in crises across the Eurozone have made debt restructuring an imperative. Thomas (2013) proposed that the debt sustainability with negotiated and consensual workouts can be achieved in the Eurozone with statutory constraints on enforcement action pending the settlement of debt workouts.

Right now most of the governments borrow money by issuing and selling government bonds to investors. Some countries sell their bonds on the local market, while others to investors from overseas. For example, Japan and Italy sell large amount of their bonds to domestic investors. Another example is the USA; it sells half of their debt on a federal level and other to international investors. During last financial crisis years some emerging economies borrowed money from large international organizations, such as IMF and World Bank with fair interest rates (Nelson, 2011). Usually government's debt burden is calculated as a percentage of gross domestic product (GDP) of a specific country, which is quantitative measurement of country's economy. It is most commonly used measure of indebtedness of the country, because it indicates relative debt burden of the government, since large economies may sustain more debt in total, compares with small economies.

The problem while researching these issues is that data on a public debt are reported in different ways. It can represent information only of central government or for all government levels (province/state, federal/central). Spain, for instance, have high spending by regional municipalities, it means that there exist big difference among general government debt and central government debt. On the other hand, the United States of America as a definition of public debt uses the federal government debt only. Such international organizations, as the International Monetary Fund (IMF), World Bank, EUROSTAT and the Organization for Economic Cooperation and Development (OECD) have their own standardized reports on public debt, which show slightly different results.

Garcia & Rigobon (2004) studied the question of debt sustainability from a risk management perspective. They found that even though the debt could be sustainable in the absence of risk, there are paths in which it is clearly unsustainable. Furthermore, they showed that properties of the debt dynamics are closely related to the spreads on sovereign dollar denominated debt.

It is also very important to distinguish who hold a debt of the country: local or foreign investors. Some governments sell majority of their bond to the foreigners, while other to the residents. For example, Japan and Italy sells most of the bonds to the local investors, that is why it is not so risky for them to carry out such large proportion of public debt to GDP ratio. The part of debt which foreigners hold is called external public debt and it is usually riskier with comparison to internal public debt holders.

There are several possible ways in which public debt can negatively impact on long term growth of the country: higher interest rates increase future taxation, higher inflation and increased uncertainty about future prospects and policies. In addition, in the worst scenario of debt mismanagement, it might cause currency or banking crisis in the economy (Hemming *et al.,* 2003). High level of sovereign debt also has adverse effect on fiscal policies, which can cause higher volatility of structural macroeconomic indicators and lower economic growth (Kumar & Woo, 2010).

Most of the theoretical researchers find a negative connection between government debt and economic growth (Rutkauskas, 2013). DiPeitro & Anoruo (2012) examined the impact of the size of government and public debt on real economic growth, for a panel of 175 countries around the world and indicated that both the size of government and the extent of government indebtedness have negative effects on economic growth and suggested that the authorities ought to take the necessary steps to curtail excessive government spending and public debts, in order to promote economic growth.

Economists argue that public debt is a burden for future generations. It comes from the lower income flows out of reduced stock of private capital. Moreover, interest rate increases in a non-linear form, what causes even higher difficulties for the government. Increase of public debt most probably will cause problems for next generations, but right now it may be advantageous for today's generation. It is one of the most egoistic forms for financing government deficit in a long term. However, economists also argue that sometimes, when debt goes to the projects which will generate additional revenue, it may improve an economic growth in a long-run (Modigliani, 1961).

Taxes are usually used as a form to finance the debt service on interest rate by both internal and external debt. It has negative spill-over effect on lifetime consumption of citizens and amount of their savings. Furthermore, internal debt may decrease a capital stock from the substitution of public debt for physical capital (Diamond, 1965).

There is also a correlation between amount of debt and deficit, as higher the debt, the higher the deficit in the country. Only if an amount of public debt is low, it is possible to use rise of the tax rate in order to increase valuable government expenditure (Adam & Bevan, 2005). One of the euro convergence criteria (also known as the Maastricht criteria) is the ratio of gross government debt relative to GDP at market prices, which must not exceed 60% at the end of the preceding fiscal year, or if the debt-to-GDP ratio exceeds the 60% limit, the ratio shall at least be found to have "sufficiently

diminished and must be approaching the reference value at a satisfactory pace" (Commission…, 1992).

It is important to understand for what reason governments borrow money. USA and some other countries, for example, have a lot of war debts, which according to scientists are less problematic for economic growth and inflation in comparison to the debts made in the peace time. After war all manpower and resources are allocated to the civilian economy. Usually, spending a lot of money on war causes high amount of public debt which in a peace time, in a short period of time, reaches the same level as before. On the other hand, debt occurred in a peace time usually has a long term dynamics (Reinhart & Rogoff, 2010).

MATERIAL AND METHODS

Based on the literature review, the following integrated model for evaluation of public debt risk was constructed by the authors. The essence of the principle approach to quantifiable estimation of the integrated model for public debt risk management lies in formalisation of the methodology proposed by Brauers (2004, 2008), Brauers *et al*. (2010, 2011), Nelson *et al.* (2011), Reinhart and Rogoff (2010); as well as Lithuanian professors Kracka and Zavadskas (2011), Ginevičius and Podviezko (2013), Kildiene (2013), Balezentis and Balezentis (2011) and others.

Recently, new multi-objective method for optimization of various alternatives was introduced named as MOORA (Multi-Objective Optimization on the basis of Ratio Analysis). Following method guides to use matrix of responses of alternatives to specific objectives (Brauers & Zavadskas, 2006). In this research as alternatives will be used member states of the European Union (UE-27 countries) and as objects – different macroeconomic parameters. Later, by using Ratio System and Reference Point methods, ranks for each alternative for particular objective should be calculated. These methodologies will be briefly discussed below. Figure 1 shows in easy and understandable way a study model used in research and analysis.

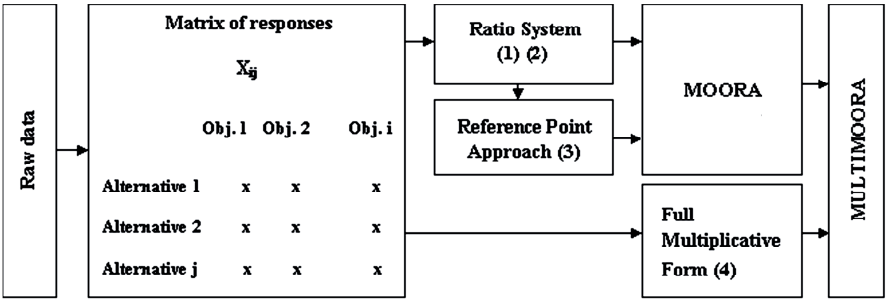

Figure 1. Diagram of MULTUMOORA
Source: (Brauers & Zavadskas, 2012, p. 8).

For calculating MOORA and MULTIMOORA first of all it is necessary to collect raw data, which will represent specific alternatives for selected objectives. This research will use data only from reliable sources, such as World Bank, IMF, EUROSTAT and others. Because quantity of gathered information is extremely large, so this step requires a lot of

efforts. Information must be collected for 9 objectives and for 27 alternatives in a period of 6 years (2005-2010).

The ratio system (RS) of MOORA method is based on matrix of responses which corresponds specific alternatives for specific objectives (x_{ij}), with:

x_{ij} – is the response of alternative j to objective i,

$i = 1, 2, \ldots, n$ are the objectives,

$j = 1, 2, \ldots, m$ are the alternatives.

According to Van Delft and Nijkamp (1977), MOORA refers to a ratio system in which each response of an alternative on an objective is compared to a denominator, which is representative for all alternatives concerning that objective. For this denominator the square root of the sum of squares of each alternative per objective is chosen (Brauers & Zavadskas, 2006).

$$X_{ij} = \frac{x_{ij}}{\sqrt{\sum_{j=1}^{m} x_{ij}^2}} \tag{1}$$

where:

x_{ij} – response of alternative j on objective i,

$j = 1, 2, \ldots, m$; m the number of alternatives,

$i = 1, 2, \ldots, n$; n the number of objectives,

x_{ij} – a dimensionless number which represent the normalized response of alternative j on objective i.

According to the characteristics of robustness, this formula in such context is the most robust one (Brauers & Zavadskas, 2006).

Responses of the alternatives on the objectives after normalization should belong to the interval from zero to one. Nevertheless, it also could be from minus one to one. It happens, when objectives have a negative dimensionless number (for example, inflation rate of the county). For optimization process these responses must be added in maximization context and subtracted in minimization context:

$$Y_j = \sum_{i=1}^{g} X_{ij} - \sum_{i=g+1}^{n} X_{ij} \tag{2}$$

where:

$i = 1, 2, \ldots, g$ as the objectives to be maximized,

$j = g+1, g+2, \ldots, n$ as the objectives to be minimized,

Y_j – the normalized rate of alternative j to all objectives (Brauers & Ginevicius, 2010).

The Reference Point (RP) approach is the second method which will be used in research for MOORA and later to MULTIMOORA calculation. This method starts by using already normalized ratios from ratio system of MOORA, equation (2). Later, it is necessary to choose a highest value as a reference point from the list of objectives in

case of maximization and lowest in case of minimization, accordingly. Then, for measuring the distance between alternatives and the reference point, the Tchebycheff Min-Max technique will be used (Karlin & Studden, 1966).

$$\min_{(j)}\left\{\max_{(i)}\left|r_i - X_{ij}\right|\right\} \tag{3}$$

where:

$i = 1, 2, \ldots, n$ are the objectives,

$j = 1, 2, \ldots, m$ are the alternatives,

r_i – the i-th coordinate of the maximal objective reference point of corresponding alternatives,

X_{ij} – normalized objective i of alternative j (Brauers & Zavadskas, 2006).

MULTIMOORA method consists of MOORA and of the Full Multiplicative Form (discussed below) and up till now there are no other known approaches, which would satisfy seven (maximum) characteristics of robustness (Brauers & Zavadskas, 2010).

MULTIMOORA method (Ratio System, Reference Point approach, Full Multiplicative Form, nominal group technique and Delphi) firstly was introduced by Brauers in 2004. This method helps to deal with subjectivity issues, which arise from the employment of weights in other well-known multi-objective methods. Belgian professor Brauers and his colleague from Lithuania Zavadskas used these methods together. Because rank correlation methods and outranking methods were conflicting, hence, the normalization of raw data by Ratio System was presented (Brauers, 2004). Reference Point method uses the ratios achieved from the Ratio System method and becomes dimensionless. Ratio System and Reference Point methods together results in a MOORA method (Brauers & Zavadskas, 2006). The first usage of multiplicative function was reported by Miller and Starr (1969). Brauers and Zavadskas in 2010 created the MULTIMOORA method by combination of MOORA with the Full Multiplicative Form (Balezentis *et al.*, 2010).

The full multiplicative form (FMF). Brauers & Zavadskas (2010) decided that MOORA can be updated by the Full Multiplicative Form. According to them, when objectives move in different directions it is important to distinguish between maximization and minimization pattern of the objectives. Hence, objectives after maximization should stay for numerator and objectives for minimization for denominator accordingly, as shown in the formula (4).

$$U_j = \frac{A_j}{B_j} \tag{4}$$

In order to distinguish n-power form from others additive forms, it will be called a Full Multiplicative Form (Keeney & Raiffa, 1993).

$$U_j = \prod_{i=1}^{n} X_{ij} \tag{5}$$

where:

$j = 1, 2, \ldots, m$; m the number of alternatives,
$i = 1, 2, \ldots, n$; n being the number of objectives,
X_{ij} – response of alternative j on objective i,
U_j – overall utility of alternative j.

The total utilities (U_j), which is possible to get by multiplication of different measurement units, become dimensionless.

$$A_j = \prod_{g=1}^{i} X_{gi} \tag{6}$$

where:

i = the number of objectives to be maximized.

$$B_j = \prod_{k=i+1}^{n} X_{kj} \tag{7}$$

where:

$n - i$ – the number of objectives to be minimized.

Thus MULTIMOORA method is created by combining MOORA methods (Ratio system and Reference Point approach) and the Full Multiplicative Form (Brauers & Zavadskas, 2010). In this research summarized ranking of three methods will be used to get final results for alternatives.

Table 1. Country risk parameters of indebtedness

Structural indicators	Data source	Desirable values
Government deficit/surplus	EUROSTAT	Max
General government gross debt to GDP	IMF	Min
Interest rate on 10 years government bonds	ECB	Min
Average debt maturity	Bloomberg	Max
Sovereign rating	Fitch	Max

Source: own elaboration.

In order to reach the results, the authors analysed a large-scale dataset needed to calculate ranked indexes of public debt risk. For calculation of the indexes, World Bank, IMF, EUROSTAT, Bloomberg, Fitch, and European Central Bank databases were used. Calculations were made for past 6 years (from 2005 to 2010) for all European Union member states (note that Romania and Bulgaria joined the EU 1st January 2007). Many other parameters were not used because of the following reasons: information was not

given for one or more countries, data was not available for every year related to research and data volatility was too high.

As it was already mentioned above, this study will analyse 5 structural indicators of EU countries chosen by authors. Table 1 shows information about these indicators: the name of structural indicator with its abbreviation, which will be used in research, the source where information came from and maximization and minimization rules, which will be used in computation of results.

The practical results of the research showed how well EU countries are able to manage their debts and what fiscal consequences it may cause them in a long term. These results could be a good guide for European institutions to take actions before it is too late to change anything.

RESULTS AND DISCUSSION

Separate analysis of each country is not the aim of the research. It is enough to show dynamics of a group of countries, because they share similar ranking and trends, but not without exceptions. Table 2 shows overall dynamics of public debt risk for all EU-27 countries. From the first look one can see that some countries were more stable concerning this issue, while others more volatile.

Table 2. Dynamics of EU public debt risk by using MULTIMOORA method in the years 2005-2010

Country	2005	2006	2007	2008	2009	2010
Austria	4	3	8	16	11	11
Belgium	17	17	11	13	10	16
Bulgaria	14	13	6	8	9	8
Cyprus	22	18	9	7	11	15
Czech Republic	5	7	13	15	20	21
Denmark	3	2	1	1	1	1
Estonia	2	9	14	2	2	3
Finland	5	4	4	3	4	4
France	12	12	16	23	19	19
Germany	8	4	7	12	15	22
Greece	26	27	27	27	26	24
Hungary	19	16	17	24	25	25
Ireland	27	26	26	9	6	6
Italy	24	22	14	18	22	26
Latvia	25	23	24	13	13	13
Lithuania	21	24	17	17	15	10
Luxembourg	13	8	2	3	7	7
Malta	7	6	23	22	21	18
Netherlands	10	11	5	9	8	9
Poland	17	14	20	20	24	23
Portugal	16	18	17	26	26	27
Romania	23	25	25	24	18	13
Slovak Republic	20	21	11	20	22	17
Slovenia	9	9	10	11	13	11
Spain	10	20	22	6	5	4
Sweden	1	1	2	3	2	2
United Kingdom	15	15	21	19	17	20

Source: own study.

The volatility mostly was caused by the political or economic actions were undertaken in the specific countries.

Baltic States, for example, show positive dynamics in public debt rating over years. Only Estonia in comparison to Lithuania and Latvia has much better performance. Interesting factor is that situation in Baltic States over last years has not changed dramatically, but rating has increased. It happens because other European Union countries perform during these years even worse.

Nordic countries (Sweden, Finland and Denmark) are the leaders in sovereign debt risk ratings. It is the safest place for investors to buy government bonds from all over the Europe. Analysis shows us that in near future following countries will not have any financial problems.

Benelux countries along with Slovenia, followed by Austria and Germany demonstrate good results too. However, Belgium has first symptoms of danger, while Germany with Austria shows decline in their ratings for the last years. Most probably it happens because of implementation of financial assistance plans to indebted Eurozone states. According to the study, there exists a possibility that Germany in near future could lose its triple A rating and borrowing for them will be more expensive.

PIGS (Portugal, Italy, Greece and Spain) countries received the worst possible results. It is important to highlight that they had bad performance even before the crisis started, but they did nothing to prevent it, while Eastern bloc put more efforts into decreasing their public debt risk. Interesting results show us Spain with Ireland; by implementing special fiscal policies they managed from the year of 2008 to change their position from the losers to the partial winners by public debt risk.

Other countries of Central Europe have demonstrated a stable situation over 6 years on their ratings.

CONCLUSIONS

Research proved that it is possible to use MULTIMOORA methodology in order to rank countries by the risk of their public debt. It proofs that in future it is possible to use following model in order to predict economic recessions of countries in danger. If countries would take appropriate actions on time, they could save their economy.

By using in detail MULTIMOORA method and introduced new model was shown how accurate predictions might be in analysing riskiness of public debt. In addition, it demonstrates how MOORA and MULTIMOORA methods are working in practice and explains why following methodology is most robust in comparison to other multi-objective methods developed earlier.

Lithuania showed constant improvement on public debt liabilities. From 2005 till 2010 Lithuanian rank improved by 11 points. Study explains that it has happened not because of significant improvement of public debt management, but rather because of a dramatic economic slowdown in other European Union countries.

Example of Greece proved that introduced model is working well. This country already had worst performance in 2005, while nobody was expecting that it going to default after 7 years. 6 years in the row Greece was on the 26th – 27th place and no actions by ECB and IMF were undertaken in the period when problem was arising.

Ireland, for example till 2007 also was on last places, but correct actions made on time relatively saved economy from further recession and now it is located on 6th place by public debt risk.

Research showed that during the last 6 years absolute leaders on public debt risk were Nordic countries plus partly Luxemburg and Estonia. Following result suggests to risk-averse investors to buy government bonds of these countries. According to the model, it will be more safe even than to invest in Germany, France or United Kingdom.

Research would be more precise if data would cover not only European Union, but the whole world. In addition, more different structural indicators could be used for calculation of public debt risk in Eastern and Central European countries. It will make research more accurate. Furthermore, calculation of other multi-objective methods should be done and received results must be compared. Finally, more years should be analysed for making better predictions of further economic recessions in order to make appropriate actions on time, before it is too late.

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Investment Decisions in Global Financial Markets: the Experience of Lithuania

Aleksandras Vytautas Rutkauskas, Alina Kvietkauskienė

ABSTRACT

Objective: The objective of this article is to identify the content of globalization processes in financial markets. The universal method of investment is offered in order to save the interests of investors – to expand the geography of investment, not leaving without attention innovative activities. This method has become global in financial market segment and thus strengthening the financial system's ability to contribute significantly to the globalization, sustainability and cost-effectiveness of education.

Research Design & Methods: It was decided to use adequate investment portfolio model for investment decision making, random fields of stochastic optimization ideas and methods.

Findings: Findings present sustainable return on investment possibilities. The analysed indicator is expected investment value, measured with a certain size of return and composition of reliability maximization.

Implications & Recommendations: There are strategies, which allow taking the positive decisions that ensure the optimal portfolio structure in global financial markets.

Contribution & Value Added: Illustrating the possibilities of their idea, authors provide investment strategies in global foreign exchange and capital markets. The set of results of investment performance, allows the reader to monitor the long-term investment experiment.

Article type: research paper

Keywords: investment; adequate portfolio model; globalization; uncertainty

JEL codes: G11, G17

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INTRODUCTION

In recent decades the phenomena of globalization found itself in the centre of academic community and the public media spotlight. Discussions extend on globalization intensity, propulsions, social forms and perspectives, which transform into the subjective evaluations that determine the interests of various social groups and their behaviour. The approach to the consequences of globalization leads to practical action, or even provoke social conflicts. The main focus should be given to innovative policy solutions in the era of globalization. Globalization must be understood not only as a process of extending the interactions between the public and the events, related to sustainability of human existence but also as a cause, which may open the way for uncontrolled conflict.

Many scientists understand and define globalization as a process, taking place in the social environment and covering a variety of public, state and social structures and their environment. It involves the intensification of mutual relationships and movement of global flows .

Beck (2001) put forward the idea that globalization is not a choice of business, countries or organizations. It is therefore necessary to analyze not only the economic effects of globalization, but also political and cultural. If globalization will be compatible with all institutions in each country, then all its results will be unpredictable and unstable, so it is necessary to examine the nature of globalization.

The fact that more areas than social processes are covered (the economy and ecology), does not mean that, on the basis of three mentioned components, sustainable development problems are solved. The pragmatic reason is that solutions of management development depend on a significantly larger set of circumstances (Rutkauskas & Kvietkauskiene, 2012).

One of most urgent questions – what will be the status of globalization sustainability status of the earth, or what is formed sustainability of human existence on development of the process of globalization.

Many scientists (Kilbourn, 2004; Najam *et al*., 2007; Stiglitz, 2002; Sebnem *et al*., 2013) emphasize that globalization is an irreversible process, which often is presented as a huge international market, or the information revolution, universal promotion of human rights, the global industrial culture, polycentric international policy for the influence on daily lives of people. These are the core positive effects of globalization.

However, there are the obvious negative effects of globalization on the lives of people all over the world – global pollution, international cultural conflicts, natural disasters.

Academic literature is trying to reveal the way by which interests intensify globalization. According to Held *et al*. (2002), a chunky capital of financial markets dominate in the interests of all over the world, therefore, the process of globalization takes place on global equity interests. Whereas the passing force of globalization is globalization of financial markets, it is important to know the adequate forms and motives of capital movement in the financial markets. Capital travels accompanied by innovative capital solutions and emerging individual interests. Therefore, it is particularly important to understand the anatomy of the decisions in global capital markets.

The main purpose of the article is to identify investment decision making scheme and methods analysing the following issues:

- Identify and disclose the main globalization processes and assumptions in the key globalization highway – international financial markets.
- To show that global financial markets are effective partners of various businesses in non-global areas searching for optimal portfolio structure in financial markets.

The main research methods include adequate investment portfolio model, stochastic optimization, and utility function. The authors use adequate portfolio model to project investment portfolio decisions in global financial markets.

LITERATURE REVIEW

Dimensions, Causes and Assumptions of Globalization

Globalization is a powerful tool for the new world economic system, and in the formation of international relations. While talking about globalization, many scientists and academics examine the different types of globalization and use the term of globalization for related but different phenomena describing: the economic, social, political and business effects, therefore the measurement of globalization must be complex. There is a need to measure the phenomenon of globalization as a whole, i.e. to establish an integrated set of indicators – globalization index in order to determine the degree of globalization of different countries. The most famous and most cited are two globalization indexes that combine the separate fields of globalization indicators: Kearney (2007) globalization index and Dreher (2006) globalization index. Kearney globalization index comprehensively measures the resolution of globalization processes and covers the most important displacements of globalization components, which include international relations, international trade, financial flows and information flow of people and ideas across national borders (Kearney, 2007). Dreher globalization index, calculated since 1970 is used to assess the extent of globalization. This index includes the evaluation of three main areas of globalization: economic, social and political.

Many works identify globalization as phenomenon which leads to substantial changes in the world and creates a new business environment where a business or economy entities re-evaluate the leading business solutions (Dicken, 2003; Held *et al*., 2002; Bhagwati, 2007).

World economies are increasingly integrated into the global economy. This process is conditioned by the stimulus strength of globalization. It is possible to distinguish the following reasons and assumptions of globalization: the global use of land resources, the convergence of existence quality, globalization challenges for state of the sustainability, the economic efficiency of development, discoveries and technological opportunities, communication improvement, cross-cultural integration, adequate opportunities of education and qualification, fundamental scientific discoveries and technological opportunities (Figure 1). These are the main factors that create the potential for economic activity and its entities for allocation of resources on a global scale.

According to some proponents of globalization (Zedillo, 2008; Scherer & Palazo, 2011) a systematic understanding of the global economy, puts the user of global market in the first place, because in the emerging area of global economy the user becomes the

main leverage of globalization. Therefore, it is important that the participants of world economy will be involved in integrated systems of supply and production at the international level.

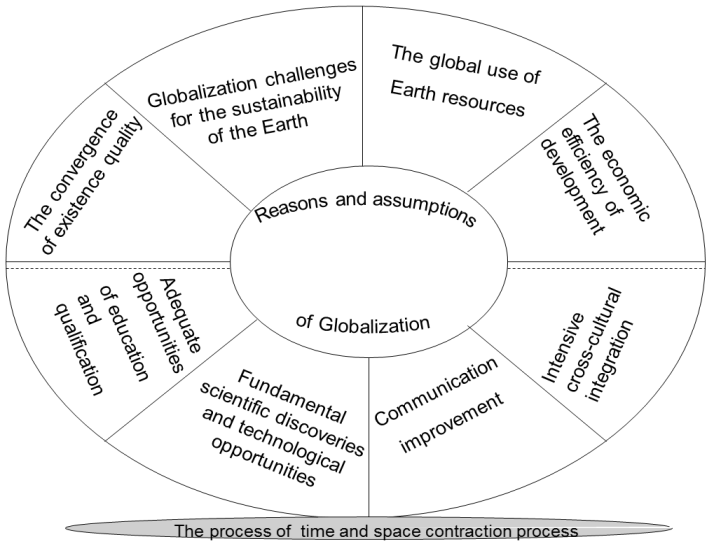

Figure 1. The causes and assumptions of globalization
Source: own elaboration.

The Opportunities and Challenges of Globalization

By some, the phenomenon of globalization is considered highly controversial. A number of authors (Held *et al*., 2002; Dreher, 2006; Bhagwati, 2004) argue that globalization is generally a positive thing, which opens the closed borders and provides various facilities for societies or states to learn from the experience of other countries and take from them what is the best. Another part of researchers (Guillen, 2000; Naim, 2009; Easterly, 2008; Lucas, 2007) analyze the significant negative dangers of its consequences.

Opportunities of globalization. Proponents of globalization often claim that globalization may be better able to solve many global problems such as poverty and unemployment. In fact, the growth of globalization can reduce unskilled labor wages of developed countries and increase wages for unskilled labor in developing countries, because these two groups enter into close cooperation with each other. Globalization generates resources and promotes the transfer of ideas, which can be used for improvement of relationship between individual and community. Ongoing processes of globalization also provide better management conditions of environment, improved living and food supply conditions. Due to globalization, almost every individual can get a chance to exhibit themselves in the global market (Bauman, 1998; Olsson & Schuller, 2012; McMillian & Rodrick, 2011).

Globalization implies relocation of many companies across the world. People can get access to a range of industries since globalization not only promotes economic growth, but also encourages competition between wholesalers and retailers, thus increasing the demand for goods.

The dangers of globalization. Globalization can influence the spread of infectious diseases and cause a growing number of casualties. This is related to the fact that people can cross international borders and quite easy get into foreign countries. The precedent speed and capacity of people mobility is the most obvious feature of the current globalization era. A number of globalization factors influence the differences between the rich and poor. Many demographers and political scientists highlight the typical migration for the twenty-first century. These migration flows increase the number of patients with infectious diseases. Modern modes of transport opened the way for respiratory tract diseases.

Due to globalization, various cultures of the world have mingled, which sometimes results in weakening of local cultural identities. A person becomes only a small part of the global world. According to A. V. Rutkauskas and A. Kvietkauskienė (2012), globalization may eventually become a new Tower of Babel. Structured delivery of globalization advantages and threats is given in Table 1.

Table 1. The advantages and disadvantages of globalization in the context of economies in transition countries

Advantages of globalization	Disadvantages of globalization
◦ Diffusion of ideas of democracy. ◦ More efficient distribution of resources. ◦ Increased standards of living. ◦ Increased access to information and technology. ◦ Positive effect of increased competitiveness: the prices of goods and services artificially are stable, the ingenuity, creativity and innovations is promoted. ◦ Availability of less expensive products to consumers. ◦ More rapid economic growth, which leads to creation of new jobs. ◦ Reduction of poverty. ◦ The changes of technologies.	◦ In some cases – an unprecedented decline of the sovereign of countries. ◦ Incomes is not always distributed evenly. ◦ The vulnerability of the international markets leads by the overall integration. ◦ A number of environmental problems. ◦ The assimilation and loss of different cultures. ◦ The negative aspects of increased competition and efficiency. ◦ The hegemony of multinational corporations (MNC).

Source: own compilation based on (Ohmae, 2000; Sachs, 1998; Ritzer & Atalay, 2010; Stiglitz, 2002; Wolf, 2001; Zedillo, 2008; Lechner, 2004; Held *et al*., 2002).

It is important to ask a crucial question: how the process of globalization and its structure is determined by the physical changes of Earth and its environment as well as opportunities of fundamental science and technology discoveries and how these lead to subjective interests. There is no doubt that the exclusion of the changes taking place on planet Earth and in its environment or disregards of science and technology, is particularly dangerous combination for sustainability development.

Talking about the globalization problem of financial markets, it can be discussed about interacting between development opportunities and emerging interest.

Cognition and Use of Globalization Processes

Globalization is an exclusive feature of modern financial markets because the world is experiencing one general investment environment and a rapid development of integration between national markets. Currently, investors are not confined to opportunities of their own country markets. Using the extensive opportunities

of information technologies and the development of financial institutions, they can operate effectively within international markets.

Searching for interactions of globalization with the development peculiarities of global, regional and national financial systems, the process of globalization can be structured on the basis of D. Held *et al*. (2002), three main schools of globalization: hiperglobalists, sceptics and transformationalists. The definition of globalization in this paper is defined on the basis of each school approach to:

- concept,
- driving forces,
- socio-economic implications,
- influence for state power and governance,
- historical perspectives.

Of course the influence of globalization is more important to the financial markets of developed countries. Increasing impact of financial globalization can promote the imbalance for all the countries of the financial markets and lead to financial crises.

There is a wide set of indicators employed to determine the extent and consequences of globalized finance. For example, whether a country has reached a particular maturity on the global financial market, is indicated by the behaviour (change) in the national rate. Although the interest rates have become increasingly more similar in many countries, for this day – they are different (the diversity of interest rate is within one country), and these differences persist even when interest rates are expressed in terms of a single common currency. Such differences emerge due to imperfections in financial markets and different economic and business development levels of the countries (Held *et al*., 2002).

According to Held *et al*. (2002) the three schools of globalization interact in the context of globalization. Hiperglobalists and sceptics submit their arguments that global capital markets have leaded the equalization of return on financial assets around the world. Various empirical studies show that in the group of the largest national economies there is a global (real) interest rate with a small and static risk premium for different countries (Held *et al*., 2002). As a result, it can be concluded that long-term interest rates emerge in the developing global capital market, despite the fact that interest rates do not level out. The formation of real global interest rates indicates the global credit demand and supply. This means a relatively high level of world financial centers interfacing and growing financial integration (Walter, 1993).

The main features of hiperglobalists, sceptics and transformationalists are presented in Table 2.

The impact of the globalization process can be inferred more adequately from the circumstances of the formation rate of return for each financial asset similarly to profitability rate in currency exchange and capital markets. Dominated interactions of supply, demand and profitability values are visible at the supply and demand balance (Rutkauskas, 2006). The emergence of profitability values is appropriate to monitor in the context of uncertainty, i.e. after development a distribution possibilities probability rate.

It is thus possible to monitor how financial assets rates of return are formed – the possibilities probability distribution for the specific market. These opportunities in every

market and every moment are different, but they follow a given standard, i.e. enough to accurately and reliably approximated by one of the probability distributions (Rutkauskas, 2006).

Table 2. Main features of three schools of globalization

Feature	Hiperglobalists	Sceptics	Transformatio nalists
1. Neutral concept	**Globalization is what is happening today**		
2. Exclusive feature of globalization	Creation of market in absolutely dominating of capital and the domination of prestigious finance	A cross-regional, trans-national communication intensification based on the sustainable development needs and financial integration of the logistical capacity	A stochastic stratification result in approach of architecture, consequences and possibilities, when the effects of uncertainty grow
3. The dominant force	Global capitalism, the finance focused on maximizing the benefits of capital	The synergy of developmental sustainability, the maximum exploitation of financial potential	The laws of global capitalism and sustainable development
4. The power of national countries	Endangered	More universal and determinant	Inconstant but persistent
5. The potential negative consequences	Inevitable cross-regional and global conflicts	Insufficient level of competitiveness, low efficiency of resource utilization	Unacceptably high uncertainty management costs
6. Historical trajectory	Global dictatorship of capital	The pursuit of global performance	The knowledge to live in uncertainty
7. The simplified image	**Globalization – is the preparation of world housing, where will be enough (not enough) places, obviously, for everyone**		

Source: own compilation based on (Held *et al.,* 2002).

Adequate Portfolio as Universal Tool for Solutions Searching

Assumption made about the fact that during intense globalization the behavior of financial markets is converging. It enables to expect the individual investment opportunities in different markets. However, analogous opportunities for investor should ensure the homogenization of market behavior. If an investor wants to invest successfully in different markets or choose a portfolio of investments from different stocks of the market, he or she should be able to use a universal tool for investment decisions. This is the role of an adequate investment portfolio (Rutkauskas, 2006). The idea of this portfolio first was proposed by A. V. Rutkauskas (2000), in the following works he examines the specific features of this theory (Rutkauskas, 2001; 2005a; 2005b; 2006; Rutkauskas *et al*., 2009). The essence of this theory is assessment of investment portfolio risk, profitability and reliability. This portfolio connects the analytical capabilities of many classical investment portfolios.

The portfolio allows a quantitative assessment of:

- efficiency of opportunities distribution and submitted compositions,
- approximate measures of financial risk,

– any potential opportunities of portfolio return on the basis of their efficiency, reliability and risks.

The formation of investment portfolios are based on modern models: Sharpe, Markowitz, Treynor *et al*. Using historical simulation, Markowitz and many other scientists use the arithmetic average of return in order to determine the expected profitability. However, the average may not reflect the actual expected return on financial instrument due to presence of uncertainty in financial markets and cyclical fluctuations, because, in the opinion of authors, there is not enough approaches for finding a constructive investment decision.

In many situations of the investment it is necessary to assess all possibilities for an investor in order to choose the best, so for the decision making of investment the authors rely on adequate portfolio.

The anatomy of adequate portfolio will be provided with the Markowitz portfolio, because it is a natural extension of the Markowitz portfolio.

If the set of possibilities of Markowitz portfolio (Figure 2 top row) generates an effective line, where the possibilities of optimal solution concentrate and each of them is described as possibilities of average profitability and riskiness, then the bunch of possibilities for adequate portfolio generates the bunch of effective lines (Figure 2 bottom row).

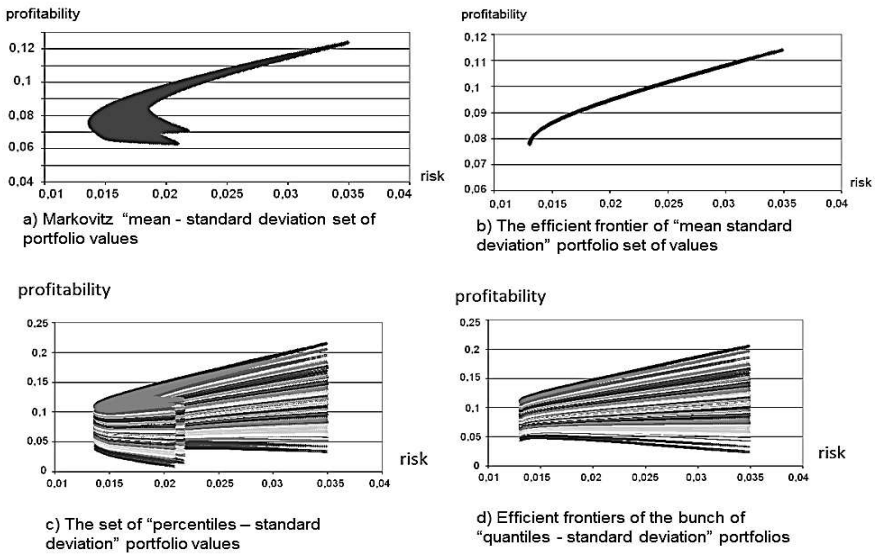

Figure 2. The scheme of formation sets of portfolio efficient values
Source: own elaboration.

As shown below (Figure 3), if the optimal solution in Markowitz portfolio is indicated by tangency of efficiency line and utility curve (bottom row in Figure 3), the optimal solution is found in adequate portfolio by tangency of return surface with the surface utility function.

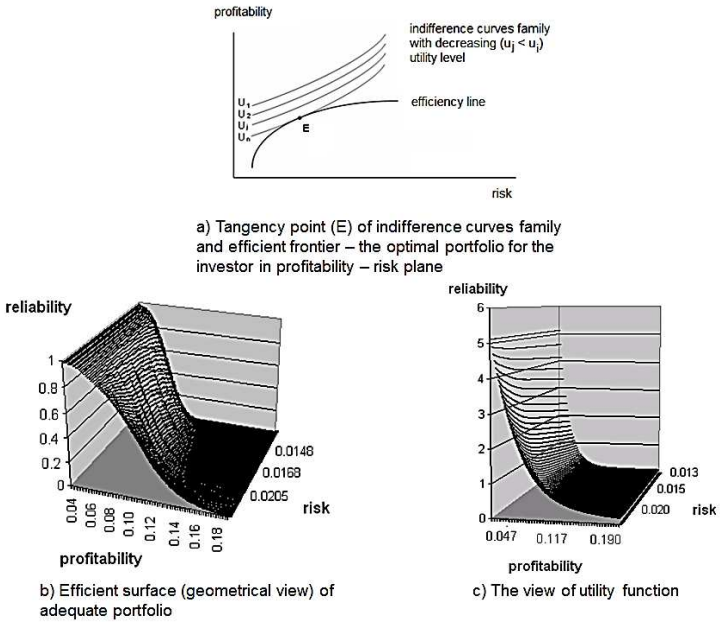

Figure 3. The possibilities' surface of adequate portfolio and investor's utility function
Source: own elaboration.

Thus, in Figure 3 we can see that in case of Markowitz portfolio, the optimal solution is defined by the average of return and riskiness, whereas in adequate portfolio – the size of return, reliability of return and riskiness of return. More precisely – it's a riskiness of return, defined by Markowitz random field as the riskiness of random size (Figure 4).

MATERIAL AND METHODS

The selection of aggregated multi-criteria feature and evaluation of opportunities practical applications are very important problems, which particularly receive strong emphasis in mathematics, mechanics and other "quantitative" science. However, attention should be paid also to social sciences problems, where a large part of the factors can be examined only qualitatively and therefore the direct analysis of multicriteria raises numerous questions (Rutkauskas & Stasytytė, 2011).

In this work in order to explore and identify the opportunities, which the market offers for investors, the impact of globalization to financial markets was taken into account. Based on our previous research, we propose an approach, where the rate of return is based on financial assets and probability distribution. In order to effectively allocate resources in the financial markets, it is important to identify the opportunities offered by the markets, profitability and risk level. By this, markets can be selected, where investors, by taking the appropriate level of risk, will receive the range of utility and reliability.

However, the authors try to step away from the concept that risk is just bearer of disasters and risk management is a desire to avoid them. Instead, the focus is on the idea

that risk taking is the searching for success and risk can be conceptualized as bearer of success. We need to understand that the risk is a substance of existence and this phenomenon illustrates its genetic power. In order to achieve successful investment decisions, the evaluation of each market opportunity should focus on the size of possibility and guarantee of this size. This scheme will enable a quicker, than with all other models and methods, review of market opportunities. The choice of useful options for entity is associated with equivalent recovery of utility function.

Whereas the utility is associated with efficiency, reliability and risk, it is possible to invoke the utility function (1):

$$U = \frac{f(e) \cdot f(p)}{f(r)} \tag{1}$$

where:

U – is utility function,
$f(e)$ – efficiency,
$f(p)$ – reliability,
$f(r)$ – riskiness.

Figure 4 illustrates the anatomy of investment portfolio possibilities and techniques, along with how to find the highest efficiency possibilities by formula (1) means.

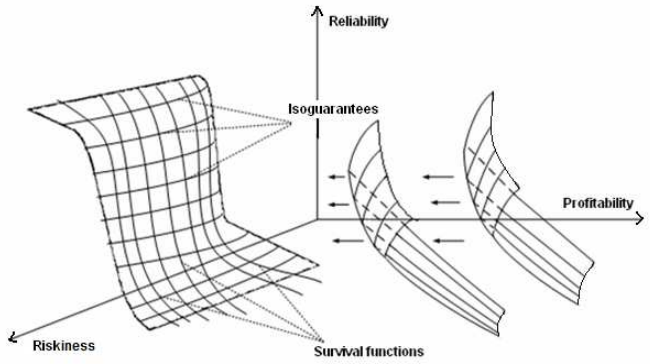

Figure 4. The general view of three-dimensional efficient surface and respective utility functions
Source: (Rutkauskas, 2006, p. 64).

RESULTS AND DISCUSSION

If we look at the investment assets content that are influenced more by the globalization processes, it is easy to recognize the time lines characteristics of previously listed return and extract the intensive nature. Firstly, this is foreign exchange market, the prices of producer's stock markets with high globalization pace.

At the same time, attention is focused on the fact that operates on the time intervals and identifies the probability distributions, used for investment instruments return write. Such parameters as the averages of probability and standard deviations,

are accepted as deterministic values. Those mutual dependencies and changes over time usually are described by the deterministic dependencies clearly indexed its own stochastic nature of change. Taking into account, the identification of probability distribution leads to formally simpler and easier identification of the same distributions, and allows constructive shaping of forecasting mechanism of the assets return that we are interested in over time. This is particularly relevant in the market looking for the efficient investment decisions. Such possibilities are fully revealed in the currency markets where returns dynamics can be captured of one day or even shorter periods. Additional opportunities to achieve the adequate description of the assets return are revealed in the currency market, analysing the investment possibilities of one day step.

Now authors do not dispose the irreproachable methods to formally evaluate the mentioned parameters of such distributions by formalized methods, so it is necessary to present an experiment – how probability distributions with random parameters were used to construct the decision making mechanism of portfolio investment in global currency and capital markets. As we mentioned, the expansion of the distributions makes its understandable for situations analysts and managers of decisions.

We have provided a purely academic sample. Supposing that in the financial markets the practices of solution are applied, i.e. when we have only selected assets for investment and volume of capital, which we intend to use in the financial markets. All of the following steps of the investment remain practically identical. Let's say that in this case here are the four assets of capital *a*.

Let's say that the forecasting system informs that for the first step the possibilities of expected return for each of the four assets are described in the following way:

$$N\ (a_i = N\ (a_i; \delta_i),\ \delta_i = N\ (\delta_i, \delta_i)) \tag{2}$$

where:

α_i – the average of normal random value,

δ_i – standard deviation of normal random value,

$i = 1,2,3,4.$

Here *N* is a normal distribution with the specified average and standard deviation. These values were calculated as random values. In such a prognostic solution (the structure of the portfolio) we choose the solution that maximizes the utility function:

$$U(x, r_x, p_x) = \frac{x \cdot p_x}{r_x} \Rightarrow \max \tag{3}$$

where:

x – the possible opportunity of the portfolio made up of the four named assets,

p_x – the reliability of this possibility,

r_x – the set, which includes the possibility of risk exposure.

For the solution that is described by the existing capital structure, which will give the maximum return by the selected utility function using the solution technique of the adequate portfolio.

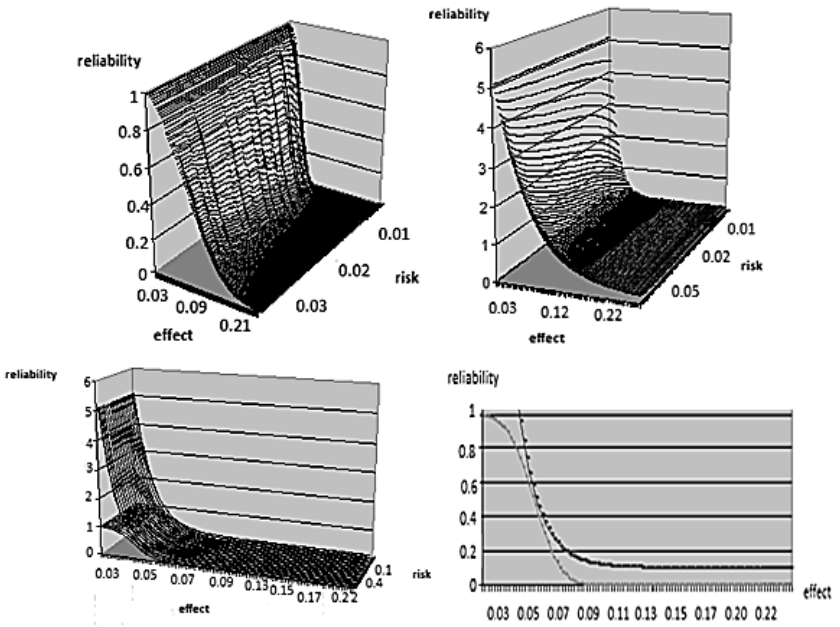

Figure 5. The scheme of the solution
Source: own study.

Table 3. The structure of invetsment and portfolio optimal solution

The investment structure			
$\omega_1^a - 0.675$	$\omega_2^a - 0.1$	$\omega_3^a - 0.2$	$\omega_4^a - 0.025$
Parameters of optimal solution			
The effect	Effect reliability	Risk level of the effect	
0.066	0.536	0.013	

Source: own study.

The scheme of the solution, which is given in figure 5 and the structure of investment (Table 3) is received using the adequate portfolio diagram (Figure 3).

The results of adequate portfolio application in various markets are provided in http://www.investis.lt. These results should confirm the hope of Lithuanian authors to create a unified methodology in global investment markets and to create a universal algorithm that guarantees a sustainable return on investment.

CONCLUSIONS

Globalization – is the whole of changes in entrails of the earth and in the nature, created possibilities of the scientific and technological innovation, differently emerging business groups and countries unions reflecting solutions and activities interaction, which has contributed significantly to reinforcing the creative power of humanity. However, the destructive power of globalization could surpass the humanity fostered aspiration of progress and the potential how to avoid the negative consequence of globalization.

A policy of intelligent activity management for consequences and trends of globalization along with existing resources will enable to make globalization an ally. It will create a sustainable future for the humanity and together form the intellectual potential to perceive more difficult negative possibilities of globalization effects.

Special attention should be given to financial markets, a fairly significant component of integral globalization and which in turn is intersections of a variety reasons and contingencies, which requires the evaluation of fundamental knowledge and skills of the market behavior under uncertainty.

Based on practical experiments in various investment markets authors suggest that adequate structure of portfolio is capable to generate the possible advantage return to the investor. Algorithm of selection with a high probability includes those instruments of investment which are the leaders among the considered fit for the investment assets during the investment period and which are the investment instruments with the progressive activities. For practical selection of above mentioned structures, the article suggests the utility function that maximizes the benefit of investor.

At the time of investment research has revealed that for the description of return on assets in global, and especially becoming global markets, probability distributions are much more flexible, if their conventional readings (deterministic) parameters are taken as stochastic values.

Authors suggest that adequate portfolio model can be applied in Central and Eastern Europe for investment decision-making in global financial markets. In this way, adequate portfolio system would become universal and easy implemented in practice globally.

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An Empirical Study of Unsystematic Risk Factors in the Capital Asset Pricing Model: the Case of Russian Forestry Sector

Varvara Nazarova

A B S T R A C T

Objective: The objective of this paper is to consider the Capital Asset Pricing Model, to determine its most disputable points, to identify concepts defining and supplementing the points of the model. The article ends with an example of calculation of the cost of equity for a company of a forestry sector of Russia.

Research Design & Methods: Two levels of study were used: theoretical and empirical. The theoretical level of research was based on interrogation, measurement, observation, experiment. The experimental part of the study has been performed by calculating models for three options of implementing the investment projects and the assessment of the total impact of reducing non-systematic risks for the Russian forestry sector.

Findings: The practical application of the research is the development of tools to assess the non-systematic risks arising during the project implementation in the forest-based sector of Russia, which enables to assess those risks for logging and sawmill woodworking enterprises.

Implications & Recommendations: The research provides the ability to assess non-systematic risks and determines the viability of risk mitigation for both initiators of investment projects and existing investors.

Contribution & Value Added: The originality of the research is based on the assessment of the effects of non-systematic risks on investment projects in the forestry sector in Russia.

Article type: research paper

Keywords: asset's rate of return; risks and riskiness of investments; market portfolio; unsystematic risk factors; forestry sector

JEL codes: D24

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INTRODUCTION

Russia currently produces only 2.3% of the world's timber and its share of the timber trade is only 2.8%, despite being the country with the fourth largest timber reserves (Forest Products …, 2010; UNECE, 2011).

With an annual increment of 800 million m^3 and an allowable logging volume of about 540 million m^3, the usage of forest capacity is about 20%. This unfavourable trend has an impact on domestic politics: the forest industry accounts for approximately 3.8% of total production and about 4% of all foreign industrial currency revenue. This figure is four times higher in countries with a developed forest industry (Forest Products …, 2013; Production, consumption…, 2010).

The main reason for this situation is the high level of depreciation of equipment, the industry's uncompetitiveness, caused primarily by a lack of investment in modernization, and the underdevelopment of some areas of country's forestry sector. In spite of a pre- and post-crisis world market growth for forest products (which has already begun), which should have stimulated the development of the Russian forestry sector, the situation is rapidly deteriorating.

The choice of an appropriate model for the estimation of the cost of equity in emerging markets is still a very challenging problem. Market inefficiency, limited opportunities for diversification, as well as liquidity issues inspire researches to look for risk characteristics beyond the traditional framework of the classical capital asset pricing model. Various models have been developed over the past several decades proposing new ways of risk assessment. However, the empirical evidence of these models requires careful consideration.

The objective of this paper is to consider the Capital Asset Pricing Model (CAPM), to determine its most disputable points, to identify concepts defining and supplementing the points of the model. It is the presence of non-system (specific) risks inherent in the logging industry which complicate the decision-making process for investing in the most promising projects. This process could be simplified by the Government, if it assumed certain obligations to reduce those risks for the industry, particularly through the implementation of integrated logging and wood-processing projects. At the same time, the cost of risk reduction should equate to the promotion of the Russian forestry sector's and the individual federal districts' development.

Two levels of research were used in the article: theoretical and empirical. The general scientific research methods (i.e. sets of regulatory principles and rules of research activity) that we applied were: surveying, measurement, observation, and use of experiments.

The experimental part of the research was done by calculating the models for three options of investment project implementation (logging, sawmilling and woodworking, and joint production), on the basis of standard materials currently used in the forestry sector, based on research studies with regard to market prices (the date of research: January 2012).

The practical significance of this work is to develop the tools to assess the non-systematic risks when implementing projects in the Russian forestry sector, making it possible to assess the risks to logging enterprises and sawmilling and woodworking

enterprises. This work provides the opportunity to assess non-systematic risks and the need for their reduction by the authorities and initiators of investment projects in the Russian forestry sector.

The methodology of the study includes the following steps:

1. analysis of the state of the Russian forestry sector by means of the SWOT analysis with the overview to evaluating the non-systematic risk,
2. determination of the approach to the non-systematic risk assessment while executing investment projects in the forestry sector (it is the Warren Miller method that binds non-systematic risks with the SWOT analysis),
3. composition formation of the main risks of implementation of investment projects in the Russian forestry sector,
4. survey of experts and representatives of the Russian forestry sector with an assessment of the main risks of investment project implementation in the Russian forestry sector,
5. project evaluation in the current circumstances by taking into account the reduction in the non-systematic risks,
6. determination of the economic cost advantages of reduced non-systematic risks while implementing investment projects in the Russian forestry sector.

In the practical part, the author has developed a set of tools to assess the unsystematic risks arising upon implementation of the projects in the Russian forestry sector, which enabled to perform assessment of these risks for logging, sawmilling and wood conversion enterprises. The conducted work made it possible to assess the unsystematic risks and reasonability of mitigation thereof by state authorities and initiators of the investment projects in the course of their implementation in Russia.

LITERATURE REVIEW

A classic capital asset pricing model (CAPM) is regarded as a theoretic basis of a number of different pricing methods widely applied in the investment practice. The model considers a limiting case based on the following assumptions of a normative approach to investing (Brigham & Gapenski, 1997; Sharpe *et al.*, 1999):

- investors evaluate investment projects by looking at the expected returns and their standard deviations for the right to hold,
- investors are never satiated: when given a choice between two projects, all other things equal, they will choose the one with higher expected return,
- investors are risk averse: when given a choice between two projects, all other things equal, they will choose the one with the lower standard deviation,
- individual assets are infinitely divisible; an investor can buy a fraction of a share, if he or she desires so,
- there is a risk-free interest rate at which an investor may either lend (that is invest) or borrow money, and this risk-free rate is the same for all investors,
- taxes and transaction costs are irrelevant,
- all investors have the same investment period,
- information is freely and instantly available to all investors,

– investors have homogeneous expectations that is they identically assess the expected returns, standard deviations, and covariances of return on investments.

All investors have the same information and equally assess the prospects for the projects, thereby they uniformly analyse the information received. Investment markets are perfect ones, and there are no factors which impede investing. Such approach enables to switch the focus of consideration from the question, how investor should invest his or her money to the question, what will happen to an investment project return, if all investors follow the same pattern. By studying collective behaviour of all investors in the market, one can identify the nature of ultimate equilibrium dependence between risk and return of each investment project.

The relation between the risk and the return of an investment project can be presented in the CAPM in a graphic form (Figure 1). Point *M* represents an investment project, and r_f is a risk-free rate of return. Efficient projects lie on the line crossing the axis of ordinates in the point with coordinates (0, *r*) and passing through *M*, and are formed by alternative combinations of risk and return obtained through the combination of investment project with risk-free borrowings or loans. This CAPM linear effective set is known as a Capital Market Line (CML). The CML expresses the balance relationship between expected return and average squared deviation for efficient investments. All other projects will lie below the CML, though some of them may also be in close proximity to it at the same time.

The slope of the CML is equal to the difference between the expected return of investment project and that of a risk-free security:

$$\left(\overline{r_M} - r_f\right) \tag{1}$$

divided by the difference of their risks:

$$\left(\sigma_M - 0\right), \text{ or } \left(\left(\overline{r_M} - r_f\right) / \sigma_M\right) \tag{2}$$

Therefore, the investment market equilibrium may be characterised by two key values. The first one is a point of crossing of the CML with a vertical axis (i.e. a risk-free rate), which is also referred to as the compensation for waiting. The second value is the CML slope which is referred to as the compensation for a unit of assumed risk. In essence, the investment market enables to trade time and risk at prices determined by demand and supply, and, thus, these two values can be interpreted as prices of time and risk.

At the same time, many researchers conclude that CAPM has several drawbacks. Assumptions of a normal distribution of returns and market efficiency do not apply to emerging market stock price fluctuations. These drawbacks led to various modifications of the model.

A number of empirical studies of the 1970s proved CAPM advantages in forecasting return. The works of Scholes and Fama can be attributed as classic works (Fama & MacBeth, 1973; Scholes & Williams, 1977). However, critique of the model started almost immediately after the first publications.

The works of Richard Roll (1971) focus on problems related to determination of a market portfolio. In practice, the market portfolio is replaced by a maximum diversified portfolio which is not only available to an investor in the market, but is also analysable (in particular, stock index). The problem of dealing with such portfolio lies in the fact that choice thereof can significantly influence the results of calculations (for example, beta value).

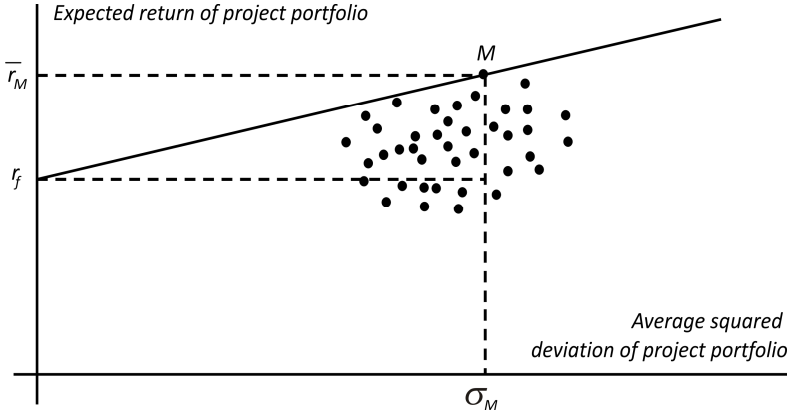

Figure 1. Capital Market Line
Source: (Sharpe *et al*., 1999, p. 245).

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The works of R. Levy (1971), M. Blume (1971) and Scholes & Williams (1977) also draw attention to the beta coefficient which is traditionally evaluated by means of linear regression, based on retrospective data using an ordinary least square method. According to the analysis results, R. Levy concluded that for any share its beta is not stable in time and, therefore, cannot constitute a precise assessment of future risk. However, beta of portfolio consisting even of 10 accidentally chosen shares is quite stable, and, thus, can be considered as an applicable measure of portfolio risk. Thereby, M. Blume's studies (Blume, 1971) showed that with lapse of time the portfolio's

beta approaches one, and company's internal risk nears industry average or market average risk.

An alternative solution of the problem of the CAPM parameters sustainability are evaluations obtained in the derivative market, when expectations as to prices on capital assets are taken as a basis. Such approach realises the Market-Derived Capital Pricing Model.

One more area of criticism concerns time intervals for calculation of the CAPM parameters (an investment horizon problem). Since in most cases the model is used to analyse investments for a term over one year, calculations on the basis of annual evaluations become dependent on environment in the capital market. If the capital market is efficient (future return is not predetermined by past dynamics, share prices are characterised by accidental movement), the investment horizon is irrelevant and calculations based on annual indicators become feasible. If the capital market cannot be considered efficient, the investment term should be taken into account.

The question about significance of only systematic risk factors has also been raised. It was empirically proved that unsystematic variables, such as market capitalisation or price/profit ratio, have impact on the required return.

The studies of the 80-90s of 20th century showed that the CAPM's beta cannot explain industry differences in return, while size and other characteristics of a company are capable to do so.

Korkmaz *et al*. (2010) used a different approach. They developed a model with the embedded Markov process, switching between two different modes depending on the volatility of regression residuals. The model with the embedded Markov process takes into account the market reaction to economic shocks. The evaluation of the performance of the model showed that it has greater explanatory power than the standard CAPM supporting the hypothesis of beta changing over time. Korkmaz *et al*. (2010) concluded that the CAPM underestimates the systematic risk during periods of high volatility and overestimates it during the periods of low volatility.

Another subject to criticism is related to behaviour of investors that rely not on a speculative, but pure risk. Here, investors are ready to invest in assets featuring excess of asset return over an average level. And vice versa, investors negatively perceive assets with negative volatility. Variance is a function of deviation of the average both towards share price rise, and towards decrease. Therefore, based on the variance calculation, a share characterized by variability towards price increase is considered as a risky asset to the same extent as a share price of which fluctuates towards decrease. Empirical studies prove (Miller, 1996) that investor behaviour is motivated by lack of tendency to unilateral negative risk, as contrasted to general risk (or variance).

Expected return variance is quite a disputable measure of risk, at least, for two reasons: variance is a plausible measure of risk only for assets expected return of which has symmetrical distribution; variance can be directly used only when symmetrical distribution is normal.

One more critical area is connected with prerequisites about probabilistic distribution of prices and returns of securities. As the practice shows, simultaneous fulfilment of the requirements on symmetry and normality of distribution of expected share return is not reached. This problem is solved by use of not classic (bilateral)

variance, but semi-variance. Such solution is justified by the following arguments: use of semivariance is justified upon various distributions of share return: both symmetrical and unsymmetrical; semivariance contains information given by two characteristics of the distribution function: variance and skewness coefficient which enables to utilise one-factor model to evaluate the asset expected return.

As many researchers note, a number of specific problems of the CAPM application is intrinsic to the developing capital markets (in particular, Russia). Here it is very difficult to justify the model's parameters (risk-free return, market risk premium, beta coefficient) based on the data of the local capital market, due to the lack of information efficiency and low liquidity of traded assets.

In 1999, two more opposite points of view at the developing markets were considered. Under the first one, the level of integration into the global capital market (or presence of barriers in capital flow) shall determine choice of the model to justify the cost of equity (De Swaan, 2003). An alternative view is presented in the works of Rouwenhorst (1999). The author came to a conclusion that in terms of the factors there is no influence of the difference between the developed and developing markets. The factors explaining return on equity, which appeared to be significant in the developed markets, are also material in the developing ones.

In her study Daryl Collins (2006) tested different measures of risk for 42 developing countries: systematic (beta), general (standard deviation), individual, unilateral (unilateral deviation, unilateral beta and cost of risk) risks, and market size (determined subject to average capitalization of country), skewness and kurtosis indicators. The test was conducted using an econometric approach (as in the majority of similar works) from the perspective of an investor over a 5-year time interval (from January 1996 to June 2001) by weekly returns. Depending on the size of capital market, liquidity and development level, the initial sample of 42 countries was divided into three groups: the first level included countries with big capital market (for example, Brazil, RSA, China), and with small market but it is being economically and informationally developed; the second level comprised smaller developing markets (Russia), the third level included small markets (such as Latvia, Estonia, Kenya, Lithuania, Slovakia and others).

Foong and Goh (2010) tested several risk measures in order to determine the best model for estimating the cost of equity based on the data from Malaysia covering the period of 2000-2007. Foong and Goh (2010) estimated the regressions and then ranked the risk measures according to their explanatory power. They concluded that their results support the implications of Estrada (Estrada, 2007) regarding the advantage of downside risk measures over symmetric ones.

Galagedera and Brooks (2007; Galagedera, 2009) considered data from 27 emerging markets for the period of 1987-1994 and examined the validity of CAPM versions. They developed a new risk measure of co-skewness and named it downside gamma. The authors concluded that downside gamma may be a more appropriate for the explanation of returns than downside beta.

Bali *et al*. (2009) considered the intertemporal aspect of the mean-semi variance behaviour concept. They examined the relationship between expected returns and downside risk, using value at risk (VAR) as a proxy for downside risk. The authors used the data from the US market, i.e. monthly returns of NYSE/AMEX/NASDAQ; NYSE/AMEX;

NYSE; NASDAQ indices for the period of 1962-2005. A positive and significant relationship between expected returns and downside risk was confirmed. Moreover, VAR outperformed variance and conditional variance risk measures. The authors discovered that as long as VAR accounted for stock returns with high explanatory power, the other measures of downside risk also performed well.

According to the received research results, for some markets beta values turned out to be smaller than was expected, which gives false signal about existence of low risk for investors. The conclusion of the work was that it is improper to apply beta (and, consequently, the CAPM) for the entirety of the developing countries. Thereby, D. Collins and M. Abrahamson (2006) argue that there is no unified risk indicator suitable for any developing state.

The CAPM contemplates that the aggregate risk for a particular project can be divided into several elements:

- β-coefficient determining change of price on company's shares, as compared to change of prices on shares of all companies in the market,
- risk of investment in a company of particular size,
- country risk,
- risk of investment in a particular project.

β-coefficient is connected with the market risk; for projects with high β-coefficients value of the market risk higher, but the expected return is also higher. Other risks are non-market and are not related to beta. Growth of these risks does not entail growth of the excepted return and, therefore, investors are not remunerated upon growth of these risks, though they have to bear them in any case (Sharpe *et al.*, 1999).

An important peculiarity is also the fact that all risks, except for the last one, are systematic. These risks arise out of the structure of markets and their dynamics; all agents in the market face the disturbances caused by such risks and uncertainty as a result of them; these disturbances can occur as a consequence of state policy, international economic forces or calamities. These risks are studied by major investment agencies, and information on them is transparent and is always updated.

But there is also a risk of investment in particular business which, in essence, is not systematic. It is not connected with development of markets, in general, and may be determined only on the basis of a professional judgment with identification and evaluation of factors determining feasibility of a particular investment project in strictly given conditions. Thereby, there are several approaches to the assessment of unsystematic risks (Karamehmedovic, 2012; Robert, 2010):

- Black/Green approach,
- Gary Trugman approach,
- Warren Miller approach.

Parnell Black and Robert Green suggested six categories for choice and evaluation of factors determining the unsystematic risk level: competition, financial stability, professionalism in management, return on and stability of investments, national economic effects, and local economic effects (Karamehmedovic, 2012).

Gary Trugman (2012) divided the factors into three main categories. The first category includes risk factors: economic, operational, assessment, market, regulatory,

business, financial, commodity, technological, legal risks. The second category concerns non-financial factors: economic environment, business location, professionalism in management, barriers to market entry, production conditions, competition, and management quality. The third category comprises factors related to a particular company: economic conditions, business location, professionalism in management, barriers to market entry, production conditions, competition, management quality, and aggregate result (Trugman, 2012).

Warren Miller proposed the structure of competitive advantages in conjunction with strategic analysis. Thereby, he suggested arranging the factors into groups within three main categories and connecting them with SWOT analysis. Warren Miller noted that the unsystematic risk analysis should be conducted downwards and start at the wide macroeconomic level and go down to the industry level and then to the level of a particular company (Miller, 2010).

Economic, political, international, demographic, technological and social and cultural factors were referred to the macroeconomic category. The factors determining development of industry, market environment, market competition (M. Porter's model of five forces of competition) were attributed by Warren Miller to the industry category. The level of a particular company included specific factors determining development of a particular business in particular conditions and reflecting conditions of conducting business and level of company management.

More or less, all factors have impact on feasibility of a certain project, and if the project implementation conditions are favourable, influence of these factors is insignificant, and, therefore, the project implementation risks are also low. It is attractive both for investors (mitigation of risk of non-return/partial/untimely return of investments), and for project initiators (opportunity to receive cheaper money for a project). But if the factors affect the project implementation very adversely, it has impact on increase of riskiness of investments and, thus, cost of money.

It is also material that the risk of investment into a particular project is, firstly, non-market one and its increase/decrease does not result in respective increase/decrease of the expected return for investor, and, secondly, shall each time be calculated separately by an expert way upon project implementation (or change of conditions of its implementation). In essence, this risk is only an obstacle increasing cost of money for a project and shall be reduced on account of special programmes supporting business development in particular economic environment. To a great extent, such improvement depends on state and municipal administration bodies, general economic conditions.

MATERIAL AND METHODS

Research Methods

Assessment of the unsystematic risk was conducted based on the methodology of Warren Miller who suggested examining the structure of the factors influencing the investment risks in conjunction with the SWOT analysis (Robert, 2010).

The key factors effecting the risk of investment into the domestic forestry sector were identified on the basis of the performed SWOT analysis. The factors were included in a questionnaire which became the basis for questioning representatives of forest

industry companies engaged in forest exploitation and wood conversion. 42 respondents were questioned, who assessed impact of the factors constraining investment processes in the forest industry of the country by an expert way on a 10-point scale (from 1 to 10). Representatives of logging, sawmilling, wood conversion industry predominantly from the north-west part of Russia participated in the survey. A body of data was prepared on the basis of the survey, which was tested using statistical tools for the possibility to utilise such data in further research.

Research Framework

From that point, we constructed three experimental models of the projects most characteristic of the current developmental phase of the Russian forestry sector, formulating two financial models for each: the first model typified the "status quo," and the second was built in due consideration of the nullification of factors to the absolute minimum. As a result of comparing and contrasting these models, we arrived at a sound estimate of the overall economic effect of the lowering of non-systematic risk under the implementation of various projects in the Russian forestry sector.

Statistical evaluation is conducted for the purposes of identifying the attributes contained in the benchmark data that could be included in further investigations, and encompasses:

- check of the statistical grouping for uniformity,
- study of attribute variation,
- check of the actual distribution of attribute values for proximity to normal.

The survey found the following: the greatest variation across all production operations is characteristic of the indicator: Risk of price increases for raw inputs and materials. The highest level of uncertainty is characteristic of the indicator: Infrastructure risk, with the lowest level of uncertainty characteristic of the indicator: Risk of intensifying competition. The greatest variance for all production enterprises is intrinsic to Risk of rise of prices on raw and other materials. The highest level of uncertainty is inherent in Infrastructure risk, and the lowest level in Increased competition risk. According to the survey results, the main deterrent of the investment activity in the industry is insufficient level of infrastructure development (as a rule, these are roads for logging enterprises and power infrastructure to processing enterprises). At the same time high potential of markets for possibility of modernisation, extension of existing capacities and creation new ones is recognised.

Let us consider a practical example of equity cost modelling for companies of forestry sector. The main reasons of low investment attractiveness of forestry business in Russia lie in three areas: market environment, legal and regulatory framework and resource provision. As a rule, experts state two main problems related to the market environment: lack of confidence in improvement of general economic situation, growth of competition in the forest product market.

The biggest group of questions arises in the area of resource provision; here, it comes to instability of prices on raw and other materials, personnel problems (both highly-skilled management staff, and operators of sophisticated industrial complexes), dependence on key counterparties (first of all, it concerns power, binders for wood conversion, maintenance and repairs of machinery), unavailable credit resources,

problems connected with infrastructure development. Some problems related to infrastructure (for example, connection of industrial sites to power, heating and gas supply systems) are attributed to the sphere of legal and regulatory framework; since forest resources are owned by the state, the problems of improvement of forest legislation receive special attention upon consideration of low investment attractiveness of the Russian forestry sector. And since the forest resources are of natural origin, for many and, foremost, logging companies issues related to occurrence of unforeseen natural and emergency human-caused situations are highly important.

The Russian forestry sector is a complex of logging enterprises (including forestry), sawmilling enterprises, woodworking enterprises (mechanical wood-processing) and timber-processing enterprises (chemical timber-processing). Each group of enterprises produces a homogeneous product. The extent and form of processing these forestry sector products can be classified as follows (Figure 2):

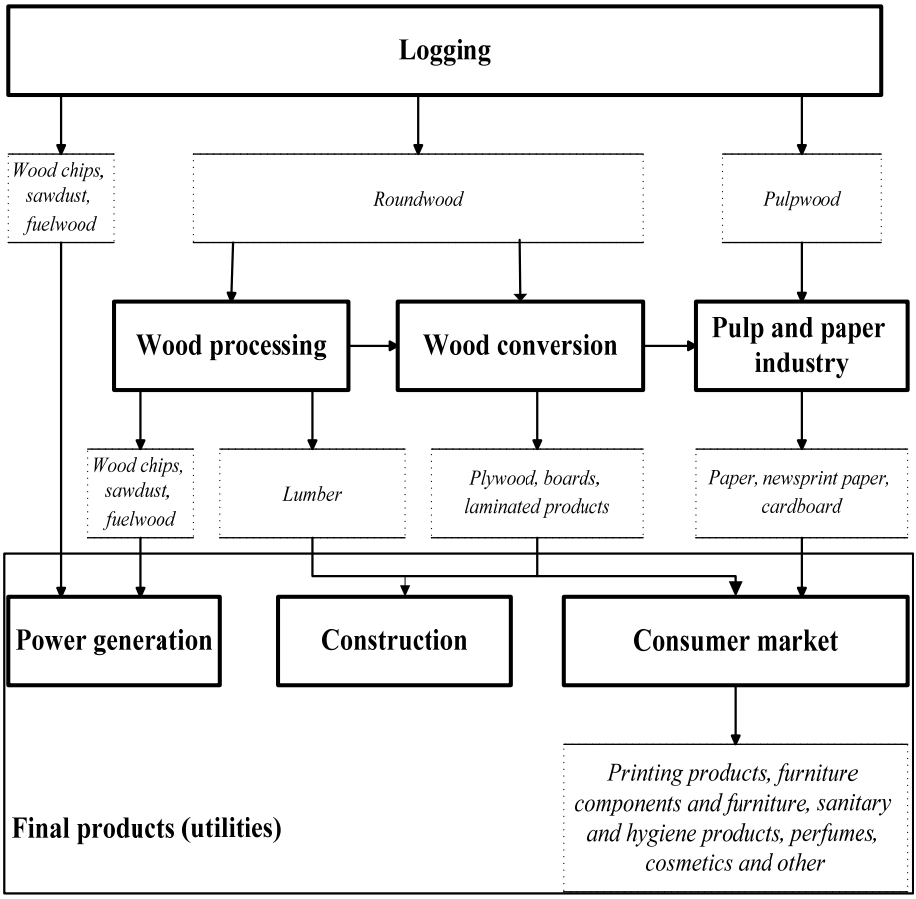

Figure 2. Structure of the Russian forestry sector
Source: own elaboration.

The SWOT analysis of the Russian forestry sector is brought in the section "Results". In terms of the SWOT analysis, the researchers exposed the main factors influencing the investment risks in the Russian forestry sector.

RESULTS AND DISCUSSION

SWOT Analysis

As many experts maintain, in the long term, with a significant increase in investment activity, the Russian forestry sector would be able to provide not only for the domestic market but also the international market. However, we should take into account not only the status of the Russian forest industry in the global market for forest products, but also the opportunities and threats which may arise through this global market. The best way to show the state of the Russian forestry sector is to carry out the SWOT analysis (see Tables 1-4).

Table 1. SWOT analysis of the pulp and paper industry in Russia

STRENGTHS	WEAKNESSES
◦ Large regional markets. ◦ Self-sufficiency of the own raw material base. ◦ Availability of relatively cheap raw materials, fuel and labour. ◦ Qualified staff and management at existing production works. ◦ The ability to develop and introduce new products. ◦ The ability to attract investment.	◦ Absence of national policies, concepts and a mechanism to develop the industry as a whole. ◦ Tendency to over-regulation and establishing prohibitions. ◦ The need for technical retooling, low technical level of production. ◦ Underutilization of capacity of the industry. ◦ Strongly pronounced raw-material orientation for the exports. ◦ The need for extensive investment. ◦ High wear of fixed assets. ◦ Limited range of exported products of the industry because of their poor quality. ◦ Significant capital intensity.
OPPORTUNITIES	**THREATS**
◦ Steady demand in the domestic and world market for the products of the industry as a whole. ◦ Large capacity of a high-quality product market. ◦ Limited number of countries with their own raw material resources. ◦ Extension and modernization of existing facilities. ◦ Increased and improved use of wood. ◦ Consolidation. ◦ Establishment of import substitution production works. ◦ Construction of new integrated enterprises in highly forested regions of the country.	◦ Rise in the cost of fuel, energy and transport. ◦ Increase in remoteness of the raw wood. ◦ Leakage of investment into new industries and macro-regions. ◦ New requirements of environmental authorities and less stringent standards in competitive countries. ◦ Decline in pulp prices.

Source: own elaboration.

The "availability of relatively cheap raw materials" factor is fundamental and it forms the basis for the strengths of the sector at present. However, the threats should have included not only the rise in the cost of fuel and energy, but also, as a consequence, the inevitable future rise in the cost of raw materials. Increase in production costs at a low investment level in the reconstruction and development of new facilities is a major problem for the industry's future development. In the future, this situation will result in

reducing the profitability of export operations, even if exports increase in value terms. From that point, we constructed three experimental models of the projects most characteristic of the current developmental phase of the Russian forestry sector, formulating two financial models for each: the first model typified the "status quo," and the second was built in due consideration of the nullification of factors to the absolute minimum. As a result of comparing and contrasting these models, we arrived at a sound estimate of the overall economic effect of the lowering of non-systematic risk under the implementation of various projects in the Russian forestry sector.

Table 2. SWOT analysis of logging industry in Russia

STRENGTHS	WEAKNESSES
◦ Low fees for forest resources. ◦ Government support in terms of rent reduction and obtaining forest resources. ◦ Availability of large timber resource bases for the organization of large enterprises in a limited area.	◦ Weak structure of the forestry sector, consisting mostly of small producers. ◦ Low level of technological equipment in production facilities. ◦ Seasonality of production. ◦ Low profitability associated with difficulties in selling softwood timber, process feedstock and fuelwood. ◦ The need for greater investment in transport infrastructure. ◦ Lack of investment in plantation enterprises for growing targeted assortments.
OPPORTUNITIES	**THREATS**
◦ Development of technologies for processing wood and logging waste makes it possible to involve higher volumes of raw wood. ◦ Raising environmental consciousness of consumers results in growth of demand for wood products.	◦ Change in customs duties for exporting roundwood. ◦ The ongoing modernization of forestry relations. ◦ Reduction in raw material markets.

Source: own elaboration.

Table 3. SWOT analysis of sawmilling industry in Russia

STRENGTHS	WEAKNESSES
◦ Low costs associated with basic items: roundwood, heat and labour resources. ◦ Experience in processing larch (the main forest resource in Russia). ◦ State support of investment projects, especially in the advanced processing of wood.	◦ Weak structure of the forestry sector, mostly consisting of small producers equipped with outdated machinery. ◦ Poor quality of products. ◦ Low profitability in case of producing rough lumber only. ◦ The need for a significant decoupling stock to ensure the smooth production flow. ◦ The need to build an internal market for forest products (especially when new product is developed).
OPPORTUNITIES	**THREATS**
◦ Growing Asian markets. ◦ Increasing popularity of wood housing with a high market potential. ◦ Government programs for housing development. ◦ Growing furniture markets with a high potential.	◦ Steady increase in transportation rates and fuel and energy rates. ◦ The tendency for replacing lumber and mouldings with products of metal, plastic, ceramic and other materials.

Source: own elaboration.

Table 4. SWOT analysis of woodworking industry in Russia

STRENGTHS	WEAKNESSES
◦ Growing domestic market. ◦ Low costs associated with basic items: roundwood, heat and labour resources. ◦ Abundance of cheap pulpwood – the main raw material for the production of wood boards. ◦ High entry barriers (primarily due to the high investment expenditures).	◦ The high level of wear of the core process equipment. ◦ The need for a significant decoupling stock to ensure the smooth production flow. ◦ Lack of Russian companies producing up-to-date binding materials. ◦ The need to build an internal market for forest products (especially for new products).
OPPORTUNITIES	**THREATS**
◦ With the increasing demand in the domestic market, some boards are not produced (OSB, fibreboard insulation, etc). ◦ Growing Asian markets. ◦ Increasing popularity of wood housing with a high market potential. ◦ Government programs for housing development. ◦ Growing furniture markets with a high potential.	◦ Steady increase in transportations and fuel and energy costs. ◦ Construction and development of modern wood board production facilities in the neighbouring countries (Latvia, Belarus and China).

Source: own elaboration.

The composition of the key risks leading to decrease of the investment attractiveness of the country's forestry sector is presented in Table 5.

Table 5. Composition and description of risks based on questioning results

Statistical indicator	Risk of deterioration of general economic situation	Increased competition risk	Regulatory risk	Risk of emergency situations	Risk of rise of prices on raw and other materials	Risk of management staff	Dependence on key counterparties	Infrastructure risk	Capital availability risk	Deficit of skilled personnel at operational stage
minimum	2	1	2	3	1	1	1	3	4	3
maximum	6	4	7	7	7	6	3	10	8	9
mean	3.52	1.86	4.48	4.40	2.67	3.64	1.36	6.93	5.19	5.43
standard deviation	0.93	0.74	1.30	0.98	1.28	1.47	0.53	2.23	1.07	1.48
coefficient of variation (in %)	26	40	29	22	48	40	39	32	21	27

Source: own study.

The greatest variation across all production operations is characteristic of the indicator: Risk of price increases for raw inputs and materials. The highest level of uncertainty is characteristic of the indicator: Infrastructure risk, with the lowest level of uncertainty characteristic of the indicator: Risk of intensifying competition.

The greatest coefficient of variation for all production enterprises is intrinsic to Risk of rise of prices on raw and other materials. According to the survey results, the main deterrent of the investment activity in the industry is insufficient level of infrastructure development (as a rule, these are roads for logging enterprises and power infrastructure to processing enterprises). At the same time high potential of markets for possibility of modernisation, extension of existing capacities and creation of new ones is recognised.

To further assess the impact of risks and to develop a set of measures to minimize this impact, three most typical forest enterprise models were prepared within the framework of this article to simulate their activities and evaluate their performance.

The summarized indicators of organized production operations are presented in Table 6.

Table 6. Main characteristics of implemented projects

Indicator	Logging and forestry	Milling (mechanical)	Wholesale manufacture
Logging volume, m³ K/year	300	-	300
Milling volume, m³ K/year	-	300	300
Investments, RUB K	450 000	1 800 000	2 150 000
Annual earnings, RUB K	384 000	1 061 000	1 445 000
Annual operating costs, RUB K	234 000	504 000	705 000
EBITDA/Sales (in %)	39	52	51
Financing structure:			
- in-house funds, RUB K	200 000	900 000	1 075 000
- borrowed funds, RUB K	200 000	900 000	1 075 000
Loan cost (in %)	12.5	12.5	12.5

Source: own study.

Findings

In order to determine the rate of return on equity, a capital asset pricing model is applied.

A discounting rate (rate of return) of equity (R_e) is calculated according to the following formula:

$$R_e = r_f + \beta \cdot (r_m - r_f) + s_1 + s_2 + c \quad (3)$$

where:

r_f – is a risk-free rate of return (taken at the rate of coupon of Eurobonds (Russia), 2030),

β – is a coefficient determining change of price on company's shares, as compared to change of prices on shares of all companies in the market (taken under quotations of Stora Enso Oyj (STERV.HE) (Helsinki Stock Exchange)),

$(r_m - r_f)$ – market risk premium,

r_m – average market rates of return in the stock market (RTS index (RTSI) taken),

s_1 – additional rate of return for risk of investment into a particular company (unsystematic risks),

s_2 – additional rate of return for risk of investment into medium-sized company (taken under 2010 Ibbotson SBBI Valuation Yearbook);

c – additional rate of return considering country risk (as of January 2012).

Calculation of the cost of equity is presented in Table 7.

Table 7. Calculation of cost of equity

Indicator	Symbol	Logging and forestry	Wood conversion (mechanical)	Complex production enterprises
Return on risk-free investments (in %)	r_f	7.50	7.50	7.50
Market risk premium (in %)	$r_m - r_f$	10.83	10.83	10.83
Average market rate of return (in %)	r_m	18.33	18.33	18.33
Beta coefficient	β	0.8	0.8	0.8
Additional rate of return for risk of investment into a particular company (in %)	s_1	3.74	3.70	4.23
Additional rate of return for risk of investment into small company (in %)	s_2	3.95	3.95	3.95
Additional rate of return considering country risk (in %)	c	2.25	2.25	2.25
Rate of return on equity (in %)	R_e	26.10	26.06	26.59

Source: own study.

Therefore, the cost of equity is approximately the same for all three projects and is quite high for the projects of this type (over 26%). Attractiveness of these projects for an investor is low. At the same time the cost of equity may be reduced (and attractiveness of the projects increased) in case of reduction of the unsystematic risks occurring upon implementation of the investment projects in the Russian forestry sector.

To assess the effectiveness of each project, financial economic models of its implementation were prepared. In accordance with the terms of implementation, key implementation efficiency indicators were obtained (discounted payback period, NPV, and IRR). As the result, with the reduction of non-systematic implementation risks, the economic effect will be 5.5 to 7.3% of the project cost. The greatest effect has been seen with complex projects, and this is obvious, since there is a reduction of non-systematic risks, not only in the logging, but also in the processing of wood.

By extending the simulated projects for the entire Russian forestry sector, we obtain a sufficiently high benefit (Table 8).

Thus, with state support for the Russian forestry sector, the net effect of non-systematic risk reduction for the logging industry can reach 10.5 billion roubles, for mechanical wood processing enterprises (in this example: sawmilling and woodworking) – 16.7 billion roubles, for complex enterprises for logging and mechanical wood processing (in this example: logging, sawmilling and woodworking) – 22.8 billion roubles. These amounts represent the maximum amount of state support in terms of reducing non-systematic risks in the implementation of projects in the forestry sector for the

production areas specified. Therefore, the state should first reduce the infrastructure risks and the capital availability risk, improve the situation in the field of forestry education, make the forestry legislation more consistent (including the establishment and conduct of a proper forestry policy), as well as mitigate the risks of a rise in prices for services by natural monopolies.

Table 8. Benefits of non-systematic risk reduction for the Russian forestry sector

Indicator	Unit	Logging and forest management	Wood processing (mechanical)	Integrated production facilities
Volume of wood processing at the facilities that require modernization	m^3 K /year	103 800	49 360	43 360
Effect of non-systematic risk reduction per 1 m^3 of logged and processed raw materials	RUB/m^3	101.3	338.2	527.0
Net effect of non-systematic risk reduction	K RUB	10 514 940	16 693 552	22 850 720

Source: own study.

It should be noted that similar risks and opportunities to reduce them are typical for other woodworking production facilities (producers of plywood, wood boards and laminated products), and, importantly, for chemical wood processing facilities (in particular this applies to pulp and paper production works). For these fields of production the effect of reducing the non-systematic risks will be much higher due to the higher capital intensity of these production works and the more serious risks assumed by the investor in the implementation of such projects.

It should be noted, that since the non-systematic risks in one way or another are common to all investment projects of all sectors of the country's economy, reducing these risks (in relation to a particular industry) will have a positive impact on the investment attractiveness of these projects and will strengthen the position of the Russian Federation in the global financial and economic space.

CONCLUSIONS

1. The decision formulation about investing is determined by the correlation of value-project profitability and risks run by the investor while investing in a particular business, in a particular company. These risks are laid the calculation of the discount rate and, as a rule, are reflected in the CAPM model as a part of additional returns for the risk investment in a specific company.
2. The required rate of return is based on the risk assessment of the company's investors, and it is one of the key parameters in estimating its value. Despite the wide application of the required rate of return, the choice of the best method for assessing the cost of equity capital in emerging markets still raises many questions that researchers want to answer. The fact is that developing capital markets are characterized by additional risks that affect the dynamics of the required return on equity.
3. Most researchers have concluded that the CAPM has a number of drawbacks, particularly when used in developing capital markets. This has led to the emergence

of various modifications of the model. There are ways to define the cost on equity that are not based on the CAPM. The researchers got conflicting results while testing models in emerging markets.

4. In an empirical study, the choice of the model of assessing costs of capital is determined by the requirements of accuracy and clarity. The classic design of the model of CAPM gives the prediction based exclusively on market risk premiums and as a specific risk. For more accuracy, it is necessary to use modifications of the classic model of CAPM.
5. The main reasons for low investment attractiveness of the forestry business in Russia lie in three areas: market conditions, regulatory affairs and resourcing. Generally, two major problems – lack of confidence in the improvement of the general economic situation, increased competition in the market for timber products – are linked to the issues related to market conditions.
6. The unsystematic risks are determined by the structure of market and its dynamics, but are intrinsic only to some agents in the market and can be identified on the basis of a professional judgment with identification and assessment of the factors defining these risks in strictly limited conditions. The majority of these risks are characteristic of virtually all enterprises of Russia's forestry sector. At the same time, there is only one difference: between the significance of each risk in specific conditions, as well as for each company and investor.
7. According to the research, the weighted average cost of capital is approximately the same for the most common models of forest enterprises (logging, sawmilling and woodworking, and joint production), and it is high enough for this type of projects. The attractiveness of such projects for investors is low. At the same time, the cost of capital can be reduced whereas the attractiveness of projects can be increased while reducing the non-systematic risks, arising during the implementation of investment projects in the forestry sector of Russia.
8. The net effect of non-systematic risk reduction for the forestry sector was estimated; for the logging industry it was 10.5 billion roubles, for mechanical wood processing enterprises (in this example – sawmilling and wood-working) – 16.7 billion roubles, for complex enterprises for logging and mechanical wood processing (in this example - logging, sawmilling and woodworking) - 22.8 billion roubles. These amounts show the maximum amount of state support in terms of reducing non-systematic risks in the implementation of projects in the forestry sector for the production areas specified.
9. For individual fields of the woodworking industry (e.g. plywood, boards, pulp and paper industries), the effect of reduced unsystematic risk will be much higher due to a higher capital intensity of production data and more serious risks which an investor assumes in such projects.
10. It should be noted that, since all investment projects are characteristic of non-systematic risks in one way or another in all sectors of the economy, the reduction in these risks (applicable to a particular industry) will have a positive impact on the investment attractiveness of these projects and the industry in general. To assess risks and identify mitigation opportunities, this research methodology, developed

by the author, will be useful. Moreover, it can be applied to any sector of the Russian economy.

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Peculiarities of Labour Income Taxation in the Baltic States[1]

Ilona Skačkauskienė

A B S T R A C T

Objective: The main objective of the paper is to analyse the peculiarities of the taxation of labour income in the Baltic States (Lithuania, Latvia and Estonia).

Research Design & Methods: The influence of the basic tax elements on the evaluation of the level of labour income taxation was investigated. The comparative and logical analysis of statistical data and literature was performed and synthesis methods were applied. During the research, Latvia and Estonia, the countries closely related to Lithuania, have been compared.

Findings: The labour income taxation (with personal income tax, social security and compulsory health insurance) in Lithuania is the lowest when compared with labour income taxation in Latvia and Estonia.

Implications & Recommendations: The results of the research have shown that the comparison of the basic tax indicators, such as non-taxable minimum income and standard rates, only partially describe the national level of the labour income taxation. A more accurate description of the tax level could be provided only after applying ratios and evaluating such factors as tax base and tax exemptions.

Contribution & Value Added: The paper delivers new empirical evidence on labour income taxation in different countries.

Article type: research paper
Keywords: labour income; taxation; contribution; tax; indicators
JEL codes: H24, H71

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INTRODUCTION

Income taxation is one of the most complicated elements of the state tax policy – it is the goal of the state to ensure sufficient revenue into the state budget as well as create a favourable labour taxation environment (high tax on labour income stimulates migration of labour force and, when generous social policy comes along, it encourages living on benefits). The fact that this area has become especially sensitive can be proven by the recent changes in income taxation introduced in most countries during last years: gradual reform of personal income tax has been implemented in Denmark since 2009; France has increased the top income tax rate for high-income earners since 2013; in 2011 Hungary changed the progressive personal income tax rate into a 16% proportional rate; Latvia has been decreasing its personal income tax rate since 2011; since 2009, Poland has imposed two income tax rates (18 and 32%) instead of the former 3 ones (19; 30 and 40%); as of 2014 Lithuania will start increasing the non-taxable amount of income. During the last ten years fundamental changes took place in the Lithuanian tax system (in improving tax administration, legal framework and taxation mechanism). It should be noted that the improvement of labour income taxation is one of the priorities of the Government of the Republic of Lithuania (SRL, 2012). It is often stated, however, that very high taxes are withheld from labour income in Lithuania. The aim of the research is to reveal the actual level of the Lithuanian labour income taxation and to perform a comparative analysis of income taxation in the Baltic states (i.e. Latvia and Estonia). Comparative and logical analysis of statistical data and literature was performed and synthesis methods were applied in conducting this research.

The issue of taxes is widely researched both in professional and scientific literature and quite a lot of attention is paid to different taxation aspects. Taxation principles, functions of tax system, its conception were studied by Cheung (2001), Tušaitė (2003), Šinkūnienė (2005), Ivaškaitė-Tamošiūnė (2013), evaluation of its components was performed by Klun (2003), Lukyanenko (2003), Budrytė and Mačiulaitytė (2004), Lambert (2004), Medelienė (2005), Toder (2007), Mažeika (2008), Skačkauskienė (2011). The article does not aim to develop the measures to improve labour income taxation. On the contrary, it raises the question of practical assessment of labour income taxation – whether comparison of the core elements in labour income taxation allows an objective evaluation of the extent of income taxation in a country. Such a research, having made comparisons of the main tax components in the Baltic States, and having compared them to the relative indicators, would allow us to make conclusions about the validity of the evaluation.

LITERATURE REVIEW

Concept of Labour Income

In economics the income of a person during a certain period of time – is the amount of money that he or she could spend without decreasing the value of his or her capital (Black *et al.*, 2013). These are earnings or income received that can be spent on consumption or savings. In order to get the income to satisfy their needs, people use

such resources as personal skills and talents, as well as physical property and financial assets. These resources provide income that can be classified into four categories according to the source of income (Table 1).

Table 1. The main sources of personal income

No.	Sources of Income	Essence
1.	Employment income	Labour remuneration according to the level of qualification of the employee, complexity of work, responsibilities, conditions, etc.
2.	Self-employment income	Revenues derived from self-employment work in agriculture, business, crafts, and free professional activities
3.	Income from financial assets	Interests, rental income, dividends
4.	Income in the form of social benefits	Pensions, allowances

Source: (Blažienė, 2002, p. 12).

The methodology of Statistics Lithuania (SLG, 2010) defines the combined household income as all the income of the household received from employment or self-employment, property income or land rental, social benefits, regular cash transfers from other households, dividends and other income. It is obvious that, according to this methodology, an inhabitants' income is the sum of different kinds of income – salary, income from personal business, rent as well as transferrable state allowances (EC, 2013a). The Law on Personal Income Tax of the Republic of Lithuania (SRL, 2002) defines income as positive income, remuneration for the works or services performed, assets or funds sold or otherwise transferred or invested and any other benefit in cash and/or in kind. This legal definition corresponds to the forms of income 1–3 as specified in Table 1 above.

The labour income is also defined as a traditional way of earning money, i.e. selling man-hours for a certain fee (Ramsden, 2007). The Law on Personal Income Tax defines employment related income or corresponding income as follows: income received for the work performed under the contract of employment or corresponding contracts as well as income received by the owner of a sole proprietorship from a sole proprietorship, a general partner of a general partnership or a member of small partnership from a corresponding partnership. In this case work labour income is treated as remuneration for work performed – income that an employee receives for his or her work (see line 1 in Table 1). Usually, employment income is the main source of personal income. In 2012 in Lithuania, for example, remuneration for work accounted for about 70% of all personal income (SLG, 2013). It is also the main source of revenue of the state from direct taxes. In 2012, personal income tax revenue labour income accounted for 81.1% of all the revenues from this tax.

There are four types of taxes and contributions imposed on labour income in Lithuania: personal income tax, state social insurance, compulsory health insurance and guarantee fund contributions. These taxes and contributions are regulated by relevant legislation presented in chronological order in Table 2 below.

Table 2. Legislation regulating income taxation in Lithuania

Year	Legal Act	Short Content (main provisions)
1990	Provisional Law on Income Tax of Natural Persons of the Republic of Lithuania (Official Journal „Valstybės žinios“, 1990, No. 31-742)	Tax payers – persons receiving income, the object – income of natural persons. There were 8 different rates set. A progressive rate was imposed on income received from the second job. Invalid as of 01-01-2003.
1991	Law on State Social Security of the Republic of Lithuania (Official Journal „Valstybės žinios“, 1991, No. 17-447)	The law defines the types of insurance as well as the categories of the insured persons; insurance management system principles, structure, the rights of the subjects, their duties and responsibilities. The amendments of the law entered into force on 01-01-2005.
1996	Law on Health Insurance of the Republic of Lithuania (Official Journal „Valstybės žinios“, 1996, No. 55-128)	Defines persons whose health insurance is compulsory, the basics of drawing the budget and compensating the expenses, institutions responsible for arranging the insurance, the rights of the insurance subjects, their duties and responsibilities. The amended law entered into force on 01-01-2003.
2000	Law on Social Insurance of Occupational Accidents and Occupational Diseases of the Republic of Lithuania (Official Journal „Valstybės žinios“, 1999, No. 110-3207)	Persons are compulsorily insured by the employer who pays social insurance contributions from the gross earnings of the employee for the work performed, the rates of the contributions depend on the level of the risk of the company’s economic activity.
	Law on Guarantee Fund (Official Journal „Valstybės žinios“, 2000, No. 82-2478)	The payers – legal persons, the rate – 0.2 % of the gross earnings of the employees from which state social insurance contributions are calculated.
2003	Law on Personal Income Tax of the Republic of Lithuania (Official Journal „Valstybės žinios“, 2002, No. 73-3085)	Defined the order of taxation on personal income, its principles, the rights and duties of the payers. The object – personal income. The object of the tax differs depending on the permanent and non-permanent residence in Lithuania. Two rates were set – 15% and 33%. According to the payment order, the income is divided into two categories – A and B. In 2005 when an amended law came into force, the main tax rate was reduced as follows: starting from the second half of 2006 – to 27%, starting from 1 January 2008 – down to 24%. The rate as of 2009 was 15%.
2009	Law on Replacing Clauses 2, 6, 8, 15, 16, 17, 18,19 and Supplementing the Health Insurance Law of the Republic of Lithuania (Official Journal „Valstybės žinios“, 2008, No. 149-6022)	Contributions for compulsory health insurance were separated from the personal income tax, the 3, 6 and 9% contributions rates were set; compulsory insurance on health insurance was introduced.

Source: own elaboration based on the legal acts included in the table.

MATERIAL AND METHODS

Personal Income Taxation

In order to analyse labour income taxation in Lithuania and compare it to labour income taxation in Latvia and Estonia we should, first of all, discuss the instituted minimum monthly wage that ensures minimal income of working people. Lithuania, Latvia and Estonia have established a minimum monthly (hourly) wage that the employer has to pay to the employee regardless of his or her position.

During the analysed period the minimum monthly wage both in Latvia and Estonia differs from that instituted in Lithuania. According to Eurostat (EC, 2013b) data, Lithuania

had the lowest minimum wage from 2009 to 2012 (on 1 August 2012 the minimum monthly wage in Lithuania was increased to 850 LTL but, nevertheless, it remained the lowest one in comparison with other Baltic states), and in 2013 the lowest minimum wage was in Latvia (Figure 1).

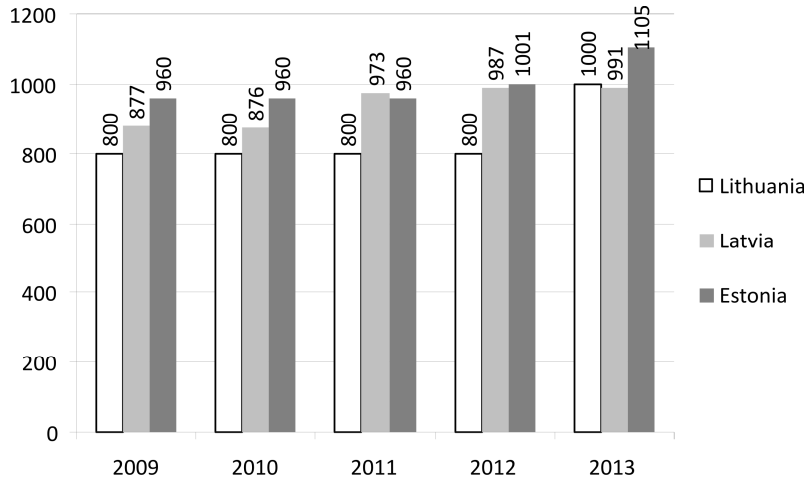

Figure 1. Dynamics of the minimum monthly wage in the Baltic States in years 2009-2013 (in LTL)
Source: Eurostat (EC, 2013b).

The minimum monthly wage in Lithuania in 2013, as compared to 2009, increased by 25%, in Latvia – 13%. The minimum remuneration in Estonia did not change over the period of 2009–2011 and in 2012 it increased by 41 LTL, in 2013 – by another 104 LTL and, if we compare the year 2009 and 2013, the minimum monthly wage here increased by 15%. To sum up the issue of minimum wages in the three Baltic States, an observation can be made that the minimum monthly wages in Lithuania, Latvia and Estonia kept increasing. The minimum monthly wage in the period of 2009–2012 was the lowest in Lithuania whereas in 2013 it was the lowest in Latvia, which has been slightly overtaken by Lithuania (9 LTL).

Most countries, including the Baltic States, apply a non-taxable income amount on labour income. Table 3 presents the changes of the non-taxable income amount during the period of 2009–2013 (EC, 2013b). During the whole analysed period both in Lithuania and Estonia the main tax-exempt amount applied on personal income tax did not change. During the analysed period the tax-exempt amount applied on personal income in Lithuania reached 470 LTL, in Estonia – 27 LTL (that is 5%) more. As a matter of fact, starting from 2014 the established tax-exempt amount is going to be 570 LTL. Meanwhile, the tax-exempt amount on personal income in Latvia during the analysed period kept fluctuating and only in 2011 it settled and reached 222 LTL.

The biggest difference in the tax-exempt amount was in Estonia and Latvia in 2010 when the tax-exempt amount in Latvia was 148 LTL whereas in Estonia it reached even 497 LTL, i.e. in Estonia the tax-exempt amount on the income of its inhabitants was more than 3 times bigger (if we compare Latvia and Lithuania, the difference is slightly smaller but also it exceeded 3 times). In 2013 the tax-exempt amount on personal income of the

inhabitants of Lithuania is more than 2 times bigger than the one applied in Latvia and 5% smaller than in Estonia.

It is obvious that the highest non-taxable amount applied during the analysed period was in Estonia. Although the minimum wage in Latvia by the end of 2013 was 16% higher than in Lithuania, the non-taxable income amount was 2.5 times smaller. We may state a *priori* that, under such conditions, an employee in Latvia receiving a minimum monthly wage pays an income tax from a higher taxable income amount.

Table 3. Parameters related to personal income taxation in the Baltic States in years 2009-2013

Indicator	Country	2009	2010	2011	2012	2013
Tax-exempt amount (in LTL)	Lithuania	470	470	470	470	470
	Latvia	173	148	222	222	222
	Estonia	497	497	497	497	497
Standard rates of personal income tax (%)	Lithuania	15	15	15	15	15
	Latvia	23	26	25	25	24
	Estonia	21	21	21	21	21

Source: own calculations based on data from the Statistics Lithuania (SLG, 2013) and Eurostat (EC, 2013b).

As mentioned above, an amount of non-taxable income is applied in taxation of labour income with personal income tax. The personal income tax is calculated according to the personal income tax rates set by every individual state.

The rate of personal income tax imposed in Lithuania and Estonia within the analysed period, i.e. from 2009 to 2013, did not change: during all the five years the personal income tax in Lithuania was 15%, in Estonia – 21% (Table 3). Meanwhile, the personal income tax rate in Latvia keeps slightly changing. The highest tax rate imposed in Latvia was in 2010. At that time it was 26%. In 2011 it was reduced by 1 percent point– down to 25% and in 2013 by one more percent point – down to 24%. If we compare 2013 and the beginning of the analysed period (2009) the personal income rate in Latvia has increased by 1 percent point.

The personal income tax rate in Lithuania is the lowest among the Baltic States. During the analysed period the rate of this tax, if Lithuania and Estonia are to be compared, is smaller by 6 percent points. Therefore, if other conditions are excluded, we may state that taxation of personal income in Lithuania is lower than that of Estonia.

Comparison of the three Baltic States shows that the highest standard personal income tax rate is imposed on personal income in Latvia. Personal income tax rate in Latvia during 2011–2012 was 10 percent points higher than in Lithuania (in 2013 – 9 points higher). The biggest difference in rates between Latvia and Lithuania was in 2010 when personal income tax rate in Latvia was higher by 11 percent points.

To sum up the labour income taxation with a personal income tax, we can make an observation that even though the minimum monthly wage in Lithuania in 2009–2012 was the lowest one (on average by 21% as compared to Estonia and by 16% if compared to Latvia), the non-taxable income amount was on average 2.5 times bigger than in Latvia and only 5% smaller than in Estonia. The imposed personal income tax rate in Lithuania during the analysed period was the lowest one as compared to other Baltic States – 40% lower than in Estonia and on average 60% lower than in Latvia. It can be assumed that the burden of taxable personal income in Lithuania is the lowest one: in

2013 an employed person in Estonia that receives a minimum monthly wage pays 123.04 LTL in taxes, in Latvia – 184.56 LTL, and in Lithuania – only 85.5 LTL. The fact that the burden of personal income tax in Lithuania is the lowest one has also been confirmed by Eurostat data (EC, 2013c). For example, in 2011 the revenue from the personal income tax in Estonia was 5.3% of gross domestic product (GDP), in Latvia – 5.6% of GDP and in Lithuania – only 3.5 % of GDP (Eurostat methodology also includes other taxes directly related to income, such as church tax, etc.).

Taxation of Labour Income with Contributions

State social insurance and compulsory health insurance contributions are imposed on labour income in Lithuania. The total state social insurance contribution rate paid by the insurer and the insured (SSI) that is imposed on remuneration and other employment related income is 40%. The insurer pays the main part – contributions of 31% and the insured pays contributions of 9% (Figure 2). An attention should be paid to the fact that this contribution rate also comprises the compulsory health insurance (CHI) contribution rate (3% paid by the employer and 6% paid by the employee). In order to clarify the structure of SSI contribution rate, it is necessary to discuss the changes implemented in 2006. Starting from 1 January 2006 the contribution rate for insurance against the accidents at work has been differentiated according to the insurers' risk and potential injury indicators in organisations. The social security contribution rate for accidents at work and occupational diseases that has to be paid by the insurer was set according to three affirmed groups of social security contribution rates: they are affirmed of annually through the law on confirming the budget indicators of the state social insurance fund. In 2012 group IV for social contributions on accidents at work and occupational diseases was added (this group is supposed to be the most risky, considering the level of hazardous works an enterprise), however, none of Lithuanian enterprises has been included into the list so far.

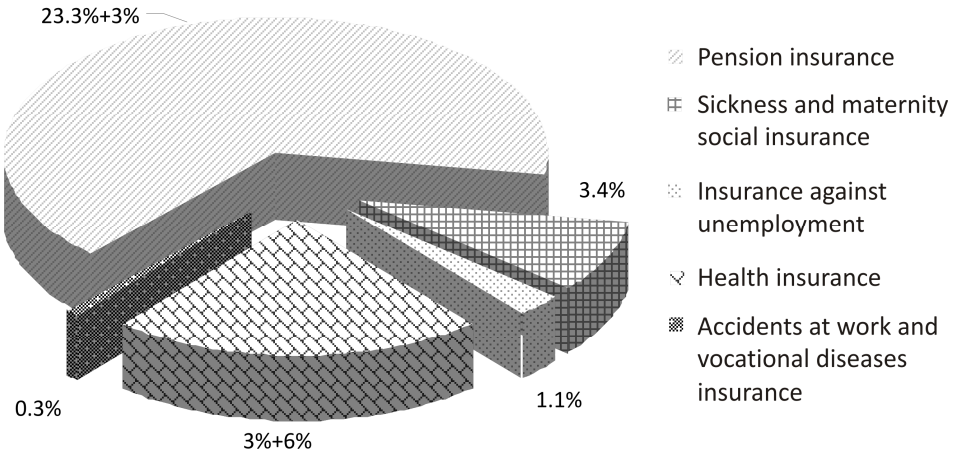

Figure 2. Distribution of the general rate of the state social insurance into different social insurance types in Lithuania in 2013

Source: The Seimas of the Republic of Lithuania (SRL, 2012).

In 2008 the following general rates of state social insurance contributions were applied in Lithuania: 31% of the contribution (3% of which was allocated to the compulsory health insurance) for the insurer, the insured had to pay 3% of the contributions. The biggest changes in state social insurance rates took place in 2009. First of all, the general SSI contribution rate significantly increased as a rate of 6% was affirmed of to be paid by the insured persons for the compulsory health insurance (earlier it was integrated into the income tax of natural persons and until 2009 the health insurance contributions had to be paid only by the insurers). Therefore, a new taxation rate scheme was introduced where the employer pays state social insurance contributions of 31% (with an integrated compulsory health insurance contribution rate of 3%) and the employee pays a contribution of 9% (with an integrated compulsory health insurance contribution rate of 6%). The pattern of paying sickness and maternity social insurance contributions has also changed. Since 2009 these contributions must be paid only by the insurers (i.e. the insured don't have to pay the 0.5% contributions on sickness and maternity social insurance). It should also be noted that since 2009 the insured has had to pay a 0.5 percent point higher rate of pension insurance contributions. But these changes have not had any significant influence on the total amount of contributions.

In 2013, as compared to 2012, the contribution rates on labour income did not change: the 31% rate paid by the insurer is allocated to different types of insurance – state social pension insurance, sickness and maternity social insurance, insurance against unemployment, accidents at work and occupational diseases insurance as well as health insurance. The 9% contribution rate paid by the insured is allocated to pension social insurance (3%) as well as health insurance (6%.). According to the Eurostat data (EC, 2013d), the social tax in Lithuania in 2012 is accounted for 11.3% of GDP and similarly in 2013 – 11.2% of GDP.

The amount of state social insurance contributions depends on the income amount received and declared by a person or the amount of the remuneration for work, however, persons with business licenses are an exception here. Attention must be paid to the fact that certain activities have a contribution base ceiling. It means that the income is exempt of taxes starting from the amount that exceeds the set insurable income amount. In the Resolution No. 5 of 9 January 2013 the Lithuanian government approved the taxable earnings amount of 1488 Lt. Such an amount, however, is not fixed for persons working and receiving income under employment agreements.

Similarly to Lithuania, in Latvia and Estonia labour income is taxed with state security and compulsory health insurance contributions. Compulsory social security contributions in Latvia are paid both by the employer and the employee. It should be noted that during the whole analyzed period 2009–2013 the contribution rate imposed on the employer in Latvia remained stable whereas the contribution rate levied on the employee kept changing. Starting from the beginning of the analyzed period until 2011 the contribution rate imposed on the employee reached 9%, in 2011 the rate was increased by 2 percent point up to 11%. Such a tendency has also remained in 2013 – the total contributions amount in 2013 is 35.09%, 24.09% of which is paid by the employer and 11% – by the employee.

In Estonia the employer pays a social tax on the labour income of every employee before any other taxes. Revenues from this tax finances health and pension insurance. Differently from Lithuania and Latvia, the social tax is paid only by the employer (except the case when an employee participates in the second pillar funded pension scheme and transfers 2% from the remuneration before taxes to the personal pension account). During the whole analyzed period the social tax rate in Estonia remained unchanged – 33%, 20% of which is allocated for pension insurance and 13% – health insurance contributions (besides, there is a maximum taxable base set – 198720 LTL a year, above which contributions are not calculated). The employer and the employee are compulsorily insured against the unemployment, the contribution rate in 2012 was respectively 1.4 and 2.8% of the remuneration. According to the Eurostat data (EC, 2013d), the social tax in Estonia in 2012 is accounted for 11.6% of GDP.

Summarising, we may note that compulsory social insurance contributions must be paid in Latvia, a social tax which finances health and pension insurance is applied in Estonia, whereas in Lithuania people pay state social insurance as well as compulsory health insurance contributions. Each of the mentioned contributions differs not only in their names but also in contribution payers and contribution rates. Taxation of labour income with contributions as percentage of GDP is lowest in Latvia (EC, 2013d).

RESULTS AND DISCUSSION

The burdens of personal income taxation born by the inhabitants of Lithuania, Latvia and Estonia are different. In order to analyze the burden imposed on labour income, we compared the personal income tax, state social insurance and compulsory health insurance contribution rates and other related indexes of each country. Figure 3 shows personal labour income taxation in Lithuania, Latvia and Estonia in 2013.

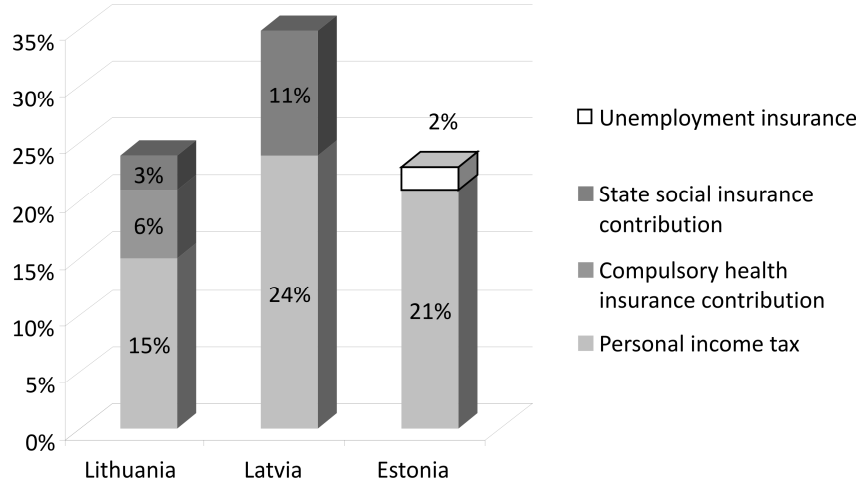

Figure 3. Standard rates of personal income taxes and contributions from the gross salary in the Baltic States in 2013

Source: Eurostat (EC, 2013d).

We may tentatively note that in 2013 the highest rate of income taxation was specific to Latvia where personal income taxation rate was 35%, 24% of which was personal income tax and 11% – compulsory social insurance contributions. Personal income in Lithuania is taxed at a rate of 24% (15% of which are personal income tax, 3% state social insurance and 6% compulsory health insurance contributions), i.e. lower by 11 percent points than in Latvia. In Estonia the personal income is taxed at the rate of 23% (21% of which constitute the personal income tax rate and 2% – insurance from unemployment) – which is lower than in Lithuania by 1 percent point and even 12 percent points lower than in Latvia. However, if we analyse the situation of the taxes paid by the employer from the earnings of a person, the situation is cardinally different: the highest burden is carried by Estonian employers – the taxes are higher than in Lithuania by 3 percent points and even by 9.91 percent points higher than those of the Latvian employers (Table 4).

Table 4. The main rates applied to employment earnings in the Baltic States in 2013 (in %)

Taxes and contributions		Lithuania	Latvia	Estonia
SSI and CHI	Employer	31	24.09	34
	Employee	9	11	2
Personal income tax		15	24	21
Labour income taxation, % of GDP (in 2011)		12.7	13.8	16.8

Source: own elaboration based on data from the Statistics Lithuania (SLG, 2013) and Eurostat (EC, 2013c).

It can be stated that labour income taxation in Lithuania, combined with personal income tax, social security and compulsory health insurance is the lowest one as compared with labour income taxation in Latvia and Estonia. If we analyze the taxation range (base – minimum monthly wage), i. e. how big is the gross salary of an employee, what income is at his or her disposal after taxes, as well as how much the employer has to pay in taxes from the gross salary of the employee, it can be stated that the smallest taxation range is in Lithuania, the highest in Latvia, and Estonia occupies the intermediate position. However, according to the data provided by the Eurostat database (EC, 2013b) on income taxation (as the percentage of GDP), the highest taxation burden is born by the Estonians and the smallest – by the Lithuanians. Another informative indicator provided by the Eurostat database is the implicit labour income tax rate – in 2011 it was the same in Latvia and Lithuania – 32.0% and the highest in Estonia (36.2%.). This can be explained by the fact that there are lots of exceptions and exemptions in the Latvian (and Lithuanian) taxation system of labour income.

CONCLUSIONS

Labour income received by employed people for their work is the main source of personal income. Personal income tax and social security as well as health insurance taxes are imposed on labour remuneration. The main and the highest tax paid by employees on remuneration is personal income tax. Proportional tax rates are applied for calculating this tax in the Baltic states. There is a fixed non-taxable income size, the application of which adds features of progressiveness to the applicable taxation model.

During the analyzed period the highest personal income tax rate as well as the lowest non-taxable amount was applied in Latvia. The lowest personal income tax burden was born by Lithuania.

Social security and health insurance contributions are imposed on labour income. Payment of these contributions, according to the proportion established by the state, is shared between the employer and the employee. In Lithuania (and Latvia also) it is the employer that pays the larger share of the taxes (respectively 31 and 24.09%), the other smaller amount of contributions – respectively 9 and 11% – is deducted from the remuneration of the employee and other employment related income. Social tax in Estonia is paid only by the employer; however, the tax on unemployment social security is shared by the employer and the employee at the ratio of 1:2.

Although the performed research revealed that the highest rate of labour income taxation is applied in Latvia, the implicit tax rate shows that the average effective tax burden on the labour income is highest in Estonia. Comparison of the main taxation rates (non-taxable minimum, standard rates) only partially reveals the national level of the labour income taxation. A more accurate description of the taxation level can be provided only by having evaluated the taxation base of taxes and contributions, tax exemptions and having evaluated such factors as the implicit tax rate or taxation of labour income as the percentage of GDP.

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Collaborative Advantage in Public and Social Services: the Case of Poland

Maria Janina Szymankiewicz

A B S T R A C T

Objective: This article seeks to analyse the relationships between the third and the public sector, with a particular focus on relations with local government units (LGUs) on the example of Poland.

Research Design & Methods: Research methods include literature overview together with the analysis of results of a 2012 focus group interview regarding the model of cooperation between public administration and NGOs, and several free-form interviews performed in 2013 with representatives of social organizations.

Implications & Recommendations: The tools within the strategic cross-sector collaboration model are helpful in the realization of the strategy of co-operation and collaborative advantage. They ought not to be used, however, in a selective manner or at random, since it is absolutely vital to create a coherent system of co-operation based on the demonstrated rules. The system should also be regularly monitored and continually improved with a long-term collaboration in mind.

Contribution & Value Added: The article characterises the essence and rules of collaboration between the social and public sectors in Poland, and determines the meaning of the cooperative development of strategy of collaborative advantage. It also presents a useful tool which facilitates the realisation of such a task – a model of strategic cross-sector collaboration.

Article type:	conceptual paper
Keywords:	the third sector; collaboration; public sector; private sector; NGOs; collaborative advantage
JEL codes:	H00, L30, L31

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INTRODUCTION

Social organisations, also called non-governmental organisations (or NGOs), are beginning to play an increasingly important role in Poland in multiple areas of life, which indicates a departure from the historical perception of the economy as being dual-sector, and a transition to the triple-sector model:

- the public sector (governmental), which creates and operates in accordance with the law and may be identified as a state,
- the business or corporate sector (economy, private sector), which functions on the basis of the market and its laws, with 'profit' being the key word,
- the third sector (social, non-governmental), determined by its objectives and values, is where the NGOs – operating on the boundary of the public and private sector – belong.

The third sector, like the other two, is seeking effective methods of management. In this context a strategy of collaboration with the other sectors, developed by social organizations, becomes of great significance. The development and operation of an organisation does not depend exclusively upon the organisation itself, but – to a higher degree – on its relationships with its environment. This is also quite valid in the Polish reality and refers to the cross-sector relations outside the world of business. NGOs do not operate in a void, but function in specific surroundings that include numerous groups of stakeholders. Communications with their surroundings allows them to inform the outer world about the character of their activity, to learn the needs of their stakeholders, to gain support for their actions, to build trust, and, as a result, to realise their goals and objectives in a much more effective manner.

MATERIAL AND METHODS

The main aim of the article is to analyse the relationships between the third sector and the public sector organisations, with a special focus on relations with local government units (LGUs) in Poland. In order to achieve the aim, following research methods were applied: literature review with the analysis of results of a 2012 focus group interview related to the model of cooperation between public administration and NGOs, as well as a number of free-form interviews carried out with representatives of social organizations in 2013.

This article constitutes an analysis of the relationships between the third and the public sector, particularly concentrating on NGOs' relations with LGUs. In management studies such a cooperation belongs to the newly arising subdiscipline of public management. The growth of importance of *The New Public Management (NPM)* has contributed to a significant development of the idea of collaboration in the public sector, quite noticeable in Poland after its accession to the EU. The article is also an attempt to characterise the essence and rules of collaboration between the social and public sectors, and to determine the meaning of the cooperative development of collaborative advantage strategy. The article also presents a useful tool which facilitates the realisation of such a task – a model of strategic cross-sector collaboration. As far as the research methods are concerned, the literature of the subject was analyzed, together with the

results of a 2012 focus group interview regarding a model of cooperation between public administration and NGOs, and several free-form interviews performed in 2013 with representatives of social organizations.

LITERATURE REVIEW

The Essence of the Third Sector

The third sector organizations perform numerous important tasks for the benefit of society and, therefore, they are often called social organisations (Kendall, 2011). They constitute a response to the insufficient social services provided by the state, and their main objective is to address the issue of social order. The term third sector has been introduced in the late 70s of the 20th century. The first who tried to describe this phenomenon was Jacques Delors. He defined it as 'a variation on the theme of the services sector' (Mertens, 1999, p. 501). Both in theory and in practice one may find various often interchangeably used forms of a social organisation, as: *the third sector*, *non-governmental organization* (NGO) or *non-profit organization*. In Poland the operation of NGOs is regulated by the Public Benefit and Volunteer Work Act of 2003, where NGOs are defined as 'not being public finance entities as defined in the provisions on public finance […], and operating without the purpose of profit gains, legal persons or units without legal personality founded under and in terms of the provisions of the act, including foundations and associations' (*Ustawa*…, 2003).

Despite its continuous growth, the polish third sector's position is still weaker than the standing of the business (private) and public (governmental) sectors. The main reason may be related to the fact that in the communist era there was no space for authentic social initiatives to the benefit of the general public, since all activity was state controlled[1]. That resulted in the disappearance (atrophy) of the legal form of a foundation. It is, however, worth paying attention to the social sector, since its appropriate functioning translates into the realisation of fundamental liberty and democratic rules while the expansion of its scope facilitates the development of a civil society, including proper collaboration of all three sectors.

The Strategy of Collaborative Advantage in Provision of Public and Social Services

Each organisation has the ability to collaborate, which enables a more efficient and economical realisation of their objectives, whose single-handed accomplishment would be impossible or would require more expenditure. Following A. Fowler we can say, that NGOs are part of 'open systems' (Fowler, 1997), where the management of relationships is the main area of management. According to Lewis (2003) 'this makes development of NGOs highly dependent on events and resources in their environment, but it also gives NGOs the potential to influence that environment'. Therefore, organisations form alliances with other entities and participate in miscellaneous interactions with elements constituting their environment. The relationships may be competitive, neutral or

[1] The backdrop for this talk about the third sector in Poland seems to be similar to the situation in Russia, and every post-socialist country. An interesting development for the third sector in Russia can be found in Hemment (2004).

collaborative. The collaborative relations, which are of interest to us, have a different meaning from the point of view of an organisation. The relationships between enterprises (business organisations) are of a competitive nature, while collaboration takes place when it allows for complementation or even strengthening of their competitiveness. Thus, the collaboration strategy is not an alternative to the strategy of competition. Moreover, it enables achieving sustainable competitive advantage with relation to the competitors outside the coalition (Faulkner & Bowman, 1996, p. 44).

The logic of collaboration in non-profit, public and social organisations is different. Competition may be justified for the sake of the realisation of public or social objectives, but it is not a prerequisite of their existence. Nevertheless, the mechanism of competition leads to the rise of operational effectiveness, which is crucial in relation to the necessity of effective usage of public funds. What is typical for social and public organisations, however, is the cooperation enabling the increase of their ability to offer services, since the nature of a public organisation involves an obligation to collaborate with other organisations, regardless of their sector of origin. In the case of social organisations, even though cooperation with other organisations is an independent and free-will decision, collaboration is also necessary in practice, to meet their social objectives. The factors that facilitate the collaborative approach are the similarity of operation in the public and social sector, both oriented towards the realization of public and social objectives, and the transparency of operation, openness and democracy, as well as the participation of structurally different social groups.

There is no such similarity between the public and private sector, which makes crossing their boundaries more difficult than the collaboration between the public sector and NGOs. Nevertheless, the practice and theory of public-private partnership (PPP) has been developing very dynamically recently (Zysnarski, 2003; Plawgo & Zaremba, 2005; Siwińska, 2008; *Partnerstwo…,* 2013). A public-private partnership is an institution based on the collaboration between a governmental unit and a private entity, regulated by the provisions of a commercial agreement. It means the cooperation of a public organisation with a business one, involving a long-term commitment of private investors into the public sector, following the regulations that facilitate a more effective realisation of public objectives and, at the same time, guaranteeing profits for the enterprise (Zysnarski, 2003, p. 11). The abiding rules and regulations are stipulated by the Public-Private Partnership Act of 28th July 2005 (*Ustawa…*, 2005) and have been subsequently amended, with the latest amendment as of 1st January 2013.

The relationships between social and public organisations are influenced by the perception of the role of social organisations in public life, which results in the adoption of the following three conceptions (Plawgo & Zaremba, 2005, pp. 98-99):

- The conception of independence assumes that social organisations (from the third sector) are independent and constitute an opposition to the public sector, because they usually provide different services. In such circumstances public organisations play a minor role in financing social organisations.
- The conception of dependence assumes that social organisations depend on public ones, since they provide social services on behalf of the state, which automatically translates into their submission to the inspection and surveillance by government institutions and self-government bodies.

– The conception of partnership is based on the assumption (statement) that social organisations are partners and co-operators for public organisations and, in consequence, they ought to have a substantial influence upon the strategy of social policy, particularly on the level of local authorities. This conception becomes the foundation for the development of collaborative advantage.

The character of relationships with the environment, in the case of public and (very many) social non-governmental organisations, is determined by their drive to collaborate with other organisations, which leads to the development of collaborative advantage. The theoretical foundations of collaborative advantage can be traced in relational exchange theory and relational approaches towards organisational strategy, which point to the existence of privileged relationships formed by organisations with their selected partners. Then, competition becomes a mechanism of secondary importance, while concluding free-will contracts and agreements that exceed the boundaries of pure competition becomes the most important issue (Kożuch, 2009, p. 214).

These relationships, called collaboration, provide a lot of opportunities in terms of goals' achievement due to the fact that organisation's own resources and possibilities do not limit it any more. It enables achieving mutual and individual objectives, which without a help of a collaborative partner would not be reachable. In case of a collaboration between public and non-government organisations, the created advantage enables a better solving of social problems. This advantage is called 'collaborative advantage'. In spite of the benefits it provides for both partners, this type of advantage is hardly achievable. The cooperation started by organisations, usually develops very slowly, and in many cases is not successful. Despite the examples of such negative experience it is worth to put efforts in building up long-term relationships with co-operators (Huxham & Vangen, 2005, pp. 3-4).

A local environment creates particularly favourable conditions for collaboration. The research performed in Poland by Klon/Jawor Association shows that NGOs most closely collaborated with local communities (83%) and public institutions, since 78% respondents declared that they maintain contacts with local self-governing bodies, i.e. local government units (LGUs). A similar percentage of organisations (78%) cooperates with other NGOs (Herbst & Przewłocka, 2011, pp. 13 and 117).

The basis for the development of collaborative advantage is an existing, distinctive convergence and complementariness of fundamental assumptions made in the public and social sector. Both parties prefer actions taken to the benefit of public interest and common good, and often operate in the same natural environment. Long-term relationships most often turn out to be mutually beneficial, because the aims of co-operating parties are, at least partially, coherent and lead to the satisfaction of local society's needs (Bogacz-Wojtanowska, 2012). Each party also has its own individual advantages. A local government is an important employer in its jurisdiction area, has the right to exercise the power that originates from direct and general elections, and administers the money from the local budget as well as communal assets. Another important aspect is the organisation of its work in accordance with the law regulating the operation of governmental bodies. The advantages of NGOs include their independence and unconventionality of operation, their recognition of social needs, which may not be obvious for the higher levels of authority, lower labour costs due to the commitment of

volunteers, support from other NGOs (on a national and international scale), as well as the possibility to use various sources of financing. The most important advantage, however, is highly motivated people – volunteers with a strong will 'to make the world a better place' (Limański & Drabik, 2007, p. 148). Their commitment and devotion enables the realisation of goals that could never be accomplished under any other circumstances.

In recent years the issue of collaboration of NGOs with public organisations has become increasingly important in public policy. After the political and economic transformation of 1989 in Poland – decentralisation trends have become more explicit and the concept of *local governance* has gained popularity. The concept is mainly based on relationships among different partners, with particular focus on social ones. The collaboration between public and non-governmental organisations, especially on a local scale, reflects the trends concerning the development of a regional public policy by numerous committed and motivated social players (Bogacz-Wojtanowska, 2011a, p. 13). Social-public cooperation is also strengthened by the development and implementation of modern models of public management. As government administration facilitated the dominant role of public organisations, the new public management supports various forms of cross-sector collaboration, e.g. contracting services (Kożuch, 2006, p. 27). The concept of *public governance* assumes the development of a network of public connections including the organisations from the third sector. Similarly, the conception of public service places emphasis on the co-existence of multiple entities that form coalitions in order to meet the determined needs of specific groups of citizens (Bogacz-Wojtanowska, 2011a, p. 16). To strengthen these tendencies, since 2008 the 'Partnering Local Government' ranking has been carried out, which summarises the intensity of collaboration between local governmental administration and NGOs. The ranking is created on the basis of an annual report 'Monitoring of collaboration between NGOs and self-governing units', which is a joint enterprise of Klon/Jawor Association and the Department of Public Benefit at the Ministry of Labour and Social Policy.

Conditions of Cross-Sector Collaboration between NGOs and LGUs

The collaboration of NGOs and LGUs is referred to in the Preamble to the Constitution of the Republic of Poland which was adopted on 2nd April 1997 by the National Assembly. The text contains a reference to the collaboration of authorities and community dialogue in accordance with the principle of subsidiarity which strengthens the authorisations of citizens and their communities. The cooperation of LGUs with NGOs took on a new light after 2003 when the Public Benefit and Volunteer Work Act was passed (Ustawa…, 2003). The Act regulates the rules and regulations of collaboration for both parties (Polish Journal of Law, No. 96, Item 873, with amendments). The amendment act of 22nd January 2010 introduced the amendments which significantly facilitate the conditions of collaboration. The monitoring of the implementation of the Public Benefit and Volunteer Work Act has shown, however, numerous discrepancies in the process of the realisation of such collaborations (Bogacz-Wojtanowska, 2011b, p. 79). The commonly reported issues resulting mainly from the dominant position of public authorities include (Swianewicz, 2008):

- insufficient resources available to non-public partners,
- weakness of citizen ties,
- low level of mutual trust, which hinders collaboration,
- traditional, hierarchical administrative structure.

Despite these obstacles, in Poland there are numerous satisfactory or even exemplary collaboration of local governmental bodies with NGOs, such as NGO Centres (NGOCs) with the longest operating one in Gdynia. Therefore, it is worth paying attention to the postulates on the regulations (conditions) of successful collaboration expressed by both parties, as well as the suggestions on its standardisation. The methods of operation of local authorities and NGOs complement each other and, thus, it is advisable to use them for the benefit of local communities. The research performed in 2010 by the Institute of Public Affairs shows the main postulates regarding attitudes, relationships and partnership, issued by the representatives of both public administration and NGOs (Table 1).

Table 1. The postulates regarding attitudes, relationships and partnership as conditions of successful collaboration

Respondents	The features of cross-sector collaboration indicated by the respondents		
	The right attitude	**Good relationships**	**Partnership**
Representatives of NGOs	◦ **transparent character of partner's operation** (public administration), ◦ tolerance for the spontaneous nature of an organisation, ◦ **openness** of administration to the needs of the third sector, ◦ **mutual understanding of needs**, ◦ readiness of administration to consider the reported problems.	◦ avoidance of relationships based on submission and dominance (by both parties), ◦ **equality**, ◦ **communicativeness**, ◦ providing assistance for NGOs, but without doing their job instead of them, ◦ avoidance of formality, ◦ avoidance of circumstances leading to conflicts among NGOs.	◦ co-initiating actions, ◦ avoidance of 'contractor-client' type of relationships, ◦ respect for the autonomy of NGOs, ◦ esteem of the organisations, ◦ mutual complementation in everyday operation, ◦ 'diplomacy', ◦ **compromise**.
Representatives of public administration	◦ the need to perceive NGOs as competent partners, ◦ **comprehension of the specificity of partner's operation** (NGO), ◦ NGOs' **understanding** that administration is not always aware of all problems and needs, ◦ **openness** in contacts, ◦ personal etiquette, ◦ expressing real interest in the operation of organisations, ◦ organisations demonstrating the will to collaborate with administration.	◦ **equality**, ◦ **communicativeness**, ◦ good will of both parties, ◦ mutual understanding.	◦ ability to **compromise**, ◦ patience.

Source: adapted from (Bogacz-Wojtanowska *et al.,* 2010).

After the analysis of Table 1 containing the postulates of good collaboration it can be concluded that the basis of the process of their development is the implementation of particular rules, among which the most vital seem to be (Romanowska & Trocki, 2002, pp. 85-86):

- the obedience of ethical criteria of cooperation, e.g. affirmation of certain conditions, keeping to initially agreed stipulations, strict realisation of the agreed quality conditions, terms of payment, delivery conditions, and general, mutual care for partners' benefits,
- the pursuit to increase organisational effectiveness and economic feasibility,
- respect for the customary norms based on the community of objectives and interests, mutual respect.

RESULTS AND DISCUSSION

An Attempt at Standardisation – a Polish Model of Collaboration

Since one can still observe cases of dysfunctional relationships between public administration and the third sector, and negative examples of a visible lack of cooperation, the discourse on the improvement and development of this collaboration appears to involve the issue of its standardisation. Standardisation is understood as 'a developed, agreed and accepted, common approach to the collaboration between LGUs and NGOs, prepared in accordance with the law, and the unification of procedures, the acceptance of best practices, the formation of common language of description and modelling, as well as the development and upgrading of common databases' (Batko, 2009, p. 129). This type of standardisation requires the determination of rules and conditions of collaboration. Such an attempt is the Model of Collaboration between Public Administration and NGOs, hereinafter referred to as the Model. It focuses on the most vital forms of collaboration between non-governmental organisations and local authorities, was prepared in full compliance with the appropriate regulations of law, and serves the needs of both parties – NGOs and LGUs (the latter understood as legislative and executive bodies with their subordinate organisational units). The development of a model of collaboration became an important issue since the scope of cooperation between NGOs and LGUs seemed to have been insufficient. The research performed among public organisations directly before Poland's accession to the EU (Kożuch, 2007, pp. 83-84) showed that cooperative initiatives were taken mainly as the result of legal requirements and were of a limited scope since they were generally restricted to informing other organisations about their own strategic plans and running consultations in certain areas. It was very rare, however, for organisations to get involved in the preparation of local documentation and the decision-making process. The changes became noticeable in 2003 after the passing of the Public Benefit and Volunteer Work Act, and with the increasing accessibility to European funds (Kożuch, 2007, pp. 83-84).

The Model developed between 2010 and 2012 is well grounded in the existing legal framework, especially in the Public Benefit and Volunteer Work Act. It is worth noticing, however, that the main focus is placed on the culture of collaboration, defined as the phenomenon exceeding the realm of the abiding law. Part of the issues within the Model, e.g. local partnerships, are not the result of the law, but the culture of

cooperation. The Model recommends basing the collaboration on three levels (Table 2) and following the rules and regulations it contains.

The main purpose of the Model is to present an optimum and – at the same time – a simplified state of collaboration. At present both the authors of the Model and its propagators face the challenge of preventing the Model from being perceived as another universal and, thus, useless tool. The popularisation of its stipulations and constituents seems to be a minor issue at the moment.

Table 2. Three surfaces of collaboration between LGUs and NGOs

LEVEL I	LEVEL II	LEVEL III
The collaboration of LGUs and NGOs **in the process of development of public policies** = systemic and regulatory actions taken in order to solve the most serious problems of the residents of local communities.	**The collaboration** of LGUs and NGOs **in the process of the realisation of public objectives** = actions taken by self-governing administration in accordance with the law regulating their terms of public reference.	**Collaborative infrastructure** (the whole of locally developed factors that influence the operation of NGOs and the collaboration between the self-governing sector and the third sector) **and the creation of good conditions for social activity**.
TERMS OF COLLABORATION:		
subsidiarity, independence of partnership, effectiveness of standardisation, fair competition, transparency, and equality of opportunities.		

Source: own elaboration based on (Departament…, 2013).

The Model should serve as a framework in the process of the development of locally applicable standards of cross-sector collaboration (Rymsza & Dudkiewicz, 2012, pp. 5-6). Even though the Model does not include all the aspects the recipients may consider important for a successful collaboration, it contains all its crucial levels, while the summary recommends such a realization of collaborative strategy that it promotes the development of local communities.

CONCLUSIONS

The special character of polish public and social organisations, and the certain similarity of their operation (common social and public objectives), facilitates a collaborative attitude. This is a positive phenomenon since there is a need for partnership to solve the most serious social issues and for the expansion of social resources through the engagement of large groups of citizens in the processes of development of both local communities and the country as a whole.

The guidelines and tools within the Model are helpful in the realization of the strategy of co-operation and collaborative advantage. They ought not to be used, however, in a selective manner or at random, since it is absolutely vital to create a coherent system of co-operation based on the demonstrated rules. The system should also be regularly monitored and continually improved with a long-term collaboration in mind.

The development of collaborative advantage by means of the rules specified in the Model requires the continuation of evolution from the model of representative democracy, where all local activity is centralised around the elected representatives and local administration, to the model of participatory democracy. The rationale for such

an evolution is the observation that a single-handed execution of authority is becoming less effective and it is highly advisable to invite various social and economic players, including NGOs, to share the responsibility. This means the skilful use of collaborative advantage in the realisation of social objectives, and a change in the way the power is executed, to give the key role to the strategy of co-operation, the development of collaborative ties and the rule of partnership.

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Cooperation and Its Role in Facilitation of Foreign Expansion: Example of Slovak Enterprises[1]

Mária Šášiková, Tatiana Hlušková[2]

A B S T R A C T

Objective: The objective of the paper is to point out the importance of cooperation between companies in order to facilitate their internationalization, based on the example of Slovak-foreign joint ventures and to present institutions supporting these partnerships.

Research Design & Methods: We posit that foreign expansion is an important motive for the cooperation of the enterprises. This hypothesis is tested on the sample of 44 Slovak-foreign joint ventures, which participated in the questionnaire survey. Furthermore, we aim to present various options supporting the cooperation of companies in Slovakia, based on own experience and knowledge gained during the work for Enterprise Europe Network (EEN).

Findings: According to the survey, the majority of companies are satisfied with joint venture performance and plan to continue their cooperation. Motives linked to the foreign expansion are among the most important for the joint venture establishment.

Implications & Recommendations: The awareness of institutions' tools supporting partnerships is rather limited among Slovak companies.

Contribution & Value Added: Research about establishment motives and satisfaction with the joint venture performance has not been conducted yet in Slovakia.

Article type: research paper
Keywords: co-operation; Central Europe; internationalization; joint venture
JEL codes: F23, F55, L24

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[2] The contribution of co-authors is equal and can be expressed as 50% each of the authors.

INTRODUCTION

The aim of the paper is to point out the importance of cooperation as a means of facilitation of companies' foreign expansion, based on the example of Slovak firms. The research was conducted on the sample of 44 Slovak-foreign joint ventures, which participated on the questionnaire survey concerning planning, managing and performance outcomes of international joint ventures with the participation of Slovak companies.

Slovak economy is heavily dependent on exports, however, many of the biggest exporting companies can be counted among the wholly-owned affiliates of foreign companies. One of the pressing problems of Slovakia is the rather low share of local – notably the small and medium-sized enterprises (SMEs) in the overall value of exports. As these types of companies often had to cope with the lack of resources needed for successful expansion abroad, the cooperation with foreign firms might be a suitable solution facilitating their internationalization. There are several types of these partnerships, but joint venture is the one with the highest resource commitment of the respective partners. Based on the example of Slovak-foreign joint ventures, the paper aims to point out the importance of cooperation between companies in order to facilitate their internationalization. Findings include presentation of means and possibilities of launching cooperation with potential business partners provided by Slovak and European institutions.

LITERATURE REVIEW

Internationalization and the Role of Cooperation between Companies as Its Facilitator

In the CEE (Central and Eastern European) countries the tradition of entrepreneurship was interrupted by the era of the socialist regimes. This fact, along with the less entrepreneurship-friendly business environment in some of the countries, poses significant threats for the successful foreign expansion of CEE companies.

According to Johanson and Vahlne (cited in Nowiński & Rialp, 2013), companies with more abundant resources may skip the earlier stages and speed up their internationalization. As for the SMEs, which have to cope with the resource scarcity, there might be two solutions of this problem: to acquire external resources or to substitute some resources with others, which are available for the company at the moment. Both of these possibilities could be closely tied to strategic alliances. Acquisition of external resources might take the form of cost-sharing or sharing of the distribution channels on the foreign markets with other companies. As for the substitution of resources, financial resources needed for the foreign market research might be replaced with the knowledge of the partner firm, which is already active in the given market.

There are many different definitions of strategic alliances, but all of them agree upon the basic point: strategic alliances are partnerships of two or more entities in order to achieve specific strategic goals, notably to gain competitive advantage. Strategic alliances enable the companies involved to make use of the opportunities which would otherwise be beyond the capabilities of a single firm (Ferenčíková *et al.*, 2013). For these

reasons strategic partnerships could play an important role in enabling or facilitating the internationalization processes of companies, especially SMEs. SMEs encounter even more challenges, as they often need to cope with the resource (notably financial) constraints. Other important issue is the absence of previous experience with the foreign markets. In the case of former socialist countries in the Central and Eastern Europe, negative country-of-origin effect could also pose a threat to successful internationalization.

Strategic alliances can be divided into two types. Contractual agreements can be formed along the whole value chain. Thus, the partners in contractual alliances combine their resources only in a certain field of business activity. Equity arrangements can take form of joint ventures, minority equity alliances or equity swaps (Ferenčíková *et al*., 2013). As for the internationalization of SMEs, the most important motives may be the foreign market entry itself (e.g., via foreign partner distribution channels), lowering the costs of internationalization and learning from the partner in terms of the foreign market knowledge.

Joint ventures played an important role in transformation of Slovak economy after the fall of the socialist regime in 1989. Slovakia opened its market for the foreign investors in the beginning of 1990s under the condition that the foreign companies would create a joint venture with local firms (mostly the state-owned enterprises designated for privatization). Nevertheless, the expectations of Slovak companies entering joint ventures in 1990s were mostly unmet. They entered the partnerships with the aim to learn from the partner, to enter its distribution channels in the foreign markets and to transfer the knowledge, technology and know-how of the foreign investors. From the beginning, the intentions of some foreign companies were completely different – often aimed at full acquisition of the Slovak firms, with little or no willingness to share the most valuable assets with them. Even if the Slovak company itself had not ceased to exist, it usually withdrew from the joint venture, which eventually became a fully-owned subsidiary of the foreign company (Ferenčíková, 2001).

Based on the case studies of six Slovak-foreign joint ventures created in 1990s, S. Ferenčíková (2001) pointed out the positive effects the foreign investors had on the companies involved:

- Change in product line towards high-quality product: either totally or partially at first – beginning with modifications of local partner's products and only later introducing new products and models.
- Technology improvement: by the means of the technology transfer or by the facilitation of the technology acquisition; in the six cases investigated, none of the foreign investors contributed obsolete technology.
- Higher quality of labour force: even though the labour force in Slovak companies was relatively highly skilled, foreign investors provided training on new technologies, work practices or foreign languages. The quality of local employees was so high that the need to bring expatriates to the joint ventures was on the minimal level.
- Implementation of management know-how: all of the foreign companies brought new methods of human resources management and also adjusted the organizational structures to the needs of the market economy. The joint ventures also underwent major changes in the fields of accounting and finance.

- Implementation of modern marketing practices: they mainly concerned the market research application and specific methods of high-quality products marketing. All these changes resulted in customers' satisfaction improvement. The adjustments were also made in the value chain, which internationalized in two ways: the joint ventures entered the supply network of the foreign investor and were also able to increase their exports.
- Foreign market know-how: most of the joint ventures (all of which were export-oriented) learned how to conduct the business in the foreign markets themselves. However, some of the transactions abroad were still managed by the foreign partners.
- Increase of productivity: reflects better organization of labour and new management practices, higher quality of labour force, new technologies and more intensive production.

The partnerships with foreign investors had a limited impact on the Slovak parent companies, with the "unintentional learning" being the most important. Spreading of managerial attitudes, ethics, corporate culture and work practices were observed in all of the six cases. However, according to S. Ferenčíková (2001) change within the local company depended to a much greater extent on the attitude of its management than on the operations of the foreign partner.

A solution to the possible negative country-of-origin effect may be provided by a joint marketing alliance, which is combining companies' marketing activities in a certain market. A key feature of joint marketing alliances is that partner firms usually combine their marketing efforts by offering a unified image in the given marketplace (Teng & Das, 2008). Cooperation could be used as a shortcut to knowledge acquisition which the partners would not be able to create within an acceptable time or at acceptable costs themselves, e.g., the knowledge about foreign markets, distribution channels or consumers (Das & Teng, 2000).

As for the internationalization of the companies, the concept of International New Ventures (INVs) may be useful in explaining the foreign expansion of SMEs from Slovakia, as shows the example of Slovak technology companies such as ESET (security software), Sygic (navigation software) or aSc (scheduling software for schools). Each of these companies achieved worldwide success and each of them entered the markets abroad soon after their inception.

The International New Venture theory explains how companies with limited resources can achieve success at the international level. International New Venture, according to Oviatt and McDougall (1994) is "a business organization that, from the inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in the multiple countries". In short, international new venture can be described as an organisation that is international from its inception. INVs bypass earlier stages of internationalization and use higher entry modes when going abroad.

As for the studies concerning INVs from transition economies – let alone CEE countries – there are only a few, as the interest of researchers is focused mainly on highly developed economies (e.g., USA, Canada or Western European countries). Nevertheless, based on the previous research, findings about internationalization of a firm from Western economies may not be fully applicable to emerging or transition

economies. The reasons could be institutional differences or resource (both tangible and intangible, such as international business experience) constraints observable in these two types of economies (Nowiński & Rialp, 2013).

In their study of four Polish International New Ventures, Nowiński and Rialp (2013) state that while these companies benefited from the developments of Poland's EU accession, these circumstances did not solely determine their early internationalization. Rather new information and communication technologies contributed to the successful foreign expansion, as they lowered the barriers of foreign market entry.

Internationalization of high-tech companies is often based on their unique resources, which form the basis of the company's competitive advantage. The examples of Slovak INVs aSc, ESET and Sygic illustrate that human resources are the most important, because people are the authors of the technology and innovation needed to achieve success at the international level. As the markets and the technology itself is a subject of constant change, the competitive advantage is at the threat of lagging behind the development of markets and customers' needs.

According to A. Osarenkhoe (2008), who conducted a study of 60 Swedish SMEs operating abroad and foreign SMEs operating in Sweden, sequential internationalization models cannot describe the foreign expansion of companies in general. All the companies willing to expand abroad have to bank on certain transaction costs of internationalization, which increase its riskiness. Nevertheless, there are certain factors which enable non-sequential foreign expansion, which is especially important for the companies from the developing and emerging countries. These factors include:

- Changed environmental conditions following globalization: diminishing differences between economies, which in turn lowers the risks tied to foreign expansion. As the world economy is becoming more and more homogenous, the costs and risks of internationalization decrease.
- The role of technology in the internationalization process: the information and communication technologies (ICT) lower the internationalization costs, which is especially important for the often resource-constrained SMEs. ICT facilitate the contact of potential customers abroad, as well as gaining the information about the foreign markets.
- Business-specific factors: they are the characteristics or nature of the product being sold. The globalization and emergence of new technologies led to the increased specialization of the companies. They tend to choose the niche market segments, where they can achieve success with their innovative and high-quality product without the need to face the keen competition.
- Entrepreneurial prowess: the managers in INVs often have previous experience with foreign markets (which also means a possibility they have already created a network abroad) and are less risk-averse than managers in other companies. They tend not to differ between the domestic and foreign markets.
- International networking and relationship conceptualization: networks provide an important possibility of learning from the partners, to gain access to their resources and to share risks. All these three aspects are vital especially for the SMEs willing to expand abroad.

The export success of Slovakia is based mainly on large companies, namely in the automotive and consumer electronics sectors. The biggest exporters are the foreign-owned subsidiaries, such as Volkswagen, Kia, PSA Peugeot Citroën, Samsung or Slovnaft. Nevertheless, SMEs are lagging behind the large companies in terms of export performance. Increase of SMEs' share of overall exports is one of the goals of Slovakia's pro-export strategy for the period of 2014 – 2020 (Ministry of Economy of the Slovak Republic, 2013). In 2012, the number of exporting SMEs reached 27 474, which stands for 97.1% of all Slovak exporters. However, the value of SME exports was 17 486 billion EUR, which represents only 27.8% of the overall value of Slovak exports. This disproportion needs to be addressed, according to the state institutions.

MATERIAL AND METHODS

The goal of the paper is to point out the importance of cooperation as a means of facilitation of companies' foreign expansion, based on the example of Slovak firms. We posit that foreign expansion is an important motive for the cooperation of the enterprises. This hypothesis is tested on the sample of 44 Slovak-foreign joint ventures, which participated in the questionnaire survey concerning planning, managing and performance outcomes of international joint ventures with the participation of Slovak companies. The firms were included in the survey only if they met one of these conditions:

- the company is a partner in an international joint venture established and conducting business in Slovakia,
- the company established in Slovakia is a partner in international joint venture established and conducting business in country other than Slovakia.

The names of potential joint ventures with Slovak participation or joint venture partners were searched for in the newspapers, magazines and on the Internet, as there is no central or partial evidence of these entities in Slovakia. These companies were contacted by phone, with the aim to establish a connection with someone authorized to provide information on the cooperation with the foreign partner. Subsequently, he/she was sent an e-mail with the questionnaire attached. Some of the companies included in the research were asked to participate based on the previous knowledge of the authors about their equity structure.

The questionnaire consisted of questions referring to the importance of various motives for the joint venture creation. A five point scale was applied as follows: 1 – not important at all, 2 – minor importance, 3 – some importance, 4 – rather strong importance, 5 – very important. The respondents were also inquired about their satisfaction with the overall performance of the joint venture with a five point scale: 1 – very dissatisfied, 2 – dissatisfied, 3 – neutral, 4 – satisfied, 5 – very satisfied.

Additional to survey research, the intent was to present various options supporting the cooperation of companies in Slovakia. Own experience and knowledge gained during the work for EEN were used while writing the paper alongside documents and secondary data provided by EEN.

RESULTS AND DISCUSSION

Results of the Slovak-foreign Joint Ventures' Survey

Even though the international joint ventures played an important role in the beginning of the Slovak economy's transition, no detailed research of these entities was conducted to this day, except of several studies based only on very limited number of companies in 1990s. Results of the following research thus provide the first more detailed information about these companies.

The research sample of the Slovak-foreign joint ventures consists of 17 (38.64%) large (250 and more employees), 7 (15.91%) medium-sized (50 – 249 employees), 10 (22.73%) small (10 – 49 employees) and 8 (18.18%) micro-enterprises (less than 10 employees). Two companies stated their number of employees only in the interval of 10 – 99, we can therefore assume they are either small or medium-sized firms. This division is based on the European Commission definition of the small and medium-sized enterprises (European Commission, 2003).

16 (36.36%) companies are active in the field of industrial products, 4 (9.09%) in the field of consumer products, 3 (6.82%) firms in the both of them. The line of business of the remaining companies can be labelled as „other" – meaning mostly various types of services, but also agriculture or technology development.

The results of the research suggest that the most important motives for partners in international joint ventures with Slovak participation are establishment of a base to access other countries' markets (average response value 3.25), gaining access to new technologies (average response value is 3.11) and gaining access to the distribution channels of the partner (average response value is 3.07). Two of these three motives could be directly linked to the Slovak companies' willingness to expand their business abroad: establishment of a base to access foreign markets and gaining access to the distribution channels of the partner.

On the other end of the spectrum, the need to overcome regulation barriers of local government (average response value 2.11) and access to the low-cost resources (average response value 2.41) are the least important reasons to create partnership with foreign company, according to the respondents' opinion. The lower need of low-cost resources might be explained by the fact that Slovak companies themselves dispose of resources relatively cheaper than those of the investor, notably the labour force. Another reason might be the lower resource-intensity of the business activities (e.g., in the sector of services).

Only minor importance of overcoming government regulation barriers might be interpreted by the structure of joint venture partners: majority of them comes from the EU member states and all the joint ventures included in the research are established in EU countries as well.

Compared to the results of previous study by S. Ferenčíková (2001), the emancipation of Slovak entrepreneurs willing to cooperate with foreign partners (in order to become more competitive in the home market or even to enter foreign markets) is visible. This development was encouraged by the period of rapid export-oriented economic growth of the Slovak economy. Moreover, many Slovak

companies started to seek for partnership opportunities abroad as well, resulting in the foreign direct investment of Slovak companies in the form of international joint ventures.

The joint venture partners were also asked about the share of exports on the joint venture sales. Of the 44 companies inquired, 8 did not answer the question concerning the share of the joint venture sales assigned to exports and 12 firms stated the share is in the 0 – 4% range. However, 8 of these 12 companies have only limited exporting possibilities, as they are active in the fields as waste management, utilities and services. Share of exports on the overall sales higher than 50% can be observed in 12 cases, another 12 joint ventures have this percentage in 5 – 49 range. More than half of the joint ventures are thus active in exporting, at least to limited extent. However, it cannot be ruled out that some of the other companies would not expand their activities abroad in the future.

Even though only 8 (19.05%) companies are very satisfied with the overall performance, as many as 23 (54.76%) firms are satisfied and only 2 (4.76%) are dissatisfied. 9 (21.43%) companies hold the neutral view. The average response value is 3.88. 42 companies expressed their opinion on overall joint venture performance.

In general, the benefits of participating in a joint venture with foreign company are obvious. The partnerships could be very helpful especially in the case of companies lacking the resources such as foreign market knowledge or access to distribution channels abroad. The survey results show that the partners are satisfied with their performance and as many as 36 companies at least partly agreed with the claim that they plan to continue their participation in the international joint venture in the long-term horizon.

Institutions and Tools Facilitating the Creation of Partnerships between the Companies

SARIO

Slovak Investment and Trade Development Agency (SARIO) is an institution which provides support for foreign enterprises willing to invest in Slovakia, but also for Slovak companies which aim to enter foreign markets and they are looking for the partnership opportunities. SARIO facilitates the cooperation with foreign entities by several means:

- the Slovak Sourcing and Cooperation Portal, the automatic matchmaking portal aimed to coordinate foreign firms' demands with production possibilities of the Slovak companies,
- organization of business journeys and fairs with the possibility of negotiations with prospective partners,
- organization of matchmaking events in Slovakia – e.g. Slovak Cooperation Exchange, Turkish-Slovak Forum or Bilateral Trade Summit, all of which took place in 2013,
- direct searching and screening of prospective partners abroad,
- providing of contacts on representative bodies of the Slovak Republic in given markets.

The Slovak Sourcing and Cooperation Portal provides an on-line database of the latest export opportunities, as well as the production cooperation offers. The aim of the Portal is to achieve more effective export promotion of Slovak products, intermediate the cooperation between Slovak and foreign companies and help the creation

of Slovak-foreign joint ventures. The Portal cooperation offers are divided into four sections: subcontracting, joint ventures, investments and tenders. There is also the catalogue of the companies with the basic information about the business entities registered in the Portal (The Slovak Investment…, 2013).

Another tool for promotion of the partnerships, which was created in 2013, is the database of investment opportunities presented at the meetings with various foreign entities. The database contains information about the field of investment, the amount of capital needed and its planned usage and some general information about the investment opportunity (e.g., if the technology is patented, or the basic technical information).

Enterprise Europe Network

Enterprise Europe Network (EEN) is only one small piece in the process of helping small and medium-sized enterprises co-operate with each other. This network has been established by the European Commission in 2008 as the initiative of Competitiveness and Innovation Programme (CIP) (Enterprise Europe Network, 2013a).

The EEN connects business-supporting organisations from more than 50 countries (28 EU countries and 26 non-EU members within Europe and abroad). The EEN has now close to 600 member organizations (also known as contact points) containing more than 6.000 experts (Enterprise Europe Network, 2013a). Members of the Network are usually the chambers of commerce, technology and innovation agencies, sector associations, regional development agencies, etc.

The mission of EEN is to help European SMEs to become more competitive, take benefit from the internal market, internationalize their businesses and increase their innovation capacity (European Commission, 2012). Experts working within the EEN help companies find international business partners, source new technologies and receive EU funding or financial support. EEN experts also advise companies on diverse issues such as intellectual property, internationalization, EU law and standards.

Increase of SMEs' competitiveness is one of the goals of the Operational programme research and innovations 2014 – 2020. One of the priorities set in order to achieve it is the development and implementation of new SME business models, notably in the field of internationalization. The foreign expansion ought to be focused on the non-EU countries. EEN is mentioned as one of the existing tools, which would fit into new, complex system of internationalization support (Ministry of Economy of the Slovak Republic, 2013).

The co-ordinator of EEN activities in Slovakia is Business and Innovation Centre Bratislava (BIC Bratislava spol. s r.o.). BIC Bratislava belongs to the network of the Business Innovation Centres (BICs) and Regional Advisory Innovation Centres which were co-ordinated by National Agency for Small and Medium Enterprises (Slovak Business Agency since March 1, 2014). These centres were established in 1993 to help Slovak small and medium enterprises with advisory and other services. Even though these centres formally exist nowadays, only a few of them fulfil their original role.

Other EEN partners in Slovakia include: SBA, Slovak Chamber of Commerce, Regional Advisory and Information Centre Prešov (RPIC Prešov), BIC Group and EurActiv. RPIC Prešov is located in eastern part of Slovakia (in the city of Prešov) and the rest of

the partners are settled in Bratislava. Altogether, Slovakia has 6 EEN contact points. In Poland, there are 30 EEN contact points located in 19 cities.

There are several main EEN tools to enhance the co-operation between companies and to help them in their business. The following EEN services for companies and other relevant bodies are especially important for going international.

Brokerage/Matchmaking events

A matchmaking event is a quick and easy way to meet many potential co-operation partners in just one day. Many times, they take place at international fairs. People meet and greet in short bilateral meetings, which usually last 15, 20 or 30 minutes. (Enterprise Europe Network, 2013b). Usually, matchmaking events last one or two days.

The Network experienced some successful co-operation with Polish partners recently. The co-operation between Slovak EEN partner BIC Bratislava and Polish EEN partner Krakow Chamber of Commerce and Industry has been carried out. In October 2013, the brokerage event Furniture 2013 was organized in Bratislava (Slovakia) within the International Fair of Furniture, Housing and Office Interiors and Design (MODDOM). This event was aimed at companies functioning in the field of furniture production and distribution. As a result, three new potential co-operations between Slovak and Polish companies were launched (BIC Bratislava, 2013).

Slovak EEN partners are also helpful with the propagation of interesting co-operation events – like AutoEvent on Zawiercie (11th–13th of June 2013, Poland). Slovak EEN co-ordinator (BIC Bratislava) was helpful in contacting Slovak clients to take a part at this event, despite the fact that the organizer of this event (Polska Izba Motoryzacji – PIM) is not the member of the EEN yet. PIM was also co-organizer of AutoDay2013 event, which was organized in Bratislava as accompanying event to the automotive companies' mission from Poland to Slovakia in April 2013 (BIC Bratislava, 2013).

Every year several brokerage events are organized with the EEN support in Slovakia, including *Engineering brokerage event*, *Slovak Matchmaking Fair* and *AutoDay*.

Seminars

EEN partners organise seminars about various topics according to the current information needs of the companies, universities, researchers and other relevant entities (e.g., BIC Bratislava organized five Regional seminars about new EU programme Horizon 2020). SBA together with Slovak-Polish Chamber of Commerce organized a specific seminar “Doing business in Poland” which took place in Žilina, Slovakia in December 2013 (Enterprise Europe Network Slovensko, 2013).

The Partnership opportunities database (POD)

The Partnership Opportunities Database of Enterprise Europe Network is one of the world’s largest business databases. It contains thousands (more than 23 000) of profiles of companies which are looking for business, innovation or research partners. If the client finds a potential partner, EEN will provide him/her with its contact information. EEN partners are always informing the client about each expression of interest

from foreign country. Subsequently, the client has the opportunity to contact the person interested to initiate co-operation (Enterprise Europe Network Brussels, 2013).

Company missions

A company mission is an organised visit to another country. A typical company mission within Europe lasts about one to two days and includes site visits, company and government agency presentations, and ample networking opportunities with local businesses (Enterprise Europe Network Yorkshire, 2013). Within the co-operation with Polish EEN branches, several company missions were carried out – e.g., company mission of Polish automotive companies to Slovakia or company mission of Polish furniture companies to Slovakia.

Newsletters

All EEN partners distribute regularly newsletter about EEN activities via e-mails and via social networks. The client can also find information online, not only on global Network webpage, but also on Slovak webpage of the Network.

Direct contact

One of the options how to introduce opportunities of EEN exploitation to potential EEN client is direct contacting of EEN contact point. In the period 2008 – 2012, Slovak EEN partners organized nearly 180 seminars with more than 4500 participants, 66 matchmaking events and 21 company missions with 1500 participants. The Network team provided free consultation services for more than 5200 companies and visited more than 1000 companies to evaluate their business and technology opportunities. All these activities resulted in 66 international trade and technology partnerships.

Every member of EEN is obliged to publish the most inspirational success stories which explain how the EEN partner helped the specific entrepreneur. Two examples of these have been presented below to illustrate the EEN role in facilitating partnerships.

Polish company Orzeł SA is a seller of tyres, which previously sent used tyres to be burnt in cement factories. Nevertheless, the company wanted not only to fulfil recycling requirements, but also do it in a greener and efficient way. It therefore contacted EEN branch, which entered its request into the POD database. Austrian SME WIL AG, specialized in building tyre-recycling plants, answered the request and the two firms signed a deal, under which WIL will help to set up a recycling line in Orzeł factory and later, the Austrian company will sell the recycled parts from Poland to its clients in Europe. This co-operation also resulted in the creation of eight new jobs (Enterprise Europe Network, 2010).

The second case involves biotech company Sensara from the famous Spanish wine region La Rioja and Slovak company Biorealis, which specializes in measurement instruments for distillers, brewers and the wine industry. The two firms were matched via EEN contact points in Spain and Slovakia, respectively. The Spanish is testing two models of portable Biorealis analysers (Enterprise Europe Network, 2013c).

CONCLUSIONS

The awareness of EEN tools is rather limited among the Slovak entrepreneurs, as only 88 company profiles from Slovakia are registered in the POD database (44 business offers, 6 business requests, 33 technology offers, and 5 technology requests). The Slovak Sourcing and Cooperation Portal registers 107 companies in its catalogue of business entities (the information are as of December 22, 2013). These rather low numbers of companies engaged in both of the databases might point to the lack of their interest in cooperation or the firms might as well be unaware of the possibilities provided by these cooperation tools.

The research of the Slovak-foreign joint ventures suggests that motives linked to the foreign expansion are among the most important for the joint venture establishment. The majority of the respondents are also satisfied with the joint venture performance and willing to participate in the company in long-term horizon. The findings suggest that the Slovak companies' cooperation with foreign enterprises can result in a successful business.

The research is limited by the number of companies which refused to participate in the survey or did not answer the request at all. Several joint ventures-turned-affiliates also could not participate because employees that might provide information about the motives for venture creation are no longer working in the company. Future research might focus on the state of the cooperation of the partners (does it continue, or was the joint venture dissolved or turned into affiliate) and the development of the joint ventures' export activities.

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Entrepreneurship Opportunities after Military Career: Practice in Central and Eastern versus Western Europe

Rasa Smaliukienė

A B S T R A C T

Objective: This paper seeks to contribute to the discussion devoted to entrepreneurship of a specific profession group – early retired servicemen. The aim of the paper is to provide a composition of existing practices of entrepreneurship skills development of early retired servicemen in EU member countries and evaluate the differences between Central and Eastern Europe (CEE) and Western Europe (WE) practice.

Research Design & Methods: Institutional survey was employed as a methodological approach for this study. The survey questionnaire included request data on programs and services that maintain the promotion, training, counselling and financial or infrastructural support by fostering entrepreneurship activities of retired officers.

Findings: The results indicate the lack of entrepreneurship development policies for early retired servicemen, while service in military often provides highly specific competencies that can be adapted as transferable expertise and knowledge for entrepreneurship.

Implications & Recommendations: The paper has identified the need to include entrepreneurship skills development in the reintegration programs of early retired servicemen. Development of entrepreneurship skills may prepare servicemen, who are being dismissed from the service, for new economic activities, as well as create conditions for their successful reintegration into civilian life.

Contribution & Value Added: The paper contributes to the debates surrounding entrepreneurship of a specific professional group – early retired servicemen.

Article type: research paper
Keywords: entrepreneurship; military; early retirement
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INTRODUCTION

Several thousand military service members move each year from the military to civilian life. Military officers retire on average 20 years earlier than people serving in civil workplaces. One in seven veterans is self-employed or a small business owner in US (Veterans Fact Sheet, 2013). The s situation in Europe is different. The programmes for retired military reintegration into civil life are focussed on employment in public sector or big business rather than rising an interest in starting own business and becoming an entrepreneur.

This paper seeks to contribute to the debates surrounding entrepreneurship of a specific professional group – early retired servicemen. Drawing on policy variation across EU countries this study analyses the differences, similarities and the best practices in servicemen engagement into economic activities by providing them with a stimulating environment for it. The aim of the paper is to provide a composition of existing practices of entrepreneurship skills development of early retired servicemen in EU member countries and evaluate the differences between Central and Eastern Europe (CEE) and Western Europe (WE) practice.

Following this introduction, the next two sections provide the literature review and research methodology used in the study including the description of research instrument, sample selection and data collection. Section four presents the research findings starting with the evaluation of the role of pensions and compensation for servicemen as a contextual variable for entrepreneurship, following with the analysis of active labour market measures for entrepreneurship in different EU countries. The article concludes with discussion on findings and implications for future research.

LITERATURE REVIEW

In terms of servicemen entrepreneurship after their active military career, the main issue concerns the relationship between active and passive labour market policies as main motivators for self-employment (Vigoda-Gadot *et al.*, 2010; Cawley & Maclean, 2012; Šileika & Bekerytė, 2013). Majority of EU member states with early retirement of servicemen (passive support) do have active programmes for their reintegration into labour market (active support) and some of those programmes encompass entrepreneurship skills development initiatives. Coordination between the two determinates the level of economic activity in civil life of early retired servicemen.

Early retirement guarantees a constant change of human resources in the national defence systems which are necessary for their regeneration. Consequently, servicemen retire on average 15-20 years earlier than people serving in civil workplaces (Henning, 2011; Wood *et al.*, 2012). The retirement pension does not equal to income that supports the standard of living that a person had before the retirement. Early retirement ensures meeting essential needs only. In order to create and maintain their well-being, a person must continue working and receiving extra income. According to previous research (Early, 2011; Ruiz & Morrow, 2005), about two-thirds of servicemen who entered early retirement work full-time. At the same time Hope *et al.* (2011) found that retired servicemen are more likely than other unemployed individuals to be self-employed. According to their findings, the probability of self-employment varies from 45 percent to as high as 88 percent.

Middle-aged servicemen, who have been discharged and want to re-start their economic activities in civil life, experience adjustment problems and require external support. Failure to understand the needs of these people is likely to result in an unsuccessful experience for self-employment and losses in self-confidence (Brown & Gross, 2011). De la Porte and Jacobsson (2012) used social investment approach to equip such people with the necessary skills to face change and provide supportive service to develop their entrepreneurship activities. The case of every serviceman is unique and depends on institutional factors such as previous work, attained rank or position, as well as on the individual's personal characteristics, communicability, and flexibility. Service in military for a few decades may provide a person with highly specific competencies necessary for entrepreneurship, skills like communication, group leadership, problem solving, and risk-taking (Caligiuri *et al.*, 2011; Haerem *et al.*, 2011; Chandra, 2013). Those competencies could be understood as transferable expertise and knowledge for entrepreneurship.

MATERIAL AND METHODS

As a methodological approach for this study, the author chose multi-institutional survey, which was a part of larger research financed by a grant (No. SIN-19/2012) from the Research Council of Lithuania. Questionnaire has been prepared based on theoretical implications in passive and active labour market policy and institutional agency in entrepreneurship development (Smaliukiene, 2014). The questionnaire included required data on programs and services that maintain the promotion, training, counselling and financial or infrastructural support by fostering entrepreneurship activities of retired officers. The questionnaire consisted of four sections. Section 1 requested basic information to identify passive support towards early retirees and initiatives in supporting employability of military/police officers to re-integrate them into the labour market after retirement. Section 2 requested information on particular

Table 1. Received answers from authorities

Received answers from military authorities from:	Information collected from secondary sources about:
Belgium	Austria
Czech Republic	Bulgaria
Denmark	Germany
Estonia	Ireland
Croatia	United Kingdom
Latvia	
Poland	
Luxembourg	
Netherlands	
Portugal	
France	
Romania	
Finland	
Slovakia	
Slovenia	
n = 15	*n* = 5

Source: own study.

activities that the government (or other institutions) is implementing for retired military/police officers. Section 3 invited to provide the assessment of existing activities in employability, while section 4 demanded information for future development in labour market reintegration programmes.

The survey was conducted by sending questionnaires to Ministries of Defence of all (N = 27) European Union member countries using Lithuanian military attaches' network. A total 15 questionnaires of 27 were returned completed (Table 1 provides the list of the countries where information came from). Additionally, information was collected from secondary sources about policy in Austria, Bulgaria, Germany, Ireland and United Kingdom.

The survey has provided comprehensive qualitative data on different policies and practices in EU regarding reemployment of early retired officers and servicemen. The data was analysed by looking for similarities and differences within and across two groups: (1) Eastern and Central European countries, (2) Western European countries.

RESULTS AND DISCUSSION

Role of Pensions and Compensation in Servicemen Motivation for Entrepreneurship After Early Retirement

The system of pensions and compensation for servicemen is a crucial contextual variable in entrepreneurship development. We base our approach on economic theories of entrepreneurship, so-called "push" approach. The "push" theories regard entrepreneurship primarily as new business creation and as an alternative to avoid unemployment and psychological discomfort (Smaliukiene *et al.*, 2012).

Early retirement goes along with pensions and compensations that are categorized as a passive labour market policy. On the one hand, passive policy represents protection mechanisms and ensures a certain income level. On the other hand, it has a major impact upon the gaining labour market adjustment capacity and financial incentive for entrepreneurship. While life expectancy and working age are increasing and birth rates are decreasing, in many EU countries pension reform, which is seeking to increase the retirement age, is being implemented (Table 2 and Table 3). This trend can be noted while analysing pension systems for military reforms.

In some countries (Ireland, Denmark, Great Britain, Croatia, Poland, the Netherlands, France, Germany) pension reforms for the servicemen are extending the retirement age for the servicemen and introducing more restrictions to early retirement.

Analyzing retirement provision for servicemen, countries can be divided into three groups. The first group consists of the countries where there is a constant rejuvenation of the military, and servicemen can retire more than a decade before the full retirement age. This group comprises the majority of our analyzed countries from CEE and WE: Ireland, Bulgaria, the Czech Republic, Estonia, Spain, Croatia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, and Finland. The second group consists of countries where servicemen can retire 6-10 years earlier than other professionals. These are only countries of Western Europe: UK, the Netherlands and Germany. The third group consists of countries where the retirement age for the servicemen is close to the full retirement age (5 years or less before the latter). These are also countries of Western Europe: Austria, Belgium, Denmark, and Luxembourg.

In all analyzed countries servicemen may terminate their military service before the early retirement age. In some Western European countries (Germany, the UK, France), such persons can benefit from the reintegration programs for servicemen.

Table 2. Retirement age for servicemen

Country	Age of retirement	
	Full retirement (men)	Retirement of military personnel[1] (average)
Austria	65	50-65
Belgium	65	60
Bulgaria	63	52-54
Croatia	65	45
Cyprus	65	.
Czech Republic	62	42
Denmark	65	60
Estonia	63	52
Finland	62-68	46[2]
France	62	45-57
Germany	65	55-65
Greece	67	.
Hungary	62	.
Iceland	67	.
Ireland	65	47-63
Italy	66	.
Latvia	62	43
Lithuania	62.8	47
Luxembourg	65	60
Malta	61	.
Netherlands	65	60[3]
Norway	67	.
Poland	65	45
Portugal	65	.
Romania	64	55[4]
Slovakia	62	40
Slovenia	63	45
Spain	65	45-58
Sweden	61-67	.
United Kingdom	65	55-60

Source: own study.

Pension received by servicemen is calculated using different methods, yet compared to previously received salary, it remains substantially lower. In some cases laws are being adopted to prevent retired servicemen from pension reduction due to a new state pension system (France) or when they are recruited in a public or private sector (Croatia).

[1] The average retirement age of officers is provided in case where soldiers are serving under term contracts.
[2] The average retirement age for the last few years has been 52 years (counting those who are retiring after full service) and 46 years (counting also those who retiring before full service years.
[3] The retirement age for officers of the Navy is 58 years, for officers of the Army and Air force is 60 years.
[4] It is foreseen to increase retirement age up to 60.

Grouping countries by passive labour market policy regarding motivation factors for entrepreneurship, we cannot see any links to the prevailing social system models, so we can assume that this is rather related to the different development of police and military as a special institution in each country. At the same time there is a clear trend to provide bigger financial support (higher pensions) in cases where early retirement age is close to full retirement age; and this is more common in Western European countries.

Table 3. Existing and expected retirement age

Country	Male			Female		
	2010	2020	2060	2010	2020	2060
Austria	65	65	65	60	60	65
Belgium	65	65	65	65	65	65
Bulgaria	63	63	65	60	60	63
Croatia	62	62	62	62	62	62
Cyprus	65	65	65	65	65	65
Czech R	62 y 2 m	63 y 8 m	69 y 4 m	58 y 8 m	61 y 8 m	69 y 4 m
Denmark	65	66	68	60	66	68
Estonia	63	63y 9m	65	61	63y 9m	65
Finland	62	65	65	62	65	65
France	62	62	62	57.9	61.7	62
Greece	65	65	69.4	60	65	69.4
Iceland	60-65	62-67	62-67	60-65	62-67	62-67
Ireland	66	66	68	66	66	68
Italy	65	65.8	67	65	65.8	67
Latvia	65	65	65	60	60	60
Lithuania	65	65	65	65	65	65
Luxembourg	61	63	65	60	63	65
Malta	65	65	65	65	65	65
Netherlands	67	67	67	67	67	67
Norway	65	65	65	65	65	65
Poland	65	67	67	60	62	67
Portugal	64	65	65	59	61	63
Romania	63	63	63	61	61	61
Slovakia	63-68	63-68	63-68	63-68	63-68	63-68
Slovenia	61-67	61-67	61-67	61-67	61-67	61-67
Spain	65 y 4 m	66 y 11 m	70 y 3 m	60 y 4 m	66 y 11 m	70 y 3 m
Sweden	65	65y 9m	67	65	65y 9m	67
United Kingdom	65	65	72.5	65	65	72.5

Source: own elaboration based on (Eurostat data; The 2012 Ageing Report; OECD, 2013).

Active Labour Market Policy for Entrepreneurship Development: Four Types of Practices

The dismissal from service occurs ten or even twenty years earlier than the full retirement age. People tend to look for new economic activities as occupational pension does not provide the same level of well-being, which they used to have in the military. On the basis of the practice of implementation of active labour market measures for retiring servicemen, countries are divided into four groups

The first group includes countries where servicemen go into early retirement and are subject to measures of reintegration into the labour market. These are Ireland, Great Britain, France, Poland, Romania, Croatia, Germany and Lithuania. Implementation of measures is coordinated by an institution of the National Defence and its priorities and implementation mechanisms are very different in each country. Looking from entrepreneurship development perspective, only few national programmes emphasize shaping entrepreneurship skills. Looking more deeply into the situation in CEE, Poland, Romania and Croatia could be presented as examples:

- Reintegration of Polish servicemen is organized in cooperation with central and local authorities, non-governmental education organizations and organizations that provide counselling on the labour market. Counselling for servicemen is provided individually as well as in trainings and seminars. There is also a personal psychological test that they need to complete. On the basis of it, occupation, places of work or retraining for self-employment are chosen. Professional counselling and training for the servicemen are provided by the same institutions that offer services for other Polish people.
- In Romania since 1998 restructuring military and reducing the number of servicemen, a retraining system for the reintegration into the labour market has been created for servicemen with terminated contracts. The program is as a necessary social measure, compensating for the social and material losses servicemen encountered during the restructuring process. It was designed in cooperation with Ministries of National Defence, Labour and National Education. Specialized units in the internal structure of the Ministry of Defence, coordinate the system of vocational retraining in military centres in different counties. District experts work in accordance with the procedures of vocational training. Program activities, i.e. counselling and training, are implemented by the National Employment Agency, controlled by the Ministry of Labour. Retraining system includes guidance that facilitates contact with the civil environment. The servicemen are provided with information, counselling and assistance in job search and self-employment.
- In Croatia reforming the system of Defence, a transition program has been designed for servicemen going into early retirement. The program is implemented by the Ministry of National Defence through programs of special assistance: information program, transition workshops program, vocational training program, employment assistance program and self-employment assistance program. Training is organized as a part of an educational program which includes: getting familiar with and increasing the state of consciousness of one's own potentials, individual preferences analysis, system of values and capabilities, testing one's communication and career skills,

decision making process, setting objectives and, developing skills of presenting own professional profile. The workshop is carried out in a dynamic manner through interactive cooperation with the Program participants.

Entrepreneurship skills development differs country to country in Western Europe. Two examples – UK and France will be analysed in detail:

- In the UK reintegration into civil life, as well as other social services for servicemen, are provided by a contractor – a private company which has won the public tender. Counselling and training start immediately after making a decision to leave the military. A serviceman is first obliged to talk to the officers, who provide him/her with the general information, while an officer of individual training and reintegration advise him/her on the reintegration into the labour market. The officer helps the serviceman define further goals and create a personal reintegration plan. The plan could be oriented towards employment or towards entrepreneurship. On the basis of this plan, a private company continues to counselling him/her on employment and provide training. Reintegration in the UK is identified as a successful transition from the military life to the civilian world; it is mainly focused on the employment or self-employment in the private sector. During the reintegration, information and counselling are provided that enable people to make more effective decisions for (self-) employability. A person leaving the military, on the basis of the number of years in service and his/her rank, is supported as the reintegration program is seen as a reward for the time spent in service.
- In France reintegration into civil life is associated with retraining. Retired servicemen can choose to use retraining for preparation for the employment or entrepreneurship activities. Career officers or people working under a contract of employment can benefit from counselling on assessment and guidance in order to prepare for the return to civilian life. They can also benefit from professional training or assistance in job search. Reintegration program is of two types – focused on employment or self-employment in the private sector, where retraining is linked to the skills required, or transferred to the civil service. The gradual transition from military service to work in the public sector is one of the state's priorities of human resource policy. Both types of reintegration program consist of four phases: information provision, guidance, training and recruitment. Implementation of the program and payment of benefits is gradually being transferred from the Mobile Defence Agency to the National Employment Agency.

The second group consists of countries which have reintegration program for the servicemen although the difference between their retirement age and the full retirement age is little (less than 10 years). These are only two Western European countries: Belgium and Germany. In Belgium the difference between the retirement age for servicemen and the full retirement age is only 5 years whereas the difference between the pension and previous salary is only 15 percent, i.e. servicemen go into early retirement at such age and with the financial backing that there is no motivation to look for a new job or start entrepreneurship activities. This reintegration program is a relic of the time when the servicemen could retire at a younger age. Currently reintegration programs are mostly directed to those who leave the service voluntarily having secured

the minimum or slightly higher pension. These servicemen go to the early retirement at 40-45 and the pension is usually not paid until they are of a particular age (it is about 60). Meanwhile in Germany, the difference between the retirement age for servicemen of different categories and the full retirement age is 9 years.

- In Belgium reintegration program is available only to non-commissioned officers and career officers. The program itself is directed to vocational retraining of skills which could be used for new employment or for self-employment. Servicemen who want to leave the military service and find a new job in another field (in private or public sectors or work on their own) can get help from a specialized office. Retraining is finished when a person starts a new job. The servicemen can choose in which, private or public, sector they want to continue their career. The program is basically focused on the employment or self-employment in the private sector.
- In Germany the reintegration of servicemen into civil life is mostly related to the military reform, i.e. the reduction or rejuvenation of the military. Measures of reintegration are long-term and systematic; however, they are employed only during the period of the military reform. Full reintegration program is only for the servicemen serving under long-term contracts. Servicemen, serving under short-term contracts, at the end of their service can benefit from a partial reintegration package, which gives them personal training and professional qualifications. They are subject to active labour market measures that encourage professional development. During this learning period they receive remuneration. During full reintegration program, just like in Belgium, the servicemen are given long-term (up to three years) retraining leave and if the salary is lower than that obtained in the military when working for another employer or by self-employment, it remains the same.

The third group consists of countries where servicemen go into early retirement, but are not subject to special measures of reintegration. These are mixture of CEE and WE countries: Estonia, Latvia, Slovakia and Finland. In these countries servicemen who have completed the service are not attributed to the special group which should be given special attention and individual measures. Measures of reintegration into the civil life for the servicemen, who have completed their service, are given just like to the other members of the social system. Retired serviceman can benefit from national or regional entrepreneurship development programmes as other citizens.

The fourth group consists of countries where servicemen are not subject to early retirement or reintegration programs. These are only Western European countries: Denmark, the Netherlands and Luxembourg. In these countries servicemen retire at the age of 60 which is five years earlier than the full retirement age; however, it is not considered early retirement. Persons who retire earlier can apply for support to national or regional programmes for entrepreneurship skills development.

CONCLUSIONS

The results of the comparative analysis of policies on entrepreneurship development of early retired serviceman point out the fact that practice for entrepreneurship skills development of early retired servicemen varies across EU member states. Analysing retirement practice of the military in EU countries, the trend of military rejuvenation is

noted. This trend forces to cut middle-age people into early retirement. It means that they will have to reintegrate into the labour market in order to maintain a similar level of well-being for themselves and their families. Accordingly, the entrepreneurship skills development is not only to prepare servicemen, who are being dismissed from the service, for the new economic activities, but to create conditions for their successful reintegration into civilian life.

The analysis shows that the impact of specific entrepreneurship development programmes for servicemen is quite limited in all analysed countries. Active labour market policies only seldom include measures for entrepreneurship skills development; type, intensity and effectiveness of these policies vary across countries.

The value added of this analysis lies in grouping countries according to intensity of reintegration programmes and the impact towards entrepreneurship development. The first group includes countries where servicemen go into early retirement and are subject to measures of reintegration into civil life. The group consists of mixture of CEE and WE countries: Croatia, France, Great Britain, Germany, Ireland, Lithuania Poland, and Romania. Some of activities for entrepreneurship skills development are included into reintegration programs. In CEE the main emphasis is put on self-development programs, while in WE more time and resources are devoted to start-up activities. In Poland there are psychological tests for self-evaluation, while in Croatia the main emphasis is on individual preferences analysis, testing one's communication and career skills, decision making process and individual's objectives. The system of reintegration and especially entrepreneurship development activities are half-way developed in CEE because of the lack of resources or priorities. As alternative, a comprehensive reintegration system is developed in France where gradual transition from military service to civil life is one of the state's priorities of human resource policy. Retraining is long-lasting and linked to the skills required for employment or self-employment. At the same time there is no evidence that entrepreneurship development of early retired servicemen is priority in any of analyzed countries.

The second group consists of countries which have reintegration program for the servicemen although the difference between their retirement age and the full retirement age is little (less than 10 years). These are Belgium and Germany. The countries of the first and second groups provide most inclusive reintegration programmes that could lead to entrepreneurship skills development of retired servicemen. The third group includes countries where servicemen go into early retirement, but are not subject to special measures of reintegration. These are Estonia, Latvia, Slovakia and Finland. In these countries servicemen who have completed the service are not attributed to the special group which should be given special attention and individual measures. Measures are given just like to the other members of the society and highly depend on general entrepreneurship development programs and activities in the country. The fourth group pools countries where servicemen are not subject to early retirement. These are Denmark, the Netherlands and Luxembourg.

This study has several limitations that should be identified while interpreting the results. The first limitation is that the questionnaire relies upon purchasing one-side representation: only institutions were surveyed. Entrepreneurship skills development

refers to institutional and individual agency. Individual internal motivation is one of the biggest factors that determine entrepreneurship activity.

Another limitation of the research lies in the representation of the countries practices. The results of institutional survey represents only half of EU member countries practices, while response rate from authorities was 55%. Finally, although the literature suggests a more detailed indicators for entrepreneurship skills development, more research may be necessary to empirically test whether those indicators are adequate in measuring the opportunities for entrepreneurship of servicemen.

For the conclusions, some policy implications could be drawn. The impact of specific entrepreneurship skills development programmes for servicemen has to be increased in all analysed countries, as servicemen are a highly potential group of entrepreneurs. Service in military for a few decades gives highly specific competencies necessary for entrepreneurship, like clear communication, group leadership, problem solving, and risk-taking. At the same time this group is highly specific and requires specific entrepreneurship skills development programmes that utilise servicemen competencies and add specific knowledge and skills needed within a business environment.

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