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PART I

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THE IMPORTANCE OF RISK ASSESSMENT IN COMMON EUROPEAN UNION DEPOSIT INSURANCE SYSTEM

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Abstract. Deposit insurance system is an important element of each country's financial system that contributes to the preservation of financial stability and consumer protection in the cases of banks bankruptcy. The main problems associated with the banking activity are too high amount of risk and inadequate insurance for banks clients, depositors. In European Union countries there are different types of deposit insurance systems, they have different approaches to the calculation of contributions to the deposit insurance funds, and deposit insurance systems do not value or estimate the banks risk differently. The European Union has repeatedly aimed to create a single deposit insurance system to all countries, which would be based on banks' risk assessment. The analysis showed that the deposit insurance system evolution began from the simple to the complex development of the system and the many risk factors for evaluating the contribution calculation, but even in the most recent presented deposit insurance system there is no plan to evaluate one of the important factor – the systemic risk level.

Keywords: deposit insurance, deposit insurance system, systemic risk, risk-based model

JEL Classification: G21, G22

1. Introduction

The main goal of single deposit insurance system is to minimize the burden on taxpayers, when bank faces with financial difficulties. European Union countries have different deposit insurance systems; they significantly differ in both their contributions to the deposit insurance system for the collection and calculation of insurance premiums and supervising bodies

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(Gómez-Fernández-Aguado, Partal-Ureña, in 2013). In order to avoid these differences since 2008 year The European Commission has started to present a common deposit insurance schemes, which could be applicable in all European Union countries. Since 2008 The European Commission has presented three deposit guarantee schemes, and the latest of which was introduced only in the middle of 2015 year. In order to determine how the newest deposit guarantee system was developed, the paper analyzed previous European Commission's deposit insurance systems, analyzes the newest deposit insurance premium calculation model, the importance of deposit insurance systems is analyzed and evaluates which risks should be included in the calculation of deposit insurance premiums. So the object of this research is EU deposit insurance system. The aim of the article is to examine the importance of risk assessment in the common EU deposit insurance system.

2. Methods

In order to equalize the differences between the deposit insurance systems and to improve the effectiveness of it the European Commission aims to create a common EU deposit insurance system. The article analyses and summarizes the various authors' studies in the field of deposit insurance systems. Firstly article provides different authors' studies with the risk-based deposit insurance systems. Later the EU's deposit insurance system risk assessment methodologies are analyzed and three common EU deposit insurance system types and aspects of the insurance premiums calculations are presented. After the analysis of common EU deposit insurance system, the suggestion of other risks evaluation in the common deposit insurance system is presented. In the article there are used systematic scientific literature analysis, comparative analysis and graphical analysis methods.

3. Deposit insurance system influence to banks' risk and risk assessment

Deposit insurance, like any insurance scheme is designed to reduce the moral hazard effects, which can be led by shareholders, banks or depositors' behavior. Deposit insurance generally has two main functions: to protect consumers and increase the stability of financial markets. These two objectives are provided in the European Directive 94/19 / EC on the guarantee scheme (Gerhardt and Lannoo, 2011). There are three basic types of deposit insurance up to this event Ex-ante, after the event Ex-post and mixed deposit insurance system. The distributions of these types of systems in the EU countries in the end of 2012 are presented in Table 1.

Table 1. Overview of deposit insurance schemes types in EU Member States in the end of 2012 year.

Deposit insurance system type	Ex-ante	Ex-post	Mixed
Country	Belgium, Bulgaria, Czech Republic, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Portugal, Slovakia, Spain.	Austria, Italy, Luxembourg, the Netherlands, Slovenia, Sweden.	Cyprus, Denmark, France, Germany, Malta, Poland, Romania, United Kingdom.

Source: prepared by the authors based on Gómez-Fernández Aguado-and-Partal Ureña (2013).

As it can be seen from Table 1, most of the EU countries have Ex-ante deposit insurance system type. Such deposit insurance scheme is provided in common EU deposit insurance system. There are distinguished two sets of deposit insurance systems forms - it is clearly defined explicit and implicit deposit insurance system. One of the main forms of deposit insurance system is clearly deposit insurance system. Demirguc-Kunt, and Laeven Kane (2014) argues that the country can offer implicit deposit insurance, causing pressure on governments to provide assistance to banks in case of insolvency, but this insurance system is not suitable if a country already has formal legislation defined deposit insurance system. Altunbas and Thornton (2013) study confirms that clearly defined in the deposit insurance system is more favorable to depositors. The authors examined clearly defined deposit insurance system impact to private capital inflows in developing countries. Study showed that when country adopt clearly defined deposit insurance system it leads to the increase of private capital inflows to country. This is due to the explicit deposit insurance system; countries are more attractive for depositors and investors for the expected additional security measures and the fact that deposit insurance provides banks the ability to have higher returns. Financial market stability, the creation and maintenance is one of the most important functions of the deposit insurance system, which takes place through the mechanism, which is presented in Figure 1.

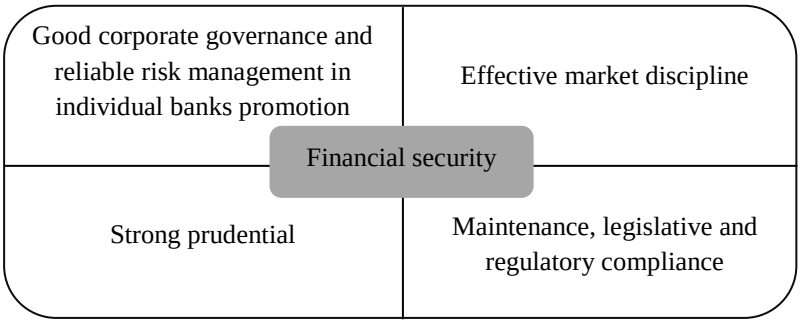

Fig. 1. Financial security features.

Source: prepared by the authors based on the Bank for International Settlements (2014).

Based on this mechanism and through all the part of it, the country can be achieved financial security. Thus, the deposit insurance system maintains the confidence of depositors in the case of bank failure. Facing with the macro-economic instability, the basic principles for deposit insurance guidance are given on the areas in which the deposit insurance system needs to strengthen in order to provide reliable support for depositors. Deposit insurance system efficiency depends not only on its provided features, but also on the environmental features in which it operates. Environmental features include macroeconomic conditions, level of independence, the financial structure of the system, prudential regulation and supervision of the legal and judicial system and the accounting and disclosure systems.

The main objectives of the deposit insurance system is to protect depositors and contribute to financial stability, but with the following main goals it is very important that the society will be informed about the benefits of deposit insurance system and its limitations. Deposit insurance should have effective contingency planning and crisis management guidelines and

procedures to ensure that it can effectively respond to some bank failures or other significant adverse events in banking system (Bank for International Settlements in 2014). Deposit insurance system is important element of each country's financial system that contributes to the preservation of financial stability and consumer protection.

Deposit insurance system affects not only depositors but also the bank and its risk-taking level. Often, a range of issues related to deposit insurance systems were solved during financial crises. Prean and Stix (2011) analyzed the raising amount of deposit insurance on banks during the financial crisis, according to Croatian data. The study showed that the new limits of deposit insurance amount had a positive impact on the confidence of depositors and the stability of the local currency. This positive effect is prominent through the increase of political reliability. However, in order that the deposit insurance system will be seen as credible, the population must be convinced that the government will keep its commitments. In the long term it showed that the increase of the amount of deposit insurance did not help to improve the confidence of depositors and the stability of the local currency remained lower than they were before the financial crisis. Boyle, Stover, and Tiwana and Zhylyevskyy (2015) examined the impact of deposit insurance depositors' behavior during the financial crisis. The research showed that when people faced with a hypothetical bank collapse, respondents from countries where there is no deposit insurance divert a higher proportion of their funds in insured accounts and require higher interest rates on these accounts than those respondents whose countries have clearly defined deposit insurance system. However, the authors argue that the deposit insurance system helps to effectively reduce surplus funds withdrawal and contribute to the reduction of financial risk.

While deposit insurance provides benefits to depositors, it sometimes can lead to negative consequences for the banks. Deposit insurance effect on banks' risk-taking (the bank loan credit quality) was analyzed by Ioannidou and Penas (2010). The authors found that the introduction of deposit insurance leads to the of subprime loans probability increase in the bank. Furthermore, the bank does not increase the collateral requirements or does not reduce the debt in order to compensate for the additional risk. Deposit insurance impact on banks' risk-taking and the quality of regulation in ten Islamic banks and commercial banks in South Korea analyzed by Kim, Kim and Han (2014). The study showed that after the introduction of deposit insurance, banks began to actively take risks, which leads to the increase of moral hazard risk. It was noticed that banks assume greater risk in countries where deposit insurance scheme is intended to protect foreign currencies or interbank deposits.

Ways to avoid the negative consequences of the deposit insurance system provides Lakštutienė, Krušinskas and Rumšaitė (2011). Negative consequences can be avoided by allowing the operation of market discipline, increasing the bank's responsibility for managing and promoting the interests of transparency, the deposit insurance system management at government level and making changes in the deposit insurance funding model. When the economic situation in the country has stabilized and the volume of deposits in banks no longer declining, banks can accept growing operational risks associated with particularly high deposit insurance limits, thus depositors may lose their protection. The main task of the deposit insurance system is to restore the population confidence of the banking sector, which

significantly reduces the economic crisis, and guarantees can also be used as an additional measure to stabilize the situation. In the scientific literature it can be found studies that specifically examined the risk-based deposit insurance schemes and some risks assessment importance in the deposit insurance system. Different studies and their results are presented in Table 2.

Table 2. Various authors' studies associated with the risk-based deposit insurance systems.

Authors	Research	Research results
Anginer, Demirguc-Kunt and Zhu (2014)	Examined 4109 banks whose shares are publicly traded on data from 96 countries. The study examined separately deposit insurance schemes on banks' risk and systemic stability separate in downturn period (in 2007-2009) and in the pre-crisis period (2004-2006), evaluating systemic risk.	Deposit insurance can increase moral hazard and make the financial system more vulnerable to crises in the good times, but it can enhance the confidence of depositors and reduce the likelihood of bank runs during volatile periods. The net effect of the deposit insurance system and the stability of the banking risk depend on whether the deposit insurance system benefits are greater than the costs of insurance.
Lee, Lin and Tsai (2015)	Analyzed the risk-based deposit insurance schemes, where the deposit insurance premium rates were seen as a put option value where the exercise price is regarded as insured deposits and the main asset is determined as the volume of bank asset.	Deposit insurance is undervalued in view of the systemic risk. Systemic risk and asset correlation evaluation helps to reduce the protective net of subsidies from the government and helps to solve a problem of premiums. Determination of the amount of deposit insurance based on a systemic risk may lead to the financial system mitigate distortions.
Acharya, Santos and Yorulmazer (2010)	Studied what factors should be determined setting deposit insurance premiums using different statistical methods and calculations.	Key factors that determine the banks systemic risk is a correlation between the bank's return and banks' size and banks' interconnectedness. These factors should be clearly and continuously evaluated in determining deposit insurance premiums.
Staum (2012)	Examined three banks, which differ from each other only by the bank return of asset correlations. The study calculated Shapley value, as measured by the average cost price and Aumann-Shapley value, which reflects the positive external factors and the benefits of a bank's solvency is expressed as it participation in the deposit insurance system level function.	Participants of deposit insurance system should be encouraged to reduce their systemic risk components. The author has developed a series deposit insurance schemes which assess Shapley and Aumann-Shapley values. According to the author, a part of created schemes are worthy of consideration and suitable for use in determining deposit insurance premiums which includes banks systemic risk.
Bernet and Walter (2009)	Examined all 27 EU countries deposit insurance systems in order to create a modern deposit insurance system.	Deposit insurance system should assess 4 different risk classes, where each class presents the contribution factor and the calculated contribution must be multiplied by a factor of systemic risk premium coefficient.

Source: prepared by the authors.

Studies have shown that the assessment of systemic risk is simply inevitable for the creation of effective deposit insurance system. Systemic risk is particularly important in today's financial system, where exists high level of banks interdependence.

In summary it can be said that the deposit insurance system has to perform several important functions to the entire financial system – to protect consumers and increase the stability of financial markets. However, the deposit insurance system may also have a negative influence - banks may begin to assume greater amount of risks, which leads to moral hazard growth. Therefore, deposit insurance premiums should be based on risk assessment and analyzes of various authors' studies have shown that it is necessary to assess the level of systemic risk.

4. Theoretical aspects of EU deposit insurance system risk assessment methodologies

The current deposit insurance system in Lithuania and many EU countries are based on the same percentage of the insured deposits amount, excluding banks and credit unions risk evaluation. Under the current system, commercial banks pay the Insurance Company contributions, which are account for a certain percentage of the total insured deposits (Deposit insurance Lithuania, 2015). Gómez-Fernández Aguado-and-Partal Ureña (2013) conducted the deposit insurance systems research which showed that in the end of 2012 year from 27 EU countries only 9 of them had risk-based deposit insurance systems. Although the law to deposit insurance systems are the same, but the EU systems are different. Also, in such countries as France, Germany, Italy, the Netherlands, deposit insurance is carried out by two institutions, depending on the bank or investment type. Such deposit insurance system completely neglects to limit bank risk-taking, which has a negative impact on the entire country's financial stability.

In order to determine whether the deposit insurance provides adequate protection for depositors, Gomez-Fernandez-Aguado, Partal Urena-and-Trujillo Ponce (2014) evaluated if the collected amount of funds in the bank resolution and deposit insurance is adequate to cover any unexpected losses in the Spanish banking system. According to the latest provided solutions the resources necessary for bank resolution and deposit insurance fund depends only on a fixed percentage of members situations. However, there is no assessment of the fund's portfolio risk, which should help to evaluate parameters such as the probability of default risk or expected loss amount for a particular member's default. Ignoring these parameters, the EU does not evaluate that the solvency of the fund may vary in different countries, which can generate problems in the development of a common EU fund. Also ignoring these risk factors over time can cause that in the recession period, total EU fund resources may be insufficient to ensure adequate solvency of banks.

First common EU deposit insurance system version was introduced in 2008 year, when the deposit guarantee scheme has been defined as Single Indicator Model. This method assesses the risks taking by banks in calculating deposit insurance premium:

(1) $$C_i = \alpha\beta_i x_i$$

where:

C_i – the contribution;

α – common to all members, reflecting the overall conditions in the banking system in the country;

β_i – proportional to the risk attitude of the i-th member;

x_i – the total amount of eligible or covered deposits.

Coefficient α often set in the statutes (or by law) governing the deposit guarantee scheme and should be regularly reviewed. It can reflect improvements or deteriorations of the national banking sector and leads to an increase or decrease in the total amount of collected resources. β coefficient takes into account a member risks less risk involves in lower contributions to the deposit guarantee scheme and a higher risk conversely increases the amount of contributions. The coefficient can be from 80 percent (least risky banks) up to 150 percent (the most risky banks) and is determined from one of the indicators given in Table 3.

Table 3. List of indicators.

Class	Indicator name	Formula
Capital adequacy	Tier 1 capital ratio	$\frac{\text{Tier I Capital}}{\text{Risk weighted assets}}$
	Total capital ratio	$\frac{\text{Total Capital}}{\text{Risk weighted assets}}$
Asset quality	Non-Performing Loan (NPL) ratio	$\frac{\text{Non-Performing Loans}}{\text{Gross Loans}}$
	Loan loss provision	$\frac{\text{Loan Loss Provison}}{\text{Net Interest Revenue}}$
Profitability	Cost to income ratio	$\frac{\text{Operating Expenses}}{\text{Operating Income}}$
	Return on average assets (ROA)	$\frac{\text{Net Income}}{\text{Average Total Assets}}$
Liquidity	Liquid assets to deposits ratio	$\frac{\text{Liquid Assets}}{\text{Customer \& Short Term Funding}}$
	Loan to deposit ratio	$\frac{\text{Net Loans}}{\text{Customer \& Short Term Funding}}$

Source: prepared by the authors based on European Commission (2009).

European Commission calculations with a single indicator model are presented in Fig. 2, which shows each country's contribution to the amount of the maximum increase/decrease contributions compared to what would be paid under the current contribution systems.

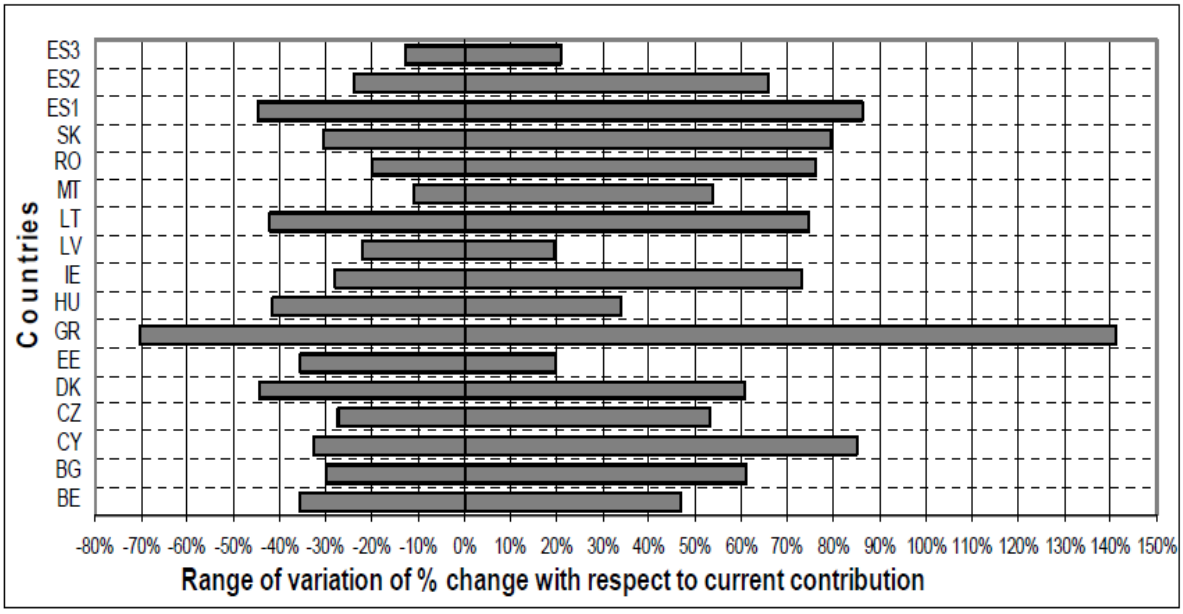

Fig. 2. Range of variation with respect to current contribution in different EU countries.

Source: European Commission (2009), p. 29

An investigation showed that this single indicator model great flexibility of the deposit insurance premium calculation exists. In Spanish case, the banks were divided into 3 groups and were analyzed separately, the decision was taken due to the current Spanish deposit insurance system features (ES1 shows the banking institutions, ES2 credit cooperative banks and savings banks ES3). Deposit insurance premiums sizes can vary from a selected indicator in the case of Greece, contributions variation even reach 210 percent. However, it must be emphasized that in the case of Greece, a huge premium variation is due to the country's specific features associated with the current Greek deposit insurance premium financing mechanism. In Lithuania, this variation would be slightly lower from -42 percent to +75 percent. It is worth emphasizing that this study did not analyzed all EU countries, the study did not include countries such as Poland, Slovenia, France and others. However, all of the Baltic countries participated in this study, and the smallest variation in contributions by single indicator model would have been in Latvia, where the contributions vary from -22 percent to +20 percent to current Latvian banks amount of contributions. European Commission in order to assess whether single indicator model properly captures the risk profile of the banks they analyzed the correlation between the 8 financial indicators. The results showed that the values of the correlation between indicators of different categories are not close to +1 or -1. Which shows that by combining indicators from different categories additional information might be captured.

So in order to get more accurate risk assessment in 2009 year European Commission has presented Multiple Indicators Model. This model was certainly more complicated, because this model was intended to overcome one of the main weaknesses of the single indicators

model. This model assumes that the total deposit insurance premiums must be made in advance (deposit guarantee scheme council or government) and then distributed to the members of the scheme. Members' contributions are calculated by multiplying the total estimated amount of the contributions by a coefficient that reflects the relative weight of each member's risk. According to multiple indicator model every members deposit insurance premium shall be calculated:

$$C_i = TC \cdot RS_i \tag{2}$$

where:

TC – total amount of contributions;

RS_i – relative risk weight of each member.

The relative risk weight of each member's is obtained by combining the base member contributions as well as their risk behavior. Overall risk behavior for each member is expressed as a coefficient βi which is determined by analyzing and combining information on the four groups of indicators (see in Table 3). Each member is assigned depending on the result of these 4 groups of indicators and the scores are transformed into βi via a linear relationship. Each member risk amount is obtained by multiplying βi by its contribution base xi, which represents the amount of covered deposits. Each member relative risk weight is obtained by normalizing the amount of risk that is each member risk dividing by the sum of total all members amount of risk. Behavioral risk factor βi can range from 80 percent to 150 percent and is calculated using a linear transformation of the assignment of each indicators particular values (see in Table 4).

Table 4. Scores to members, based on the set of indicators.

Class	Capital adequacy	Asset quality	Profitability	Liquidity
Very low risk		1		
Low risk		2		
Medium risk		3		
High risk		4		
Very high risk		5		

Source: prepared by the authors based on European Commission (2009).

This point allocation is carried out using the distribution of quintiles, quintile are divided into five groups, according to which a certain score is assigned for each of the calculated indicator. European Commission also carried out calculations with multiple indicators model, which are presented in Figure 3.

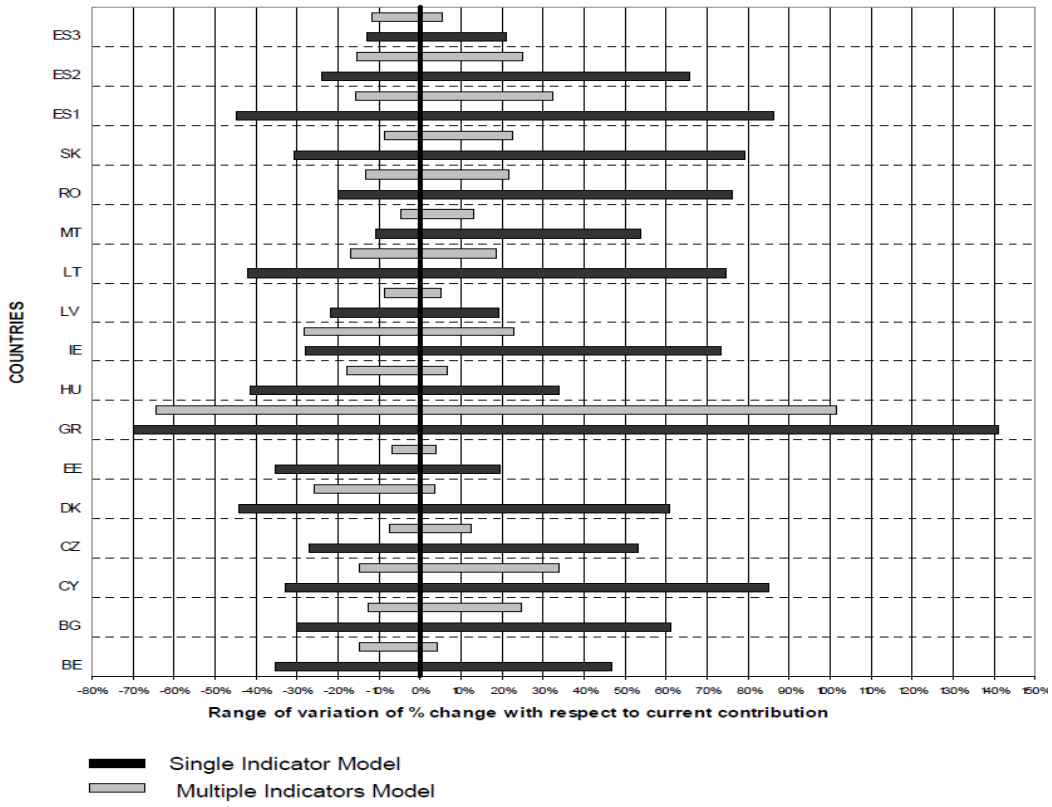

Fig. 3. Single and multiple indicators models range of variation with respect to current contribution in different EU countries.

Source: European Commission (2009), p. 35.

Multiple indicators model is much more complicated than a single indicator model and assesses in detail the four main risk groups in determining each member's deposit insurance premium amount. The risk assessment has reduced the size of contributions variation in all EU countries, but in the case of Greece, there still can be seen high contributions variation, but it is because its current deposits contribution mechanisms peculiarities. In Lithuanian case, payments variation would be from -18 percent up to +19 percent. In the Baltic countries, the smallest variation using multiple indicators model would be in Estonia and seek only from -8 percent to +4 percent. It is worth noting that the study carried out with a multiple indicators model was with the same EU countries, as well as single indicator model. Summarized results of the tests carried out with a single indicator and multiple indicator models presented in Table 5.

Studies have shown that although multiple indicators model is more accurate and better assess banks' risk profile, but risk assessment still need to include more indicators in order to get as accurate as possible bank's risk. So in 2014 year the European Parliament adopted a new Directive on Deposit Guarantee Schemes (DGS), the creation of (European Parliament and of the Council directive, 2014). According to this directive, the European Banking Authority (EBA) in 2015 of May 25 provided guidance on the new deposit guarantee schemes premium calculation methods. EBA is an independent body whose objective is to ensure effective and consistent level of prudential regulation and supervision to the entire European

banking sector. The main objective of this institution is to maintain financial stability in the EU as well as to ensure the banking sector integrity, efficiency and smooth functioning of its operation (EBA, 2015).

Table 5. Results of one indicator and multiple indicator models.

Models	Authors	Research results
Single indicator model	European Commission (2009) research	One indicator model is easy to use, but only one indicator of the 8 option ignores valuable information related to the bank's risk assessment, which can be measured by other indicators. Depending on the selected indicator the amount of contributions to deposit guarantee system significantly vary.
Multiple indicator model	European Commission (2009) research	This model is much more complex than a single indicator model. In order to use risk-based premiums evaluation mechanism it is crucial to ensure that the selected indicators would show accurate as possible bank's risk assessment. Evaluation of indicators from the different classes of risk helps to better determine the overall bank risk. There is also evidence from numerical experiments, that the amount of the premiums volatility in this model is significantly reduced.
	Gómez-Fernández-Aguado, P., Partal-Ureña, A. (2013)	Several indicators model does not assess the determinants of systemic risk, such as the correlation between the bank's investments and some institutions the size or banking interconnectedness, because this could lead that the credit institutions, which have a greater systemic risk can be subsidized by others which distorts the justice of the system.

Source: prepared by the authors.

Under the new decisions contributions to the DGS will be based on the amount of insured deposits and the degree of risk incurred by the respective member. Such deposit guarantee schemes contributions calculation will reduce the moral risk in banking activities. Under the deposit guarantee scheme, Member States may provide lower contributions to lower-risk sectors which are governed by national law (European Parliament and of the Council directive, 2014).

The European Banking Authority indicated the guidelines for the annual contributions to the DGS which may be calculated according to the following formula:

$$Ci = CR \times ARWi \times CDi \times \mu \tag{3}$$

where:

Ci – Annual contribution from member institution;

CR – Contribution rate (identical for all member institutions in a given year);

$ARWi$ – Aggregate risk weight for member institution;

CDi – Covered deposits for member institution;

μ – Adjustment coefficient (identical for all institutions in a given year)

Each year, the calculation of the annual target level of deposit insurance premium rate (CR) should be based on several assumptions:

- DGS began to collect contributions before the occurrence of the insured event (ex-ante deposit insurance type) of its members institutions and over 10 years the target amount of the deposit guarantee system amount should be reached;
- Contributions to the DGS must be spread over 10 years and as evenly as possible;
- Each year, contributions collected by the DGS must be equal to the annual target rate of premium which is set for the relevant year.

The adjustment factor should be used to ensure that the total annual contributions (total amount of all individual premiums) is equal to 1/10 of the target level.

Integrated risk factor (ARW) calculation of each participating institution should be assessed individually and based on the evaluation of various risk indicators for each of the following risk categories: a. Capital b. Liquidity and funding c. Asset quality d. Business model and management e. Potential losses on deposit guarantee schemes. Minimum ARW ratio should range between 50% and 75%, when the biggest ARW should be between 150% and 200%. A wider range can be determined only on the justified reasons. Without the main risk indicators, the Deposit Guarantee Scheme may also include additional risk indicators, which are important in determining the risk profile of the members of the institutions. The sum attributed to all risk indicators in deposit guarantee schemes for the premium calculation method must be equal to 100%. The allocation of weights for each specific risk indicators must be done in accordance with minimum weight requirements for risk categories and key risk indicators, which are presented in Table 6.

Table 6. Minimum weights for risk categories and core risk indicators.

Risk categories and core risk indicators	Minimum weights [%]
1. Capital	**18**
1.1. Leverage ratio	9
1.2. Capital coverage ratio or CET1 ratio	9
2. Liquidity and funding	**18**
2.1. Liquidity Coverage Ratio	9
2.2. Net stable funding ratio	9
3. Asset quality	**13**
3.1. Non-performing loans ratio	13
4. Business model and management	**13**
4.1. Risk-weighted assets/Total assets ratio	6.5
4.2. Return on assets (RoA)	6.5
5. Potential losses for the DGS	**13**
5.1. Unencumbered assets/covered deposits	13
Sum	**75**

Source: EBA (2015), p. 23

It should be emphasized that all this deposit guarantee scheme contributions calculation is only one of possible. Each Member State may develop and submit for approval its premium calculation method. Deposit Guarantee Schemes can used own risk-based methods, which would be allocated to the risk-based contributions calculation. Contributions should be calculated proportional to the members' risks, properly assessing the various business models risk profile. For the purposes of risk assessment methods is permitted to take into account the balance of a specified asset and risk indicators, such as capital adequacy, asset quality or liquidity (EBA Guidelines, 2015). Generally EU deposit insurance models and the evolution of main features are presented in Figure 4.

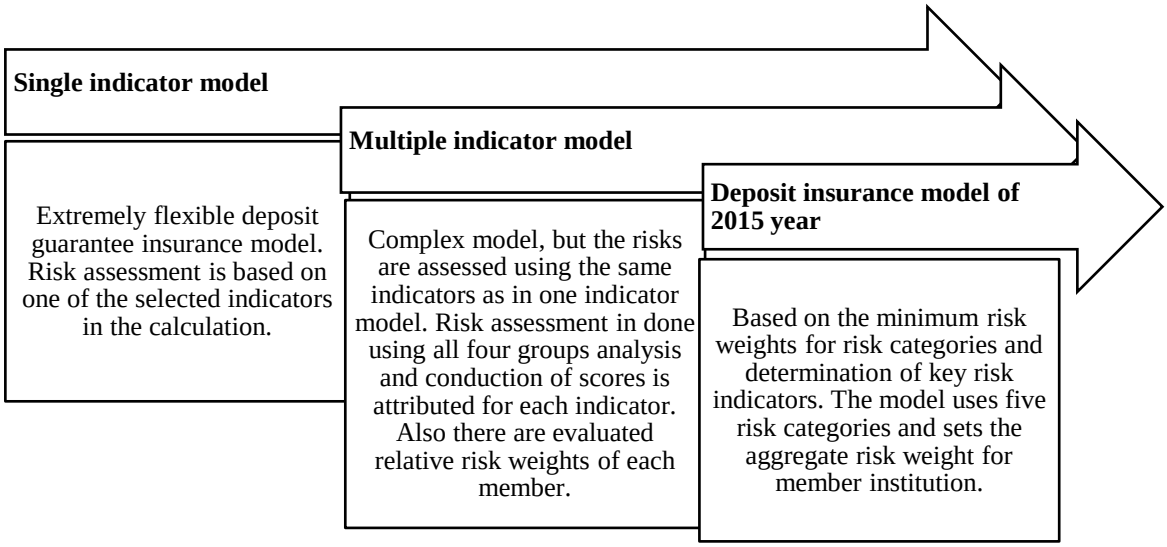

Fig.4 . Common European deposit insurance system models changes.

Source: prepared by the authors

Common deposit insurance system development began with the simplest one indicator model, later moving on to a number of indicators in the calculation of risk-based deposit insurance premiums evaluation and finally in 2015 year the risk assessment included an additional group of indicators and replaced some of indicators. The new deposit insurance premium calculation model should more accurately assess banks risks, because its calculation includes additional risk group and evaluates more risk indicators. However, although in 2015 year introduced deposit insurance calculation model the variety of bank risk assessment is estimated, but it still does not consider one of the major risk evaluation – systemic risk level in banks. Various authors' researches confirmed that the assessment of systemic risk in the nowadays modern society is just necessary and it could be done using one of several systemic risk assessment methods.

5. Conclusions

The main functions of the deposit insurance system are to increase the stability of the financial system and to protect consumers (depositors') interests. Deposit insurance systems can be divided into three types: Ex-ante, Ex-post and mixed. In EU countries there is mainly

dominated Ex-ante, before the insured event, deposit insurance system type. Deposit insurance system has many positive features, but it can have a negative impact on banks' risk - banks may begin to assume greater risk, which leads to moral hazard growth. Therefore, the calculation of deposit insurance premiums should be based on banks risks assessment and performed various authors studies showed that it is necessary to assess the level of systemic risk. Also, in many countries the existing deposit insurance systems do not provide sufficient protection for depositors and deposit insurance does not perform one of its basic functions.

In order to equalize the differences between deposit insurance systems and to improve the effectiveness of deposit insurance system the European Commission aims to create a common EU deposit insurance system. Since 2008 year there were presented three models of deposit insurance systems, ranging from extremely flexible and easily adaptable single indicator method moving to the minimum weighting of risk categories and key risk indicators and aggregate risk factor determination. It can be stated that 2015 year designed deposit insurance premiums calculation evaluated additional banks risks indicators, but it still does not consider one the most important systemic risk level evaluation in banks.

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SIMULATION OF PROGRESSIVE INCOME TAX IN LITHUANIA: EFFECT ON THE INCOMES OF THE NATIONAL BUDGET

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Abstract. One of the main means ensuring state's economical growths and development are the incomes closely related to the state tax policy. The Lithuanian Law on personal income tax (PIT) was adopted in 2003 for the first time and has been adjusted 63 times already. Procedures of personal income taxation adjusted from one to nine times during the year are influencing collection of incomes designated for national budget. In order to improve collection of tax revenues there are increasing plans on restructuring of the tax system. The fact is that countries who are applying the model of progressive personal income taxation system are collecting more taxed incomes than the states who are applying proportional rate of PIT. This is why the aim of during this survey is to assess how the collection of taxed incomes of the national budget would change when progressive personal income taxation would be applied by simulating different situations and using personal income taxation models used in Slovenia and Ireland. The results showed that the method applied for PIT calculation in Slovenia would be most useful subject to Lithuanian tax revenue collection as the change of personal income tax in the budget would be higher by 42.13 percent of the current situation. On the contrary, application of Ireland's personal income taxation model would decrease the incomes of the national budget collected from the personal income tax by 66.41 percent.

Keywords: personal income tax; progressive personal income taxation system; national budget; tax revenue; tax rate

JEL codes. H2**,** H24, K34

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1. Introduction

One of the main tools that ensures the economic growth and development of the state are the incomes, closely related to the taxation policy of the state. Taxes are the main source of the state revenue mostly and are used for achieving the goals and performing the functions of the state. Creedy and Sanz-Sanz (2011) highlights that tax incomes of some states are distributed between the budgets of the state and municipalities and tax benefits are administered in central and regional levels. Each state is using an individual taxation system that was formed in different economic and political conditions. There is a tax harmonization process implemented in the countries of European Union and this is a process the aim of which is to equalize taxation conditions in all the countries of EU so the European integration process would be achieved (Palczewska, 2013). Personal income tax is calculated by evaluating an individual situation of a person and each state has personal income taxation rules of its' own and so it is one of those taxes that is not harmonized in the European level. Jukonienė and Šapalienė (2011) are stating that the personal income tax is one of the most important taxes that is generating the most revenue of the state, but it is a burden of a population at the same. On one hand in order to reduce the tax burden of individuals that are receiving low incomes, it is important to choose the right personal income taxation system (Bikas et al. 2014). Collected tax revenue depends in the model of personal income tax selected and applicable tax rates. Characteristic features of national personal income taxation systems are: several tax payment schemes, complex tax calculation formulas, additional fees, a lot of exceptions and wide scales of tax rates. As Fuest et al. (2008) asserts, the main goal when implementing income taxation reforms in many countries is a simplification of tax system. Although states are applying different personal income taxation systems, Palczewska (2013) distinguishes several similarities characteristic to all the models of taxation: all personal incomes from several income sources are taxable by the personal income tax; in many European countries there are progressive personal income taxation system applied that differs from each other by tax rates and by number of taxation threshold.

The taxation of personal incomes is performed by using proportional or progressive taxation system in most cases. The difference between them is that in the proportional taxation system a steady tax rate in proportion to total incomes is applied and in case of progressive taxation system a higher tax rate is applied subject to increasing incomes on purpose of higher taxing of individuals receiving more incomes. Proportional taxation system of personal income taxes (hereinafter - PIT) is applied in seven countries of Europe while the progressive taxation system is applied even in twenty four countries (Taxation Trends in the European Union, 2014). This confirms the remarks of Đurovi-Todorović and Đornević (2012) that progressive taxation systems are generally used by the developed countries and proportional income rate is used in the developing countries as it is easy to apply and it does not require of complex tax administration.

All the incomes of employed individuals in Lithuania are taxed by applying a flat personal income tax rate regardless of the wage paid. It has been noticed while analyzing the data of Lithuanian Department of Statistics that the revenue of personal income taxes during the year 2007 - 2014 are compiling 23.91 percents of all the state tax incomes on average. Meanwhile

in many other European countries in which progressive personal income taxation rates are applied this part is significantly higher and is reaching 55 percent. Progressiveness of the personal income tax depends on the statutory PIT rate model which depends on the number of tax threshold, the proportion of them and on the differences between the highest and the lowest PIT rate (Paturot et al. 2013). Progressiveness depends on the specific articles of the law granting the power to reduce taxpayers' tax obligations as well. The tax is reduced by deductions, exemptions, exceptions allowed and this depends on the level of the incomes and/or on the certain characteristics of the family (for example, number of the children or marital status). This is why it is important to analyze how the tax revenue collection in the national Lithuanian budget would change by introducing progressive personal taxation system dominating in the European countries.

The Aim of this Article is to assess the impact of progressive personal income tax rates on the Lithuanian national budget tax revenue collection by simulating this system. *Methods of Research:* analysis of legal documents, analysis of information publications prepared by financial institutions, methods of statistical data classification, comparison and graphic representation while seeking identification of particularities of personal income taxation applied in the European countries; analysis and synthesis methods of Lithuanian and foreign scientific literature are applied when assessing progressive and proportional personal income taxation systems according to the classical principles of taxation; methods of logic simulation, statistic data grouping and graphic imaging are used while creating a basis used in the calculations with progressive and proportional PIT rates.

2. Literature review

As there are four types of the income taxation systems distinguished in the scientific literature (see Fig. 1), a lot of discussions are arising regarding particularities of each system. By the affirmation of Hagopian (2011), personal charge is not an income tax however it is universally recognized that it is the tax system most efficient economically as each person is obliged to pay a certain portion of their incomes and to contribute to the alimentation of the state. And a sole factor on which depends the taxation rate here is the place of residence of a person, consequently individuals residing in the different regions has to pay a flat-rate personal tax settled by the regional authorities.

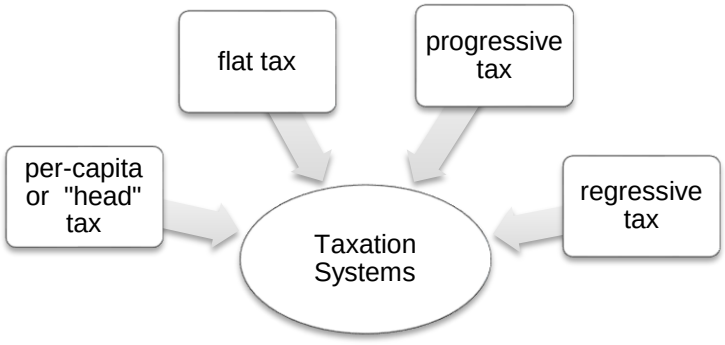

Fig. 1. Systems of personal income taxation

Source: compiled according to Hagopian, 2011.

Paulus and Peichl (2008) are highlighting that proportional taxation is leading to a relatively high tax burden on tax payers that are receiving low incomes as the incomes of everyone, regardless their high, are taxed by a flat PIT rate. It increases inequality of incomes and makes a negative impact on a social justice. Meanwhile a progressive tax policy helps reducing income inequality and instability (Weller and Rao, 2010). Yet Paulus and Peichl (2008) notes that the application of proportional tax rates is reducing evasion of taxes in certain cases as individuals are less interested in hiding or reducing taxable incomes by paying a flat tax rate. Specific tax rates that are increasing with decreasing incomes are specific to the regressive system.

Sympathizers of this taxation method are stating that taxpayers that are earning higher incomes must be "rewarded", encouraging them to work more in this way. Unfortunately, this method of taxation is rarely used in practice. And the main reason of it is that a system of decreasing taxation is socially unfair as the taxpayers with the lower incomes are taxed by higher tax rates when individuals earning higher salaries are paying relatively lower taxes. While analyzing progressive taxes Đurovi-Todorović and Đornević (2012) are distinguishing the following tax rates: proportional progressive, graduated progressive and regressive progressive. Tax rates are increasing by increasing the tax base when applying progressive personal income taxation system. Increase of the tax rate can be balanced, fast or slow compared with the growth of the tax base.

Proportional progressive tax rate is increasing together with a proportional growth of a tax base what means that when the tax base increases at a certain percentage, the tax rate is increasing equally. Graduated progressive tax rate is increasing more rapidly than the tax base and by taxing the incomes on this rate the taxpayers earning higher incomes would pay progressively higher taxes. Regressive progressive tax rates are increasing by a smaller percentage than the tax base.

By the statement of Bikas et al. (2014) progressive taxation is usually more complex what increases the costs of tax administration. Whilst Caucutt et al. (2006) are asserting that taxation of progressive incomes is not motivating unqualified workers to improve their skills and this slows down the process of economical growth. Policy of progressive tax can provoke evasion of taxes, increase the costs of government sector which are decreasing interior savings and ejects national capital investments (Weller ir Rao, 2010). Although Conesa and Krueger (2006) remarks that progressive income taxes ensures more equal distribution of incomes, wealth, consumption and social welfare, but progressive income taxation has an undesirable effect in terms of decisions of private households and companies related to manpower supplies and savings.

Combining all the principles of taxation is complicated when evaluating proportional and progressive personal income taxation systems as they are contradicting each other in one way or another. And according to the opinion of Paulauskas (2008), when changing the taxation system from proportional into progressive one, progressive taxes introduced would slow the economical growth down at the beginning, would divert the investments to the other countries and would reduce consumption at the same and this can have a negative impact on the budget revenue. Gentry and Hubbard (2004) are agreeing with the fact that progressive taxes are

slowing the growth of productivity down as the people are not interested in working more and in efficient manner in order to increase their incomes and income tax by the same. According to Penkaitis (2013), it depends on the tax rates selected only if the incomes of the budget will grow, decrease or remain on the same level after introducing progressive personal taxation system. Seeking the change of income taxation system it must be set if the progressive taxation rate fixed for the certain groups of people will be purposeful and practically possible. If the increase of tax rate of the richest persons is not contributing to the increase of PIT incomes, then suchlike change of taxation will not be any benefit to the society (Slemrod, 1996). If more tax revenues are collected after increasing the rate but it receives strong behavioral reactions of taxpayers, the economic costs increased can be quite high and they can even exceed the benefit of increased tax revenue (Bikas et al. 2014).

Application of personal income taxation system in a specific state is governed by legislation acts thought the taxpayers of some states are free to choose the way their incomes can be taxed: whether as the incomes of individuals or as the incomes of a family. Piketty and Saez (2012) are distinguishing two basic methods of personal income taxation: 1) system of the incomes received individually, when every person pays the income taxes from his incomes gained. A couple is interpreted as two individuals that must pay individual income taxes from the incomes earned; 2) system of taxation based on the family model where the income tax is applied on the total of family incomes, that means, the general sum of the incomes received by both spouses is taxed. It is important to mention the fact that the income tax paid from the incomes gained often depends on the number of children in the family too. Families that are having more kids are less capable to pay taxes in general. In order to reduce the aging process of society and encourage the families to give birth to bring forth the children when calculating personal income tax a part of the incomes is not taxable and the proportion of them is increasing with bigger number of children in the family (Piketty and Saez, 2012).

Therefore, summering it all up can be stated that there is no solid opinion of the scientists regardless the most attractive taxation system; however the incomes in the economically developed states are taxed by applying progressive, and in the developing states - by applying proportional personal income rates and the taxation systems are having their own particularities: the number and proportion of the rates applied are different, exemptions and taxation procedures of the persons living in couples vary. Nevertheless all the taxation systems are formed basing on the classical principles of taxation (such like: justice, economic efficiency, administrative simplicity, productivity and elasticity of tax revenues) which are used for the establishment of optimal charging system. Therefore empirical study of progressive PIT in Lithuania by simulating this situation on the example of the other countries is performed and basing them on these principles.

3. Methods and Material

Data sample. This analysis is conducted on the basis of these basic preconditions: 1) only the taxation of hired employees working the whole work day is estimated; 2) information concerning marital status of the individuals and number of children in the family used is

evaluated according to the data of population census of the year 2011 and information concerning the wages - according to the data of Lithuanian Department of Statistics dated October, 2013; 3) employed individuals are grouped according to their age and their wage level: according to the age - into 5 categories, varying every 10 years while the wage is presented in the ranges of 50, 100 or 300 EUR values; 4) all the benefits or income tax rates were applied to the situation of Lithuania in relation to purchasing power parity while adapting taxation systems used by other countries. There are purchasing power parity values presented in the data base of Eurostat in year 2013 used that were calculated from the country's GDP (Gross Domestic Product) by using E28 as a basis; 5) this survey is performed by assuming that the other conditions are not changing (*lot. ceteris paribus*) and the collection of tax revenue depends on the tax calculation procedure only.

Reasoning of taxation base assumptions. According to the data of Lithuanian Department of Statistics there were 2,943,472 people residing in Lithuania on January 1, 2014. On October, 2013 there were 1,071,781 individuals working under employment contracts. It is presumed that this number of employees will not change over 2 months (that is, up to January 1, 2014) and will constitute 36.41 percentage of all the residents of Lithuania. There were 932.513 individuals working full-time over the employed people and 139,268 – part time. Knowing the number of the persons working full-time, their marital status and number of children in the family are evaluated. For this purpose the statistics of general census of the population performed in year 2011 is used and it indicates how many children up to 18 years are growing up in the family nucleus of different types. In the definitions of general census of the population (2011) it is highlighted that a family nucleus consists of two or more persons that are living in the same household and are related to each other as a husband and a wife or cohabitants living together with or without their child (children) or one of the parents with his/her child (children). Persons who were having children older than 18 years, persons of pensionable age, individuals who never lived in conjugality and the ones who classified themselves to the category “Other” or did not indicate any category were not evaluated as a part of family nucleus. There were 1,988,981 residents in the family nucleus with the children up to 18 years rated during the general census of the population of the year 2011 when there were 3,043,429 residents in the Republic of Lithuania in total. There were 411,639 individuals living alone and not belonging to any family nucleus in year 2011 and there were 642,809 individuals who assigned themselves to the category “Other”. According to the data held it is considered that exactly the same part of all the residents of Lithuania will be evaluated in the family nucleus during the year 2014 and this part will be constituted by $1{,}988{,}981 \div 3{,}043{,}429 \times 2{,}943{,}472 = 1{,}923{,}656$ persons. Having this data it is considered that during the year 2014 there will be exactly the same part of Lithuanian residents evaluated in the family nucleus that will conclude these individuals.

In order to identify how many of these individuals are belonging to a specific category (spouses, cohabitants, single father/single mother and children up to 18 years old) proportions of individual distributions calculated according to the data of general census of the population of year 2011 are used. It is presumed that 1,988,981 individual is composing 100 percents and this is why proportions indicating how much individuals out of this number are spouses,

cohabitants, single mothers or single fathers and children up to 18 years old are calculated accordingly to this figure. It is known that a general number of children belonging to the family nucleus were 554.933 during the year 2011. Assuming that there are 100 percents of individuals in each number category (there are 6 of them in total) of children in a separate family nucleus it has been calculated how this number distributes in three different types of family nucleus. Individuals living alone and persons belonging to the category "Other" are calculated by using proportions assessed in 2011. The results summarizing the calculations are presented in the Table 1.

Table 1. Recounting of persons according to distribution proportions of general census of the population in year 2011.

Category of Persons	Proportion, percentage	Number of people, year 2011	Number of people, year 2014
Residents, total	100	3,043,429	2,943,472
Married couple	38.64	1,175,900	1,137,278
Cohabitant couple	4.94	150,450	145,510
Single mother of father	3.54	107,698	104,161
Children	18.23	554,933	536,707
Individuals living alone	13.53	411,639	398,119
Other	21.12	642,809	621,697

Source: own calculation

Children up to 18 years old can be growing in the categories of spouses, cohabitants or single mothers/fathers. During the general census of the population economical involvement of the parents has been assessed. This is why it is considered that the same distribution proportion will remain during the year 2014. In the couples of cohabitants or spouses can be unemployed both individuals, can be working one or both of the individuals. Single father or single mother can be working or not. In each category of the family nucleus these three (two) possible options are distinguished and, according to the percentage of parents involvement, the general number of working people is calculated.

A sample is received according to which the PIT is calculated, but it still needs to be figured out what is the salary belonging to a specific person. All of 4,114 working children according to their age belongs to the category "Individuals up to 20 years". And it is assumed that the couples of spouses, cohabitants or single fathers / single mothers are from the age of 20 years up to the age of 50 years.

The other individuals are belonging to the category where the working people are not having under aged children and are older than 60 years old. All working individuals belongs to the six age group ranges where a total amount of individuals compiles 932,513 according to their wages. Considering that it is 100 percents of all the individuals, proportions for different age category are calculated basing on which it is counted up how many individuals are consisting each category of the age (see Table 2).

Table 2. Distribution of individuals according to the categories of age.

Category of individuals	< 20 years	20-29 years	30-39 years	40-49 years	50-59 years	> 60 years	Total
Number of individuals belonging according to size of wage	4,114	168,777	206,005	248,078	236,004	69,535	932,513
Couple of spouses	-	140,622	171,640	206695	196635	-	715,592
Couple of cohabitants	-	13,195	16,105	19394	18451	-	67,145
Single father / mother	-	14,075	17,180	20688	19682	-	71,625
One individual (up to 20 years old)	4,114	-	-	-	-	-	4,114
Single individual (without children)	0	885	1,080	1,301	1,236	69,535	74,037

Source: own calculation.

We have distribution of the individuals according to the type of family nucleus and different groups of age, but when PIT is calculated you must know the information related to the amount of each working person's wage and the number of children in his/her family. When determining the wage the proportion of people who are receiving an appropriate wage in a separate age category is first calculated. It means that 100 percents are considered as a total number of persons belonging to the different age categories. When a distribution percentage is received they are accordingly multiplied by the number of individuals assigned to that age group (according to the different categories of persons). All parallel calculations for all the categories of individuals in different age categories are completed in this way and a table used for summarization of further calculations is obtained.

While performing the survey it is taken into consideration that individuals receiving a different salary can belong to any type of family nucleus and grow a different number of kids (see Fig. 2). Each individual can have a different number of children and for evaluation of it probabilities were used. They were calculated separately for each type of the family nucleus: a family nucleus of a certain number of children has been divided by the total number of family nucleus. The probabilities received were used while calculating a number of individuals receiving different salary who can grow up neither one, one, two, three, four or five children respectively.

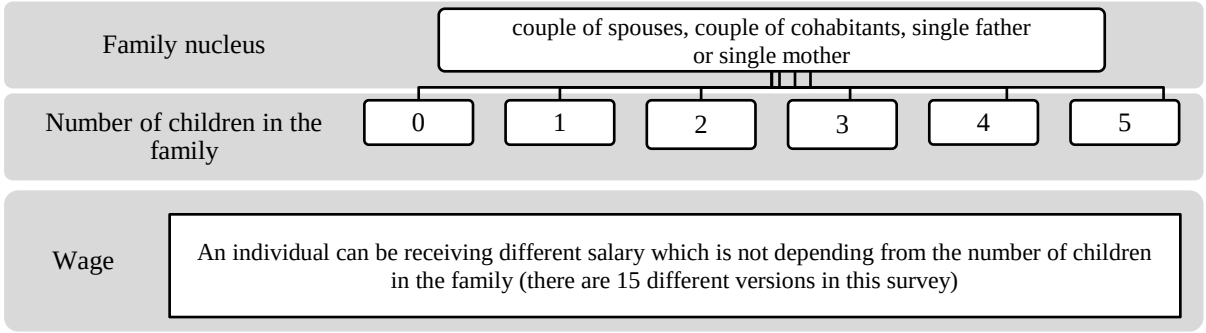

Fig. 2. Scenarios used for the survey.

Presumptions of PIT calculations. The following PIT calculation presumptions when calculating PIT taxable incomes received according to the present taxation system are identified: 1) all individuals are working in the main employment place and did present a request of free form regarding the application of NTI (non-taxed incomes); 2) individuals belonging to the categories "Children" and "Others" are not having children up to 18 years old and this is the reason why ANTI (additional non-taxed incomes) are not applied when calculating their PIT; 3) for couples of spouses or cohabitants where both of the individuals are working, ANTI is divided in half and when only one of individuals is working - a full ANTI is applied. A full ANTI for single fathers or mothers growing children up to 18 years old is applied too; 4) as the wage is presented in the intervals, arithmetic mean of range is applied for these calculations.

Then individuals are divided into categories according to the size of salary, marital status and number of children in the family, proportion of monthly non-taxed incomes is calculated first of all. As all employed people are earning more than 290 EUR of incomes related to work relations or relations corresponding work relations per month, monthly NTI is applied by using the following formula (1):

$$NTI_{\text{monthly}} = 166 - 0{,}26 \times (-290) \quad (1)$$

where:

NTI_{monthly} – non taxed incomes per month;
MR – employees' remuneration received per month.

When the mean of monthly NTI is received it is to be considered to have a mean of zero. Zero NTI is applied for the working individuals who are receiving salary of 950 EUR and more per month. While for individuals who are bringing the children younger than 18 years up there is an additional non-taxed incomes (hereinafter – ANTI) applied which is 60 EUR for one child since January 1, 2015. That means that ANTI applied for the individuals bringing 1 child up is equal to 60 EUR, 2 children – 120 EUR, 3 children - 180 EUR, 4 children – 240 EUR and 5 children – 300 EUR. It is important to highlight that full ANTI is applied for one working individual of the family only and this is why if both of the parents are working, ANTI is divided in half, for example, when a family is having one child, additional non-taxed income charge of 30 EUR amount is applied for both working parents.

The size of remuneration taxed by personal income tax is calculated by deducting NTI and ANTI from the gross salary. A personal income tax of 15 percents is applied to any size of taxable wages. Calculated PIT is multiplied from the number of individuals receiving the same employment salary. Similar calculations are applied to all the different categories of remunerations, taking different number of children and marital status of individuals into consideration.

When the evaluation of PIT collection according to the current income taxation model of Lithuania is completed, a situation of Lithuania by using a progressive personal income taxation system applied in Slovenia is simulated. This particular state has been chosen because is of the similar economic development level and a level of the salary paid is closest

to Lithuania in comparison with the other countries applying progressive taxation system. Slovenia, same as Lithuania, has joined the European Union in year 2004 and, in comparison with the other countries that entered the European Union in the same year, was the first one to adopt the currency of euro. On purpose to apply progressive personal income taxation system of more developed country, simulated situation of Lithuania is based on example of Ireland.

It is important to note that there were no most recent data available to the public when the study has been performed this is why the presumptions are formed according to the data of the general census of the population completed in year 2011 and data presented by Lithuanian Department of Statistics on October 2013. In order to obtain a data comparable between each other, adapted tax base has been formed.

The effect of progressive PIT introduction on the incomes of the national budget has been measured by analyzing the change of personal income taxation procedures assuming that none of other conditions are altering (lot. ceteris paribus). The base resulting is used for the study of personal income taxation according to personal income taxation models applied in Lithuania, Slovenia and Ireland.

4. Results and Discussion

4.1. PIT collection according to the current income taxation model of Lithuania

In order to set distribution tendencies of individuals receiving different remunerations it is noticeable that the payers of PIT are earning 325 EUR or 550 EUR in most cases (see Fig. 3).

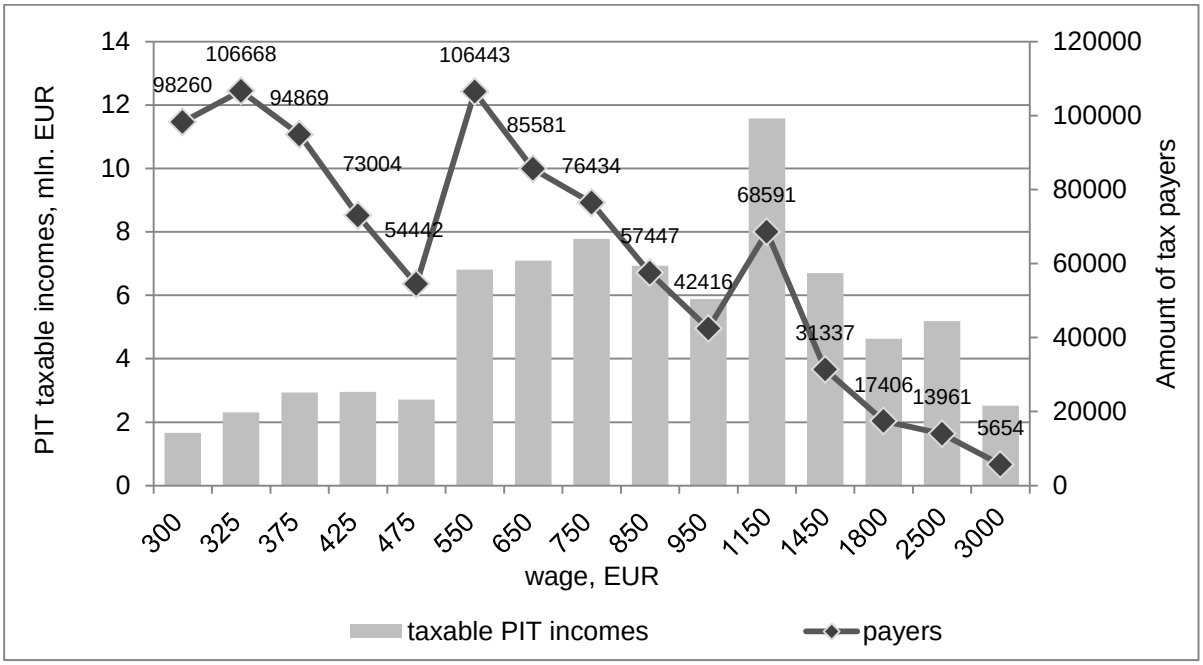

Fig.3. PIT collection by using current (proportional) model of Lithuanian income taxation.

Source: own calculation.

There are 213,111 persons in these categories of wages and it makes 22.85 percent of PIT payers in total. According to the remuneration distribution there are three categories to be distinguished. The first one: individuals who are receiving 300-475 EUR and makes 45.83

percent of all the PIT payers. The second one: working individuals whose salary ranges from 550 up to 950 EUR and they are forming 39.50 percent of all the PIT payers. And to the third category individuals who are receiving 1150-3000 EUR are assigned which are forming 14.67 percent of all the PIT payers. This distribution is pointing that most of the Lithuanian residents are belonging to the category receiving the lowest wages which are significantly lower than an average wage (according to the data used in this survey it has been calculated that an average wage is seeking 670 EUR).

According to the current personal income taxation system it is noted that individuals who are receiving the lowest salary are paying the lowest tax of personal incomes, that is, 16.33 percent of all PIT paid. Individuals belonging to the second category are paying 44.40 percent of all PIT and individuals belonging to the third category are paying 39.27 percent of all the PIT.

Individuals receiving lower than an average salary are paying 34.25 percent of all PIT while the individuals earning more than 670 EUR are paying 65.75 percent of all PIT. As the number of people receiving different remuneration is significantly different, there was an arithmetic average withdrawn which indicates that an individual earning 300 EUR is paying a monthly 17.32 EUR of PIT on average while a person earning 3,000-446.70 EUR per month and it shows that even if the incomes are taxed by using a flat rate, the taxes paid by individuals defer (those earning more are paying a bigger part of this tax). The main reason of this difference is an exempt of incomes which conditions a bigger non-taxable income amount for the ones earning lower incomes.

4.2. Personal income taxation in Lithuania according to an example of Slovenia

Every working person is interpreted as a separate payer of personal income tax in Slovenia this is why married persons are taxed individually from each person's earned incomes not summing them up. Four rates of different personal income tax are applied for the taxation of employed persons incomes and they are increasing with higher incomes (see Table 3).

Table 3. PIT rates in Slovenia (compiled according to the data of Ministry of Finances of the Republic of Slovenia[4]).

Taxable incomes, EUR		Rate, percent	Additionaly, EUR
From	To		
0	505.30	16%	
505.30	1,194.38	27% over 505.30	+ 80.85
1,194.38	4,466.72	41% over 1,194.38	+ 266.90
4,466.72	-	50% over 4,466.72	+ 1,608.56

Source: own calculation.

The tax payers can reduce their taxable incomes depending on the marital status of the working persons (Worldwide Personal Tax Guide. Income tax, social security and

[4] http://www.durs.gov.si/en/angleske_strani/personal_income_tax/tax_rate/

immigration, 2014-15). If and employed person is having one child, the monthly taxable incomes are reduced to 153.51 EUR, two children – 166.89 EUR, three – 278.34 EUR, four – 389.80 EUR, five – 501.25 EUR. Meanwhile for the related and unemployed member of a family (a spouse, for example) there is a monthly amount of 153.51 EUR non-taxed incomes applied. For the permanent residents that are not having any family and are living alone there is a general taxation case applied. Taxable incomes are reduced to 410.71 EUR when the incomes of such individual are up to 684.51 EUR; when the incomes are between 684.51 EUR and 791.89 EUR – they are reduced to 278.35 EUR and when the incomes are exceeding the amount of 791.89 EUR – reduced to 208.05 EUR (Taxation in Slovenia 2013/14).[5]

Seeking the application of Slovenian personal income taxation system there was an amount of tax benefit deducted first. Exemption subject to the couples of spouses or cohabitants where both individuals are working and subject to the number of children in the family is shared between both individuals of a couple. An exemption of a full size depending on amount of the children in th family and an additional benefit designed for the unemployed person of the couple is applied when the working person belongs to a couple where only one individual is employed. An exemption of a full size is applied for the single parents too. There is a general exeption applied for the individuals living alone. The result received after deduction of all the exemtpion sums from the gross salary is taxed subject to personal income tax. By application of Slovenia personal incomes taxation system the incomes collected from this tax would reach 110,436,229 EUR per month increasing tax collection revenue by 42.13 percent in comparison with the present taxation system of personal incomes hereby. Total collection of tax revenue and average PIT sum going to one tax payer over the month as per wage level is presented in the Fig. 4.

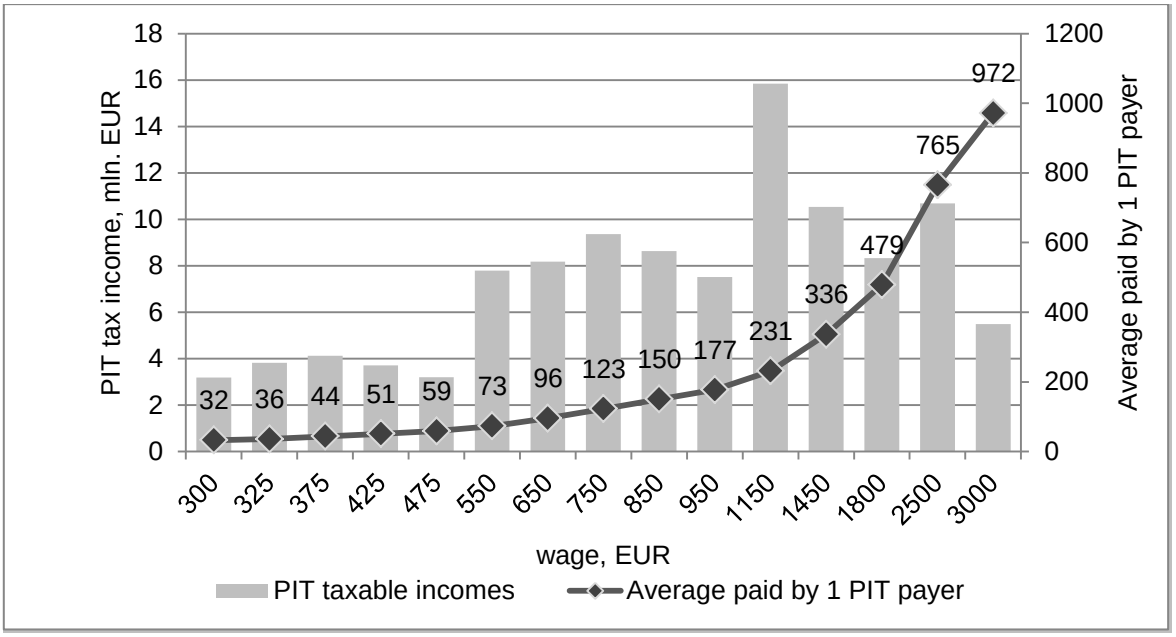

Fig. 4. PIT collection in Lithuania when applying the personal income taxation model of Slovenia.

Source: own calculation.

[5] http://www.mf.gov.si/fileadmin/mf.gov.si/pageuploads/Davki_in_carine/Angle%C5%A1ki/Taxation_in_Slovenia_2013.pdf

The sum of personal income tax paid by one person is growing in higher speed that the wage itself and this means that the taxes applied to the individuals are increased without evaluation that the incomes of the individual are growing in slower pace. By setting progressive PIT rates applied in Slovenia, individuals receiving any size remuneration would have to pay more PIT than are paying according to the recently applied model. It would affect persons earning 3,000 EUR, 2,500 EUR or 300 EUR mostly. Means that the personal income tax would increase 117.66 percent, 106.13 percent and 91.60 percent respectively to the individuals receiving such wages. It is important to mention that by application of this system there would be none of the person to whom a tax rate higher than 50 percent would be applied and this and this demonstrates that similar tax rates would be too high in the situation of Lithuania.

4.3. Personal income taxation in Lithuania according to an example of Ireland

Incomes of individuals working in Ireland are taxed by two different rates of personal income tax. The standard rate of PIT is reaching 20 percents and the highest one – 40 percent (from year 2015). Families where both of the individuals are working can choose conducive income taxation method: the incomes of the family to be taxed commonly, the incomes of the family to be taxed separately or the incomes of the family to be taxed by using the same procedures as are used to the income taxation of individuals living alone (The Office of the Revenue Commissioners).[6] Ireland has a better system of tax credits than a system of taxation benefits which is applied when calculating income tax (Delloite, 2012). Tax credits are reducing personal income tax paid by the residents. Even if there are many different types of tax credits, though in this survey only the credits for assessment of which there will be enough information available concerning the tax payers will be evaluated: personal tax credits and PAYE (*Pay as you earn*) tax credits.

To all the tax payers according to his/her marital status there is a personal tax credit applied. The size of such credit in Lithuania should be reaching 75.94 EUR for the people residing alone and 151.88 EUR for the spouses or cohabitants during the year 2015. The amount of 75.94 EUR of personal credit will be applied to single father or single mother and the same would be designated to the widowers bringing the children up alone or divorced individuals without evaluation of any additional conditions. PAYE tax credit is equal to 75.94 EUR monthly amount and is granted to the employees paying taxes through the system of Pay as You Earn. Persons paying through the PAYE system can be tax payers, public servants or self-employed individuals.[7] As the PIT paid by hired persons is calculated while performing this survey, all of them are assigned to the category PAYE payers.

4.4. Discussion

Applying the PIT rates of Ireland to Lithuania there would be 26,100,071 EUR collected over the month and it is 66.41 percent less in comparison with the incomes received by using current taxation system. Most of the taxable incomes would be collected from the persons that

[6] http://www.revenue.ie/en/tax/it/leaflets/it2.html#section7
[7] http://taxcalc.ie/budget-2015/

are receiving the wages of 2,500 EUR (see Fig. 5). Meanwhile individuals earning less than 750 EUR would not be paying the PIT at all. There are 695,701 individuals receiving such wages in Lithuania and that means that the budget would lose a significant proportion of the incomes by applying the personal income taxation model of Ireland (according to the recent taxation system there is a yearly 34,264,352 EUR amount received from the individuals of this category). There would be barely 3.35 percent of all PIT payers taxed by the highest rate of 40 percent but the incomes received from this group of tax payers would constitute a significant part of 53.2 percent in the national budget. Uneven tax revenue collection shows that a similar model would not answer the purpose as the biggest part of the tax payers (66.41 percent) are belonging to the category of individuals earning less than average wages.

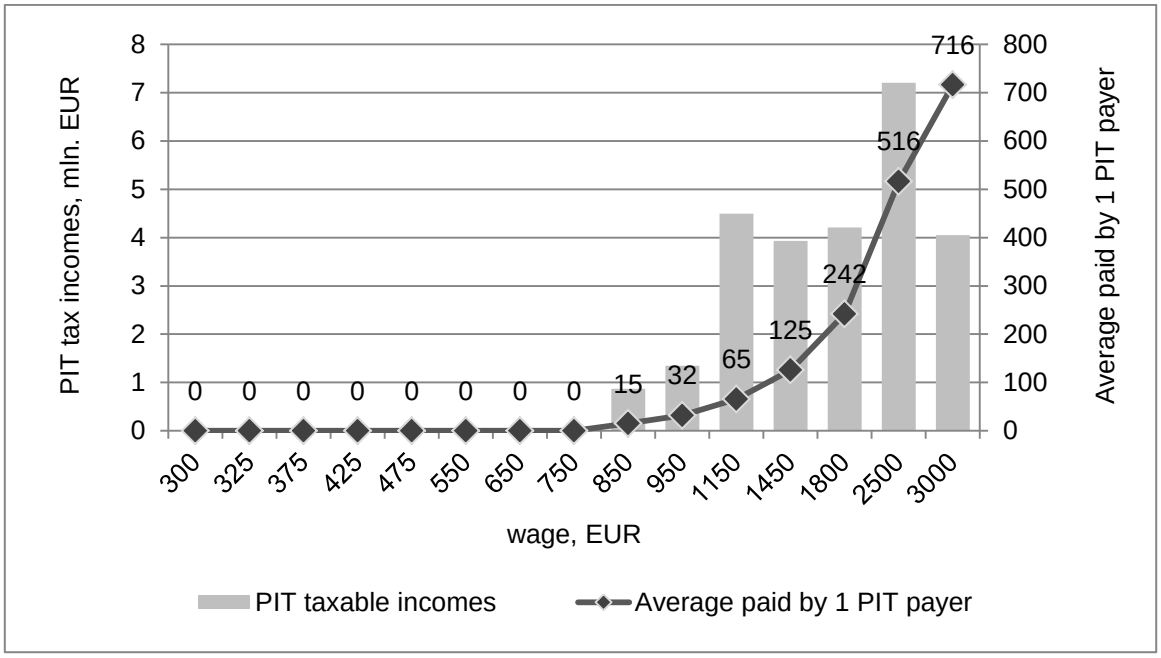

Fig. 5. PIT collection in Lithuania when applying the personal income taxation model of Ireland.

Source: own calculation

The results of this research are indicating that subject to different tax thresholds, the number and size of the tax rates, benefits applied and methods of PIT payment there were different results received when applying foreign taxation systems to Lithuania. Summative information regarding the collection of taxable incomes in Lithuania according to different taxation subjects whose earned monthly salary is from 300 EUR up to 3,000 EUR, is presented in Table 4.

In respect of tax revenue collection it would be useful to Lithuania to apply the taxation model of Slovenia. Collection of tax revenues into the national budget of Lithuania would grow by 42.13 percent by taxing personal incomes of the residents by the PIT rates applied in Slovenia and not changing other conditions. The revenue collection from the spouses, cohabitant and single fathers/single mothers growing children up to 18 years old would increase By applying the system of Slovenia. Even if there are exemptions depending on the number of children applied in the country, but the incomes of the residents are taxed by applying higher PIT rates and it conditions a higher collection of tax revenues. Subject to

collection of taxable incomes the model of Ireland taxation system would be less useful to Lithuania as employees receiving a lower wage than 750 EUR would not be paying personal income tax and a bigger part of Lithuanian tax payers (66.41 percent) are receiving lower incomes than 750 EUR.

Table 4. Results of tax revenue collection simulation from personal income tax.

Subject of taxes	Lithuanian (fact)	By example of Slovenia	By example of Ireland
Spouses (both are working)	583,776,783	913,374,795	216,279,153
Spouses (one is working)	138,575,700	157,181,886	23,568,815
Cohabitants (both are working)	54,573,619	85,006,504	20,293,690
Cohabitants (one is working)	12,912,683	14,489,943	2,211,483
Single father / single mother	64,705,196	89,102,942	25,126,728
One person (up to 18 years old)	1,991,950	466,930	51,583
Single person (not having children)	75,890,587	65,611,747	25,669,393
In total, EUR	932,426,518	1,325,234,747	313,200,847

Source: own calculation.

Theoretically the question of taxable income collection increase in Lithuania would be possible to solve by using the taxation model applied in Slovenia. However, it is important to emphasize potential negative consequences of this model's application. First of all – individuals receiving salary of any size would have to pay a higher tax of personal incomes which, subject to an appropriate level of remuneration, would increase by 14.37–117.66 percent. Referring to the analysis of taxes paid by residents completed by Personal Finances Institute of Bank "Swedbank" performed in year 2012, it emerged that by the liquidation of the underground economy in Lithuania, it would be possible to collect 2.17 milliard EUR from PIT and this consist 6.6. percent of the whole GDP (gross domestic product). As the proportion of underground economy is so high, a presumption can be made that increased tax rates would provoke even a higher activity of underground economy as it is possible to decrease or avoid duties of taxes.

According to the date of Lithuanian Department of Statistics there were 83,257 persons (2.65 percent of all the residents) who emigrated from Lithuania over the year 2010, 53,863 (1.76 percent of all the residents) over the year 2011, 41,100 (1.34 percent of all the residents) over the year 2012, 38,818 (1.31 percent of all the residents) over the year 2013 and 36,612 (1.24 percent of all the residents) over the year 2014. Even if the scale of emigration is decreasing but it is noted that Lithuanian population number is very sensitive and elastic to the changes of wages and situation can become worse with introduction of progressive personal income tax rates applied in Slovenia. The emigrants are usually choosing the countries offering higher salaries which (in comparison with Lithuania) are applying higher PIT rates but the taxable incomes are higher too. Applying progressive PIT taxes in Lithuania the highest rates will be applied for the individuals receiving higher incomes and who are

having a higher qualification usually. And so similar reform could cause a situation that part of those specialists would choose emigration to the foreign countries who would be able to offer higher wages.

Assuming that other conditions are not changing (*lot.ceteris paribus*) and only the aspects of personal income taxation are evaluated, and increased taxation of personal incomes can reduce the attractiveness of investments into the country. According to Nausėda (2013), the margins of top PIT rate are formed by the PIT rate tarriffs of neighbourhood Latvia and Estonia and for this reason tax systems of these countries are affecting the competiveness of Lithuania. In case of progressive tax rates introduction in Lithuania it would be cheaper for the businesess to settle down in the neighbourhood countries that are having proportional taxes, (in Latvia or Estonia for example) as they would have a lower general tax burden on labor. Consequently, deciding to apply the taxation model of Slovenia the fact subject to assumptions named above can cause a failure to collect incomes foreseen by this taxation model into the national Lithuanian budget.

The results of this survey showed that taxable incomes of PIT would increase by 42.13 percent when applying the system of personal income taxes of Slovenia to Lithuania. Nevertheless basing on surveys completed in Lithuania and statistical data held a presumption that with application of Slovenia's model in Lithuania, there would be an increase of an underground economy and emigration and the competitiveness of the country would be reduced. Taxable incomes of Lithuanian national budget would decrease with application of Ireland personal income taxation model (decrease by 66.41 percent). And so after evaluation of all the versions it is clear that none of the analyzed personal income taxation practice applied in the other countries would suit to Lithuania in respect of PIT tax revenue collection.

5. Conclusions

Personal income tax is one of the main state taxes composing the biggest part of European state budgets through taxable incomes collected. Different countries are applying different personal income taxation systems, but most European countries are using progressive taxation systems of personal incomes and these countries are standing out by their economical development. Only seven countries of the European Union are applying proportional PIT rate meanwhile: Lithuania, Latvia, Estonia, Check Republic, Bulgaria, Romania and Hungary. Applying the taxation models of personal incomes used in Slovenia and Ireland when progressive personal income tax rates are applied and presuming that no other conditions are changing, the method applied for PIT calculation in Slovenia would be most useful subject to Lithuanian tax revenue collection as there would be 42.13 percent of personal income tax transferred to the national budget of Lithuania. On the contrary, the model of Ireland personal income taxation would fail as the taxable incomes would decrease up to 313,200,847 EUR in Lithuanian national budget and this would make up to 66.41 percent of the budget.

Even if in respect of tax revenue collection it would be useful to Lithuania applying Slovenia's personal incomes taxation model, additional surveys determining costs of model application and tax administration should be performed however.

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SYSTEM OF INFRASTRUCTURAL SUPPORT OF ENTREPRENEURSHIP IN THE REPUBLIC OF TAJIKISTAN: MODERN TENDENCIES OF DEVELOPMENT

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Abstract. The article analyzes some modern trends of the development of business activity in Tajikistan, primarily in the field of entrepreneurship. Economy in today's Republic of Tajikistan is growing, but at the same time business faces problems. The article shows some findings of the research, which is aimed at revealing and describing these concerns.

Keywords: tendencies of economic development, small and medium enterprises, entrepreneurship, transition, Tajik economy, Tajik market

JEL Classification: G30, L26, O43

1. Introduction

In Tajikistan, the transition from a command economy to the economy operating according to the laws of the market, is difficult and ambiguous. Formation and development of entrepreneurship is becoming a crucial element of emerging market economy. During the economic transition period, such countries as Tajikistan are experiencing a very important phase in its motion to civilized economic relations. Socio-economic conditions, namely low level of infrastructural support of enterprises, often prevent further quantitative growth of entrepreneurship subjects. On the whole, the development of the system of infrastructural support of entrepreneurship is connected with a particular territory, and undoubtedly it depends on the territorial organization of the productive forces. Thus, it is necessary to pay attention to all the aspects of the growth of economic development. In this regard, special attention should be paid to the factors that could negatively influence the economic growth: firstly, those connected with general infrastructure (transport, energy, telecommunication,

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water, and sanitation) and secondly, those related to specific infrastructure (banking and insurance sector, the securities market, leasing, and information) infrastructure. The action taken for inflow of investments in these sectors is insufficient. This is partly the result of insufficiency of institutional conditions capable to ensure the transparency of decision making on the direction of investment, control over the effective expenditure of funds, lack of the developed system of partnership of the private and public sectors.

In the 50s, an American economist P. Rosenstein-Rodan defined an infrastructure as a set of conditions that ensure the perspective development of private enterprises in major sectors of the economy and meet the needs of the entire population. His ideas were later developed by A. Angsana, R. Nurkse and A. Hirschman. The scholars attempted to justify the role and importance of infrastructure for the effective operation of production. V.A. Abchuk gives consideration to the concept of infrastructure, as well as the structure of entrepreneurship from the perspective of an abstract company. By the infrastructure of an enterprise the author means buildings, constructions, and other fixed assets, while the structure of an enterprise involves relationships among its divisions.

In Tajik scientific literature, S.D. Komilov and R.K. Radjabov became the first academic economists who paid special attention to communication and transportation as factors of the productive forces forming general conditions for operation of manufacturing.

The world experience of market economy formation proves that self-employment can serve as one of the most important sources of savings to small business development, especially for technology obtainment. This experience should apparently be considered with due account for the specific conditions of economic reforms in the Republic of Tajikistan. S.D. Komilov assumes that "within the transition to the market economy, each country has its own logic, but, despite large differences of initial starting conditions and the government policy, we can observe the similarity of problems and difficulties during the transition to the market."

In the article desk research analysis was conducted in order to collect and analyze data.

2. Result and Discussion

At the initial stage of the private sector formation, self-employment of population significantly contributes to the genesis of entrepreneurship. According to the data of the Agency on Statistics subordinated to the President of Republic of Tajikistan, at the beginning of 2014, the number of economically active population (the employed and the officially registered unemployed) reached 2,362.0 thousand people, including 2,307 thousand people (97.6%) employed in the economy and 55.0 thousand people officially unemployed, which represented 2.5% of the economically active population.

Many experts consider that for Tajikistan the establishment and development of entrepreneurship activity play a crucial role. There are a lot of grounds in favor of this position. Private entrepreneurship vectors social directions in the process of reforms; it accelerates a relatively fast-flowing process of formation of a new generation of entrepreneurs throughout the whole country, especially in rural areas. Many experts consider that this

tendency raises the level of employment, attracts savings, increases competition and ultimately improves the well-being and standards of living.

Over the last years, the Republic of Tajikistan has demonstrated positive dynamics of socio-economic development. The focused and phased policy of the Government of the Republic of Tajikistan has led to the strong growth of small and medium enterprises (SMEs), which in its turn affects the indicators of socio-economic development of the country (See Table 1). However, the *National strategy of development of the Republic of Tajikistan for the period of 2015* emphasizes that entrepreneurial activity has encountered a number of problems that hinder production development:

- lack of financial and investment resources;
- poor infrastructure of the entrepreneurs' (especially beginners') support;
- weak public-private cooperation;
- imperfection of the system of credit and financial support of SMEs, general and specific infrastructure.

Table 1. Dynamics of macroeconomic indicators of the Republic of Tajikistan in 2009-2014.

Indicators	Years						2014 to 2009 in %
	2009	2010	2011	2012	2013	2014	
GDP real growth (in % to previous period)	3.9	6.5	7.4	7.5	7.4	6.7	172
Growth of industrial products	-6.3	9.7	5.9	10.4	3.9	1.7	26.9
Growth of agricultural products	10.5	6.8	7.9	10.4	7.6	7.3	69.5
GDP per capita	2715.75	3234.62	3851.48	4567.47	4965.99	5498.2	202.4
Consumer price index (starting this year)	105.0	109.8	109.3	106.4	103.7	106.1	101.0
Producer price index (starting this year)	147.8	127.2	115.5	106.1	102.1	101.9	68.9
Market basket (somoni)	90.96	110.55	–	–	–	–	–
Average monthly earnings	287.80	354.77	446.23	555.53	697.76	819.59	281.3
Unemployment rate	2.1	2.2	2.5	2.4	2.3	2.5	0.1

Source: data of the Statistical Agency under President of the Republic of Tajikistan.

The information-analytical review "On the status of small and medium enterprises in the CIS countries" indicated that by then "state support of entrepreneurship was not systematic and did not take into account the budget loss on existing benefits, and the lack of support of main branches of specialization in the country- light and food industries".

Gradually, the private sector has been developing, and today it produces about 63.4% of GDP and involves 64.5% of economically active population, it also provides more than 79% of the tax revenues of the state budget. The contribution of the private sector in agriculture is 93%, in industry this figure reaches 53%, and in the construction sector, it is 43%. Moreover, the development of entrepreneurship contributed to the decline in poverty of the population from 80% in 2003 to 35% in 2014. Every year the number of fiscally registered subjects of

entrepreneurship, especially in small and medium businesses, increases (see table 2). During 2009-2013, throughout the country there were 284,529 registered subjects of entrepreneurship, which makes 16.9% compared with the same period last year. Business statistics is not perfect enough, studies in this area are irregular, infrastructure of support of small business is underdeveloped, and investment risks remain very significant.

Table 2. Dynamics of the subjects of entrepreneurship in the Republic of Tajikistan in 2009-2013.

Items	2009	2010	2011	2012	2013	2013/2009 in %
Subjects operating upon licenses	50,340	52,670	28,130	35,610	31,352	62.2
Subjects operating upon patents	87,383	55,913	75,342	78,339	82,874	94.8
Legal entities	11,488	12,107	18,617	25,728	31,925	277.8
Dehkan farms	44,051	65,844	92,989	96,764	138,378	314.1
Total	193,262	186,534	215,078	236,441	284,529	147.2

Source: Based on the data of the report "On the state of small and medium enterprises in the states - participants of the CIS".

An investment infrastructure for provision of development of entrepreneurship in the Republic of Tajikistan should play an important role. The volume of investments from all the financial sources reached 3,614.4 mln somoni ($759.1 mln), representing 116.5% of the corresponding period of 2012.

According to the Ministry of Economic Development and Trade of the Republic of Tajikistan, the major part of the investments – 44.4% - were made in the public sector. The private sector attracted 27.1%, joint ventures – 8.6%, foreign investments accounted to 27.1%, and the energy sector took 16.7% of all the investments. In addition, 603.6 million somoni ($126.8 million) were invested in the construction of energy objects, including 481.4 million somoni ($101.1 million) made by public and domestic private companies (79.8%). Foreign credits (20.2%) added 122.2 million somoni ($25.7 million). The share of assimilated investments in the construction of energy objects turned 62.2%.

Business operations in the area of improvement of the investment climate is supported through the Consultative Board on improvement of investment climate under the President of Tajikistan, which includes representatives of the Government of the Republic of Tajikistan and actors from the private sector.

The legal system of the country established the supportive system of guarantees for investors and investment operations. Both national and foreign investors are guaranteed the unified system of profit transfer and other forms of income from the investment activities. According to the National Bank of the Republic of Tajikistan, in December 2013, banks and other credit organizations allocated loans totaling 11,140.5 million somoni, which is by 30% more than in 2012 (see table 3).

Table 3. Dynamics of loans provision to the subjects of entrepreneurship in the Republic of Tajikistan in 2009-2013.

Items	2009	2010	2011	2012	2013	2013/2009 in %
Given credits, million somonies	3,801.6	4,615.1	7,252.0	7,874.7	11,140.5	293.0

Source: based on the data of the report "On the state of small and medium enterprises in the states - participants of the CIS".

A number of significant measures for strengthening the legal framework and removing administrative barriers to business and investment were taken, which largely influenced the indicators of business activity.

The introduction of the principle of *'a single window'* for business registration, reduction of the number of required documents, reduction of the number of inspection services and regulatory audits, improvement of bankruptcy procedures and the protection of minority shareholders, reforms aimed at improvement of business environment for doing business – all these measures were appreciated at the international level. In the annual World Bank's report on business performance, the Republic of Tajikistan entered the 'top ten' best reformers in 2010 and 2011.

The law provides a system of preferences for enterprises engaged in the production of goods: they are tax exempt if they make investments in authorized capital of the company. The legislation of the Republic of Tajikistan also provides a system of tax and customs preferences. In particular, this applies to exemption from customs duties and VAT on equipment import.

Special incentives are given to the entrepreneurs who work in the priority sectors of the economy, such as manufacturing, construction of hydroelectric power stations, and enterprises engaged in full cycle of cotton fiber progressing.

The government of the Republic of Tajikistan pays considerable effort and funds to build infrastructure, including roads and railways, bridges and tunnels, irrigation systems and power lines, which significantly contributes to the growth of business activity in the country and in the whole region. Public investment in this area amounted to about 2 billion US dollars. A new program of state support of entrepreneurship for the period of 2012 - 2020 was adopted in the Republic of Tajikistan. It was approved of by the decree №201 of the Government of the Republic of Tajikistan in April 30, 2012 and the law of the Republic of Tajikistan dated 28 December 2013 *'On state-private partnership'*. The program is aimed at the continuation of the work on a phased, comprehensive reforms on the legislation of the Republic of Tajikistan, modernization of production and technology processes, attracting foreign and national investments, strengthening of public-private cooperation, and improvement of credit and financial system of support of the small and medium businesses.

To encourage those subjects of entrepreneurship in the areas of production, which meet the requirements of the Law of the Republic of Tajikistan "On the moratorium on all the types of inspection of subjects of entrepreneurship in the sphere of production" on the appropriate

level, as well as to improve incentives and timely and qualitative execution of their goals and professional objectives, outlined by the government law №696 of the Republic of Tajikistan on December 3, 2012, the procedure for the promotion of successful subjects of entrepreneurship in the areas of production was approved.

For the purposes of the organization and development of the subjects of entrepreneurship in the Republic, the Government adopted a number of normative-legal acts for state support of entrepreneurship:

- the law № 46 of the Republic of Tajikistan dated May 10, 2002 "On state protection and support of entrepreneurship in the Republic of Tajikistan";
- the law № 907 of the Republic of Tajikistan dated December 28, 2012 "On state-private partnership";
- the program of state support of entrepreneurship in the Republic of Tajikistan for 2012-2020; approved by the decree №201of the government of the Republic of Tajikistan dated April 30, 2012.

Meanwhile, entrepreneurial activity cannot be conducted in a completely free market, as classics of economics A. Smith and D. Ricardo argued over 200 years ago. Being a subjective constitutional right, the right on entrepreneurial activity provides a subject with certain measures of possible behavior aimed at achieving stated goals. At large, the right on entrepreneurial activity does not grant infinite freedom to the business actor. It must be performed within the boundaries described by normative legal acts containing both positive rules of conduct and prohibitions.

3. Conclusions

Analysis of the state of existing system of infrastructure of entrepreneurship for the growth of the national economy shows that small and medium businesses, as well as individual entrepreneurship has become an important element of the economic system in the Republic of Tajikistan, and their number is constantly growing. The formation of positive economic environment for the creation of the powerful sector of small and medium businesses became one of the leading objectives of the government. In recent years, the Republic of Tajikistan has had significant changes on the legislative level associated with support of SME development.

Full compliance with normative legal documents and maximum reduction of the obstacles for doing business may give a significant impetus to the process of improving business climate. Mechanisms and methods of the specified activities should be determined within the framework of multilateral cooperation.

In this regard, the following ways to facilitate infrastructure of entrepreneurship can be considered:

1. increase in participation of the banking sector in the financing of SME;
2. creation of an expended system of public-private partnership;
3. effective mechanism for government's partial loan guarantee given to small and medium businesses, including in the area of high technology;
4. improvement of the tax legislation;

5. improvement of the investment climate, and accessibility to potential investors;
6. development of the scheme for the establishment of institutions for the regulation of business and investment policy in the Republic of Tajikistan;
7. development of the program for the formation and implementation of business incubators, technology parks as an integrated solution to the entire spectrum of issues on the preparation of a favorable investment conditions in regions of the country.

In countries such as the Republic of Tajikistan, the formation of entrepreneurship infrastructure began not long ago. The formal institutions has not been formed yet, and therefore they have been substituted by informal structures. On the one hand, this situation allows to quickly make the necessary decision, but on the other hand, it limits the opportunities for investment and sustainable development even in the medium term.

In conclusion, it should be noted that stability and effectiveness of the state regulation of entrepreneurial activities between government institutions, business structures and others participants of the economy will largely depend on finding new norms, forms, mechanisms and methods of interaction between different subjects and objects of business activity.

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THE IDEA OF QUALITY ANALYSES OF COMPANY'S INTELLECTUAL CAPITAL FROM LONG TERM COMPETITIVENESS PERSPECTIVE. PART I

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Abstract. *Purpose* – the paper aims to present the idea of quality analyses of company's intellectual capital from long term competitiveness perspective. *Design /methodology/ approach* – the paper reviews the theoretical and empirical IC literature. The research seeks dependency between the level of intellectual capital and its components. *Findings* – A qualitative model of intellectual capital was developed. This paper presents a theoretical model of intellectual capital in a strategic and qualitative approach, developed in the context of building a company's long-term competitiveness. *Research limitations /implications/* – the investigated area involves variables of intellectual capital, determination of their impact on business results and the process of building intellectual capital in the context of long-term competitiveness. *Practical implications* – the presented method may be deployed by companies to determine the value of their intellectual assets and to evaluate their impact on the IC level. The premises of the strategic and qualitative model of intellectual capital should inspire companies to value their intangible assets in the context of long-term competitive advantage and should constitute a venture point for asset management. *Paper type* – conceptual paper.

Keywords: intellectual capital, performance, competitiveness.

JEL Classification: M54, O15, D83.

1. Introduction

Now days pressure on competitiveness made different approach to the company's assets. There is the need for commoditization in their products and services have generated the necessity for analysis of non-material assets. High profile corporate collapses, such as Enron

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in the USA and HIH in Australia, have generated pressure on professional observers not only of the financial markets to provide clearer lead indicators of financial performance of listed firms. In addition, the Australian regulatory regime encourages a relatively high proportion of superannuation monies to be invested either directly or indirectly into the share market creating both opportunities and threats for retail investors. Intellectual capital has been considered by many, defined by some, understood by a select few, and formally valued by practically no one. Therein lies one of the greatest challenges facing business leaders and academic researchers today and tomorrow (Bontis 1998, p. 1). At the same time, many human capital metrics, such as might be derived from the Kaplan and Norton (1996) style of *The Balanced Scorecard* or *Strategy Maps* (Kaplan and Norton, 2004, pp. 31-37) cannot be systematically adopted by analysts and fund managers without breaching regulatory boundaries, since those metrics rely on an in-depth understanding of an organisation which could only be gained by access to privileged assets. This paper discusses the nature and source of the originality of firms on which the variety of an industry is based. Variety among firms refers to the differences between them in what they do and how they do it. Fundamental changes have been wrought in the global economy, which are changing the basis of firm level competitive advantage and with it the functions of management. The decreased cost of information flow, increases in the number of markets (e.g. for intermediate products, and for various types of risk), the liberalization of product and labour markets in many parts of the world, and the deregulation of international financial flows is stripping away many traditional sources of competitive differentiation and exposing a new fundamental core as the basis for wealth creation. It is concern not only of company managers' but for the nation and population of the cities (Bounfour A., Edvinsson L. 2005, p. 29). Basically, if firms are diverse, they do not compete fiercely. It is proposed that, in the context of knowledge-intensive industries, what makes firms special is their intellectual capital (IC). The motivation of the paper is to justify a better conceptual option for describing intra-industry variety that is essential for economic progress. This is important because the concepts on which the evolutionary theory of economic change currently rely, namely routines and dynamic capabilities, are not well suited to capture the uniqueness of a firm, especially in the context of a knowledge-intensive industry. In addition, the paper analyses IC at the industry level. So far, no such approach to IC has been taken, as the focus of IC research has been mainly on practical management methods. However, lately there has been some research on IC in wider contexts, such as clusters (Oliver and Porta, 2006, p. 16), regions (Josep Ma. Viedma Martí 2005, pp. 22-23) and nations (Bontis, 2004, p. 12).

This paper is a natural corollary to that stream of IC research. The starting point od it is the evolutionary theory of economic change where industry development is seen as the interaction of innovation and competition within a population of firms. Firms innovate to escape competition and also compete by innovating The argument is developed through theoretical analysis and illustrated through empirical findings from a knowledge-intensive industry. The main emphasis is on theory development whereas the empirical observations serve as sources of inspiration. The argument developed in the paper follows the logic shown in many casual examples. This way as a link is created between the economic perspective that

acknowledges intra-industry variety and the management perspective that concentrates on how such differences, or competitive advantages, are created endogenously within the firms.

The contemporary changes observed in the business environment support the observation that the significance of traditional assets (capital, land, labour) in the process of building competitive advantage is falling in favour of intangible assets, mostly knowledge, intellectual capital and information (Stewart 1997, p. 22). According Allen, P.M., Strathern, M. and Baldwin, J.S. (2004), contemporary changes are marked by three characteristic features. The first involves the gradual transfer of the change process from a deterministic to a stochastic form, implying the growing significance of random factors in the economy and increasing difficulties in forecasting events. The second feature accounts for the direction of the noted changes and the mode of those transformations which are marked by lateral trends and occur independently based upon the changes often take place simultaneously. The third characteristic feature concerns the movement from a state of continuity to a state of discontinuity (Allen, P.M., Strathern, M. and Baldwin, J.S. 2004, pp. 61-7).

The specific nature of contemporary changes demands that business creators acquire new skills in the area of management. They draw upon continuously growing knowledge assets which support creativity and innovation. The approach to business evaluation which is based on qualitative measures (such as loyalty, reputation, solidity, reliability) has been steadily gaining ground. Monetary measures which are popularly adopted in a competitive environment are gradually losing their significance. According to R.E.S. Boulton, B. D. Libert and S.M. Samek (2000, p. 33), the above transformations are a distinctive feature of the so called new economy which is based on intangible assets.

Intangible assets are investigated on many levels. Initial studies aimed to determine the significance of knowledge, its generation and absorption. This asset category was perceived as the source of market success and a prerequisite for building a strong competitive advantage. The concept of knowledge management originated in 1987 when the first conference entitled *"Managing the knowledge assets into the 2lst century"*, co-organised by the Purdue University and DEC, was held in the United States At the same time in Sweden, the *Konrad Group* launched a study to investigate intellectual capital management, and their projects took on a strategic significance (Liebowitz, J. and Chen, Y. 2003 p. 410, Nemetz, M, and Karagiannis, D. 2007, p. 76).

The nature of intellectual capital is best expressed by the definition formulated by L. Edvinsson and M. Malone (1997, p. 40) which has since been awarded the status of a classic. According to the above authors, intellectual capital comprises the possessed knowledge, experience, organisational technology, customer relations and professional skills which provide a company with competitive advantage on the market. The value of intellectual capital is the range within which those intangible assets contribute to the company's achievement of financial gains. The most frequently cited components of intellectual capital are: human capital, process capital, innovation capital and customer capital. Studies investigating intellectual capital as a whole have shown that it directly influences a company's financial results. Human capital is not directly responsible for a company's financial

performance (Wang, Chang 2005, p. 234), but it has a direct impact on other intellectual capital components, including innovation capital, process capital and customer capital.

The existence of a relationship between intellectual capital and business performance has also been postulated by A. N. Andreou, A. Green and M. Stankosky (2007, pp. 64-69). In addition to technology, their study of organisational capital also accounted for management styles as a component of process capital. They relied on correlation methods to prove that in high-tech companies, financial performance was most closely linked to process capital – at 49.5%, human capital – 38%, technological capital - 26.9%, innovation capital – 20.7%, market capital – 11.1% and decision-making effectiveness – 5.9%. The above authors concluded that the people employed by a company and their operating methods had the greatest impact on the performance of a high-tech enterprise.

In their study of relations between intellectual capital and financial performance, H. P. Tan, D. Plowman and P. Hancock 2007, pp. 90-91) attempted to prove four hypotheses: I) There exists a positive correlation between intellectual capital resources and a company's financial performance; 2) The higher the level of intellectual capital, the better the results; 3) There exists a positive correlation between financial performance dynamics and intellectual capital; 4) The influence of intellectual capital on financial results is determined by the market segment in which the company operates. According to S. Becker (1993, p. 27), the present value of intellectual assets in the United States exceeds the value of its fixed assets three-fold.

Equities are traditionally seen primarily through the lens of risk and return, with a focus on the alpha factor (as an adjusted performance), as well as the beta factor, the volatility compared to the market sector. However, the culture and management systems, which create a firm's ability to execute strategy, tend to be minimized in the quantitative aspects of mathematical modelling. One commentator on this phenomenon, Bernstein (2001, p. 14) describes the recent increase the level of journalistic reportage on firms, in terms of earnings models, as increasing the “noise”, or extraneous data, available to investors, but without an associated increase in authentic analysis which may provide insight into the future performance of firms. The field research described in this paper indicates that more systematic analysis of management systems, as one key form of intangibles, can make the process of investment process more transparent.

2. Implications of the strategic and qualitative approach to intellectual capital

Even though organizations and scholars recognize the important contribution of many individual assets such as brand, relationships, culture, and knowledge, they do not necessarily use the term IC. It seems that the concept of IC is not well understood and rarely clearly defined (Marr B., Chatzkel J. 2004, p. 225).

Researchers such as Dunphy D. Griffiths A., Benn S. (2003 have established the case for observers and participants in organisations to have highly sophisticated interpretations of intangibles within organisations. Yet, it is ironic that knowledge required for securities analysts to make investment decisions has traditionally been based on mathematical modelling. Common mathematically-based approaches to financial analysis include: the

capital asset pricing model, the weighted average cost of capital, earnings estimates based stock exchange publications.

According to B. Lev, knowledge and other intangible assets are the main prerequisites for the creation of added value and the company's future development (Housel, Nelson 2005, pp. 547-548). This approach to intangible assets indicates that they do not generate immediate profits and they do not guarantee a return on assets. A company's future value may be a sum total of the value of assets in a given location, as the value resulting from possible growth in the future, plus the value of growth generated by new assets. The first two factors are determined by the degree of accumulation and previous investments.

The company can adequately deploy its knowledge and other assets to build competitive advantage only through innovation. For this reason, in the classical Skandia Market Value Scheme (Edvinsson, Malone 1997, pp. 35-48), innovation capital and process capital are the building blocks of competitive advantage. Innovation capital comprises two traditional intangible assets: intellectual property rights (e.g. trademarks and trade names) and other intangible assets, such as the company's operating philosophy. Process capital is made up of work processes, technology and employee programs which increase and reinforce the effectiveness of production and service provision - it is the practical knowledge which is deployed in the continuous process of value creation. In the intellectual capital value creation map in Edvinsson's model, a company's future is determined by the steady improvement of its innovativeness as the basic organisational skill. Innovation supports continuous development and revival, and it enables the company to build customer capital as the result of the clients' loyalty and attachment to the company's products.

An organisation's innovativeness and creativity are determined by the organisational climate (West, M.A. and Anderson, N.R. 1996, p. 682). Due to the above interdependency, the innovation process which is rooted in knowledge and organisational climate should involve an analysis of the economic, technical and social aspects of the company's operations (Cardinal, Alessandri, Turner 2001, pp. 196-197). In the economic context, a company can adequately remunerate its employees and finance research projects. The technical aspects determine the need to implement adequate solutions in the company's narrow set of procedures. The social perspective accounts for the impact of management styles and the organisational culture on the innovation process and, consequently, the company's competitive advantage.

Based on the lead authors' field research, as well as the ongoing research of both authors over many years, it becomes clear that the fundamental question of the sustainability of a listed firm can be analysed via a clear and systematic analysis of the intangibles of a firm. In particular, analysis of the human capital of a listed firm, as manifested in the configuration of its management systems, can give rise to a clearer and more transparent picture of the firm allowing for a higher level of analysis of accountability and potential future financial performance.

The requirements relating to the development of innovativeness and competitiveness, as the basic prerequisites for the achievement of competitive advantage, are determined by the qualitative features of intellectual assets which, in the context of building a company's future,

are re-valued and transformed into capital. The latest model for the qualitative assessment of intellectual capital components in the context of building competitive advantage was proposed by J. Chen, Z. Zhu and H. Y. Xie (2004, pp. 203-206). In this model, qualitative indices are assigned to the following components:

- strategic leadership management; employee quality;
- employees' ability to learn;
- employees' ability to participate in the development of the company's policies and corporate management;
- identification with the company's core values and goals;
- employees' creative skills;
- development and functioning of corporate culture;
- quality of relations between power, responsibility and benefits;
- mutual support and collaboration between employees;
- cooperation with external organisations in the area of innovation;
- ability to manage innovative projects; incentives for employees dealing with innovations;
- supporting corporate culture and encouraging employee innovation; management's support for innovation.

It should be noted that the company's future results, their consequences and the qualitative indices assigned to intellectual capital components are determined by intellectual assets in the teleological area of management comprising: the mission, policy strategy, management scenarios, etc. Assets I resources may be transformed into capital depending on whether they are consciously and intentionally deployed to support the organisation's goals. Intellectual capital management has become strategic management, and the structure of intangible assets which build the company's prospective competitive edge takes on a dynamic character. The above logic is illustrated by Plexus' dynamic model of intellectual assets (Litschka, Markom, Schunder 2006, p. 1647). In Plexus' model, intellectual assets are shaped by: 1) human resources: knowledge, abilities, skills, professional predispositions which affect the level of employee satisfaction with work, involvement, motivation; 2) organisational and codified resources comprising: mission and policy, strategy, structure, processes. Those resources shape the organisational culture which affects human resources.

The qualitative requirements set for intellectual assets result from the company's prospective plans. The analysis of intangible assets to determine the needs of future goals involves a descending approach.

In terms of future research, numerous opportunities are open. First, it is desirable to replicate this project by analysing proceedings of other KM/IC conferences, for example the International Conference on Intellectual Capital, Knowledge Management & Organizational Learning. Second, it is important to know what topics KMIIC scholars tend to investigate. This issue was omitted in the present project since no comprehensive KM/IC topic classification mechanism exists. Initially, a comprehensive keyword classification scheme of KM/IC topics should be developed, as has been successfully accomplished in other scientific domains (see, for example Barki 1993, pp. 322). Third, a similar scientometric study should

encompass the 20 KM/IC academic journals identified and ranked by Serenko and Bontis (2009). In this case, a comprehensive picture of the discipline identify will be obtained. The field of KM/IC has had significant growth in the last decade and a half. Much of this growth can be attributable to McMaster University and the role it has played in hosting a world class conference. Ultimately, whether it is at McMaster or any of the other top producing institutions, the key element to driving a field's growth is the continued support of key individual researchers. At almost every single leading KM/IC institution is an individual who acts as a hub of activity. Collaborators are invited to join him, organizations are invited to share their experiences, and future PhD students are also groomed by that same individual.

3. Valuation of intellectual assets in the context of building competitive advantage

Professional observers of the business such as scholars and academics, are rewarded on their relative ability to predict the future financial performance of construction companies based on data which is released to the exchange and on data provided by regular analyst briefings. Key themes of contemporary markets are transparency, accountability and performance. While not directly stated, underlying these themes is the principle of sustainability of the human capital systems of the publicly listed firm. The question "Will the company survive given the configuration of their human capital intangibles?" is important for managers. Many studies especially managed by Hong Pew Tan, David Plowman and Phil Hancock proved that there is quite strong correlation between intellectual capital and company's performance (Tan P.H., Plowman D., Hancock Ph. 2007, p. 79).

A survey of Australian superannuation funds noted that all respondents were aware of the United Nations Principles for Responsible Investment and that 75 percent had either signed the principles or were intending to do so in the next 12 months (Australian Council of Super Investors Inc., 2007, p. 51).

The term "human capital" is used here to define the practices used in organizations which work towards the long-term sustainability of organizations. It is distinguishable from the more commonly used term "social capital" which is defined by Dunphy as human sustainability, which implies building human capability and skills for sustainable high-level organisational performance, and for community and societal well-being. Ecological sustainability requires redesigning organisations to contribute to sustainable economic development and the protection and renewal of the biosphere. Dunphy provide us with a series of phases in the development of sustainability from both an ecological and a human perspective .

According to N/ Bontis (Andreou, Green, Stankosky 2007, p. 56), the company's strategy determines intellectual capital categories, key success factors and, consequently, a system for measuring the value of intellectual assets. For this reason, every enterprise should focus on developing the right strategy. A strategy which supports the achievement of competitive advantage by relying on intangible assets should have a long-term perspective, The above necessitates the implementation of the right management style which, in the opinion of Ch. Lynch, is imposed by the adopted strategy (Unruh 2006, pp. 25-26). The right management style should be inspired by the managers' attitudes rather than a set of rules and instructions which are characteristic of management styles that lead to the achievement of measurable,

short-term goals. A new management style which supports the company's strategy has to be adapted to the needs and expectations of its employees, and not the other way around. According to L. Unruh, the managers' key task is to create business, delegate authority and control processes within an organisation. The management style should support cooperation between employees at every organisational level. In practice, the above should involve a free shaping of the organisational structure subject to the nature of the arising tasks. This observation is supported by the work of H. Tserng and Y. Ch. Lin (2004, pp. 784-786). The above authors have noted that direct interpersonal relations are the main contributors to the process of knowledge acquisition. For this reason, they have postulated that one of the key challenges facing a company is the shaping of a favourable organisational climate which motivates employees to acquire, expand and share knowledge.

In view of the mutual relations between strategy, structure and culture in the long- term competitiveness perspective, R Miles and C. Snow have classified organisations into three types (McKenna, Beech 1997, p. 69):

1. **defence-oriented organisations;** their main objective is to secure and maintain a stable position on the market of a given product or service. Such organisations place the main emphasis on formal systems where planning and control are centralized. The key concerns are productivity and cost reduction.
2. **analysis-oriented organisations;** such companies emphasise the importance of research and development and recognize the need for steady, rather than rapid growth. They are more inclined to follow the existing market trends rather than become market leaders.
3. **search-oriented organisations;** the main goal is to develop a new product and take full advantage of market opportunities. The emphasis is on flexibility, provisional systems and creativity.

The above organisation types are characterized by varying degrees of innovativeness and creativity and, consequently, organisational entrepreneurship. A defence-oriented organisation represents the lowest level of pro-innovative activity and willingness to introduce the required changes. The highest degree of entrepreneurship is manifested by a searching for creative oriented entity.

In view of the differences in the level of entrepreneurship in the adopted perspectives and strategies of competitiveness, typical management styles can be assigned to different organisation types. Organisations with a defensive strategy are likely to adopt a stabilizing style. Research-oriented organisations are characterised by a developmental style. A creative / entrepreneurial style is typically associated with organisations oriented towards search and creativity. In view of the requirements of the contemporary economy and the company's long-term competitiveness, the most desirable type of an organisation is the one oriented towards the search for new solutions which provide it with a permanent competitive advantage. Therefore, the creative / entrepreneurial style is the most highly valued management style in contemporary businesses, while the stabilizing style, which can cause relative stagnation in a company, is the least desirable style. The true art of managing a contemporary business

involves the transformation of a defence-driven organisation into an organisation oriented towards search and analysis. The management style which exists in the framework of the company influences the relation among the employees, especially between white and blue collars.

Internal influences that affect managerial beliefs and perceptions and management strategy include the state of the employment relations, cultural factors, costs associated with the need to secure commitment of employees (such as reward, performance management, and career and development systems) and insider-outsider relations. External influences that affect managerial beliefs and perceptions and management strategy include historical trends, the competitive nature of the economic environment, institutional factors, the nature of the product, technological changes and the costs associated with recruitment. It is crucial to state in any qualitative analysis of this kind that while the internal and external influences are interrelated, they have not evolved in any business activity.

From the point of view of building competitive advantage through pro-entrepreneurial transformation of an organisation, management styles become a normative category of management science comprising: norms, principles, methods, techniques, instruments, institutions which integrate different parts of an enterprise and harmonise its operations to support the continuous growth of productivity, entrepreneurship, flexibility of structures and processes, ethical conduct. In the context of intellectual capital management, management styles become an instrument of that process and support the modelling of other intellectual capital components. Management style is also an asset which contributes to the effective use of other intellectual assets in the process of creating added value in the future. The above implies that management style is an intellectual capital component next to: human capital, structural capital (innovation capital, organisational capital, process capital), customer capital (Edvinsson, Malone 1997, pp. 34-35), strategy, mission, policy and structure (Litschka, Markom, Schunder 2006, p. 164). Adequately selected management styles form the management style capital, teleological aspects (mission, strategy, policy) build the teleological capital, while structures contribute to the organisational capital. In the operational approach, the art of managing intellectual capital, as characterised above, involves the enrichment of organisational culture with elements of entrepreneurship - which should be a shared feature of all intellectual assets. Entrepreneurship is a feature characteristic of both people and organisations and it supports the transformation of assets into desired values which make up the concept of capital. The process of organisational development involves the evolution of organisations which are based on individual entrepreneurship into organisations that rely on cultural entrepreneurship (World Bank 1998). Yet for full economic development to be achieved, the organisation has to build its social capital (social ties) based on mutual trust, reciprocity and involvement (Usoff, C., Thibodeau, J. and Burnaby, P. 2002, pp. 9-15). Through the development of social capital, organisations lose their mechanistic(bureaucratic) traits and are transformed into organic, network organisations (Burns, Stalker1961, pp. 9-122).

According to F. Fukuyama (Fukuyama F. 2006, p. 24), the importance of social capital grows with technical advancement, the flattening of management structures, and the

replacement of hierarchies with a new network structure. Social capital is rooted in mutual trust which, similarly to lubricant, facilitates the functioning of people, groups, organisations and their cooperation (Fukuyama 1997, p. 136). The flexibility of structures, network connections, individual entrepreneurship and the flattening of hierarchies shape the organisational climate and a mental approach which supports innovation and creativity. In the opinion of G. Hamel (2006, pp. 63-64), human potential can be multiplied by creating a communal climate within an organisation. People are drawn to that community by important, shared goals rather than economic needs. A community where control is more likely to be exercised by co-workers rather than superiors offers a more favourable environment for growth and development.

For a communal climate to be established, the degree of organisational asymmetry, which is manifested through cultural asymmetry, uneven distribution of profits and pay, emotional, motivational and information asymmetry (Mroziewski 2006, pp. 15-18), has to be reduced. The reduction of organisational asymmetry enriches the capital of internal and external stakeholders who have an interest in working with the company in the long-term perspective. Over a longer period of time, a communal climate contributes to the emergence of an integrative culture, a concept which was coined by R.M. Ranter (1983, pp. 54-6). The main features of an integrative culture are: readiness to go beyond the boundaries of taught knowledge, combining ideas from different sources, perceiving the problem as a whole which is connected to a greater whole, questioning routine practices, operating on the verge of competence, measuring own success in terms of future vision rather than past standards, developing mechanisms which facilitate the exchange of information and new ideas, recognising and even supporting differences with the willingness to cooperate, looking to the outside, searching for new solutions.

Integrative culture values, in particularly in search-oriented organisations, are supported by collective emotional intelligence, as identified by D. Goleman (1997, p. 67, pp. 254-259). Collective emotional intelligence also accounts for the predispositions of teams which are oriented towards cooperation, including the ability to motivate, persistence in striving towards goal achievement despite failure, the ability to control impulses and delay the time of satisfying those impulses, the ability to control mood and resist problems which impair thinking ability, the capacity of empathising with the feelings of others and an optimistic outlook on the future.

Emotional intelligence, which is associated with relations, organisational climate and the organisation's future, meets the criteria set for intellectual capital components and creates the emotional capital of an organisation. Emotional capital comprises mainly: self-confidence, accurate perception of own abilities, honesty and persistency. In the opinion of the above authors, a communal climate, trust, entrepreneurship, elements of an integrative culture and emotional intelligence are the building blocks of social capital. The general structure of social capital is inclusive of the internal relations capital, external relations capital and emotional capital.

According to D. C. North, Nobel Prize Winner of 1993, the ability to develop various forms of cooperation and creative attitudes which support the growth of prosperity is

determined by adaptive effectiveness (Landreth H., Colander D.C. 1994, pp. 237-8) in the long-term perspective. Adaptive effectiveness is related to rules which determine the way the economy develops over time. This applies to the society's readiness to acquire knowledge, learn, stimulate innovations, take risks and become involved in different types of creative activities, such as problem solving and the elimination of obstacles which every society encounters during its evolution. D. C. North regards development as a process of evolution in which institutional and organisational changes facilitate coordination and cooperation between people, lower transaction costs and enhance development. Economic growth is also the product of cooperation and competition, but competition plays the leading role in the process. For this reason, a conscious effort should be made to establish institutions which incite technological change, accumulation and mobility of capital, improvement of human capital, and which foster the evaluation and distribution of risk and facilitate cooperation. Institution building is an important process in view of the fact that culture is the key to understanding the way the past affects the present and the future. The knowledge possessed by every generation is conditioned by its specific point of view which has been shaped in the historical process of collective learning. The incentives for acquiring "pure knowledge", which is an important driver of modern economic growth, are conditioned by financial awards and fines and the degree of social tolerance for creativity and development. D. C. North associates the system of awards and fines and social tolerance for innovativeness and development with the problem of intellectual property protection. He argues that full institutional protection of intellectual assets is required to make the economy effective (Keating 2006, p. 5). In the authors' opinion, D, C. North's concept of adaptive effectiveness, which relates mostly to the characteristic features of a society, describes not only the desired state but also the qualitative criteria which should be met by intellectual capital components of a contemporary business. Managerial operations should be oriented towards the enhancement of the employees' creativity, innovativeness, team working skills and effectiveness to maximize the company's potential. The instruments supporting the achievement of the above objective should be the principles and institutions of management. Their flexibility, adequate selection and contribution to the growth of enterprise make up the capital of the management institution which will determine the management style.

The authors subscribe to the opinion of H. Johnson (Edvinsson, Malone 1997, p. 11) that companies' ability to learn and adapt make up their intellectual capital. The presented intellectual asset components indicate that individual and social acts of creativity and innovativeness in an enterprise are determined by people functioning in intellectual, emotional and spiritual dimensions. Based upon Britannica Encyclopedia study of the human mind and creative potential has led to the identification of three types of intelligence:

1. **Intellectual** (rational) **intelligence** which is used to solve logical problems. It is manifested by our reasoning ability, the ability to acquire and use information (learn), our mental capacity to think rationally, the skill of solving various problems and cognitive activity.
2. **Emotional intelligence** (in D. Goleman's approach) which shapes our determination to act while recognizing the emotions of our co-workers.

3. **Spiritual intelligence** which combines intellectual and emotional intelligence by understanding the deeper meaning and the value of human actions in a business environment. It is a bridge across two worlds: the enterprise and the society (http://www.brittanica.com/EBchoed/toic/289760/internence – access 2015.11/12).

An organisation's creativity reaches its apex when it is incorporated into the "mind and soul" of the system of modern and innovative organisations. Spiritual development fosters the growth of collective creativeness by shaping the collective mind which has a much greater creative potential than individual minds. By moving from the individual level to the level of a group and an organisational system, the creativity and innovativeness of minds is expanded, supplementing the creative potential of the collective mind. Its intelligence and creativity substantially supersede that of an individual mind. In the authors' opinion, the organisational mind shapes the creative capital which encompasses intellectual, emotional and spiritual ability to, develop new products, new processes and new markets in the area covered by the company' s activity.

The concept of human capital in L. Edvinsson's approach does not account for the main "actors" in a market economy, i.e. entrepreneurs who are the last instance decision makers, their individual differences are responsible for the dynamic evolution of the capitalist system. R. Griffin, G. Moorhead (2006, pp. 233-235) defines an entrepreneur as an entity which organises and conducts business activity and takes risk. An entrepreneur undertakes actions which is generally defined as entrepreneurship. Therefore, an entrepreneur is an entity which: organises and conducts business activity, takes business-related risk, makes vital business decisions and is charged with ultimate responsibility for the consequences of its business decisions. Entrepreneurs'/managers' philosophy (set of core values, beliefs, methods and objectives of action) influences an organisation's adopted strategy, structure, organisational culture and intellectual capital management. Similarly to other people employed in the company, entrepreneurs are active participants in the business process, and their attitudes, behaviour and decisions shape the human capital which initiates changes in other intellectual capital components.

4. Conclusion

The presented results of theoretical studies indicate that the quality of intellectual capital components directly affects companies' financial performance, profit growth dynamics and competitive position. The growth of a modern enterprise is inseparably linked with the evolution of individual and organisational innovativeness and creativity within the organisation in line with the qualitative principles of the company's specific integrative culture and adaptive effectiveness. In an era marked by high mobility of people and information, long-term success will be scored by companies which provide its employees, in particular knowledge workers, with satisfactory living and working conditions. The relative attractiveness of the living and working environment is a factor which contributes to competence stability and the growth dynamics of an enterprise which actively searches for new methods to build and maintain its long-term competitive advantage.

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INNOVATION DURING ECONOMIC DOWNTURNS – SOME REMARKS IN RELATION TO KEYNESIAN AND KALECKIAN ECONOMICS

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Abstract. This article examines what led to the work of Keynes and Kalecki, and how these Keynesian techniques have been imbedded into the modern NeoClassical Synthesis. Most modern economists consider the NeoClassical synthesis as a general guideline for managing the cyclical nature of modern economies. In a stagnating economy, New Keynesian economics are mainly applied in order to stimulate Aggregate Demand (AD), which increases output and decreases the negative effects of a downturn in the economic cycle. Research shows that innovation stimulates consumer demand through the filling of technology gaps. The stimulating of consumer demand, in turn, increases AD. It is the conclusion of this article that properly timed public investment in innovation would be more cost-effective at eliminating the negative effects of a recession, then non-targeted and generalized deficit spending. Furthermore, the products of the aforementioned innovation would provide society with longer-lasting technological benefits.

Keywords: Innovation, Economic Downturns, Economic Cycles, Aggregate Demand, New Keynesian Economics, NeoClassical Synthesis, Technology Gaps, Deficit Spending

JEL Classification: E11, E12, E32, E62, B12, B22, O31

1. Introduction

The Age of Enlightenment led to what is now considered classical economics. The Age of Mercantilism used heavy government regulation to achieve its goals of optimal trade flow. This form of economic theory seemed artificial and unnatural to the intellectuals who were following the works of the natural scientists. A more natural state of economics became far more fashionable. The term *laissez faire* ("let it be") was born. Free enterprise and free trade were left relatively unhindered, and wealth was seen as flowing from one area of society to another in the same way blood travels through the human body.

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Adam Smith published "The Wealth of Nations" in 1776, and this is widely regarded as the beginning of modern economic thought. This laid the groundwork for American Capitalism as well as giving a basic philosophy for the upcoming industrial revolution. Smith stated that human labor created value rather than trade. Smith surmised that although each person in a free market is completely selfish and self-centered (attempting to get the most that they can), the competitiveness of the free market controls this selfishness. Smith argued from a supplier's point of view. According to Smith, each seller would like to charge as much as possible for their product (be it labor or a commodity). However, above a certain price level, the seller will not find a buyer due to competition in the free market. This "invisible hand" of the free market was a revolutionary breakthrough, when compared to the military backed mercantilism of the previous centuries (Smith 1776). Nowadays, the term *laissez faire* seems to have a negative aspect to it in many circles, especially amongst the New Keynesians, but it was an innovative concept that gave birth to our modern understanding of economic thought. The New Classical economists are still referring back to the work of Adam Smith even to this day; although they do have more microeconomic foundations today than Classical macroeconomics had so long ago.

The classical economics pioneered by Adam Smith reigned supreme for one hundred and fifty years: far longer than any other modern macroeconomic model. The "Let it Be" *laissez faire* approach worked well for the established capitalists. Throughout the nineteenth century, Europe and the United States grew rapidly through industrilaization and colonization. Europe used wealth from colonies around the world, while the United States used wealth from a westward expansion. Both used a pool of easily exploitable cheap labor in their industrilaized areas. The deterioration of the standard of living for the poor of indusrialized cities at the time was so dire, that Charles Dickens made a career by writing stories decrying the squalid conditions and Karl Marx made contributions to the economic theory of his day by observing those same horrid conditions from an economic point of view and drawing some conclusions from it.

For example, Marx assumed that innovation could replace workers and increase unemployment. As employers switched to automation, fewer workers would be needed. As the number of unemployed workers rose, they would be accepting ever lower wages (due to increased competition for each position) to the point where the economy would collapse due to a glut of unsold product that much of the population could no longer afford to buy. The glut would eventually clear, and the economy would rebound. This would essentially lead to a cycle of „boom and bust". This is actually one of the first instances of economic cycles being considered. Marx assumed that the instability of the economy would drive the working classes to violence through a sense of desperation (Marx 1867). Nowadays, we know that modern economies are characterized by economic cycles. Since the Great Depression, modern economics has been dedicated to smoothing out these business cycles.

Peter Schumpeter was far more pragmatic and logical than Karl Marx. Schumpeter saw what Marx descibed as being a very clever insight, but Schumpeter did not make specific political predictions. Instead, Schumpeter correctly saw that intellectuals as a class of society would be able to correctly analyze and solve the problems of capitalism, and lead society into

a world with less exploitation and a better standard of living (Schumpeter 1942). Furthermore, Marx only described innovation as an entity that would replace workers through automation. Marx could be described as an economist who did not value innovation. On the other hand, Schumpeter correctly surmised that innovation is a process of creative destruction, and that innovation will allow society to progress. The work of Marx served as a starting point for some great economists such as Kalecki; who was a contemproary of Keynes.

2. Economic Cycles and the Rise of "Keynesian" and "Kaleckian" Economics

A fast-growing economy is best handled in modern economic theory with a more classical supply-side approach. Unfotunately, an economy cannot grow at a fast pace indefinitely. The great depression of the nineteen-thirties showed the limitations of classical economics. The post World War One boom, quickly turned into a bust on October 24, 1929. The theory of economic cycles had not been investigated with enough rigor, and the downturn was a great shock. The first hint that the economy may show cycles came in the early nineteenth century when an astronomer noticed a correlation between the 11 year sun-spot cyle and wheat prices. Apparently, the sun-spot cycles affect the weather, which affects the amount of wheat that is grown. Of course, the greater the supply of wheat, the lower the price. Of more interest to modern economists is the work of Nikolai Kondratiev who postulated that Western capitalist nations seem to have an economic cycle of fifty to sixty years. This cycle of boom and depression was seen to be rather long by Ernest Mandel who shortened the economic cycles to a period of twenty to twenty-five years (Sontag et.al. 1969). This is the theory of economic cycles. The work of Mandel has been brutally accurate with cycles very close to the twenty to twenty-five year period being the norm. Once economic cycles had been established, the problem became how to minimize the effects of downturns in the economy.

Keynes learned modern economic mathematics and graphing as a student of Marshall at Cambridge. This was a great advantage for Keynes, since it made his work much easier to comprehend: even across language barriers. The main conclusion reached by Keynes was that focusing on aggregate supply and using *laissez faire* fiscal policies will not allow the economy to reach an equilibrium that is desirable (or even survivable) for the majority of the population. Keynes did not discredit classical economics completely, but instead insisted that the natural supply-side correction mechanisms of *laissez faire* may take decades to correct itself. Meanwhile, one-fourth of the work-force in the industrialized world was unemployed, without money to purchase basic food-stuffs. Thus the famous quote from Keynes, "In the long-run, we are all dead." (Keynes 1923). The mathematics and graphing of Keynes (the original borrowed from Marshall) introduced what we now consider to be modern macroeconomics. In 1936, Keynes published his Magnum Opus "The General Theory of Employment, Interest, and Money". The main argument was a rejection of the idea that falling wages will restore full employment. In Classical Economics, it is assumed that increased unemployment will put downward pressure on wages. As the labor becomes less expensive, employers will begin hiring again. As more workers are employed, they will begin to purchase more, which will eventually clear the glut. Companies will then begin to make more capital investments, and the economy will recover. Unfortunately, Classical Economics

did not consider time as being part of the equation. Keynes made the argument that while the above-mentioned scenario may eventually come to fruition, there may be a long time-period where companies are not confident enough to make capital investments, or increase their hiring at significant levels. This would lead to a "stickiness" in the nominal price of wages and the level of unemployment. According to Keynes, this stickiness could be overcome by stimulating Aggregate Demand (AD). Aggregate Demand can also be thought of as the total demand for the final goods and services of a nation's economy. According to Keynes:

(1) $$AD = C + I + G + NX$$

In other words, aggregate demand (*AD*) is equal to consumption (*C*) plus investment (*I*) plus government spending (*G*) plus net exports (*NX*). As aggregate demand increases, the *AD* curve will shift to the right, and increase both the price level and real output (*Y*). In simple terms, an increase in any one of the factors listed above will increase *AD*, shift the *AD* curve to the right, and lead to increased real output and higher price levels. Therefore, in 1936 Keynes suggested that governments should spend their way out of the depression, borrowing money if need be (Skidelsky 2008). Of course, this is now refered to as deficit spending. For example, the USA and the UK increassed government spending on infrastructure, Germany (under Hitler) increased government spending on the military. As World War Two began, the United States significantly boosted the economy by increasing military spending (*G*) and exporting these products to the allies which increased net exports (*NX*). The increased employment boosted both consumption and investment in the United States. After the war, the United States was in the perfect position to become the superpower that it is today.

There are problems with the theory of Keynes, however. Firstly, Keynes published his magnum opus three years after another economist had essentially reached the same conclusions via different means. The Polish economist Michał Kalecki is greatly underrated and often overlooked in Western Economic thought. Kalecki approached the problem of the Great Depression from a Marxist foundation, albeit with better mathematics than most Marxist economists of his time. Three years before Keynes, Kalecki published "Proba teorii koniunktury" (An Essay on the Theory of the Business Cycle). Kalecki simplified the economy to a simple equation and then expanded that equation to be more inclusive. Kalecki started with the profit equation, where workers consume all of their wages. In this scenario:

(2) $$P = Cp + I$$

In this equation, gross profits (*P*) equal the consumption of capitalists (*Cp*) plus Investment (I). Kalecki argued that consumption and investment by capitalists determine profits. While this makes no sense for an individual capitalist, it does make sense for the capitalists as a group. For an individual, the more that they consume, the less that they will have. However, since a group of capitalists are continuously buying and selling to each other, the more that they consume as a group, the more market activity there will be. This should stimulate the economy and boost profits for the group as a whole. From this basic foundation, Kalecki expanded the model to include more terms. If capitalist consumption is moved to the left, then gross profits minus capitalist consumption will equal savings (*S*):

(3) $P - Cp = I$ or

(4) $S = I$

Next, Kalecki assumed that workers may have savings as well. Kalecki assumes that workers‘ savings will be removed from the economy, and that there are exogenous factors at play. However, it is possible to open up this model and include several factors that are affecting profits. According to Kalecki:

(5) $Pn = Cp + I + G + NX - Sw$

In other words, net profits (*Pn*) are equal to capitalist consumption (*Cp)* plus investment (*I*) plus government spending (*G*) (i.e. deficit spending) plus net exports (*NX*) and minus the savings of workers (*Sw*). Actually, Kalecki used different variables, but here they have been changed to the same variables that were used by Keynes in order to demonstrate the indredible similiarities between the model of Kalecki and the work of Keynes (Kalecki 1933). If equation (5) is compared to equation (1), it is clear that Kalecki has all four of the same variables that Keynes uses, but Kalecki goes further in subtracting away the Savings from workers. While Keynes speaks of *AD*, Kalecki speaks of net profit. However, the two are related. Keynes idea was that increased *AD* would give the incentive for firms to begin producing, since there was a profit to be made. Kalecki by-passed *AD*, and set-up his model to directly address net profits. There are two main reasons why Kalecki was not credited to the degree of Keynes for his work. Firstly, Kalecki originally published his work in Polish and French, but not in English. This mistake could be the main reason why we discuss “Keynesian” economics rather than “Kaleckian” economics. Other than academic prejudice against any language that is not English, Keynes had the advantage of his mentorship with Marshall. Marshall introduced the graphing forms that we use today in modern macroeconomics, and Keynes was the first to use them extensively. Keynes was able to visually show the curve for aggregate demand shifting from left to right, which made the effects extremely clear. This graphing was so effective that textbooks often refer to Keynes work as the beginning of macroeconomic theory. Unfortunately, Kalecki was not the luckiest economist to have ever lived. After the war, communist Poland did not appreciate his work, and when the international community did recognize his brilliance; he died only a few months before he would have been awarded the Nobel prize (Chapple 1995; Figura 2005). There is even some speculation that Keynes may have read the French version of the work of Kalecki. This is due to the conclusions being extremely similiar.

Keynes believed that his model of boosting *AD* should be used at all times: whether the economy is in a boom or a bust. After the second world war, the developed economies of the world experienced a post-war boom for almost thirty years. Keynesian economics reigned supreme, and most economists believed that economic downturns were a thing of the past.

Keynes believed he had found the solution to unemployment. According to his rather simplisitc theory, inflation of nominal prices would encourage growth and lower involuntary unemployment. In line with the economic cycle theory of Ernest Mandel, about 25 years after the economic boost of the second world war there was a downturn in the economy. During the

middle of the nineteen seventies, the industrilaized nations encountered stagflation. This went completely against Keynesian theory. Not only were nominal prices increasing at a feverish pace, but involuntary unemployment increased significantly as well. It was obvious that a new theory would be needed to replace Keynesian theory.

The demise of traditional Keynesian theory led to a resurgence of classical economics. This time, the classicists combined the microeconomic foundations (such as the concepts of margins and maximum utility) of the classical school with macroeconomic concepts, leading to Neoclassical theory. Soon after, the Keynesians rallied their intellectual forces, and modified the macroeconomic Keynesian model with microeconomic foundations: leading to New Keynesian theory.

Luckily for modern economists, the world has combined these two schools of thought into the Neoclassical Synthesis whereby economic downturns are managed in a more New Keynesian style and upturns are managed in a more Neoclassical style. This modern approach seems to have smoothed out economic cycles to a great degree in the industrialized world. Unfortunately, there are many externalities not addressed in modern economic theory, such as overpopulation in the developing world, pollution, global warming, and even the security of the very society that Europeans and Americans have developed which allows us to conduct economic transactions without the threat of violence. While it is not within the scope of this article to address those externalities, it is within scope to provide improved ideas of smoothing out the negative effects of the economic downturns.

3. Innovation May Be Used to Smooth Economic Cycles by Stimulating Aggregate Demand

Modern research into innovation theory as we know it today only really started in the nineteen sixties. Most of the work done in the nineteen sixties and nineteen seventies was qualitative, with most of the theories being based in the management sciences. The idea was to form a general concept of innovation. One of the more interesting and useful concepts was from Jacob Schmookler. Before nineteen sixty-six, it was assumed that technological change was completely supply-side driven. The common logic of the time was that the supplier would create a new product or process, gain an economic advantage and supply that new innovation. However, Schmookler correctly saw that the demand-side of the equation may also play a role in innovation. The demand-pull model of innovation showed that a need for an innovation will have an effect upon whether the innovation is developed or not (DeJong & Shepard 2007). After all, who would develop a "better mouse-trap" if there was no need for a mouse-trap in the first place. Therefore, if (and only if) there is a need for a new piece of technology, then it becomes worthwhile for someone to develop that new technology. This is also in-line with New Keynesian economics. The demand for the new product is far more important than any supply-side considerations.

Related to this novel idea, Karl-Heinrich Oppenländer developed the idea of technology gaps. In this theory, there is a gap in the technological knowledge that needs to be filled. This demand-side need could only be fulfilled if a firm or industry could develop the technology. However, if there is no demand for the product, then it will not be innovated since the supply

side would not gain any reward for the innovation (Gandolfo, 1998). This is very much in keeping with the work of Schmookler.

The Grossman-Helpman model of economic growth expands upon the work of Dixit-Stiglitz from nineteen seventy-seven. Where Paul Krugman had used Dixit-Stiglitz as the basis for examining diversity of innovation in international trade, Grossman and Helpman examined the issue of innovation at the firm level under monopolistic conditions. According to the Grossman-Helpman model, society acquires ever more knowledge, and this knowledge is built upon and expanded through innovation which allows economic growth to occur. The Grossman-Helpman model showed how monopolistic firms will attempt to increase their revenue stream (Grossman & Helpman 1991). Grossman and Helpman showed that there is a positive correlation between innovation and the rate of growth of economic output. Also, there is the same type of positive correlation between the specialization of a sector and the rate of growth of the final output (Grossman & Helpman 1991; Guarini 2009).

Therefore, it can be clearly seen that innovation is a key input for growth to occur. In a similar vein, around the same time as Grossman and Helpman, Aghion and Howitt went back to the original works of Schumpeter (already cited above) to develop an updated version of creative destruction. They mainly added uncertainty in Research and Development to what is essentially the Grossman Helpman model. This particular endogenous growth model considers vertical integration mainly at the firm level with the idea that the firm is attempting to establish a monopoly by discovering a new technology. As new technology is developed, it automatically makes the old technology obsolete. This creative destruction is strictly Schumpeterian in nature (Aghion & Howitt 1998). The problem with the work of Aghion & Howitt (and by default Schumpeter) is that they assume that an old technology will be replaced with no time lag. This is as serious a mistake as was made by the original classical economists. It is true that markets will clear; but how long will they take to clear? Also, it is true that new technology will replace old technology, but how long will that take to occur?

As alluded to earlier, it may be possible to smooth out the negative effects of an economic downturn by using investment in innovation to stimulate aggregate demand (*AD*). According to the Neoclassical Synthesis that is accepted by nearly every credible economist today, during an economic downturn federal banks should use a New Keynesian approach in order to stimulate aggregate demand and increase real output. Meanwhile, Schmookler developed the Demand-Pull Model of Innovation showing that a demand for an innovation is what drives the innovation, and not supply-side factors. This was further developed by Karl-Heinrich Oppenländer who showed that innovation comes about to fill gaps in technology that consumers want or need. Therefore, it is logical to put these three topics together in order to reach a strategy in dealing with downturns in economic cycles. According to Keynes and Kalecki, the best way to smooth out a downturn in an economic cycle is to stimulate aggregate demand by increasing consumption, investment, government spending and / or net exports. Since innovation fills a gap in the technology that consumers want or need, it is logical that filling that technological gap will increase consumer demand and boost *AD*. Furthermore, if the innovation is of high enough quality to be exported, then it will also increase net exports and boost *AD*. Also, government spending and private investment in

innovation research will also directly affect *AD*. Therefore, from the work of Kalecki and Keynes and the work of Schmookler and Oppenländer, investment in innovation will boost aggregate demand (*AD*), shift the *AD* curve to the right and increase the real output of the economy. This may be an extremely useful approach in order to smooth out downturns in the economic cycle. Instead of non-specific, generalized economic stimulus packages (and/or non-specific deficit spending) during an economic downturn in order to boost *AD*, that financing should instead be earmarked for investment in innovation projects and Research and Development that has the potential to fill a technological gap.

One last consideration is the timing of economic downturns. According to Mandel, economic cycles tend to run in twenty to twenty-five year cycles. Since most innovations have a significant lag time from investment to final product, someone might beg the question of when should these investments be made in order to smooth out a downturn. Since Mandel predicted a twenty to twenty-five year cycle, firms should be encouraged, perhaps through tax incentive programs or the like, to invest heavily in innovation as soon as there are indications of a downturn in the economy, especially after a long spell of at least ten years of economic growth. In that way, it will be likely that a new much sought after product may save not only individual firms, but even sectors during the lean years; and help boost overall *AD*. Meanwhile, the government, and any investors who can afford to do so, should invest heavily in innovation during the economic slump. This is because Investment and Government spending have both been shown by Kalecki and Keynes to stimulate *AD*. Properly timed investments in innovation could help to diminish the negative effects of a recession (or depression) and alleviate the suffering of many who might be unemployed. The financing of the innovation from the federal level should come from the funding that would otherwise have been spent upon non-specific economic stimulus.

4. Conclusion

A brief history of economic thought was presented in order to show how the work of Kalecki and Keynes developed. A more detailed look at some selected types of innovation economics at the sector, national and international level was performed as well. It was further shown that economic cycles are a fact that modern economists must deal with. Economic cycle theory was explored, and it was shown that the work of Kalecki and Keynes were the first macroeconomic efforts to smooth out the negative effects of downturns in the economic cycle. It was also shown that the demand-pull model of innovation allows for innovative technologies to fill gaps in consumer demand. Therefore, it is the main conclusion of this article that properly managed innovation investment and incentives may smooth out the negative effects of economic downturns by stimulating aggregate demand (*AD*) via the New Keynesian ideology which is part of Neoclassical synthesis and modern macroeconomic thought. Since New Keynesian theory often relies upon deficit spending in order to stimulate *AD*, the properly timed direct or indirect investment in innovation by governmental agencies would provide a greater stimulation to *AD* then simply relying upon non-specific investment into the economy. This could have the effect of reducing the amount of deficit spending required to stimulate the economy during a downturn and allow economic stimulus packages

to have greater effectiveness. The end result would be a better targeting of financial stimulus. Furthermore, innovation would provide longer lasting effects for society through the development of new technologies.

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SAVINGS OF THE POPULATION AND THE FACTORS INFLUENCING THEIR GROWTH

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Abstract. The article deals with the population's savings in Tajikistan, the factors affecting their growth. It also considers the analysis of individual deposits in banks of the country.

Keywords: Savings of the population, deposits, remittances, inflation, market economy.

JEL Classification: D14, E21, G21.

Transformations of a society of our country, the challenges of economic globalization confront domestic enterprises such tasks as finding a considerable quantity of investment resources. The state, in the field of investments, mainly focused on finding foreign capital. This manifests itself in a lack of demand for financial capacity concentrated in the population which has no dependence on fluctuations of the world financial markets.

Speaking about financial potential of the population, it is necessary to note first of all its savings. It should be noted that under the savings meant that part of the income which does not go for the purchase of goods and services. In Tajikistan, it was not given sufficient attention to a problem of savings. Now we start to understand and realize the importance of macroeconomic aspects of a problem of savings.

Transition to a market economy forces us to reassess the role played by monetary savings in the economy. It is possible not only to save up free money resources, because savings are resisted by investments. If you consider the problem of savings more in detail you will see that savings are the difference between incomes and consumption though it is considered savings to be the difference of incomes and expenses. And depending on in what measure people protect the means, the society directs the resources on capital investments. In this case

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it is necessary to provide productive use of savings to reach cost increments. Without performance of these conditions the families' interests in savings of means will be gone.

First of all, speaking about savings of the population and their further use as contributions to banks it is necessary to expand channels on which these savings can be involved. One of the basic steps to this direction is privatization of the state and municipal property, occurrence of alternative structures in financially-credit system, universalization of activity of already existing financially-credit institutes. All this creates favorable conditions for transformation of monetary savings into the active catalyst of development of economy.

In our state, as well as in other states with transitive market economy, the question of the status and operation of inflation to the citizens' money resources is important. Certainly that inflation makes fatal impact on savings of means because monetary savings depreciate. Under the look-ahead data of the Asian bank of development, from which prospect of improvement of economy of republic the next two years will depend on volume of remittances and the foreign trade relations of the country. In connection with decrease in remittances in Tajikistan, in report ABR it was predicted that economic growth this year will be slowed down to 3.5%, and inflation will increase in republic to 10%. According to National Bank of Tajikistan, the volume of remittances in dollar expression was reduced to 32% within first six months 2015 in comparison with the similar period of previous year.

Population savings need to be carried to the basic source which is used as contributions to banks. For today the market of bank deposits is actively developing sector of the domestic market of bank services and first of all related with formation of the market of contributions of the population. Commercial banks continue to be basic "collectors" of savings of the population and the basic suppliers of long-term investment resources.

Considering dynamics of deposits of physical persons of the Republic of Tajikistan it is important to notice that for last 7 years sharp jump and the detailed data is observed are resulted in the diagram 1.

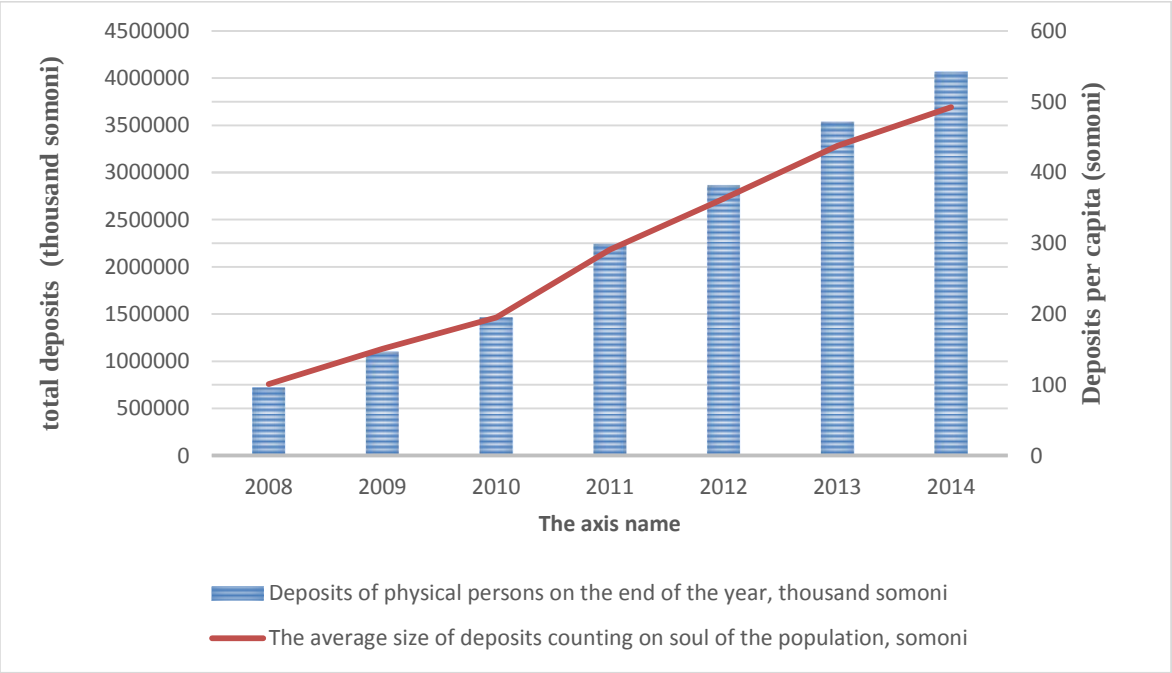
Apparently the rests of deposits of physical persons on the end 2014 are equal in the diagram to 4,062,900 thousand somoni that in 5.6 times the sum of which rests of deposits exceeds similar indicators of 2008 is equal to 724,277 thousand somoni. Essential increase is observed, also in an indicator of deposits per capita from 100.96 somoni in 2008 an indicator, has increased to 492.08 somoni.

The resulted indicators are not so impressive, if we compare them to similar indicators. However it is necessary to notice that is not dependent on reduction of receipts of remittances and foreign trade activities, the gain that testifies about not so critical financial condition of the population of the country is observed.

The basic problem concerning the formation of savings at the Republic of Tajikistan is the absence of these monetary resources at a certain part of the population. In particular, it's connected with decrease in volumes of receipts of remittances of migrants. Inflow of remittances of migrants promote not only to formation of savings, but also on volumes considerably to block outflows of financial resources from national economy that supports liquidities in national economy and in the financial market, keeping macroeconomic and financial stability. Macroeconomic stability of the state affects a stable financial position of

the population. People store money resources in commercial banks. But in connection with the developed crisis situation in the country and in the world, a high rate of inflation and insufficiently high standard of living, do it cautiously, being afraid to lose the saved up money resources entrusted by them the state and commercial banks.

Table 1. Dynamics of deposits of individuals in banks of the Republic of Tajikistan



Improvement of quality and efficiency of savings behavior of the population basically and first of all, depends on productivity and efficiency of state regulation and creation of system of protection of the rights and interests of the population which is ready to invest the savings.

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REVIEW OF THE BOOK
„Zarys budżetowania przedsiębiorstwa. Perspektywa strategicznych wyborów." ("Corporate budgeting. The strategic decision-making perspective") by Jan Komorowski

Zbigniew Korzeb*

The 21st century has brought new challenges and demands. Modern methods, tightly integrated into strategic value-based management, differ radically from traditional budgeting instruments, which used to dominate until a few years ago. The evolution which took place in the recent years significantly changed the role of budgeting, transforming it from a quintessentially operative tool into a means of creating the most economically beneficial long-term business development.

One of the main modern corporate budgeting-related problems is the skilful use of budgeting in the process of implementing the chosen strategies. This is the subject of Jan Komorowski's book. As well as his extensive body of scientific work, the Author has vast practical experience in introducing the budgeting tool in Polish companies. His monographic work contains twelve chapters, in which he presents the problem of budgeting defined as a method of management supporting the effective use of company resources, which includes the entire range of actions connected with preparation of the budget, implementation of tasks and controlling budget variances.

The book is not an instruction for individuals preparing budgets. Rather, it is a collection of observations concerning effective corporate budgeting. It is not the Author's intention to idealise budgeting - he does see its imperfections. The Author presents budgeting in the context of the changing attitudes towards the system itself, and in the context of the search for ways to modify the system to better fit the demands of the market. The book presents the Author's personal views on the subject, and it ought to be treated as his contribution into the ongoing discussion about improving the system of budgeting.

The Author emphasises that successful implementation of the strategy and an increase of long-term shareholder value can be achieved only as a result of purposefully implemented

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actions, which were earlier translated into specific tasks for responsibility centres and individual members of staff. Budgeting is becoming an indispensable tool of corporate management. It combines the optimisation of the profit and loss account and the balance sheet, the structure and volume of cash flow, the system of motivation, the increased effectiveness of actions and the optimisation of costs.

No other available publication has presented the key aspects of corporate budgeting in a manner so comprehensive, and yet so accessible. The book will be equally well received by the academia, and by practitioners interested in the problems of modern corporate budgeting.