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Panel Analysis of the Influence of Macroeconomic Factors on the Household Savings

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Abstract:

The current deepening fall in real consumption is caused by slight increase in nominal disposable income, increased inflation, as well as by the tax changes and developments in the savings rate. Looking at the savings rate in the Euro zone different household responses could be observed. This paper focuses on monitoring of the development of disposable income, household consumption and savings in the Visegrad Four countries in the period 2005−2014. The analysis covers impact of selected macroeconomic indicators (gross domestic product, disposable income, inflation rate, and unemployment rate) on volume of household savings using the panel regression. Within the analysis three models were used: pooling model (PM), fixed effects model (FEM), and random-effects model (REM). Performance of the analysis proved that in all three models the GDP has a statistically significant impact on household saving. The GDP increase by € 1 million caused an increase in gross domestic savings by € 0.20464 million.

Keywords: consumption, savings, gross domestic product, unemployment rate, disposable income.

JEL Classification: E20, E21, E257.

1. Introduction

Family saving and assets building has the potential to promote well-being across the life span. Assets symbolize household stability and serve as a safety net against unexpected life events *(e.g.* illness, unemployment, divorce). Households' stability could be affected by households' financial behavior under changing macroeconomic conditions. Saving represent one of the most important economic activity of households from both microeconomics and macroeconomics point of view. At microeconomic level household savings ensure stable level of consumption during the time of income reduction, aggregated household savings at macroeconomic level can be used as a source of investments (Zhuk 2015). Savings accumulation is also an element that shapes the pension policy system, particularly in the segment of individual, voluntary savings products that can be burdened with a considerable value impairment risk, which results from macroeconomic factors (Pukela and Adamisin 2015). The Korean households used to first purchase deposit or protection-type insurance, and then subscribe to private pension plan or savings-type insurance (Choe 2008). Horioka, Suzuki and Hatta (2007) in their analysis of impact of population aging on Japan's household savings rate and on its public pension system have found, that the rapid aging of Japan's population is causing Japan's household savings rate to decline and this decline can be expected to continue. The family saving decision making procedure usually consists of four steps: a) whether to save or not; b) how much to save; c) which savings tool to choose; and d) how to allocate savings in each tool (Choe 2008).

The main source of households' uncertainty comes from labor income generation, which is critically determined by unemployment. Fuenzalida and Ruiz-Tagle (2009) stated that households' financial vulnerability depends on their indebtedness levels and on the fragility of their income sources to be able to fulfil their obligations. Analysis of the factors affecting savings decision making process showed, that the incomes from different sources had different impacts on savings, and the risk tolerance also had a partial influence (Choe 2008). Zhuk (2015) in his investigation of the most influential macroeconomic factors that determine household savings formation in Ukraine proved that levels of such macroeconomic indicators as gross domestic savings, household consumption expenditures and gross national income were of first order of integration and had unit root. Badun and Franic (2015) examined the impact of selected macroeconomic indicators (wages, interest rate, stock exchange index, availability of loans and unemployment rate) to the housing savings in Croatia within the period 2000−2013.

According to research of Harris, Loundes,and Webster (2002) provided in Australia, income and wealth are positively and significantly related to the propensity for households to save, and the level of the interest rate has little or no influence. They indicated also impact of age, pessimism in their outlook, home ownership, children and their number, unemployment, disability, sole parent payments, and the area of residence. Horioka and Wan (2007)

analyzed the determinants of the household saving rate in China for the 1995–2004 period. They found that China's household saving rate has been high and rising and that the main determinants of variations are the lagged saving rate, the income growth rate, (in many cases) the real interest rate, and (in some cases) the inflation rate. Chamon, Liu and Prasad (2013) described markedly increased China's urban household saving rate since the mid-1990s as well as the U-shaped the age-savings profile caused by rising income uncertainty and pension reforms. Modrakova, Hetes and Soltes (2014) were analyzing saving on pension in Slovak conditions. Mishra and Chang (2011) examined the factors affecting tax-deferred retirement savings among the farm households. Their results indicated that demographic factors, total household income, off-farm work, and risk preference play important roles in retirement savings plan participation. Retirement savings increase with household size, intensity of off-farm work by farm operator and spouse, and size of farming operation. They found that the amount of retirement savings decreases with operator's age and increases with spouse's age, and that cash grain and dairy farmers have lower retirement savings. Analyses of Pukela and Adamisin (2015) indicated the increasing importance of insurances and their role in shaping of household savings portfolios. Finlay and Price (2015) proved that households' saving ratios tend to increase with income, but decrease with wealth and gearing. More at-risk households such as single-parent and migrant households tend to save more than other households, all else being equal. Niculescu-Aron and Mihaescu (2012) stated that economic growth reflected by percentage of GDP increase determines a decrease of savings, since a 1% increase determines a 0.35% decrease of the saving rate. The inflation rate has a direct influence on saving, a 1% change determining an almost 0.07% change in the same direction of saving rate. Adema and Pozzi (2015) investigated the cyclicality of the household saving to household disposable income ratio for a panel of 16 OECD countries over the period 1969–2012. They found that three main determinants of household saving (i.e., unemployment risk, household wealth and credit constraints) have a significant impact on the household saving ratio. Households' debt increased the importance of financial counselling and planning, and financial education for households is getting more attention to improve the ability to financial management of households (Kim 2015).The significant relationship between the savings and investments exists and the dynamic of savings depends on the development of economy and vice versa (Bikas, (2008), Andrejovska and Banociova (2013)). Results of Jongwanich (2010) provided in Thailand (1960–2004) suggest that an increase in economic growth, inflation and terms of trade all have a significant positive impact on household and private saving rates. In contrast, the availability of bank credit tends to reduce household and private saving rates. Furthermore, public saving seems to crowd out household and private saving, but less than proportionately. This reflects a possible role of fiscal policy in increasing national savings in the economy. Over and above these variables, corporate saving is another important determinant of household saving. An increase in the former brings about a significant reduction in the latter. Similar results were described in works of Hajdu, Andrejkovic and Mura (2014), Soltes and Gavurova (2014), Banociova and Raisova (2012), Hakalová *et al.* (2014), Glova (2014), Mirdala (2014), and Michalski (2014).

Among the many factors that influence the saving propensity of the population, especially in Central and Eastern Europe, the most visible ones were those concerning the security and stability of income, something obvious in the context of the recession. During economic prosperity, families save money either because they have an excess from the income increase or they anticipate significant gains from interests, either because they are stimulated to save through adequate fiscal policies or/and they believe in the favorable evolution of the economy. On the other hand, 2008 brought a shock for all European states, which determined major changes in the saving behavior and the two groups of countries reacted differently. In Western Europe the saving rate decreased.

Conclusion

Income, savings and household wealth are widely discussed topics among professional and scientific community, as well as participating public. Households participate in the entire national economy, and their consumption and savings largely affect economic aspects of the whole country. Our study evaluated a ten-year development and relationship of the volume of savings and macroeconomic determinants affecting them. Understanding the impact of these factors is important not only for future economic planning and determination of prognosis, but also for calibrating of risk, and setting the macroeconomic policy. Out analysis confirmed that GDP had a positive impact on gross household savings. Unemployment had a negative impact on the savings; the increase in the unemployment rate by 1 percentage point caused a drop in gross domestic savings by € 969.70156 million. It remains questionable whether the expert discussions on future development trends and possible modifications of design of our determinants could reach general consensus and consistency.

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System Based Development of the Poultry Sector in Kazakhstan in Mid Term Perspective

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Abstract:

The paper is an attempt to present the current state and possible ways of development of the poultry sector in Kazakhstan as a complex adaptive system. It also aims to forecast the possible development of this industry is mid-term perspective. Additionally, it aims to propose the institutional measures that would enhance the development and competitiveness of Kazakhstan's poultry industry as a supply chain based integrated platform. The research is based on the heterodox assumptions of deductive and descriptive reasoning, with the system approach, based on the secondary data coming from various sources. Also various methods of the economic analysis, including the regression analysis and trend models were applied. For this kind of analysis were used secondary data sources. As a primary method, there was applied a multiple regression analysis to forecast the scale of the development of the poultry sector in Kazakhstan.

Keywords: economics, Kazakhstan, multiple factor analysis, poultry, supply chain platform.

JEL Classification: Q00, O13, F15, C69, O21.

1. Introduction

The current development of the agricultural sector in Kazakhstan is primarily aimed to ensure national food security, with special focus on food quality and availability. However, as it was broadly described by Golubov (2010) or Pomfret (2013), there are several problems with fulfilling these objectives, which come of technological, market and institutional sources. To solve these problems, the Kazakh government undertook broad reforms in frames of which assigned the important role to the domestic poultry industry, as one of the branches of agriculture, which is dynamically developing in recent years. The poultry industry has been chosen as a sector from which in a fast way the society could be supplied with valuable protein, due to the fact that other products of animal origin, *i.e.* milk are also in shortage and their supply is much more limited. It is pre-assumed (Wieck *et al.* 2014) that it might be possible to reduce sharpness in providing the population with production of animal husbandry products in the short time due to increase in production of fowl and eggs, which will come not only from agricultural enterprises, but also from peasant (private) farms and household's plots (from the total amount of fowl production 94 % are made in agricultural enterprises and 4% in household's plots) (Yesbolova *et al.* 2015b).

Conclusion

Poultry production in Kazakhstan is recognized as a promising and strategically important sector for ensuring the country's food security. Despite increase in production and considerable investments into poultry industry, Kazakhstan still remains dependent on import of poultry production - more than a half of the consumed production is imported to the country.

The analysis of the received results of processing of the questionnaire shows that the prices of the main products of poultry farming significantly differ from the prices of different forms of trade, and over time the population will prefer to do the purchases in supermarkets. And also for successful functioning on a sales market of fowl necessary to create distributor networks with the developed transport infrastructure.

The conducted research shows that in general poultry industry in Kazakhstan is a perspective sector. In mid-term perspective, this sector should be developed in a complex way. On one hand, the production (supply) side should be enlarged and modernized, especially through economics of scale and specialization. On the other, the demand side should be developed too, where special attention should be paid on price levels and distribution channels.

Nonetheless it needs to be remembered that technological and economic incentives might not bring expected results, if the institutional factors will not be implemented too. This is especially important with regard to market information, which should be used to reduce the production and trade risk under the conditions not only of national but also global competition.

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Foreign Capital Inflows, Institutional Factors and Economic Growth. Evidences from Republic of Yemen

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Abstract

The present study attempts to explore the effect of foreign capital inflows (i.e., Foreign Direct Investment (FDI), workers' remittances and foreign aid), on economic growth for Republic of Yemen. We also examine the role of corruption and political stability whether these factors have any impact on foreign capital inflows between 2003 and 2014. The empirical results reveal that FDI inflows have a positive and significant effect, while workers' remittances have insignificant impact on Yemen's economic growth.

However, results on the impact of corruption and political stability on economic growth are statistically insignificant. The findings of the study suggest some policy implication, i.e. FDI and remittances need to be enhanced, while corruption needs to be controlled and political stability be sustained in order to achieve sustainable economic growth and development.

Keywords: foreign capital inflows, institutional factors, Republic of Yemen.

JEL Classification: D7, F2, N15.

1. Introduction

Every state intends to achieve a higher level of economic growth and thereby improve social welfare. Therefore, they look for ways to expedite the process of growth and economic development. In this regard, the role of Foreign Capital Inflows (FCI) in the process of economic growth and development cannot be overlooked particularly incoming FDI and remittances. Although, there are arguments about the effect of FCI on the economic growth in developing countries, many research scholars opine that the components related to FCI affect the domestic savings and economic growth negatively in the developing countries especially where there are poor policies (Boone 1994, Enos and Griffin 1971, Khan *et al.* 1992, Papanek 1973). However, FCI serves as one of the ways to support GDP just like the empirical assessment of importance of FCI to growth of economy in some host countries (Balasubramanyam *et al.* 1996, Borensztein *et al.* 1998, Makki and Somwaru 2004). There is a widely shared view that FCI fosters host countries growth by raising domestic savings and then transferring technology from abroad. Moreover, FCI can increase competition in the host country's domestic market; and lastly, increase exports due to increase of foreign exchange flow to the economy at large (Hsiao and Shen 2003). According to Kim *et al.* (2007) in a convention, the developing countries welcomed FCI to fill the space existing between domestic savings and investments to promote economic growth. However, some other studies have been criticized based on general view that FCI hinders mobilization of economic growth and that of domestic savings.

Fundamentally, all developing countries are poor; hence they have lower income due to lower saving and investment. Consequently, lower income leads to lower taxable capacity leading to low government expenditure. Therefore, countries struggling to develop need to depend on FCI to make up for deficits in investment-saving and balance of payment. Therefore, the developing countries need FCI for their development. For a number of developing regions, the study of Driffield and Jones (2013) finds that the impacts of FDI inflows and remittances

are encouraging as they largely stimulated economic growth during 1984-2007 based on unbalanced panel which contains 5-year average. The study also observes that the foreign aid (official development assistance (ODA)) has a negative effect on growth. However, the level of assistance from foreign economy is at variance from one country to another. The size and conditions of the economy of a country are the main factors that affect the amount and structure of FCI in a specific country, other studies find negative effects on some countries, (Orji *et al.* 2014). The empirical results of Azam (2015) support the presence of positive and significant relationship between remittances and economic growth for four Asian countries namely Bangladesh, Pakistan, Sri Lanka, and India during 1976-2012. Tahir *et al.* (2015) find that incoming FDI and foreign remittance have significant positive roles in the process of growth of Pakistan using data over the period 1977-2013. In a recent study, Azam *et al.* (2016) finds that both FDI inflows and foreign remittances are important sources of economic growth for 12 countries from Europe and Central Asia during 1993–2013.

Abdouli and Hammami (2015) investigate the relationship between FDI inflows, quality of environment and economic growth of capital stock across 17 countries from Middle East and North African (MENA) including Yemen during 1990-2012. The empirical results indicate that an increase in incoming FDI and capital stock promotes the process of economic growth in MENA countries. However, in particular, FDI inflows to Yemen have insignificant impact on economic growth.

Similarly, the role of the institutional factors is highly indispensable for the economic growth and development. The study of Mauro (1995) observes corruption and investment have a negative association and thereby affect negatively economic growth. Catrinescu *et al.* (2009) find that institutional environment covering political stability and corruption is affecting volume and effectiveness of investment. Moreover, remittances can be done in a more efficient manner in the presence of good institutions and therefore get a high result in return. Aisen and Veiga (2013) suggest that a higher degree of political instability is associated with lower growth rates of GDP per capita. Azam and Emirullah (2014) also find that high cost of doing business and inequality due to high corruption lead to a decrease in investment and at the end have a negative impact on economic growth.

According to Haan (2014), there are a lot of challenges to economic development in the future of Yemen economy. Instability in politics continuously affects all sectors in the government alongside challenges of security. In addition, there are tough economic issues and political challenges in Yemen. Political stability plays an important role and positively affects FDI inflows and the growth of economy in Yemen (Musibah*et al.* 2015).

The statistics show that the highest component of FCI to Yemen is workers remittances during 2003-2013 then followed by ODA and FDI respectively. Remittances achieved the highest amount, more than USD 3.3 billion in 2012. Also, ODA reached around USD 1 billion in 2013 and the highest magnitude for FDI was in 2008, almost USD 1.50 billion. The most shocking aspect of the issue is FDI which started by a negative value in the period under study and also has continued in the negativity since Arab spring in 2011. However, FCI in FDI form fluctuated over the period under this study although the best period for FDI to Yemen in the period between 2006 and 2008. On other hand, ODA increased slowly and worker remittances rose sharply from 2011 (World Development Indicators 2015).

The Republic of Yemen has relatively allowed level of income due to low savings and investments and thereby lower revenue of the government. Consequently, government is not in a good position to have more resources for the development of Yemen. In a study,Casper (2014) mentions that the present condition of poverty in Yemen is a result of high level of corruption in the system of politics. Researchers have shown that Yemen is a country which is continuously politically corrupt on a large scale and multitude of levels. Therefore, the present study is an effort to explore the relationships between FCI and economic growth, while considering the role of institutional factors namely corruption and political stability. This study is different in terms of the portfolio of explanatory variables, time period and methodology. It is expected that outcomes of the study will guide policy makers of Yemen.

The remaining study is organized as follows: Section 2 deals with data and empirical methodology used in the study. Section 3 interprets the empirical results. Section 4 concludes the study.

1%,5% and 10% respectively.

Conclusion and policy recommendations

The aim of the present study is to evaluate the impact of FCI on economic growth in Republic of Yemen over the period 2003-2014. Additionally, it examines the effect of institutional factors namely corruption and political stability on Yemen's economic growth. The OLS shows that FDI inflows and ODA have positive impact on the economic growth, while workers' remittances have a negative impact on economic growth. Similarly, the effect of institutional factors, corruption and political stability are found statistically weak.

However, these results have some important policy implications. Policy makers need to create sound environment to attract more FDI into the country. The FDI can be utilized to enhancing domestic production, and volume of exports. It will help in increasing the use of new technology and learning and also provide access to external market. The government should speed up the improvement of infrastructure which is an important factor for attracting foreign investors. The government of Yemen needs to encourage the local industries and reduce imported goods. However, consuming local products may reduce the negative impact of personal remittances or may change it to positive effect in future which will lead Yemen to get positive balance trade. Indeed, Yemen needs a business environment which is conducive to the needs of businesses. In general, foreign investors don't look for fiscal concessions or special incentives but they look for investor-friendly official procedures, rules and regulations, clearance, no corruption, political stability and opportunities in Yemen. In fact, this can be achieved only if Yemen implements its new generation of reforms in totality and in right direction.

In light of current situation in Yemen, the role of political stability including security cannot be taken for granted, however. It will increasingly become an important factor in order to create a conducive environment to attract more FDI and hence promote economic growth. Thus, the leaders and policymakers should make every effort to create political stability and good governance as well as secure and peaceful condition and situation to establish sound investment climate in the country.

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Improving the Efficiency of Socio-Economic Development of Mono-towns in the Republic of Kazakhstan based on the Development Strategies

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Abstract:

Due to the potential threat of socio-economic crisis and degradation of single-industry towns in the Republic of Kazakhstan, the purpose of the article is to develop a conceptual approach to the formation of optimal development strategies of mono towns considering the level of their current socio-economic development. Method for contrast of means was the methodological basis of the study which allowed revealing direct proportion of social and economic development trends in mono towns as of 2015. Using expert method, we have formed a sample to determine the integrated index of social and economic development of mono towns and on the basis of principal component analysis we have established the extent of their influence on the intensity of their development. Using matrix approach mono town were differentiated by strategic areas of their socio-economic development in the modern conditions. Matrix of ongoing socio-economic development directions of mono towns was formalized during the study, differentiating territorial entities according to their level of socio-economic development as of 2015. The proposed strategies reflect a new approach in the system of strategic management of regional development, since it is based on the peculiarities of the actual development of mono towns in direct proportion to the levels of mono towns' socio- economic development.

Keywords: development strategy of mono towns, matrix of socio-economic development strategies, mono towns, socio-economic development efficiency.

JEL Classification: P35, R13, G38.

1. Introduction

Stable economic development of a country is provided by a stability of the regional system, the basic structural element of which is cities. Reforming and development of the economy of the Republic of Kazakhstan facilitated the emergence of a special category of cities, the so-called single-industry towns (mono towns). Currently 27 cities out of 86 operating cities in the country have the status of a mono town– almost every third city with a total resident population constituting 16.8% of the country's urban population (Ministry of National Economy of the Republic of Kazakhstan 2015). In modern conditions, economic development of mono towns in the Republic of Kazakhstan is characterized by the outdated structure of regional production, high level of depreciation of equipment, networks and systems, low level of qualification of employed population, weakness of the local budgets. The basis of mono town is local economic mainstay, forming non-diversity of such settlements, which, in turn, cause dependence of all spheres of livelihood of the population on the economic situation of the company and its financial and economic results. With the growth of mono town population over the past decade by 150% in parallel with the decline in industrial production by 15% and decreasing level of investment in fixed assets by 36% as of 03.01.2016, the potential threat of socio-economic crisis and social degradation of environment in these territorial entities is forming (Ministry of National Economy of the Republic of Kazakhstan 2015).

Conclusion

Thus, the developed conceptual approach to determining strategic directions of monotown development as exemplified by RK represents a new approach in the management system of non-diversified territorial entities development. A distinctive advantage of this approach from the generally accepted approaches used in practice and presented in theory is the differentiated approach to working out strategic directions of monotown development. Based on accounting the current level and the effect of the interdependence of social and economic development, monotowns are grouped by type of strategic development based on the matrix "index of economic development of a monotown"–"index of social development of a monotown". This approach allowed arguingthe peculiarity of state of their socio-economic development and identifying current strategies of development: "Development despite the Growing Negativity" (high level of social development/low level of economic development); "Medalists" (high level of social development/high level of economic development); "Contradiction" (low level of social development/high level of economic development); "Catastrophe" (low level of social development/low level of economic development). The ability to determine the current strategies for socio-economic development of monotowns allowed developing advanced strategies of RK monotowns' socio-economic development on a case-by-case basis in order to increase their effective functioning.

The conceptual approach to the formation of monotown development strategies, designed in the study, serves as a basis for improvement of theoretical and methodological bases of management of regions development. It promotes reasonable determination of the priorities of the state policy in the field of funding of multi-territorial entities with regard to their socio-economic importance.

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Method for Adjusting Current Appropriations under Irregular Funding Conditions

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Abstract:

The study suggests using the indicators that characterize the process of funding to equation the problem of adjusting current appropriations under irregular funding pattern. The principal assumption of the methodology is that the proportionality of the residual unpaid part of the limit for each project to be funded should be observed. This requirement is stipulated by practical considerations and explained by the necessity to implement a whole number of projects whose component parts are included into a large scale project (program). The methodology solves the problem of adjusting funds distribution between the projects to be funded based on the profiles that have been formed at the earlier stages of funding. However, for the first stage of funding, the retrospective distribution profiles are not available; therefore, the additional task has been set to solve the optimization problem of redistributing current fund allocations without taking into account the retrospective distribution profiles. The compromise principle is represented by the fair concession principle that solves the problem of multi-objectiveness in a radical way by applying the convolution of the set of criteria to obtain one integrated criterion. Practical applications of the developed indicators and methods have been illustrated by a number of examples.

Keywords: funding, resource allocation problem, financial modeling, mathematical programming, multi-objectiveness.

JEL Classification: L10, O22, O29.

1. Introduction

Dynamic influence of the internal and external factors, many of which have a random and often indefinite nature, cause the need in correction of allocating funds between financing objects with account of the currently shaping situation. If the project manager has an amount of money enough for financing each object in the project (subproject) at his/her disposal, then the task of current allocation is irrelevant and solved automatically. The deficit situation is considerably more difficult when the total volume of the demand for financing exceeds the amount of money available to the manager. In this case, the problem of adjusting the current assignments becomes nontrivial. There are no universal recommendations here. The method for adjustment of the current assignments based on the optimization model of smoothing out the discrepancy of cash proceeds at the previous funding stages will be discussed below.

Conclusion

Basic criteria of rationality in distributing the currently allocated monetary means are represented by the proportionality of the residual unpaid part of the limit of each object of funding upon each scheduled operation of distribution and by the regular pattern of allocating funds for each project to be funded. The requirement that the objects should be funded in a proportional manner is, as a rule, predetermined by the necessity to perform the activities in different areas in parallel and also by the complex nature of these activities. Applying the criterion of regularity to funding improves operational efficiency, and, consequently, the quality of the project implementation management.

The list of the criteria of the problem under consideration would not have been exhaustive if the current priorities of the objects of funding were not taken into account. They should be defined, for instance, for the cases when some important or urgent activities have to be performed.

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Rethinking of the Concept of Economic Systems Balance through Analysis of Disproportions of Economic Growth in the Global Economy

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Abstract

The purpose of the article is to verify the offered hypothesis and substantiate the necessity for rethinking of the concept of balance of economic systems through analysis of disproportions of economic growth in the global economy. This purpose is achieved with the methods of induction, deduction, synthesis, formalization, and systemic, structural, and problem analysis. The authors determine the sense of current concept of balance of economic systems, conduct analysis of disproportions of economic growth in modern global economy, substantiate necessity for rethinking of the concept of balance of economic systems, and offer new approach to treatment of the concept of balance of economic systems. As a result of the research, the authors come to the conclusion that concept of balance of economic systems in its modern understanding is not applicable to analysis of the global economic system. The authors develop a new formula of balance of the global economic system and provide practical examples of such balance for 100 recent years.

Keywords: concept of balance, economic system, disproportions of economic growth, global economy.

JEL Classification: P40, O40, F60.

1. Introduction

Actuality of the study of perspectives of determination of global economic balance is predetermined by strategic orientation of modern global economy at provision of sustainable and stable economic growth, which is impossible under the conditions of its imbalance within disequilibrium state. Economic growth and development stipulates maximization of satisfaction of public needs, which is a main task of economic science, which is solved in this paper.

Initially, the idea of balance emerged in macro-economic scale and was used for analysis of the state and perspectives of development of national economy. With development of the global economic system, this concept was distributed without changes in the global economy. Taking into account that principles of development of the global economy differ from principles, on the basis of which economy of particular countries develops, it is possible to suppose that analysis of the global economic system requires a new concept of balance, different from macro-economic one.

Use of incorrect concept of economic balance with analysis of the global economic system may be a cause for incorrect treatment of its state and perspectives of development, as well as selection and use of ineffective instrumentarium for regulation of international economic processes. This constitutes a scientific problem which should be solved in this paper.

Probably, the recent global financial crisis was indirectly caused by incorrect approach to establishment and preservation of the global economic balance. Its rethinking will allow not only quickening the process of overcoming the consequences of the global recession but transferring the global economic system to a new level of economic growth and development. Based on this, the authors offer a hypothesis that the concept of balance of economic systems in its modern understanding is not applicable to analysis of the global economic system, which leads to necessity for its rethinking in the context of analysis of disproportions of economic growth in the global economy. The purpose of the article is to verify this hypothesis and substantiate the necessity for rethinking of the concept of balance of economic systems through analysis of disproportions of economic growth in the global economy.

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Conclusions

The conducted analysis of disproportions of economic growth in the global economy allowed proving the offered hypothesis and proving that concept of balance of economic systems in its modern understanding is not applicable to analysis of the global economic system.

The authors substantiate the necessity for rethinking of the concept of balance of economic systems and prove that establishment of correspondence of the level of economic development of various countries of the world is impossible – moreover, during evolution of modern global economy, not only was the tendency of reduction of gap between levels of economic development of various countries observed, but there is a tendency of its deepening.

This shows a utopian nature of the very idea of one-size-fits-all approach to analysis of economic development of various economic systems due to large diversity of their peculiarities. Taking into account that there is a close interdependence between countries in the global economy, and total resources (as well as production factors and total income) are limited, any change always leads to improvement of position of certain countries and aggravation of position of others.

Based on this, the authors build a new formula of balance of global economic system, as a situation acknowledged and accepted by all (or at least, by most) members of international economic relations, and provide practical examples of such balance over recent 100 years.

The authors' conclusions have high theoretical significance, as they allow specifying the concept of balance of economic systems in view of peculiarities of the global economy, and high practical significance – as they could be applied during analysis of balance of global economic system and development of program of measures for its establishment and correction of existing programs for supporting the developing countries by the developed ones.

A sight limitation of scientific results, received during the research, is narrowness of time interval, over which the examples of global economic balance were studied (recent 100 years). Due to that, during further research in this sphere, it is necessary to pay more attention to consideration of such examples during the whole history of the global economy.

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Do Conventional and Islamic Stock Markets Subject to Different Market Anomalies? Empirical Evidences from Indonesia and Malaysia

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Abstract:

This study aims to investigate whether the conventional and Islamic stock returns are subject to different calendar anomalies by testing the monthly calendar effects on stock returns in both markets. Focusing on the Indonesian and Malaysian Stock Markets, the closing monthly prices of the Jakarta Stock Exchange Index (JKSE), Kuala Lumpur Stock Exchange Index (KLSE), Jakarta Islamic Index (JII) and FTSE Bursa Malaysia Hijrah Shariah Index (FBMHS) were considered covering the period from 2004 to 2015. An independent sample of t-test is adopted to explore the differences between the conventional and Islamic stock returns in both countries, while the calendar effects of the stock returns is then tested using the multiple regression. The study finds that there were no differences between the conventional and Islamic stock returns, and the calendar anomaly is only existed in the Indonesian stock markets. This implies that although both the conventional and Islamic stock markets have been well integrated in both markets, the stock markets of Malaysia have been more efficient than the Indonesian counterpart.

Keywords: anomaly, monthly effect, Islamic capital market, conventional capital market, stock returns, Islamic finance.

JEL Classification: C32, C53, E44, G15.

1. Introduction

The capital market has been commonly used as one of the indicators of a country's economic progress as it essentially indicates the availability of long-term funding to support potential growth of the business sector. The stock market, in particular plays an important role in the economy since, in addition to its function as a means of funding for companies and other institutions, it also serves as a venue for investment.

Similar to other stock markets in the Asian countries, the stock markets in Indonesia and Malaysia have been progressing rapidly in recent decades as reflected by the continuous growth in the value of stocks, significant increase in the stock indices, transaction value and market capitalization, and more diversified investment products. The emergence of Islamic stocks in Malaysia at the end of 1999 and Indonesia in early 2003 was a period of phenomenal growth of stock markets in both countries. Since their inceptions, the Islamic stock markets continue to grow rapidly with increasing public awareness of conducting business and investment activities based on the *shari'ah*, which is free from the elements of interest (*riba*), uncertainty *(gharar)* and gambling (*maysir*) (Metwally 1997, Yusof and Majid 2007 and 2008, Majid and Kassim 2010, Yusof *et al.* 2011). Since then, Muslim investors can be more selective in investing their monies by not just looking at the rate of return and investment risk trade-off, but also considering the permissibility (*halal*) of investment so as to be in line with their religious belief.

Since the launch of the first Islamic stock market in Jordan in 1978, the world financial system experienced a drastic change with the Islamic stock market operating in parallel with the conventional stock market in several countries, including Malaysia and Indonesia. The Islamic finance industry has developed significantly ever since, especially during the 2008 global financial crisis and 2010 European debt crisis (Kassim and Majid 2010). Currently, the industry is no longer confined in the Muslim countries, but also in the western countries. Growing at a double-digit rate of around 15% per year, the Islamic finance industry has attracted the western countries to also introduce the Islamic stock market as an alternative investment avenue for the investors.

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The presence of the Islamic stock market has enabled the Muslim investors to diversify their investments in financial assets that are permissible based on the Islamic tenets. Despite this, the investors are assumed to be guided by the normal risk-return consideration. According to Sharpe *et al.* (1999), investments in financial assets are the core activity in the capital market. Investment involves the sacrifice of the certain current value to gain uncertain future values. Investors expect to accumulate positive returns from their investments, considering risks-returns trade-off. Apart from the expectation of positive rate of return, investing in the stock market also has risks that are difficult to predict. In every investment made both in the Islamic and conventional stocks, investors who expect to gain higher returns should bear a higher level of risk. Thus, investors should diversify their investment in order to gain positive return with a minimal level of risks.

While investing in stocks, investors consider all available information related to the stock issuers and economy as a whole including published and unpublished information in order to minimize errors in deciding in which stocks they are investing. The right investment decisions also require information about the market and economic conditions at all possible levels, namely nationally, regionally and globally. The extent to which the stock market reacts quickly and accurately to achieve a new equilibrium stock price which fully reflects the information that is available, which is so-called as the efficient stock market (Choudhry 2001, Jogiyanto 2009, Ambarwati 2009, As'adah 2009, Karim and Majid 2009, Al-Jarrah and Basheer 2011, Chia and Khim 2012, Debasish 2012) is also need to be well-understood by the investors so that they could minimize the investment risks and gain maximum diversification benefits.

Previous studies on stock market anomalies worldwide documented mixed empirical findings. These studies, however, discovered the existence of anomalies in the stock markets with the findings contradicting the theory of efficient markets. Several similar studies conducted on the Indonesian and Malaysian markets have also discovered the existence of anomalies in the stock markets, but very small number of studies has examined the monthly effect of both conventional and Islamic stock markets. Comparing to the vast-growing of the Islamic stock markets in the countries, number of studies on the Islamic stocks have been far smaller than that of the conventional counterparts. This motivates the present study to fill up the existing researches' gap by empirically exploring the efficiency of Islamic stock markets in Indonesia and Malaysia, and at the same time, comparing them with the conventional stock markets. With reference to Worthington (2012), this study, specifically, attempts to empirically examine the differences in returns between the conventional and Islamic stocks, and investigate the existence of seasonality in the form of calendar anomalies in both conventional and Islamic stocks in Indonesia and Malaysia.

The rest of this study is organized in the following sequences. Section 2 reviews the selected previous literatures on the stock markets and their anomalies. Section 3 highlights the data and research method on which the analysis of the study is based. Section 4 discusses the findings of the study and provides their implications. Finally, Section 5 concludes the paper.

Conclusion

This study empirically investigated the differences in returns between conventional and Islamic stock markets both in Indonesia and Malaysia. It also attempted to test the monthly effects on stock returns in both markets, covered the period 2004 to 2015. Closing monthly prices of the Jakarta Stock Exchange Index (JKSE), Kuala Lumpur Stock Exchange Index (KLSE), Jakarta Islamic Index (JII), and the FTSE Bursa Malaysia Hijrah Shariah Index (FBMHS) were utilized. An Independent sample of t-test was adopted to explore the differences between the conventional and Islamic stock returns in both countries, while the calendar effects of the stock returns was then tested using the multiple regression with dummy variables.

The study documented that there were no statistical differences in returns between the conventional and Islamic stock markets in both countries. This finding implied that the conventional and Islamic stock markets in both countries has been well-integrated, having the similar patterns in the stock prices movements both in conventional and Islamic stocks in both countries. This further implied that investors who investing their monies in both markets would gain similar diversification benefits. As for Muslim investors, buying conventional stocks are against the Islamic injunctions as it is contained elements *riba*, *gharar,* and *maysir* that are totally prohibited in Islam.

In addition, the study also found that there were calendar anomalies in both conventional and Islamic stock markets in Indonesia, but not in the neighboring stock markets*.* Specifically, there were monthly effects of April and July on the returns of the Indonesian conventional stocks, while the monthly effect of April was recorded in the Indonesian Islamic stock market. This implies that although both the conventional and Islamic stock markets have been well integrated in both markets, but the stock markets of Malaysia has been more efficient than the Indonesian stock markets.

The findings of the study are based on the methodology outlined above. The differences in returns between Islamic and conventional stock markets and the existence of calendar anomalies on both markets were empirically explored. For a more reliable and robust finding, further studies should also compare the differences in risks between those markets. Additionally, further studies should examine other type of anomalies and at the same time identify the factors contributing the presence of the calendar anomalies in markets. Covering broader range of the Islamic and conventional stock markets worldwide is also recommended.

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Tax Administrative Costs in V4 Countries

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Abstract

Main aim of this paper is to identify trends and differences between V4 countries. There are selected three categories of Tax Administrative costs which include information technology operations (IT), human resource management (HRM) and total administrative costs. To the description of result there are used several moment characteristics (average, range, etc.). Relationships between variables are tested by coefficient of variation, Pearson correlation, One-way analysis of variance and Kruskal-Wallis test. Based on statistical analysis can be stated that in the chosen period the administrative cost structure in V4 countries is variant.

Keywords: tax administration, costs, V4, statistical analysis.

JEL Classification: H20, H21.

1. Introduction

An effective tax system could be considered as a system that produces the lowest tax burden and causes low administrative costs at the highest tax revenues. Administrative costs are costs incurred by the tax authority in establishing and operating systems to manage all aspects of taxation. (Shaw *et al.* 2010) Kubátová (2010, 45) explains that the transfer of funds from the tax payers to the state budget requires for expenditures for its implementation and it causes inefficiency. The aim of tax system is to minimize this inefficiency. Costs of collection of taxes on the part of government are called direct administrative costs. This includes all costs of state administration for organizing the tax system for the registration of tax payers, tax collection, and control and so on. These are all the costs of the public provided those concern the tax system (*eg*. Costs Statistical Office to obtain information for tax authorities, the cost of justice services for tax administrator). Direct administrative costs are relatively easy to detect, since their entries are registered in the relevant state institutions (Kubátová 2010, Zubaľová 2008).

2. Methodology

In our research, we have used data from OECD study Tax Administration 2015. For our purpose, we have selected three categories of Tax Administrative costs which include information technology operations (IT), human resource management (HRM) and total administrative costs. For first two areas OECD survey sought data concerning: (1) Information technology operations: Actual or estimated costs of providing all information technology support for administrative operations; and (2) Human resource management functions: Actual or estimated costs of providing all human resource management support functions (*e.g.* personnel, payroll, recruitment, learning and development) for administrative operations (OECD 2015, 175).

For our purposes of comparison V4 countries in Tax administrative costs area we have firstly analyzed their GDP and subsequently performed analyzes with this indicator. Conclusions are made on basis of the results of statistical analyzes. The aim of this contribution is to identify trends and differences between V4 countries according to further indicators:

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- total administrative costs/GDP (%), 2005-2013,
- HRM costs /total administrative costs (%), 2007-2013,
- IT costs/total administrative costs (%), 2009-2013.

Methods used in work define several authors as Anděl (2007), Pacáková *et al.* (2009), Markechová, Tirpáková, Stehlíková (2011). To the description of result we use several moment characteristics (average, range, etc.). Relationships between variables are tested by coefficient of variation, Pearson correlation, One-way analysis of variance and Kruskal-Wallis test which are more described below. The coefficient of variation for a single variable aims to describe the dispersion of the variable in a way that does not depend on the variable's measurement unit. The higher the coefficient of variation is, the greater the dispersion in the variable.

$$v_K = \frac{s_x}{\bar{x}} \tag{2.1}$$

with: s_x - standard deviation of variable x, $\bar{x}$ - average of variable x.

The Pearson product-moment correlation coefficient is a measure of the strength of the linear relationship between two variables. It is referred to as Pearson's correlation or simply as the correlation coefficient.

$$r = \frac{\overline{xy} - \bar{x}\bar{y}}{s_x s_y} = \frac{\frac{1}{n}\sum_{i=1}^{n} x_i y_i - \bar{x}\bar{y}}{\sqrt{(\frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^2)(\frac{1}{n}\sum_{i=1}^{n}(y_i - \bar{y})^2)}} \tag{2.2}$$

with: n - number of observations; s_x - standard deviation of variable x; s_y - standard deviation of variable y; x_i - value of i-th unit of variable x; y_i - value of i-th unit of variable y; $\bar{x}$ - average of variable x; $\bar{y}$ - average of variable y

As the first choice to test differences between countries we use *One-way analysis of variance*:

$$F = \frac{MSA}{MSE} = \frac{\frac{SSA}{k-1}}{\frac{SSE}{n-k}} = \frac{\frac{\sum_{i=1}^{k}(\bar{y_i} - \bar{y})^2 n_i}{k-1}}{\frac{\sum_{i=1}^{k}\sum_{j=1}^{n_i}(y_{ij} - \bar{y_i})^2}{n-k}} \tag{2.3}$$

with: MSA - pooled variance obtained by combining the individual group variance, MSE - estimate of in the absence of true group effects.

The conditions of ANOVA (normality and homoscedasticity) are tested by Levene test and Goodness of Fit test. In case of rejection of at least one of the mentioned conditions is used automatically Kruskal-Wallis test

$$Q = \frac{12}{n(n-1)}\sum_{i=1}^{I}\frac{T_i^2}{n_i} - 3(n+1) \tag{2.4}$$

with: n - number of total observation; n_i - number of observation in i-th group; T_i^2 - total rank of the sample size of i-th group

Analyses are made in the Excel and statistical software Stat graphics and Statistica.

Conclusion

Tax administrative costs are all costs of state administration for organizing the tax system, for the registration of taxpayers, tax collection and control. We hypothesized that there are differences among the V4 countries in the amount of total administrative costs, HRM costs and IT costs expended by the tax authorities. Based on the analysis we can state the differences in the three groups of costs (total administrative, HRM, IT) among the V4 countries. In each of these groups, there was significantly different another country and therefore we consider the administrative cost structure in observed group of countries as variant.

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Ensuring of Sustainable Socio-Economic Development of the Region on the Basis of Capitalization and Economic Security

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Abstract

The article presents the conceptual and categorical apparatus of sustainable socio-economic development of the region in the author's extended systematization, specifying the categories "criteria of economic security of the region", "threat to the economic security of the region", "indicators of capitalization of the regional economy", "reserves of capitalization of the regional economy". The authors developed a conceptual integrated multi-element system of sustainable socio-economic development of the region, reflecting the functional relationship and interdependence of sustainable development, capitalization and economic security of the region, their quantitative and qualitative characteristics.

Keywords: sustainable socio-economic development, regional development, economic security, regional economy capitalization, conceptual multi-element system.

JEL Classification: O44, Q01, R11.

1. Introduction

The concept of "sustainable development" is the last on emergence time global socioeconomic paradigm of development. Within its framework in the course of economic growth the needs of today's generation are met without creation of threats for opportunities of future generations to meet their own needs. This concept has replaced the concept of "development without distinctions", carried out by the United Nations Environment Program (UNCED) in 70-ies XX century, and "eco development" concept, which was adopted in the 80s of the last century. It is the result of scientific and socio-ideological thinking of a systemic crisis of civilization in the era of uncertainty and catastrophic escalation processes and global threats.

The institutionalization of the category "sustainable development" took place in 1992 at the UN Conference on Environment and Development in Rio de Janeiro (UNCED). After that, the idea of sustainable development as a global trend became the basis of the anti-crisis environmental modeling of economic activities at different levels and a full-fledged direction of domestic policies of a number of developed and developing countries. More than 100 states, including Russia, have developed their own strategies for sustainable development. In this case, the center of gravity moves to the sustainable development of the regional economy, because the stable regional blocs form a stable national economy.

In the light of decisions of the global Summit of the sustainable development "Rio+20" issues of creating sustainable regional economic development models are highly relevant. These models have to lean on local resources, the balanced interaction of the nature and economy in spatial systems, further capitalization of resources at all system levels (national, regional and local), creation of system of distribution of the income, fair from the ecological and social points of view, innovative and technological updating of productions, an effective institutionalization of the natural and resource relations.

The relevance of the study of conditions and factors of sustainable development of Russian regions is now growing under the influence of the growing manifestations of the geopolitical and economic instability in the world economy. It determines the need to ensure the economic security and to increase the capitalization of the Russian regions. In the complex, it is a necessary prerequisite for achieving sustainable socio-economic development of each region individually, and the national economy as a whole.

Conclusion

The transition to sustainable regional development requires strengthening of the integration process, the output of economic relations in the region as outside their geographical boundaries, as beyond Russia. Regions need embedding in world reproduction cycles on the basis of fair exchanges in the world markets, expansion of opportunities of access to world resources of development, system integration into the world economy for the purpose of ensuring growth of capitalization and sufficient level of economic security for realization of strategic interests of achievement of a sustainable development.

In our opinion, sustainable economic growth of regional economy as a basis of its sustainable development has to be characterized by the balanced use of the natural, human, financial and physical capital with the state support of environmental protection and equitable distribution of opportunities for growth of quality of life of the population. In contrast to this approach in many regions of Russia takes place or unstable growth with sharp changes of economic dynamics and a standard of living of the population now, or the distorted growth with primary development and use of the industrial physical capital to the detriment of reproduction of the human and natural capital.

In modern Russia factors of sustainable development begin to develop in a few the most developed regions. Therefore, sustainable development for all remains an elusive goal in the conditions of extremely low market capitalization of the assets and the lack of a system of criteria for the economic security of the region, as well as the prerequisites for the implementation of sustainable development strategies in the form of integrated inter-regional economic relations.

The analysis of the relationship of capitalization, economic security and sustainable development of the regional economy shows the existence of certain relationships between the development of the process of capitalization of the region's resource potential, economic security level of the regional economic system and its sustainable development. In the future, it seems necessary to develop a model of sustainable socio-economic development of the region based on the capitalization criteria and economic security. Analytical and experimental validation of this model will allow using the capitalization as the target category and economic security as a limiting prerequisite in the design of regional strategies for the sustainable socio-economic development.

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The Impact of Macroeconomic Fundamentals on the Indonesian Sharia Stock Index

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Abstract:

 Stock market index is a tool used by the investors to determine the market and compare to return on some certain investments. Many studies have been conducted aimed at investigating the relationship between stock market index and macroeconomic fundamentals. However, only a few studies investigated the Sharia stock index. This study investigated the long-term and short-term relationship between Indonesian Sharia Stock Index (ISSI) as the dependent variable and macroeconomic fundamentals as the independent variables comprising Consumer Price Index (CPI) - the proxy for inflation rate, interest rate, exchange rate, and money supply. The method used to investigate the long-term and short-term relationship was Vector Error Correction Model (VECM). Before using VECM, Johansen's Co-integration Test was used to test the co-integration relationship between the dependent and independent variables. The result of showed that there is a long-term relationship, but no short-term relationship between those variables was found. The result of both tests revealed significant relationship between dependent variable and independent variables. However, the variable of CPI was insignificant in influencing ISSI. The conclusion is that ISSI reacts positively towards interest rate and money supply while high depreciation of Rupiah will potentially create difficulty towards the market conditions in a long-term.

Keywords: Sharia stock index, vector error correction model.

JEL Classification: G11, C13.

1. State of Art

 Stock market index is the average for price of selected stocks commonly used by the investors as for determining the market and comparing the return on certain investments. Macroeconomic fundamental is one factor among many factors used to predict a lower or higher return on investments. The stock price return can possibly and significantly be affected by the change of the macroeconomic fundamentals. Studies on the influence of macroeconomic fundamentals on the stock market index commonly employed various methods and macroeconomic fundamentals (Naik 2013, Tripathy 2011, Hosseini *et al*. 2011, Yadav 2012). However, only a few studies studies dealt with the influence of macroeconomic fundamentals on Sharia stock market index, especially in Indonesia.

 Indonesia is a developing country that has many different kinds of bank. Banking in Indonesia does not only consist of commercial banks, but also many Sharia banks and other types of banks. As a unique type of bank, Sharia bank is slightly different from the common commercial bank, but it tends to apply the Islamic principles as the basic principles in operating the banking system. According to OJK (*Otoritas Jasa Keuangan* or Financial Services Authority of Indonesia), an institution responsible for monitoring all banks in Indonesia, the principles of Islamic banking operation comprise mutual benefits principle and partnership providing an alternative system of banking with mutual benefits for the bank and the customers. OJK states that in the context of macro-economic management, an extensive use of various Islamic financial products and instrument helps attaching financial sector and real sector and creates the harmonization between the two sectors and in addition to support financial and business, the wide use of Islamic product and instrument will also reduce speculative transactions so that the economy supports the stability of overall financial system. At the end, the Islamic banking will significantly contribute

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to the achievement of mid-long term price stability. Therefore, this study concerns the influence of macroeconomic fundamentals on the Sharia stock market index as Sharia banking system also plays an important role in the economy of Indonesia. Further, this study is aimed at analyzing the relationship between macroeconomic fundamentals and Sharia stock market index.

Conclusion

The purpose of this study is to observe the relationship between the Islamic stock index in Indonesia and the macroeconomic fundamentals by examining the Indonesian Sharia Stock Index and four macroeconomic fundamentals, namely, the consumer price index - the proxy for inflation rate, interest rate, exchange rate, and money supply. The conclusions of the study found that the consumer price index using proxy for inflation rate, cannot be a reference to determine the Indonesian Sharia Stock Index (ISSI). According to Talla (2013), the negative relationship between inflation and stock price can be explained by the fact that additional funds flow due to inflation increase the supply in the stock market index while the demand side remains unaffected. This static circumstance on the demand side of the security market puts downward tension on the stock price index. However, in this study, inflation rate is shown to be an insignificant variable in determining the Indonesian Sharia Stock Index.

Meanwhile the interest rate is shown to be supporting the incline of ISSI. This is a special case, because it tends to influence the stock index negatively. However, In Indonesia, conventional financial system is seen to be more dominant compared to Sharia financial system. Therefore, the impact of interest rate runs towards the conventional stock index more rather than towards Sharia stock index. The study found that interest rate supports the incline of Indonesian Sharia Stock Index. Because when Bank Indonesia, the central bank of Indonesia, decides to increase BI rate which directly influences the interest rate, people will tend to save their money on bank rather than invest the money. Other people will see a potential from the Sharia stock. Therefore, they move to invest their money on the Sharia stock. This case is very special, because Indonesia has dual financial system, namely conventional financial system and Sharia financial system. However, in Indonesia, conventional financial system is still more dominant compared to Sharia financial system. Therefore, when the potential of conventional stock declines, people might see a good potential on the Sharia stock.

The depreciation of rupiah towards US dollar indicates the poor condition of Indonesian economy. This condition will give a disadvantage impact towards firms. The study found that the depreciation of rupiah towards US dollar will cause the Indonesian Sharia Stock Index to decline, because when rupiah depreciates against US dollar, it means that the economic condition in Indonesia tends to be poor at the time. Therefore, investors will sell their stocks or bonds in droves instead of keeping them, because the investors see the potential of foreign stocks and bonds to be more profitable. Money supply, like interest rate, supports the incline of Indonesian Sharia Stock Index. This is a normal case of money supply towards stock index.

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Accounting and Analytical Procurement of Predictive Appraisal of Synergistic Effect in Small Business Construction Companies

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Abstract:

The need to form the synergy is observed in the event of circumstances related primarily to cost saving, increase in market prices, etc. Notably, the interested user groups exercise their own approach to the assessment of financial results. This study is aimed at the formation of accounting and analytical systems of predictive consolidated balance sheets, in accordance with certain trends of the synergistic effect. Based on this, the cluster analysis combined with the analysis of the portfolio of works performed by the development and construction companies was carried out, the business strategies and their relationship with the accounting processes were defined, the main trends of preparation and evaluation of the synergistic effect were formed, the value chains were analyzed.

The steps formed in the framework of assessment of the predictive synergistic effect predetermine the direction of the emergence of the synergistic effect and the speed of calculation of the predictive economic effect by the trends, and determine the impact of the planned operations on the financial condition of the development and construction company and the net asset value, allowing to make the right management decision.

The formation of the main trends of the synergistic effect is aimed primarily at harmonization of accounting and analytical information as the basis for the competent business management.

Keywords: synergistic, management, tax, costs, accounting and analytical procurement, business strategy, accounting system.

JEL Classification: M21, M41.

1. Introduction

The dynamic changes in the economic conditions necessitate the search for new business opportunities and additional profits. This takes into account both external and internal resources. While the large companies have already been receiving, the small businesses are just looking for the ways to receive the effect from the complementarity of the units and services, the use of participatory management style, the use of common resources, the development of new products and everything else that creates the synergistic effect.

A few years ago, the construction business was being developed actively in Russia, bringing effortlessly large profits, but today the situation changed. High competition, changes in approaches to the selection of contractors and credit policy of banks, lack of equity, reduction of real income and certain other factors had an impact on the issues related to a profit making in this field of industry. Therefore, the time has come when the generation of additional income became the essential problem for the development and construction companies.

The possibility of the emergence of synergy is expected at the confluence of certain circumstances; very often it is expressed in cost saving, growth in market prices, etc., and therefore the problem of the synergistic effect

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assessment against the general search of synergy is of particular relevance. At the same time, it should be noted that the shareholders, investors, founders, managers, economists and other interested groups have different approaches to the financial result assessment criteria. It can be the difference between revenues and expenditures, the capital gains, increase in the value of the company, the growth of net assets, the net inflow of funds, etc. Another problem lies in the differences between the companies by size, type of activity, management style and industry characteristics.

All this makes it necessary to develop modern approaches to accounting and analytical procurement of predictive appraisal of synergistic effect drawing.

Conclusion

Preparation of the derivative consolidated balance sheets by the small businesses of the construction industry, given the above requirements, allows to perform the appraisal of the predictive synergistic effect from the point of view of the influence on the balance sheet factors and capital gains. The increase in asset turnover, the release of funds can be observed as the additional effect.

In the course of decision-making, the minimum amount of assets allowing the receipt of the maximum profit should be calculated; for this purpose, the parametric analysis of the assets used should be performed, the unused assets should be disposed, their structure should be updated. It is advisable to take into account the concept of financial leverage effect: the change of the value and the return of the assets results in the change in cash flow, which, in turn, allows to save on interest on borrowings and therefore leads to the capital growth.

The phased appraisal of the predictive synergistic effect allows to determine the trend of the synergistic effect, to calculate quickly the predictive economic impact by the trends and to determine the impact of the planned operations on the company's financial condition and the net asset value, which reflects positively in the results of the decisions made.

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Project Valuation of a Distribution Centre of an Auxiliary Rail Freight Terminal: Using Real Options with Fuzzy Logic and Binomial Trees

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Abstract:

This paper presents the financial evaluation of the extension of an auxiliary rail freight terminal to integrate it to a logistics platform (LP). This investment phase is focused on building a distribution center (CEDI), as part of a comprehensive project of high commercial and strategic impact for Mexico. The project evaluation is done using binomial trees for the valuation of an American type real call option, incorporating the expected volatility over the expected cash flows, in order to determine the benefit of postponing the project three years. In addition, to complement this real option valuation, we incorporate the fuzzy logic theory in the process of assigning probabilities to the branches of tree. The value of the American type real call option to postpone the project three years is 30.37% of investment, while the value of real option, using fuzzy logic is 29.94% of investment, this is a better result.

Keywords: project evaluation, real options, binomial trees, fuzzy logic.

JEL Classification: C63, C65, G13, H43.

1. Introduction

Logistics is a strategic resource to generate competitive advantages, which in turn foster the integration of global supply chains (that move goods across the border quickly and reliable), that is delivered to end customer the right product in the right place, at the right price, at the right time, at the lowest possible cost. The synchronization of the activities of multiple organizations participating in the logistics chain and transport, allows the emergence of complex logistics systems, based on synchronization process and feedback of information that give rise to multimodal transport schemes, defined according to the load characteristics, time, distance and geography that must travel and take advantage of each mode of transport for the benefit of the competitiveness of the load transportation.[9]

This type of processes leads to improve productivity of transport operations to move significant volumes of cargo between two logistics platforms, and organize shipments combined loads to different customers in the area of influence of each platform. So, you have a better transport infrastructure that has efficient connectivity and a solid structure of logistics services seeking high logistics standard at lower costs and provide competitive advantages to attract investment for the country.

Within companies, the implementation of well-structured processes in which value chains "to provide value to customers and to the same company", Porter (2009) provides the competitive advantages that the company requires.

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Conclusions

The results obtained in the prices of real options allows a deep analysis over the flexibility and advantages that the investor faces in the project development for the extension of an auxiliary rail freight terminal to integrate it into a logistics platform, and in that the first phase of the overall project consists of the construction of a Distribution Centre (CEDI), with the purpose of offering new logistics services. It is evaluated the development of the project from the perspective of postponing its construction over a period of three years or have the flexibility of wait less time according to economic-financial and political environment. For this reason, it is very necessary, wait for the results of the study by the National System of Logistical Platforms and the guidelines and the public policy, that they could dictate by Authority in the matter over the sense of promoting and give competitive advantages for development; and moreover, wait for a rebound in economic activity and its environment, trying to reduce the risk to a minimum and avoid exposing the company to adverse changes in the value of assets and their expected benefit.

It should be noted that the averaging period to three years was based according to the failures of structural reforms of the current presidential term, this due to the impact of exogenous events such as the reduction in international oil prices and that it has a direct impact on the federal budget by reducing expenditures budget of federal government involving the cancellation and postponement of projects hence the possibility of providing investors the opportunity to realize the project before the deadline *T-t*. It is for this reason, that in a world of risk and of uncertainty, it becomes prudent assessment of the options that could lead to the project, as part of a strategic planning that affects beneficially for the company, and minimizing the risk the optimum way.

The results show that the volatility is $\sigma = 35.78\%$ of the yields of the cash flows, this value is significant in the valuation process of investment project, the value of the investment in the project is $ 64,126,877 and present value of expected cash flows is $ 64,717,954 it is discounted at weighted average cost of capital of 7.35%. Therefore, for that the investment project is feasible, the present value of expected cash flows discounted at r_{WACC} rate, should be greater than initial investment to keeping alive the investment option, in this case results that NPV is positive, it means the investment is accepted. However, the investors don't have flexibility in their decision making

Comparing the prices obtained of the real option shows: From the model of Black and Scholes, it is observed that the price of the option is $18,322,418, equal to 28.57% of the initial investment outlay at the time of expiration, which implies three years of postponement. While the price obtained for the American call option, has a percentage of 30.37% of the current investment; it shows to the investors, how much it would cost to have the right to postpone the project three years and to have the possibility of beginning the project in any moment into this period if the economic-financial and political environment is feasible.

The use of fuzzy logic allows us to estimate the expected value of the American call option, in which has been considered a distribution function of triangular way, as well as a minimum value of the option, one maximum and another, base value, which incorporate volatility of the cash flows and incorporates the coefficient of variation unlike only the minimum and maximum values. This involves having a payment on the option premium of 29.94% of the value of the investment in the project if it is postponed until three years, as recommended by the experts in this type of projects and with the possibility to exercise at any time of period considered and giving the investor the flexibility to exercise according to the financial-economic environment, what represent a great advantage for the investor. This kind of evaluation allows the membership relation of an element of a set, change gradually and no in discrete and absolute way as the classical theory of sets, ie, admitting valued belongings in the range [0,1] instead of the set {0 ,1}.

In turbulent and uncertain environments is need, search the methodologies which enable to evaluate projects, incorporating the benefits of new opportunities or investment strategies and to mitigate the risk inherent in them. Fuzzy logic offers investors a more sophisticated and robust approach that helps them to support the results obtained. Moreover, facing the challenge of infrastructure financing in the current economic scenario, this technique applied to the valuation of socio-economic projects related to infrastructure development, especially in the communications and transport sectors, which requires multimillion-dollar investments, is very useful, it shows the investment alternatives pattern to the authorities responsible for their evaluation and acceptance that accommodate new valuation techniques, giving them a more accurate and precise way in measuring uncertainty and risk approach; the ability to break down large projects into sub-projects; assess the overall risk of a project and its sub-projects; the possibility to postpone, to stop and reactivate a project; know beforehand extreme scenarios such as the abandonment of a project; contemplate accepting projects that at first glance can be discarded by having a negative net present value close to cero. This type of innovation in the sector can accommodate greater

participation of the private sector, by leveraging schemes such as public-private partnership, providing more benefits at private investor's and greater certainty to the public sector and enabling it to reach its socio-economic objectives. All this, if projects are observed under the new optical: valuation of real options with fuzzy logic.

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Economic and Mathematical Modeling of Complex Cooperation of Academic Staff of Educational Cluster on the Basis of Fuzzy Sets Theory

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Abstract

The article substantiates necessity for development of fuzzy models for evaluation of cooperation level of academic staff of educational cluster on the basis of fuzzy sets theory, which allow performing integral accounting of qualitative input/output parameters. Methodology of complex of fuzzy models is brought down to analysis of problem situation and structuring of subject sphere, development of fuzzy models, execution of calculation experiments with fuzzy model, application of results of calculation experiments, and correction of fuzzy model. The authors develop a complex of fuzzy models for evaluation of cooperation level of academic staff of educational cluster, which includes the following models in the basis of fuzzy sets theory: model of evaluation of cooperation of academic staff of university chair, which is a part of a cluster; model of evaluation of post-graduate system of professional training for academic staff of cluster; model of evaluation of developed strategy of cooperation of academic staff of cluster; model of evaluation of cooperation of cluster multiplier; model of evaluation of development of mobile innovational group of cluster; model of formation of linguistic evaluation of students' success in studying; model of evaluation of use of cluster web-resources. Modeling is realized by means of MATLAB with the use of specialized package Fuzzy Logic Toolbox on the basis of fuzzy inference of the Mamdani algorithm.

Keywords: fuzzy model, educational cluster, Mamdani algorithm, linguistic variable, MATLAB, membership function.

JEL Classification: C31

1. Introduction and overview

Significant peculiarity of higher education is complexity of qualitative evaluation of cooperation of academic staff of universities which belong to a cluster. There is not unified list of indicators of cooperation quality, as there is no idea which quantitatively measured factors influence it, in which evaluating indicators it is expressed, and what is authenticity of these indicators.

It is obvious that during formation of rating scale of the used parameters of a model, role of subjectivism is very large – as here a lot depends on experience, intuition, competence, and experts' professionalism. Besides, requirements, set by various experts to the level of cooperation of academic staff of a certain educational cluster differ greatly.

During formation of results scale, the method of "trials and errors" is frequently met (Khubaev 1996). Fuzziness of such notion does not allow old methods of mathematical modeling to receive adequate quantitative descriptions of studied parameters, so it is necessary to solve classic tasks of educational process with non-classic methods.

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The most interesting feature of human intellect is capability to make right decisions with incomplete and fuzzy information. Development of models of approximate discussions of human and use of them in computer systems of future generations is one of the most important problems of science (Kruglov *et al.* 2001).

Substantial progress in this regard is made by Professor of the California University (Berkeley) Lotfi, A. Zadeh. How work "FuzzySets", which appeared in 1965 in the journal "Information and Control" (No. 8), set foundations of modeling of intellectual activities of human and was a start for development of a new mathematical theory. Zadeh expanded classic notion of set, assuming that characteristic function (function of belonging of element to set) can take any values in the interval [0; 1], and not only values 0 or 1. Such sets were named fuzzy.

Having introduced the notion linguistic variable and assuming that its terms are fuzzy sets, L. Zadeh created apparatus for description of the processes of intellectual activities, including fuzziness and uncertainty of expressions. Actuality of this problematics is emphasized by large number of works by Russian (Olishevskiy and Serbinovskiy 2009, Tishchenkoand and Zhilina 2015) and foreign scientists (Wang 1992, Weiss 1973), devoted to it.

Methodology of fuzzy modeling does not replace or exclude methodology of systemic modeling, but specifies the latter as to the process of building and use of fuzzy models of complex systems. The process of fuzzy modeling is the similar consequence of interconnected stages as the process of system modeling. At that, each stage is performed for the purpose of building and use of fuzzy model of the system for solving the initial problem. Generally, fuzzy model is understood as informational and logical model of the system built on the basis of fuzzy sets and fuzzy logics theory. Use of fuzzy models for calculation of quantitative indicators of cooperation of university academic staff will expand possibility for use of clusters in higher education and will allow evaluating output parameters of models under the conditions of uncertainty and lack of statistical data.

Conclusions

▪ A set of fuzzy models of evaluation of cooperation level of academic staff of universities which belong to cluster was developed.

▪ The offered methodology allows performing integral accounting of qualitative factors (strategy and tactics of chair/cluster, rating of academic staff of chair/cluster, evaluation of proficiency of cluster's students, use of clusters' web resources, etc.) – on view of their uncertainty. Setting the criterion of significance of certainty level, it is possible to change final results, depending on the group level of cooperation in cluster.

▪ It is experimentally determined that use of this approach allows obtaining evaluation of the level of cooperation of academic staff of cluster, which proved efficiency of its application during development of complex approach to perfection of organization and management of existing clusters in the sphere of informational security.

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Comparison of Resource Related Sectors with Non-Resource Sectors from the Point of View of Economic Growth and Dutch Disease Potential, Studied on the Case of Four Resource Dependent Countries

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Abstract:

The Dutch Disease phenomenon makes scholars conclude on the base of the historical empiric evidence, that natural resources can be actually a thread to the long-term stability and prosperity of countries. This view of natural resources as a curse rather than a blessing was shown on many cases of national economies. No studies had however compared different commodities in order to draw a conclusion on the severity of their impact on GDP growth with other sectors and also on the lagged impact in a mid-term time span. The study compares on the base of historic longitudinal panel data analysis, selected types of resources with a Dutch Disease impact potential on GDP creation, such as crude oil and gold and compares these with agricultural and industrial output and high-tech exports in chosen countries.

1. Introduction

Economic growth is to a major extent induced by learning by doing, in agriculture as well as manufacturing (Torvik 2001) and not by resource based windfall. The Dutch disease or the "Natural Resources Cause" (Allcot *et al.* 2014) is the designation of a process related to a boom in the sector or natural resources, which causes reduction of non-resource sectors and deindustrialization. Paraphrased, it is a market failure causing negative externalities impacting on sectors of services and tradable goods and services, in preventing these from organic development (Bresser-Perreira 2013). The phenomenon is based upon the concept of Ricardian rent, defined by dynamics of international markets and creating a cost differential between the cost of less efficient producers present in the market and the cost of countries producing the natural resource the commodity on account of its natural reserves. While according to Ricardian rent concept the owners of the most productive lands are the principal beneficiaries, some scholar see the curse of this rent-seeking following oil exports as well as exports of other mineral resources. In the short run, local consumers can purchase tradable goods cheaper than in a situation without Ricardian rent, however in the long run sophistication of production will be impeded, as labor is transferred to resource extraction sectors with higher value created per capital.

If the view of Corden and Neary (1982) on the division of economy into sectors of natural resources, non-resource tradable including manufacturing and agriculture as well as non-tradable sectors including construction and non-tradable services is accepted, then it is realistic to expect the existence of a spending effect (increased spending due to resource related income leading to increase imports) and the resource movement effect (rise of labour costs due to rising marginal product of labour), both being the cause for Dutch disease phenomenon, resulting from the impact of non-natural resources relative to the impact of non-tradable assets.

In 2006 the Center for Global Development identified the Dutch disease as a term used by economists to describe a reduction in a country's export performance as a result of an appreciation of the exchange rate after a natural resource. The natural resources can be as much a curse as a blessing, and the Dutch disease is as a case of "resource curse" or "paradox of plenty", existing even if the commodities that give rise to it have high technological content, as is currently the case of oil production. (Bressser-Pereira 2008)

In other words, the Dutch disease can be labelled as re-allocation of capital from tradable to non-tradable sectors, leaving the markets more open to economic shocks. Evidence shows that fluctuations of commodity prices have strong impact on domestic spending, lead to output variabilities of commodity exporters and especially those that are less developed from the point of view of financial development, with less pro-cyclical fiscal policies and inflexible exchange rates. (IMF2015). Natural resources derived wealth exacerbates weaknesses of institutions (Brahmbhatt 2010), but can also actually deteriorate governance (Collier *et al*. 2007). The term, was coined in 1977 by the Economist (2014) in reaction to Dutch economy which was characterized by reduction in manufacturing due to discovery of large gas reserves in the Northern Sea leading to increased demand for the currency thus leading to appreciation of the Dutch Guilder, causing inflation which in turn reduced profitability and competitiveness of the national output, lower interest rates and crippled the economic potential of the country. The argument on the comparative advantages of the resource rich economies is however controversial, since the commodity prices tend to fluctuate and in times of low prices economies without developed back-up sectors incur into troubles. According to Stiglitz (2004), three major impacts of Dutch Disease can be identified: the focus on non-productive activities mal-allocating development effort, often leading to wars and corruption with secondary effects, dependence of by default volatile commodity and crowding out of other economic sectors. Kareem (2010) studied Dutch disease in a study examining oil-exporting countries using Heckscher-Ohlin factor endowment model in the period of 1977 – 2004 and found out that oil booms lead to reduced manufacturing output, that windfall shocks had negative impact on markets rather in countries with open capital markets to FDI, that the price of labor to capital as well as capital intensity appreciated thanks to a windfall and that high capital and high diversification intensity economic sectors are less impacted by windfall shocks.   Collier and Goderis (2007) used a panel co-integration method for 130 countries in a period between 1963-2003, reached the conclusion that commodity price booms had positive short-term impacts related to growth, this impact would however be negative in the long term and would be restricted to countries with low quality governance and essential natural resources such minerals and oil. Reinhart and Rogoff suggested in 2010 that Dutch disease induced external debt rising over 60% leads to a decline of 2% of GDP growth.

The study of 97 developing markets, with high natural resource exports to GDP showed low GDP growth between 1970s and 1980s (Economist 2014). Smith (2014) replicated calculations done by Black et al. (2005) in examining the impacts of oil price booms and subsequent busts for 19 oil-dependent markets did not contradict the negative view of the Dutch Disease model, however showed a strong negative relationship to price levels in case of countries with high non-hydrocarbon natural resources as well as agricultural products, suggesting move towards industrialization, caused by oil related windfall. His study suggests that there is ambiguity related to effects of oil boom and its impact on other sectors, as they do not imply mechanisms related to Dutch Disease including the spending effects or the resource movement, and thus raised doubts on the simplified explanations of the oil windfall related impact. Allcot *et al.* in 2014, examined the Dutch Disease in selected U.S. counties, using panel dataset of gas and oil production since the 1960s until the present time and came to the conclusion that manufacturing benefits from resources related windfall, due to pro-cyclical inputs, however limit their findings on local production as well as local manufacturing not taking into account related issues on scale of national states. Bjørnland *et al.* (2014), used a Bayesian Dynamic Factor model and quantified the impact of a fall of oil prices by 25% to by 2-2.5 percent of Norwegian economy.

However, pure resource-based dependency may not be a simple explanation. Stiglitz puts forward in his article for Guardian (2004) an exemplary case of such Dutch Disease doubt the comparison between Indonesia and Nigeria, both dependent on oil and having a similar level of per capita income in 164, yet today per capita income of Indonesia is four times Nigeria's, which has actually, as measured in constant dollars since 1995, fallen. A pattern alike could be observed in Sierra Leone as well as in Botswana, both dependent on diamond export. However, Botswana averaged 8.6% GDP growth over the past three decades, while Sierra Leone entered in a protracted civil conflict. Gold mining, is a great sector in at least 34 African countries, a large number of resource-rich African countries did not get a good benefit from their resource endowments. The reason behind this situation is the fact that countries received small shares of the revenues from Gold mining sector and sometimes because of foreign direct investment have negative effect in this sector (Gajigo *et al*. 2012). Economies that are dependent

on natural resources when the source of the exploited natural resource depletes or the value declines internationally, the country is left without a booming sector and with its remaining economy weakened and prone to "Dutch Disease." This phenomenon is named for the experience of the Dutch economy in the 1960's. After natural gas was discovered in the North Sea, increased production of gas "crowded out" other activities. Essentially countries experiencing "Dutch Disease" like Africa countries find that resources shift into the booming natural resource sector resulting in decreased production in other sectors particularly manufacturing and agriculture. In addition, an appreciation of the real exchange rate often exacerbates the phenomenon by making domestic products more expensive on international markets. This depresses domestic export industries. In the 2009 with the report of the World Economic Forum (WEF), which showed Ghana as relatively weak in related areas of technology, innovation, education, health, market competition and labor market efficiency. These findings suggest that skills and productivity is the most importance competitiveness challenge facing Ghanaian enterprises. Akanni (2007) studied Oil Wealth and Economic Growth in Oil Exporting African Countries found that oil revenues in oil exporting African countries have failed to promote growth, increase welfare or solve migration problems. To find more evidence about Dutch disease in oil-rich countries by the study of Treviño (2011) on the 14 member countries of CFA franc zone, who divided them into two groups of oil exporter and non- exporter by studying some indicators like economic growth, GDP and real exchange rate, the results clearly refer to existence Dutch disease into oil exporter group during the oil-price boom. Chukwuka *et al.* (2013) studied the effect of oil discovery in Nigeria on agriculture sector activity by using annual time series data from Central Bank of Nigeria, and the study was focusing in relationship between agricultural commodity export and oil export by using co-integration and vector error correction model (VECM), so these results showed that Dutch disease is exist in Nigeria because with 1% increase in oil export the agricultural commodity export will decrease by 16% with less competitive in international markets, these results in the same context with Olusi (2007) and Oyesanmi (2011) whose found that Dutch Disease exist in the Nigerian case. Also Dutch disease has a negative impact on Nigeria's and Indonesia's agriculture sectors because of local currency appreciation which affected on labour, land markets and cropping pattern and at the end led to less competitive (Rudd 1996), another evidence from Brazilian economy with overvaluation of the exchange rate over the last years because of impressive growth of oil which reflected on decreasing economy performance and its competitive ability, which lead us to say it is a case of resources curse (Ueno 2010).

Acknowledgment:

Conclusion

The measurement of four countries that represent potentially important Dutch Disease target countries showed a striking importance of industry, services as well as trade sector on the GDP growth in the period of 11 years, which is comparable or more important than the contribution of extractive sector. The explanation of this finding can lie in the fact, that extraction of resources did contribute an important share to national GDP volume decades ago, yet rather contributed less to GDP growth than the sector mentioned. This would imply a possible illumination on the dangers of Dutch Disease as a phenomenon especially crucial during a period of growing output of the natural resources contribution to GDP, while after reaching a certain threshold, such as the extraction capacity limits, the complementary sectors of economy can become actually responsible for GDP growth in a more dramatic way than the extraction itself. Development of social capital is a precursor to long-term economic growth, in the view of mainstream economics being a hydraulic system situated in time as well as in space. Abundant natural resources should be a blessing, not a curse and can become one, if the exploitation of natural resources happens with measured approach and in balance with development of other principal economic sectors. This in other words requires robust planning on macroeconomic level, with complex coordination between different frameworks of governance and includes imposition of limits in the extraction sectors, which is rather more difficult to put into practice than to consider from a theoretical point of view and which actually goes against the laissez faire neoliberal market view. In other words, not the resources themselves, but incapacity to see a wider panorama of the market system as well as a view of long term economic perspectives, implies the Dutch Disease potential. Rent-seeking behavior and short termism of state officials, and natural resources wealth grab, which is less complicated than a strenuous, gradual development of industries and commercial infrastructures, in combination with dependence and volatility of the prices of resources, can be indeed detrimental to creation of the pool of social capital and crowd out other, in the short term less lucrative activities, which can however at the end provide and incomparably more important contribution to balance the satisfaction of economic needs.

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Evidence of Financial Crisis in the Banking Sector of the Republic of Kosovo

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Abstract:

Commercial banks in Republic of Kosovo have undergone major changes since the beginning of their establishment after the end of the war in 2000. Changes mainly resulted from technological changes, changes in the regulatory environment, the entry into the market of foreign capital banks and as a result of increased competition. Due to these changes, particularly as a result of the last global financial crisis in 2008, commercial banks in general were faced with rising operating costs, which may have affected their profitability, liquidity and credit quality.

Our research evaluates the performance of commercial banks in the Republic of Kosovo during the period 2006 - 2012 by utilizing the method of financial ration analysis. We have also utilized the statistical t-test to analyze the impact of the recent global financial crisis on the performance of commercial banks in the Republic of Kosovo.

The paper is organized as follows: Section 1 provides an analysis of the banking sector in Kosovo and macroeconomic indicators for the period analyzed. Section 2 provides a literature review on the performance of banks in other countries. Section 3 describes the research methodology and assumptions. Section 4 presents the results of research. While Section 5 consists of the summary of the research and provides our main conclusions.

Keywords: bank performance; profitability; global credit crisis; liquidity; credit quality.

JEL Classification: M40, M41, E50, E60.

1. Introduction

Kosovo banking sector consists of commercial banks activity. During the period of analysis, the number of banks has gradually increased. In the year 2006 the total number of commercial banks operating in Kosovo was 6, while on the year 2013 the total number of commercial banks operating in Kosovo was 9, which are: ProCredit Bank (ex-MEB – Micro Enterprise Bank), Raiffeisen Bank (ex-American Bank of Kosovo), Bank for Business (ex-Business Private Bank), Nova Ljublanka Banka (NLB) Prishtina (established by merger of KasaBank dhe New Bank of Kosovo (BRK), Economic Bank, National Trade Bank Kosovo Branch (BKT), Türk Ekonomi Bankasi (TEB), Isbank and one branch of Komercijalna Banka A.D. of Belgrade who is operating only in the north side of Mitrovica and in Gracanica.

Seven of these banks are well established and have their branches operating throughout Kosovo. It should be noted that only two of the banks in Kosovo have local capital (Bank for Business and Economic Bank), while other banks are banks with foreign capital (the shareholders are not Kosovars). This appears as a new trend in the Kosovo market.

Despite many services which are provided by commercial banks in Kosovo, lending remains their principal activity. It should be emphasized that the demand for money, in a country in transition such as Kosovo, is significantly greater than the supply of money, so the importance of lending remains very high.

Of course, the lending (credit issuance) activity must be genuine and sound and banks should maintain their stability and liquidity. In achieving this objective, the completion of legal financial regulatory framework has played a great role, and also without prejudice, the strict supervision by the Central Bank of the Republic of Kosovo (hereinafter: CBK). Another feature of the overall financial sector in Kosovo is that it is still dominated by the banking sector, with a share of 70-75% percent of total financial system assets (Financial Stability Report 2010-Central Bank of Kosovo).

The main sources of financing of the banking sector in Kosovo are domestic deposits and domestic borrowings, which represent about 70-80% of all liabilities. This represents a great advantage for Kosovo banking

sector, since they are not linked directly to international financial markets, and this has directly reduced the impact of the global financial crisis in the Kosovo banking sector.

The global financial crisis of 2008 has had a great impact on the global economy. Many countries entered recession, while in some countries, economic growth slowed down significantly. As a result of the 2008 financial crisis and its response, many countries were forced to increase public spending to reduce the effects of the crisis and stimulate economic growth. Central Banks also reacted, which were obliged to apply expansionary monetary policy. These measures had a high impact in eliminating the impact of the crisis, offsetting the decline of activity in the private sector by increasing public sector participation in the economy.

Since commercial banks in Kosovo are mainly of foreign capital, in 2009, the banking systems in the countries where the foreign banking groups have subsidiaries in Kosovo were characterized by slower growth, difficulties in obtaining financing and deterioration of their credit portfolio quality (Financial Stability Report 2010-Central Bank of Kosovo). As a result of this, this contributed to the reduction of the overall profitability of the banking system during and after year 2008.

However, relying on statistical data of Table 1 and Figure 1, it can be noted that during 2006-2012, the banking sector in Kosovo, namely loans and deposits have been increasing steadily, despite the appearance of the global financial crisis and its effects worldwide. But this does not mean that the global financial crisis had not affected the performance and efficiency of these banks.

Summary and conclusions

In this paper, we measured the performance of commercial banks in Kosovo during the period 2006-2012 and we have statistically tested the level of impact of the global financial crisis in 2008 on these banks. The results showed that on average, profitability, liquidity and credit quality has been improved over during 2006-2008 and from 2008 began to deteriorate.

It is also concluded that there was no statistically significant difference in the bank's performance during the period 2006-2007 compared with 2008-2009. Such a result may have been due to the fact that Kosovo is faced with the global financial crisis in a good macro/fiscal position allowing less sensitive effects.

We can conclude that, despite the appearance of disorder and crisis in global financial markets during 2008-2009, the banking sector in Kosovo has remained stable. Banks have continued to meet all regulatory requirements regarding capital adequacy and liquidity acceptable level. Also, it can be emphasized that banks have remained in stable position and protected from the storm of the global financial crisis, as they have benefited from limited exposure to foreign company securities and due to the fact that the crisis assets have been minimal on the balance sheets of commercial banks of Kosovo.

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Differentiation of Regions of the Russian Federation as to Level of Budget Revenue Potential of Municipal Entities

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Abstract

The article deals with the notion "budget revenue potential" of region. Potential of local budgets in the regions of the RF is analyzed and transfer-dependent model of economic behavior of municipal regions is determined – for revenues from own production and financial and commercial activities of municipal entities are very low, and budget revenues are too centralized.

The significance of financial stability of municipal entities for provision of socio-economic development of region is emphasized. It is shown that financial state of municipalities is determined by the mechanisms of leveling of budget provision on the basis of inter-budget transfers, their perfection and objectivity. The main problem of local administration is determined – chronic deficit of financial assets for current needs and development of municipal entity, which is peculiar for most countries. For the purpose of complex characteristics of budget of the subject of the Russian Federation and its economic potential, it is offered to calculate such indicators as the level of tax provision, independence, and transfer dependence of budget. Direct dependence of effectiveness of territorial budgets on the level of decentralization of the budget process is shown. The conclusion is made on significance of fiscal decentralization in the system of management of state and municipal finances. Experience of Stavropol Krai in regulation of budget relations and increase of effectiveness of budget expenditures is provided.

Keywords: budget relations, budget process, subsidized budget, inter-budget transfer, tax system, tax revenues.

JEL Classification: H72. R51.

1. Introduction

With Russia's transition to market foundations of economy, revenues began to be formed mainly from tax revenues, which meant their transition to the legal basis, regulated by the law. At present, revenues from own production and financial and commercial activities of municipal entities do not exceed 10% of all revenues, which means that the rest 90% of revenues are received by municipal entities due tax revenues and financial help from other budgets (Kuryan 2014).

State and municipal finances are ties which connect the integrated economic environment of a federative state, which is expressed in centralization and constant flow of financial assets in the process of distribution of tax revenues between the levels of budget system and distribution of tax revenues of above budgets between budgets of lower levels (Benito *et al.* 2015, Hansen *et al*. 2014, Chernyavsky and Vartapetov 2004).

In Russia, this mechanism is pre-determined by the Federal laws. The Federal Law No. 131-FZ "On general principles of organization of local government in the RF" (Articles 55-59) sets that norms of allocations from federal taxes, equal for the level of budget system, are set by the Budget Code (Federal Law No. 131-FZ), which increases predictability and sustainability of tax revenues of budgets of all levels. Regional taxes (Article 14 of the Budget Code of the RF) include: transport tax, tax on gambling, corporate property tax (Tax Code of the RF). Revenues

from regional taxes and collections are transferred into local budget by rates set by the subjects of the Russian Federation on the basis of the Tax and Budget Codes of the Russian Federation.

The federal laws set local taxes which are levied on the whole territory of the RF. Specific size of tax rates are set by the legal acts of representative bodies of municipal entities. The Article 15 of the Tax Code of the RF assigns the following taxes to local taxes: land tax, personal property tax (Tax Code of the RF).

Local administration has a legal right for establishment, change, and cancel of local taxes and fees. The mechanism of norms of tax liabilities allows redistributing assets by means of local budgets into regional budgets. That's why the government of the RF aims at development of the country in direction of more just redistribution of budget assets between the levels of budgets of the RF. Realization of this task requires the totality of financial and economic indicators which provide adequate evaluation of budget potential of the territory.

Conclusions

As a result of the research, a stable tendency of recent years was found – reduction with municipal entities of their own revenues against the background of constant increase of the number of issues of municipalsignificance.

There is constant under financing of municipalities and targeted character of assets allocated from higher budgets, which means aggravation of quality of budget expenditures of municipalities which do not deem it necessary and possible to optimize their expenditures. Actually, it is possible to state that as a result of the municipal reform in Russia, there appeared a model of transfer dependent municipal district with the high level of dependence on subsidies. In order to improve this situation, it is recommended to divide budget expenditures into effective, poorly performing, and ineffective with mandatory refusal from budget financing of the latter.

Measures for budget saving cannot solve the problem of growth of budget revenue potential in the North-Caucasian Federal District which has the lowest level, as compared to other levels, though there has been certain positive dynamics since 2012 in part of transition to leveling of budget provision instead of leveling of the level of coverage of actual expenditures.

Significant reduction of differentiation of the level of budget provision in recent years (starting from 2012) is observed in Stavropol Krai, where distribution of subsidies from the krai budget lead to differentiation of budget provision between 10 most and 10 least provided municipal entities of the krai reducing by 7 times.

It was found that city districts have certain budget autonomy, and municipal districts are turning into addition for regional authorities – they do not have their own assets for development, as tax and non-tax revenues constitute less than 1/3 of total volume of their budget revenues.

Therefore, the main budget problem of local authorities in Russia (and other countries of the world) is chronic deficit of financial assets even for current needs, let alone development of municipal entities. At that, solution of this problem lies beyond the authorities of local administration, as their arsenal has a limited number of strategic tools of influence on the volume of revenues and expenditure powers.

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The Short- and Long-Term Relationship between Input and Output in the Turkish Automotive Sector

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Abstract:

This study aims to discuss the short- and long-term relationship between the input and output variables of the Turkish automotive sector using a production model. This relationship, measured using the data for the period between 1982 and 2014, was analyzed using the ARDL bound test. In the long-term analysis, the effect of the input variables on the output was significant, with the FTP being the most effective on the output. In the short-term analysis, the effect of the input variables on the output variable was found to be significant.

Keywords: automotive sector, total-factor productivity, ARDL

JEL Classification: D22, D24, L25, L62.

1. Introduction

The automotive sector is currently going through a rapid process of innovation under the effect of globalization. This sector is characterized with an effective use of technological developments. These characteristics have a positive effect on the automotive sector in such areas as the production process, distribution of goods, governance, human resources policies and marketing.

The automotive sector, which has a strategic importance for an economy, can be referred to as a driving force for other sectors and overall economic performance in developed and developing countries. This is because the automotive sector tends to make a positive impact on many sectors, given the production of intermediate goods and sales processes. The products of other sectors are used by the automotive sector as intermediate goods in the production process. Thus, the automotive sector receives its intermediate goods mainly from the iron and steel sector, but also from glass, plastic, textile, electronic, petrochemical and IT sectors, and in this way, it affects them. Moreover, it makes positive contribution to the effective functioning and development of the services (distributors, retail, maintenance and repair and insurance activities), construction, tourism, agriculture and transportation sectors. These characteristics indicate that the automotive sector is broader, more diversified and more effective than most other sectors.

The automotive sector is also characterized with intense research and development (R & D) investments and the use of advanced manufacturing techniques. With this feature, it has added positive impact on the economic structure. As a result of intense R & D investments in the sector, the emergence of technological innovations as well as the obtaining of new production information is facilitated.

With its production magnitude, job creation capacity and high share in global trade, the automotive sector is one of the leading economic activities (Automotive Distributors' Association 2013, 11). The two most important characteristics of the sector are the high competitiveness and innovativeness. With these characteristics, it helps the sector's firms develop efficient and effective policies. Other benefits include the increased diversification of products and the acceleration of investments (Ertuğral 2011, 76) (Yaylalı and Çalmaşur 2014, 326). In addition, the automotive sector creates value added in the economy.

Being part of the manufacturing industry, the automotive sector has a considerably important place in Turkey's economy. There are numerous statistics and indicators attesting to the sector's importance. Turkey is the world's 17th largest automotive producer and, as of the end of 2014, is Europe's largest light commercial vehicle producer (Investment Support and Promotion Agency of Turkey 2014, 4). In Turkey's vehicle production, the compound annual growth rate has been approximately 22% for the last 10 years (Abylkassymova *et al.* 2011: 22). The exports by the automotive sector, which is one of the leading exporting sectors of Turkey, rose from $1.593 billion in 2000 to $18.065 billion in 2014 (TurkStat 2015). The automotive sector offers employment opportunities for numerous people in Turkey. The share of the sector's wage earners in the top 500 industrial enterprises was only 3.1% in 1983, but it rose to 13% in 2011 (Ministry of Science, Industry and Technology 2013, 14). Likewise, the total number of the sector's employees rose from 40,838 in 2010 to 43,683 in 2013 (Automobile Manufacturers' Association 2015a, 30). The investments in the sector jumped from TL 551 million in 2010 to TL 1.374 billion in 2014 (Automobile Manufacturers' Association 2015a, 31). In Turkey, the automotive sector attracts a significant

portion of foreign direct investments (Yaylalı and Çalmaşur 2014, 326). The positive developments in the sector continued also in 2015. Indeed, total automotive production rose by 17% in the first 11 months of 2015 compared to the previous year while automotive exports increased by 12% over the same period (Automobile Manufacturers' Association 2015b).

Given these positive effects of the sector on Turkey's economy, it is essential that the sector's total-factor productivity (TFP) should be identified and the short- and long-term relationship between its inputs and outputs should be established. The study first estimated the TFP, which is the rate of the output produced over a certain period to the inputs used in the produced over the same period. In this estimation, the work by Lieberman et al. (1990) as well as Lieberman and Dhawan (2005) was taken into consideration. The estimated TFP and the short- and long-term relationship between capital and labor inputs and the output were estimated using the Autoregressive Distributed Lag (ARDL) Bound Test method. In this context, the Turkish automotive sector was selected as a whole and certain policy proposals were developed for the development of Turkey's automotive sector in the light of the findings from the analysis conducted with the sector's data with an integrated approach. The main objective of the study is to estimate the Turkish automotive sector's TFP econometrically using the sector's data for the period between 1982 and 2014 and analyze the short- and long-term relationship between the sector's inputs and outputs.

In this framework, the study first gives an account of the literature on the subject, and then moves on to describe the data and methodology and finally discusses the analysis findings. In the conclusion section, the findings are assessed and policy proposals are presented.

Conclusion

The automotive sector is a very important sector for Turkey's economy. Given the supply of intermediate goods for the sector as well as the production and sales processes, the automotive sector has positive effects on many other sectors.

This study sought to estimate the short- and long-term relationship between the inputs and outputs of the firms in Turkey's automotive sector, including the supplier industries, based on their data for the period between 1982 and 2014. In this context, first, the TFP was econometrically estimated on a yearly basis, and then, the short- and long-term relationship between the inputs and outputs using an econometric model including the TFP, namely the ARDL Bound Test method.

The empirical results of the study revealed a number of important findings for the Turkish automotive sector for the period between 1982 and 2014. Under the constant returns to scale assumption, the capital and labor made significant positive effect on the output for the period in question, and the capital flexibility and labor flexibility of the output were found to be approximately 0.59 and approximately 0.41, respectively. This finding indicates that the partial effect of the capital on the sector's output is greater than the partial effect of the labor on the sector's output. In this context, policies may be developed for boosting the capital inflow to the automotive sector, which has widespread positive effect on Turkey's economic indicators. Various measures may be taken to improve total savings in the country and additional policies may be implemented to encourage consumers to spend these savings in the automotive sector. This may improve the capital utilization in the sector.

The study also found that the TFP levels of the Turkish automotive sector, calculated using the econometric method, differed from year to year and tended to decline during economic crises. By increasing the labor productivity, the TFP ensures more effective output. For this reason, policies may be developed to make a positive effect on the sustainable structure of the TFP so that the sector should not shrink during times of crisis. In this framework, certain arrangements should be made to make sure that these markets continue to function in times of crises and more resources should be allocated to research and development.

As a result of the ARDL bound test conducted, cointegration relationship was identified between the inputs and outputs. In the long term, the variables TFP, capital and labor were found to affect the sector's output significantly. In the long term, the TFP and capital were found to make a positive effect on the output while employment was found to have a negative effect on the output.

The sector's input significantly increases in line with the increase in the TFP. Moreover, of other independent variables estimated, the capital also found to have a significant and positive effect on the output. The capital increase in the long term in the Turkish automotive sector increases the output as well.

Of the long-term inputs studied, the variable which has the biggest effect on the production is the TFP. In order to augment the output in the Turkish automotive sector and maintain it in a sustainable form, the sector's firms should allocate more resources to their research and development (R and D) investments to drive their technological development. Moreover, the government may develop incentives geared to boost the productivity growth of firms. More effective results may be obtained if these incentives are designed to sponsor the research into technology and intelligent energy infrastructure which may play a role in improving the use of renewable and clan energy resources. On the other hand, the government should develop and implement a policy for enhancing technological infrastructure that will ensure that the sector can maintain the productivity growth in a sustainable manner.

When the short-term coefficients were taken into consideration, it was found that the TFP values for the current terms and three and four periods ago (excluding the values one period and two periods ago) as well as the coefficients of the capital were economically and statistically significant. More precisely, the TFP's values for the current period and three and four periods ago as well as the capital values had positive effects on the output in the short term in the Turkish automotive sector and these effects were found to be significant. A significant, but negative correlation was found between the labor and the output in the short term, as was the case in the long term. The study also found that any deviation in the output in the short term may be corrected by 81.1% in the next period to attain the long-term balance.

In conclusion, it can be indicated that the TFP significantly makes the biggest effect on the output than the other inputs both in the long and short term in the Turkish automotive sector. In this context, the automotive sector's policy makers should develop policies to boost the TFP in order to make the sector's long-term output sustainable.

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Strategic Focus as a Tool to Ensure Economic Stability and Security of Non-Financial Corporations as Socio-Economic Systems in Modern Russian Economy

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Abstract:

Considering potential threats to the economic security of non-financial corporations in the Russian Federation (RF) caused by inefficient strategic management, this article aims to develop a conceptual model of a strategy which would ensure the economic stability. The study is based on the statistical method that enabled to reveal a negative trend in the development of non-financial corporations in the current economic situation in Russia, this trend being a destabilizing factor of social and economic stability. The method of structural and logical simulation was used to develop a structural-logical model of long-term economic stability of non-financial companies seen as socio-economic systems. The strategic focus of the socio-economic systems is defined as a specific target-oriented category that allows assessing the shifts in the economic stability of the system. Thus, it is possible to say that the strategic focus is an indicator of quantitative and qualitative criteria of socio-economic systems performance. This idea enabled the authors to form a complex structural-logic "Model of economic stability and security of non-financial companies as socio-economic systems". The method of monitoring and evaluating economic stability and security of socio-economic systems forms the basis for this structural-logical model. Such an approach allowed the authors to indentify whether the current strategic targets of socio-economic system are achieved. The findings were analyzed to form the conceptual provisions. Thus, this concept can be used to develop economic stability monitoring and management techniques considering the strategic aspect of the socio-economic systems operation in modern conditions. Besides, the findings of the research enabled to improve the methodology of strategic management and to ensure stable development of the real sector of the national economy.

Keywords: economic stability, economic security, self-organization, conceptual-logical model, strategic focus, vector of consumer values, socio-economic system.

JEL Classification: D21, M210, O21.

1. Introduction

Non-financial corporations are the basis for the Russian Federation development since they account for over 80% of the country's production of gross value added (Federal State Statistics Service – FSSS 2016). However, in the situation of geopolitical imbalances and the financial crisis the growth rate of non-financial corporations' production demonstrates a steady decline. The functional efficiency of socio-economic systems goes down, which threatens the economic stability of companies and stagnation of real economy. One of the destructive factors of this steady trend is the inefficient strategic management in corporations. Changes in the socio-economic systems development, along with their complex functional structure result in the emergence of two vectors that can be used to improve the management mechanism, taking into account the increasing uncertainty of the environment as well as economic and management risks (Engert *et al.* 2016). The first vector deals with the desire of non-financial corporations to expand their own innovative opportunities due to their increasing importance, such as being a significant factor of modern economic development, which, nevertheless, carries a lot of risks. The second vector is determined by the visible contradictions between the internal and external factors that are prerequisites for the reform of the management mechanism and that should comply with the new model of the Russian economy. In the context of the current financial crisis of the national economy, the abovementioned problems cannot be solved by some applied approaches. In this regard, it seems viable to focus on theoretical and methodological issues of system-wide study of economic stability in the framework of economic security and socio-economic systems. At the same time, ensuring economic security, socio-economic systems should use their potential of

permanent transformation and overcome internal restrictions. These transformations should result in the formation of dissipative structures with a higher level of organization and effectiveness in achieving the strategic goal (Plott *et al.* 2013). In this case, it is possible to talk about the self-organization of a system in the course of its evolution, which is a key factor in ensuring the strategic stability of a system.

Thus, it is necessary to develop new conceptual theoretical and methodological provisions for ensuring economic stability of socio-economic systems that are integrated in the structure of control theory and are based on the complex of methodological foundations, essential characteristics of non-equilibrium systems and conceptual models of their economic sustainability. This approach will significantly improve the economic stability management to ensure the companies long-term operation in the conditions of unstable Russian economy.

Conclusion

As part of the empirical study, the statistical analysis of the current state of Russian non-financial corporations allowed the authors to conclude on the ineffectiveness of strategic management as the main destabilizing factor in the companies' economic stability and the need to manage them as socio-economic systems. Review of scientific works enabled to refine the definition of the concept of economic stability of a socio-economic system. This definition reflects the links between economic stability assessment, monitoring and management, considering strategic risks and using a methodological approach to the information-analytical assessment system, status monitoring, and management of economic stability of socio-economic systems. This approach allowed the authors to form a structural-logical model of the strategy for economic stability of non-financial corporations as socio-economic systems. A distinctive feature of the model is the presentation of the strategy implementation process as a consistent set of management stages, based on the logical structure of economic stability that defines its essence, requirements to the system properties, characteristics of its condition, the degree of equilibrium and transition to a new qualitative state. Working on the conceptual model of economic stability strategies development, the authors could identify a new stage of the economic security strategy – "defining the strategic focus of the socio-economic system". This stage allows setting long-term goals and functional objectives for non-financial corporations, which in turn ensures the strategy effectiveness and long-term stability of the socio-economic system in the national economy under high risk and chaos. Conceptual provisions, presented in the article, can facilitate further improvement of the methods of socio-economic systems strategic management and increase the level of economic stability of non-financial corporations in Russia under current conditions.

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Comparison of Changes in the Shares of Public and Private Funds in Cluster Budgets after 2010

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Abstract:

The scientific paper presented compares the share of public and private funds in cluster budgets. It is based on two authentic and independent primary surveys which were carried out in 2011 and 2016. In both surveys the addressed clusters responded to several questions concerning their budget structures. The goal of the surveys was to track changes in funding clusters during this five-year period and examine the statistical significance of such changes. The share of public and private funds in cluster budgets has not significantly changed from the statistical point of view, nor has the structure of public funds; the structure of private funds has changed relatively considerably, when the decreasing share of membership fees in cluster budgets has been compensated for by the revenues generated by clusters themselves from their own activities, and the share of venture capital, resources of "business angels" and other donors hasalso increased.

Keywords: clusters, financing clusters, cluster budgets, public funds, private funds.

JEL Classification: O31, O38, R58.

1. Introduction

The topic of clusters, cluster initiatives and cluster policies has been the subject of great concern to professional public since 1990 due to the publication of Michael Porter's book (1990) *»Competitive Advantage of the Nations«*. Other research studies have been gradually growing in number, dealing to a greater or lesser extent with cluster funding and exploring the issue from various aspects. Financing clusters is possible by employing resources either from the private sector or public sector, or by a combination from two.

A number of the above-mentioned studies examined clusters, cluster initiatives, their support and finance on the worldwide basis (Sölvell*et al.* 2003, OECD 2007, Lindqvist *et al.* 2013) or concentrated on surveying finance predominantly in European countries (Oxford Research AS 2008, Barsoumian *et al.* 2011, Lämmer-Gamp *et al.* 2011, Müller *et al.* 2012, Urbančíková and Burger 2014, Meier zu Köcker and Müller 2015). Other studies analysedclusters and their support in groups of countries which are somewhat specific and demonstrate some common features which frequently distinguish them from others (Ketels and Sölvell 2006 dealing with clusters in the EU-10 new member countries, or Ketels *et al.* 2006 exploring clusters in developing and transition economies). Similarly, part of the research studies concerned mainly financing clusters in some selected European countries (Hantsch *et al.* 2013 – clusters in Germany, France and Norway; and Sölvell and Williams, 2013 – clusters in Sweden).

These and numerous other studies have dealt with the issues of the best suitable methods of cluster funding, the shares of public and private funds in cluster budgets, the amounts of financial support from public funds, thelevels from which clusters should be supported (whether a local, regional, national or international level), the methods of creating an optimum cluster programme, and the appropriate length of government cluster support.

Conclusion

The structure of the individual types of funds in cluster budgets has developed in an interesting manner over time. Shortly after defining clusters by Porter (1990), they mainly employed private resources to perform their activities. Even today, the majority of clusters that came into existence before 2000 prefer private funds to public funds in their budgets unlike the clusters that developed after 2000 (Sölvell *et al.* 2003 and Müller *et al.* 2012). As a result, financial support provided for clusters in a number of countries in Europe and in the world, has become a useful and frequently-used tool to improve the competitiveness of these countries, especially within some of their specific regions. Several cluster programmes have been formed and which are still very successful and are still currently operating (for example, *Vinnväxt*in Sweden, *Pôles de Compétitivité* in France, etc.).The share of public funds seems to have stabilised over the last five years along with the changes in the structure of these in cluster budgets in Europe(the Structural Funds and community programmes of the European Union, central government subsidies, regional government subsidies, and local government subsidies), which are rather inconsiderable and statistically insignificant in comparison to private funds.

In contrast, the structure of private funds in cluster budgets has experienced significant change. Membership fees continue to play an important role, however, the majority of European clusters are able to gain just as much private funds into their budgets by selling their own products or rendering their own services. Many of the clusters operating in the IT sector have recently been generating more income from their own activities than by collecting membership fees. These revenues further reduce membership fees for the individual cluster members or make it possible to further develop the cluster. Similarly, the employment of resources from venture capital, crowd funding circles such as "business angels", and various donor gifts in European clusters has increased in the last five years, which to a large degree follows the pattern of American clusters that have been quite frequently employing such resources in their clusters since the 1990s (Alcazar*et al.* 2011, Muro and Katz 2010).

Three hypotheses were proposed in the paper. The first hypothesis assumed that „the share of private funds in cluster budgets statistically increased significantly in 2016 in comparison with 2011" and was shown to be untrue. According to the surveys, the share of private funds in the budgets of the clusters in question has increased slightly in the last five years; nevertheless, the identified differences are not statistically significant. The second hypothesis assuming that "the differences identified in the shares of individual types of public and private funds in overall cluster budgets between 2011 and 2016 are statistically significant" has been proved to be untrue as well. The changes that occurred in the structure of public funds in cluster budgets are minimal. A slight decrease in the individual types of such funds in the budget structures only follows the overall decrease of public funds in 2016 in general. Finally, the third hypothesis stating that "the differences in the shares of individual types of private funds in overall cluster budgets between 2011 and 2016 are statistically significant" holds true. Based on the 2016 survey, only one out of four types of private funds in cluster budgets – bank loans, the least frequently used source of finance, has not undergone significant change since 2011. The other three explored types of private funds have changed significantly. While the extent to which clusters financially depend on membership fees has dropped considerably, that fact being statistically significant, the extent of generating revenues from the clusters´ own activities as well as the access to venture capital and the resources from "business angels" and donor gifts have been significantly larger in the last five years. Based on both the 2011 and 2016 surveys, Hypothesis 3 can be confirmed. That points to the fact that clusters have recently restricted financing their activities by collecting higher membership fees and have put more effort in actively gaining their own resources by selling their products successfully and providing services for their customers more effectively, thus improving their competitiveness.

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Impact of Tax Burden on the Country's Investments

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Abstract:

The approaches to fiscal expansion and the corresponding methods are the same in most countries of the world. Depending on a specific task, the type of tax incentives may vary from country to country to increase their efficiency. Having analyzed the statistical data on all Russian enterprises (excluding small ones) for the period from 2008 to 2015, we deduced an equation y=0.0221x+0.3824 which describes the dynamics of the share of the enterprises investment in the total number of monetary assets. A positive value of the coefficient 0.0221 suggests that the volume of investments in the total number of monetary assets is increasing steadily. The government increases tax burden to ensure solvency and financial stability of the enterprises engaged in the development and implementation of investment projects. However, it should be noted that such decisions of tax regulation seem inconsistent. We have proved the hypothesis which explains to what extent tax burden on enterprises should be decreased to set the liquidity ratio and profitability at standard values (0.7 – 1), other conditions in the country being equal.

Keywords: investment in fixed assets, tax burden, tax incentives, investment projects, depreciation policy of the company.

JEL Classification: E 200, E 220, E 620.

1. Introduction

A detailed classification of tax incentives has been developed in the general theory of taxes taking into consideration taxation practices. One of the criteria in this classification is "the tax element which a tax incentive is aimed at". According to this criterion, tax incentives may be targeted to the taxpayer (tax exemption), the object of taxation (this type of tax incentive is called "bite of taxes"), the tax base ("tax deductions", "tax credit", "investment tax credit"), the tax rate (reduction of the tax rate), for the period of payment (postponement or paying tax in installments). Another criterion for granting tax incentives is a time period for which the exemption is available. Tax exemptions may be granted for a specified time period (tax holiday), or on a permanent basis without limitations on the incentive duration.

The analysis of foreign practices related to tax incentives provision showed that by present moment a set of specific tax incentives has been formed to encourage investment development. The approaches to fiscal expansion and the corresponding tax incentive tools are standard. However, depending on specific tasks, the types of tax incentives may vary from country to country, which increases their efficiency. For instance, the federal government is concerned with developing principles of division of public authorities' powers at various levels related to tax incentives. In this article let us consider several principles of division.

Conclusion

In the twenty first century, the issue of economic growth remains the most important problem of the market economy. Attracting investment in the economy is the main prerequisite for ensuring economic growth. For Russia, the issues of economic growth, expanding the investment activities are inextricably linked with the high level of fixed assets depreciation. Index of basic production assets (BPA) depreciation in Russia, according to the international economic associations, is at least 50%. Russian federal authorities estimate this figure at 45-65%, and the Russian Federation research centers as at least 60-65%. So, the BPA wear rate exceeds the critical value, which leads to a decline in production in most Russian industries.

Over recent years, Russia has shown a positive trend in the fixed assets renewal, and along with this, there has been an increase in investment activity in almost all industries. In turn, this has led to the fact that in 2012 the rate of fixed assets renewal exceeded the retirement rate for all types of economic activity. However, the degree of fixed assets depreciation in different industries remains relatively high, remaining almost the same over the last years (Table 6).

Table 6 – Characteristics of the fixed assets wear rate

INDICATOR	Wear rate	Renewal rate	Retirement rate
For All Organizations	48.1	3.9	0.7
Agriculture, Hunting and Forestry	43.9	4.1	2.4
Fishing, Fish Farming	65.2	2.8	1.6
Mining	51.3	5.3	0.9
Manufacturing	48.0	5.9	0.9
Production and Electricity, Gas and Water Supply	47.9	4.2	0.4
Construction	50.6	4.8	2.0
Wholesale and Retail Trade; Repair of Cars, Motorcycles, Household and Personal Use Items	40.5	6.3	1.0
Hotels and Restaurants	42.8	3.5	1.3
Transport and Communications	56.6	3.3	0.4
Financial Activities	42.4	8.8	0.7
Operations with Real Estate, Renting,	36.3	2.2	0.4
Public Administration and Defence; Social Welfare	53.7	6.9	1.3
Education	54.4	3.5	0.6
Health and Social	52.8	4.7	1.3
Other Community, Social and Personal Services	45.4	4.7	0.9

Having analyzed the international practices aimed at creating favorable tax climate for investment in a county, we can draw the following conclusion.

First, despite the increase in investment, Russia still demonstrates one of the world's highest levels of fixed assets depreciation, which directly influences the volume and quality of Russia's products, their competitiveness, production costs and the efficiency of enterprises (Figure 3).
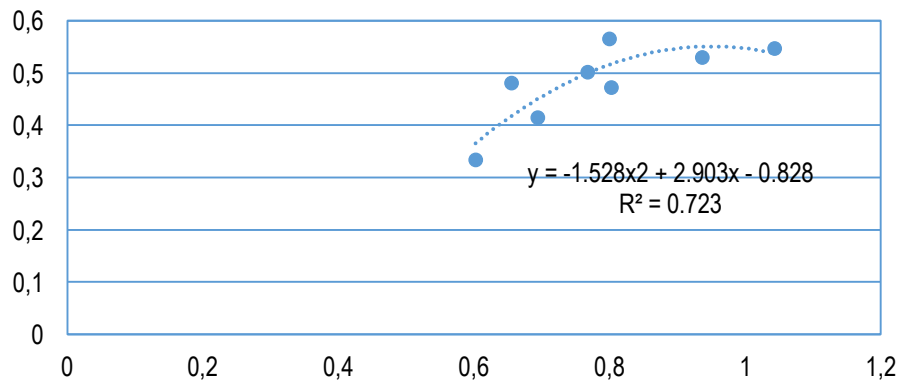
Figure 3 – The ratio of tax burden and the increase in investments in Russia

The value of the coefficient $R^2 = 0,7235$ *indicates* a relatively high accuracy of the resulting equation of the following function $y = -1,5x^2 + 2,9x - 0,8$, which describes the dependence between the volume of investments made by enterprises and the level of tax burden in the country. When a critical indicator of tax burden in the country reaches 0.95 (granted that profitability rate equals 0.7), the volume of investments decreases and the process becomes irreversible. Therefore, this equation provided us with a necessary and sufficient condition that is required to determine the future strategy of the state with focus on increasing the volume of funds raised.

Second, the factors that hinder investment activities in the regions are the following: the lack of their own funds, sporadic activities aiming to improve and adjust the investment policy of the region, the lack of mechanisms (incentives), stimulating the regional authorities to attract investment; the lack of medium and small foreign investors which affects the stability and sustainability of investment inflows. Using the method of linear interpolation, it is possible to obtain a mid-term forecast on changes in the investment structure in various types. This refers to fixed investment, investment in residential and nonresidential building construction, investment in transport and equipment, as well as other types of investments (Figure 4).
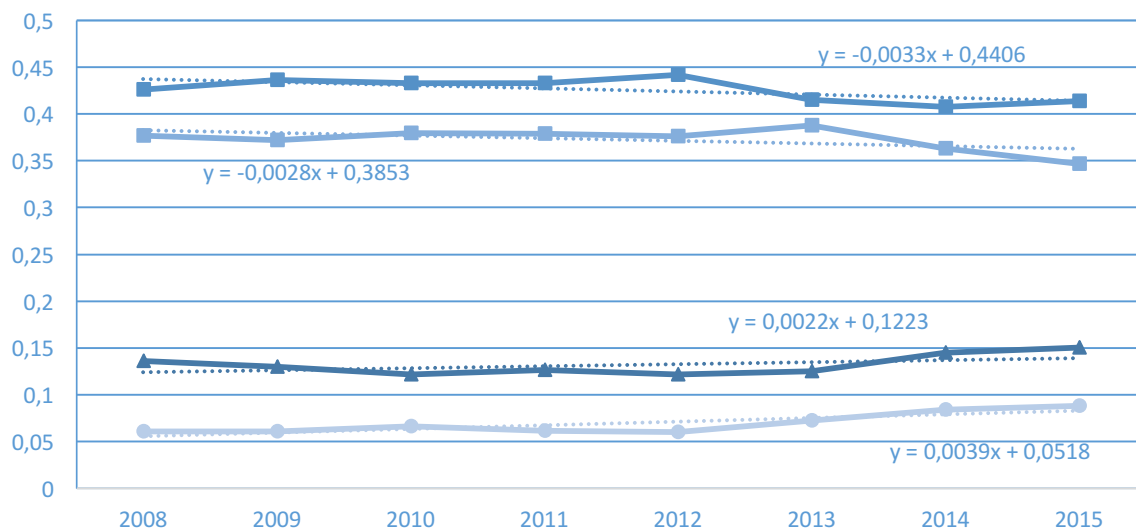

Figure 4 – Changes in the share of investment allocated by enterprises for their various types

Positive values of the coefficient in the equations $y = 0.0022x + 0.1223$ and $y = 0.0039x + 0.0518$ identify the positive trend to an increase in investment in buildings and facilities, as well as other types for the Russian economy over the period of 2008–2015. At the same time, the negative values of the coefficient in the equations $y = -0.0033x + 0.4606$ and $y = -0.0028x + 0.3853$ illustrate the trend of a decreasing interest in investments in fixed capital and housing, as well as in transport and equipment for the same period. In addition to that, the lack of financial resources, especially at the regional level, remains one of the most painful problems still unresolved. This impedes optimization of the structure of currently available investment sources and results in underdevelopment of debt financing procedures and economic instability as a whole.

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Dropshipping: Accounting and Mathematical Models

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Abstract

The aim of this article is to present the accounting benefits of drop-shipping type transactions, transactions adopted by more and more online retail merchants.

The greatest disadvantage of this transaction is that inventory is centralized at the supplier/manufacturer and therefore, the risk of loss of inventory and control over transactions upon it, while the seller is responsible for the product marketing, customer acquisition and delivery costs. Because of this accounting problem, the seller is obliged to pursue the profit for each order, he having advantages only if the price of the supplier does not increase and if the delivery costs do not change. The vendor must also know the optimal amount he must sell for profit.

Due to a business environment situated within a permanent change because of the economical crisis, entrepreneurs need to promote electronic commerce and optimal solutions for accounting for a rising profit. To streamline dropshipping transactions, we proposed a model for calculating the optimal quantity of the sold products and a registration into accounting of the dropship bill modality.

Key-words: e-commerce, dropshipping, accounting, optimal order, mathematical model, accounting records.

JEL Classification: C61, M41

1. Introduction

Participation in e-commerce of the firms and the quick adaptation to changing markets, have become a necessity due to competitive pressure made by new firms. A decrease of the costs and improve customer service with e-commerce is no longer an option for the smallest and medium enterprises, but relates directly to their continued existence on the market.

Electronic commerce generates overall entity lower cost than if they tried to improve the cost structure starting from its components. Regarding the competitive mechanism, such changes lead to a market economy, to major shifts. Electronic commerce or e-commerce refers to a wide range of online business activities for goods and services. It also pertains to "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact" (Khurana, Goel, Singh and Bhutani 2011).

E-commerce is the sale of products and/or services via Internet and the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals (Khurana, Goel, Singh and Bhutani 2011).

Dropshipping is a method of electronic retail sale through an online store, which does not store the products they sell. If the store sells a product, it acquires the element from a third party and delivers it directly to the customer. As a result, the trader does not come into direct contact with the product.

The biggest difference between dropshipping and standard retail model is that the merchant does not hold an inventory (Granai 2008). Instead, the trader buys the products according to the demand from a third party - usually an en-Grossiste or producer - to meet orders (Gan, Sethi and Zhou 2010).

Although in this study we treat a specific form of B2C (business to consumer) and dropshipping, we consider it important to emphasize the role and place it between the other types of e-commerce:

- *Collaborative commerce (C-commerce).* In this type of e-commerce, business partners collaborate electronically. Such collaboration frequently occurs between and among business partners along the supply chain.
- *Business to consumers (B2C).* In this case, the sellers are organizations, the buyers are individuals.
- *Consumers to businesses (C2B).* In this case consumers make known a particular need for a product or service, and organizations *compete* to provide the product or service to consumers. (An example would be Priceline.com, where the customer names the price and suppliers try to fulfil it.)

- *Consumer to consumer (C2C).* In this case an individual sells the products (or services) to other individuals.
- *Intrabusiness (intraorganizational) commerce.* In this case an organization uses e-commerce internally to improve its operations. A special case of this is known as B2E (business to its employees) e-commerce.
- *Government to citizens (G2C) and to others.* In this case the government provides services to its citizens via e-commerce technologies. Governments can do business with other governments (G 2G) as well as with businesses (G2B).
- *Mobile commerce (m-commerce).* When e-commerce is done in a wireless environment, such as using cell phones to access the Internet, we call it *m-commerce*.

Dropshipping is often defined as an easy way to get into the e-commerce business. You set up a store and whenever an order comes in, you simply email the supplier. They package up the item and ship it to your "customer", and you keep the profit. You never even have to spend time or money keeping and tracking physical inventory. This sounds great in theory. But like all formulas that promise to print money, this one is too good to be true. There are certain reasons why success in this branch of trade is not as easy to achieve as it sounds, some of which are presented in Table 1.

Table 1 - Benefits and limitations of dropshipping

Benefits of dropshipping	Limitations of dropshipping
Non-physical inventory	Low certainty of the product's condition
No stocking requirements	Incertain stock status
Unlimited product variety	Difficult perisable product and goods shipping
Low human resources	Difficult clientele development
Small maintenance cost	High Shipping Costs
Easy acces to information via Internet	Shipping Delays
Flexible working program	Large orders may block their delivery
Marketing investments required rather than inventory investments	Time spending and high costs for product promotion

Source: authors'contributions

There are certain conditions that state the economical superiority of dropshipping next to the traditional means of distribution. Though the fact that dropshipping is growing as a distribution system, there are cases when adopting this apparatus is not the best economical choice for the channel members. Sometimes only the manufacturer would favour dropshipping (Özer and Wei 2006). The inefficiency of the traditional system is caused by the lack of coordination so dropshipping comes as a second option where the lot-sizing decision is made by the manufacturer.

Dropshipping can be an easy way to get started selling online. But always remember that dropshipping isn't a magic formula to make you rich. Building a business does take a certain amount of hard work, and this is no exception. The real "magic" is that dropshipping allows you to invest your money in marketing rather than inventory. A well-planned marketing strategy is what will ultimately help you build a lucrative income (Granai 2008).

Conclusions

The motivation for this research is drawn from the idea that everyone, especially youth, is chasing an easy way, no cost, no "registry", without major obligations but to obtain a huge profit. But nobody thinks that, in general, what is easy is outdated. Regarding dropshipping transactions, it seems relatively easy to get and launch such a firm. There is the possibility to open a site that runs selling the latest products, buyers launch online orders at any time of the day and night, so that, as vendor, you shall not be connected non-stop with the seller.

The question is: Why should your site visitors buy from you and not from other 100 sites that sell the same product? Maybe if you provide quality guarantee, if you could guarantee a rapid distribution, your business would be a priority for the customer. But it is hard to get distinguished from the existing products in thousands of other sites. As shown in this research study, to cheapen the value of orders, there is not a solution because you will be selling and loosing. There is always someone willing to sell cheaper, and margins on elements that can be distributed via dropship may be too small to start a business with them. You do not have too much flexibility.

In our opinion, to do dropshipping correctly, you will need to write unique descriptions per product. It takes time and/or money, even more than if you were selling products truly unique.

From the study, we conducted, we found that the most important elements influencing the order and the profit are the shipping costs and even the time spent lifting and delivering the orders. These issues must be clearly defined when concluding contracts with transport companies so that unprofitable business development gaps fail to appear.

In conclusion, through the conducted study, we demonstrated that the essential factor for profitable dropshipping business type is determined by establishing an *optimal point* between transport costs and acquisition costs for each transaction. This aspect can be revealed most efficiently by using the mathematical model proposed in this research paper.

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