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Journal of Applied Economic Sciences

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On the System-Theoretical Foundations of Non-Economic Parameter Constancy Assumptions in Economic Growth Modeling

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Abstract:

Most growth models assume that some of the model parameters that are determined in non-economic systems are exogenous and constant. Such non-economic parameter constancy assumptions (abbr. 'NEPCAs') seem inevitable in economic growth modeling, yet they are not necessarily consistent with the empirical evidence on significant cross-system interactions, *i.e.,* long-run interactions between the economic system and the non-economic systems (*e.g.,* socio-cultural, political, and ecological system). We derive the system-theoretical conditions under which NEPCAs can be good approximations of cross-system interactions: we (a) discuss the standard types of dynamic equilibrium and the problems that arise when using them to justify NEPCAs in growth models (in presence of cross-system interactions), (b) formulate an equilibrium type (a 'stable partial dynamic equilibrium') that solves these problems, and (c) demonstrate the applicability of this equilibrium type as a foundation of the NEPCAs used in the AK growth model. Finally, we discuss some topics for further research.

Keywords: long-run economic growth; parameter conditions; cross-system interactions; dynamic systems theory; dynamic equilibrium, AK model

JEL Classification: O40; A12

Introduction

Over the last decades, economic growth theory has reoriented towards quantitative, positive, and predictive models that can 'reproduce' the observed quantitative characteristics of the long-run dynamics of economic variables while assuming that some 'non-economic parameters' are constant. These 'non-economic parameters' are the exogenous model parameters (*e.g.,* time-preference rate, savings rate, population growth rate, and depreciation rate) that are primarily determined in non-economic systems (*e.g.,* in the socio-cultural, political, and ecological system). Major examples of such a model are (the positive interpretations of) the Solow (1956) model and the Ramsey-(1928)-Cass-(1965)-Koopmans-(1967) model, which are the basis for numerous (positive and quantitative) growth and development models.

The 'non-economic parameter constancy assumptions' (NEPCAs) described above are associated with a major problem. According to the empirical evidence discussed in Section 1, there are interactions between the economic system and the non-economic systems. Such cross-system interactions imply that although the non-economic parameters are determined in non-economic systems, they are not necessarily independent of economic system dynamics, since economic system dynamics may have an effect on non-economic systems that leads to a change of the non-economic parameters of the economic model/system. That is, the assumption that the non-economic parameters of the positive/quantitative economic growth models are exogenous or constant is not necessarily consistent with the empirical evidence on cross-system interactions. For example, the positive interpretation of the Ramsey-(1928)-Cass-(1965)-Koopmans-(1967) model seeks to explain the observable long-run economic dynamics (among others, long-run per-capita income growth) while assuming that several parameters (*e.g.,* the time-preference rate and the population growth rate) are constant. However, the empirical evidence and theory imply that these parameters depend, among others, on the socio-cultural characteristics of the society/economy and that in the long run, per-capita income growth has an impact on the socio-cultural system (Sections 1 and 5). In general, the explanatory and predictive validity of positive and quantitative economic long-run models that are based on NEPCAs may be restricted/biased in presence of cross-system interactions.

This discussion challenges the common practice of basing economic growth models on NEPCAs and questions whether we need to change the approach to long-run economic dynamics modeling by focusing on large-scale (interdisciplinary) models that endogenize 'all' NEPCAs or by searching for empirical evidence on the various NEPCAs that are used in standard economic growth models ('empirical foundations of NEPCAs'). As discussed in

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Section 2, these alternatives are time-intensive, complex, and model-*specific* and, anyway, NEPCAs seem inevitable in economic growth modeling. Moreover, cross-system interactions may but need not necessarily imply that NEPCAs are inadequate. In particular, in some types of dynamical system, NEPCAs are a good approximation of cross-system linkages (even if there are interactions between the systems). For these reasons, we seek to identify these dynamical system types and analyze the implications of cross-system interactions for NEPCAs in a *general* framework.

By using the system-theoretical approach described in Section 2, we identify the conditions under which the NEPCAs used in economic growth modeling are consistent with cross-system interactions. In particular, we show that the equilibrium type that we name 'partial dynamic equilibrium' may serve as a system-theoretical foundation of NEPCAs. As discussed in the concluding section of our paper, this result can be (a) used for further methodological discussion of economic growth modeling with respect to the necessity of interdisciplinarity, (b) applied in future modeling of cross-system interactions (as demonstrated in Section 5), and (c) used for identifying the real-world non-economic (sub-)systems that are not modelable by NEPCAS and, thus, elaborating an interdisciplinary research program on endogenization of NEPCAs in economic growth modeling. Moreover, we provide a version of the AK growth model with interactions between the non-economic and economic system (via socio-cultural development and population growth) demonstrating the applicability of the partial dynamic equilibrium as a foundation of the NEPCAs used in the AK model.

The rest of the paper is structured as follows. In the next section, we discuss briefly the literature on cross-system interactions. In Section 2, we explain our methodological approach. Section 3 introduces the mathematical description of the economic and non-economic system (which relies on differential equation systems). Section 4 is devoted to the discussion of the standard types of dynamical system equilibrium in the context of NEPCAs and the derivation of the concept of partial dynamic equilibrium. In Section 5, the latter concept is applied for modeling the interaction between the economic and non-economic system based on the AK growth model. Concluding remarks are provided in the last section of the paper.

Aknowledgement

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Financial Markets, Shocks and Omori-Utsu La

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Abstract:

A lot of physicists and economists have contributed to studies showing analogies between physical complex systems and economic and financial markets. In this paper we have compared the complex system of earthquakes with Internet, social media and finance. In particular, we have observed as Omori's law conforms in both to the evolution of the tweets and to the securities exchanged on the financial market after dissemination of information. The analysis of empirical data concerns companies operating in the market. We have tested the relationships between variables through Person correlation coefficient and the relationship between phenomena with power trend-lines. We show that these complex financial systems follow a specific law that is related to the Omori's law.

Keywords: econophysics; Omori's law; finance; shock; tweet; price stock; earthquake

JEL Classification: G10; G15; F37; C15

Introduction

Physical models are used more and more to explain the complexities of financial markets (Sharma, Agrawal, Sharma M., Bisen, Sharma 2011, Bouchaud, Cont 2002, 543-550, Dash 2010, Savoiu 2012, Faloutsos, McCauley 2004, Sornette 2003). From the last decade a group of physicists began to take an interest to the analysis of economic systems by applying techniques and paradigms of statistical and theoretical physics. This discipline is called Econophysics (Mantegna, Stanley 2007) and it is the "application of typical methods of physics to the study of financial market, considered as complex system" (Stanley 2000, 1-17). Brownian motion and Black and Sholes model are two important examples to describe points of contact between economics and physics. The first is a probabilistic model used in physics to describe the motion of pollen grains suspended in a liquid with Gaussian probability distribution and which was later applied to economic and financial problems for similarity with the pricing of financial securities. The second is still used today as a "standard" model to describe the evolution of prices, an it shows that prices have a lognormal probability distribution (Cocolicchio, Grilli, Maddalena 2006). So it's important to have a new vision of the economy to have a more realistic understanding of phenomena.

In this paper we consider the relation between a well known physical law, that is the Omori's law which is applied to earthquakes, and financial markets with a special focus on the case of shocks as a consequence of social media rumors and information. The phenomena that occur in many complex systems as earthquakes, internet and financial markets are characterized by a power law distribution (Faloutsos, Faloutsos and Faloutsos 1999, Kapopoulos and Siokis 2005, 48-54, Lux and Alfarano 2016) We consider that financial markets, social media and internet are complex systems, and we suppose that a shock resulting from information on the web can be compared to earthquakes and consequently the Omori's law can be applied to these two systems. In the first section we explain the Omori's law that describes the dynamics of earthquakes. Then we have illustrated the methodology that we have used to analyze the data of empirical cases. The date shows a similarity between the law and the phenomena that happen in the Internet and in the financial market after a scandal or event that concerns a firm.

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Conclusions

In this study we have considered interactions between news, social media and the finance. The starting point has been the Omori's law. We have shown how this law can apply also in social media and finance.

We have considered two case studies and in both cases the results are positive, since it emerges that the trend of tweets and stock prices follows the trend of the curve of Omori's law.

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Corporate Culture Key Criteria and Clustering

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Abstract:

The aim of this article is to revise the main distinctions between corporate cultures of different nations. National corporate cultures attract interest for economists all around the world. Such problem remains important nowadays as well, and it will be important in future, because effective cross-border cooperation is one of the crucial factors that attract overseas investors. Modern researches have proven that both cultural and financial cross-national bonds are getting stronger these days, which create new paradigms of international cooperation across the globe. Author set up new methods that analyse cross-cultural variance and statistically forecasting from the point of intercultural interaction. These methods are implemented for transnational cooperation assess and identification of its specific traits. The paper reflects a quantitative instrument that allows to measure cross-cultural conflictless and to sign out influenced criteria. The method can be applied in various levels, from measuring conflictless between two departments of a company to assessing return on investment of transnational companies coming to the new markets. Research is based on the criteria of corporate culture differentiation developed by Geert Hofstede. The study provides valuable information regarding the interaction of corporate cultures and enables to address this traditionally empiric question from statistical point of view.

Keywords: corporate culture; cross-culture; interaction efficiency; cultural criteria; social analysis

JEL Classification: C10; M14

Introduction

Present researches held by many sociologists show that both intercultural and international bonds become stronger and stronger nowadays, which leads to creating a totally new paradigm of interaction between different countries worldwide. Globalisation brings to surface the fact that now, unlike half a century ago, cross-cultural penetration gets stronger and stronger. Big international companies' eager to grow and increase their financial results set all new demands. It is evident that unhealthy atmosphere at the enterprise is the main reason of negative moral consequences, low labour productivity, decrease in product cost effectiveness and increase in personnel turnover. (Tzai-Zang, Ya-Fen 2005).

One should also keep in mind the fact that cross-cultural disparity is one of the most serious, though underestimated, barriers for potential investors planning to enter industries with significant turnover. In fact, incorrect corporate politics, inability to adapt corporate rules to basic regulations and standards, accepted in the invested country may lead to significant drop in effectiveness of investment project, even despite thorough analysis of its economic constituent (Shinichi, Katsuyuki, and Hideaki 2007). Thus, exploring and examining corporate cultures becomes vital for increased business productivity. The main problem that we face when trying to perform this study is the lack of objective, independent, reliable and measurable instruments practical for describing key criteria identifying corporate cultures. So the aim of our research is to revise main distinctions between corporate cultures of different nations and try and develop specific instruments that may be used to measure corporate culture. It is a very important aspect of any business, but unlike quantitative indexes, such as revenue or market share, it is purely subjective and unsubstantial, though important and influential (Lorincová, Hitka, Balážová 2016, 719-732; Moran 2017, 232-236). Consequently, the objectives of our research are listed as follows:

- systemise past researches performed in the relevant area and identify the instruments involved;
- choose key criteria that allow best to identify corporate cultures;
- pick statistical instruments suitable for the analysis;

- perform basic statistical analysis of corporate cultures and evaluate economic meaning of the analysis;
- perform statistical clusterisation of global corporate cultures and analyse the resultant clusters.

The analysis of cross-cultural differentiation allows to track evolutional dynamics of basic criteria, identifying human behaviour. With enough statistic data, this research can be held on both national and international levels. This research might also be interesting if we consider the fact that these cross-cultural criteria are very hard to modify. Whilst external features of corporate culture can rapidly change with time, basic ones are strongly resistant to evolution, which, despite changing cultural paradigm, allows researchers and investors to forecast corporate conflicts and identify which social aspects can be used as sticking points for cross-cultural interactions during future decades (Hofstede 1980).

Naturally, corporate cultures of various nations have been formed during hundreds of years under the influence of various contradictive (and, in many times, totally arbitrary) factors. The evolution of corporate cultures has walked its way from its total absence to global recognition of its importance and understanding that lots of hard work should be applied to grow corporate culture in a true supporting system that will significantly augment business productivity (Hai, D.H., Hai, N.M., Van Tien 2018, 450-465)

Conclusion

Corporate culture is a unique element of any society that is formed under the influence of various arbitrary factors throughout centuries. It usually remains concealed and tends to be treated without proper attention most of the time.

Owing to its nature, corporate cultures are hardly measurable and comparable, although extensive researches are held in this domain. In this article, we have presented a method to analyse corporate cultures by clustering them in economically and statistically meaningful groups. One of the next possible steps to improve and develop the research will be to carry out extensive economic research of these clusters, trying to find similarities and contrasts in their financial and political conditions. This will help to better understand the real-life representation of each differentiation criterion and the influence that each of them and their combination has on actual corporate management models adopted across the world (Kotter 2011).

Another practical application of these results will be to shape a cross-cultural situational model that describes interaction between different pairs of clusters, assesses its efficiency, shows strong and weak aspects of this interaction and offers possible strategies to minimise existing discrepancy.

It is also possible to develop an aggregate index of cross-cultural conflictness. It will show the overall effectiveness of transcultural collaboration without focusing on each specific reason why this collaboration is effective or not.

Generally, cluster analysis of corporate cultures seems to be an interesting way to understand and analyse cross-cultural communication. Basic mathematical and statistical instruments described in this article permit to assess overall conflictness of cross-cultural interaction and to identify social traits, being the reason of this conflictness.

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Internet Usage in Entrepreneurial Process and Firm Characteristics

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Abstract:

In this study, we examine the impact of internet usage in entrepreneurial process on small firm characteristics. We look into the relation between states' success in designing online internet start-up, tax payment, and licensing systems, and small firms' characteristics in those states. Our results show that younger firms tend to concentrate in the US states with high-internet scores. We find that relatively larger firms are more concentrated in the states with high-internet start-up and internet tax payment scores. Single employee firms are more concentrated in the states with high-internet licensing scores. On the other hand, firms with 2-20 employees are more concentrated in the states with low-internet licensing scores. We also find some differences in firms' industries in the high-score states versus low-score states. Finally, we do not find significant differences between the firms in the high- versus low-score states in terms of firms' operational area.

Keywords: entrepreneur; entrepreneurship; small business; Internet; entrepreneurial activity; firm characteristics

JEL Classification: G38; L25; L26

Introduction

In this study, we examine the relation between technology use in entrepreneurial start-up process (as well as tax payment and licensing processes) and firm characteristics. What type of firms are attracted to the US states that have a better internet start-up process? Similarly, what type of firms are concentrated in the states with a better internet tax payment system or a better internet licensing system?

We use the results of the "United States Small Business Friendliness Survey" done by Kauffman Foundation and Thumptack.com in 2013. Using the responses in each state, we first compute each state's scores on internet start-up, internet tax payment and internet licensing. Then, we compare small firm characteristics across high- and low-internet start-up score states. We do the same comparison for high- versus low-internet tax score states. Finally, we compare small firm characteristics across high- and low-internet licensing score states.

The firm characteristics that we examine are the firm's operational area (*i.e.* the number of states that it operates in), whether most of its sales are local, firm age, firm size, and firm industry. For operational area, we have three classifications: firms that operate in only one state, firms that operate in two to five states, and firms that operate in more than five states. For local sales, we just look at whether the firm has ninety percent or more of its sales within 50 miles. For firm age, we have four classifications: firms that are established in less than a year, firms that are one or two years of age, firms that are three or four years of age, and firms that are older than four years of age. For firm size, we have five classifications: single employee, two to twenty employees, twenty-one to fifty employees, fifty-one to a hundred employees, and more than a hundred employees. We also look into the number of firms in nine different industries.

Our results will show the types of firms that are more attracted to certain aspects of the online systems. We are hoping that state officials will benefit from these findings. If certain online systems affect certain types of firms more, then the officials can focus on those systems only. This will help them allocate their resources more efficiently.

The paper proceeds as follows: section 1 discusses the previous literature, section 2 explains the data, section 3 demonstrates the empirical results, section 4 concludes.

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Conclusion

In this study, we examine the relation between internet usage in entrepreneurial process and small firm characteristics. The "United States Small Business Friendliness Survey" done by Kauffman Foundation and Thumptack.com in 2013 is employed. This survey asks small business owners questions about their firm and their state's online startup, tax payment, and licensing systems. Using the responses from each state, we first compute each state's scores on internet startup, internet tax payment and internet licensing. Then, we compare several small firm characteristics like operational area, firm age, size, and industry across high- and low- internet startup, internet tax payment and internet licensing score states.

When we compare the firm characteristics in the states with a high internet startup score versus in the states with a low internet startup score, we find significant differences in terms of firms' age. Older firms (*i.e.* firms that are older than four years) are more concentrated in the low-score states. Younger firms are more concentrated in the high-score states. Relatively larger firms are more concentrated in the states with high-internet startup scores. On the other hand, we do not find any significant difference in high- versus low-score states in terms of the firms' operational area. Also, we do not find any significant difference in terms of the firms' industry (except for "home" industry).

When we compare the firm characteristics in the states with a high internet tax payment score versus in the states with a low internet tax payment score, we find significant differences in terms of firms' age. Younger firms are more concentrated in the high-score states. Relatively larger firms are more concentrated in the states with high-internet tax payment scores. Although we do not find any significant difference in high- versus low-score states in terms of the firms' operational area, our results show that there are more firms with local sales in the high-score states. Our results also show that there are more firms in the "Home" and "Writing" industries and fewer firms in the "Business" industry in the high-score states.

Finally, when we compare the firm characteristics in the states with a high internet licensing score versus in the states with a low internet licensing score, we do not find any significant difference in terms of firms' age. With respect to firm size, single employee firms are more concentrated in the states with high-internet licensing scores. On the other hand, firms with 2-20 employees are more concentrated in the states with low-internet licensing scores. On the other hand, we do not find any significant difference in high- versus low-score states in terms of the firms' operational area. With respect to industries, we find significant differences. There are more firms in the "Instruction", "Technology" and "Writing" industries and fewer firms in the "Business" and "Care" industries in the high-internet licensing score states.

Our results indicate that certain types of small firms are more concentrated in the high-internet score states. Therefore, if a state wants to attract certain types of small firms into their states, they can utilize the findings here when making their investment decisions.

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Risk Indicators and Risk Management Models for an Integrated Group of Enterprises

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Abstract:

The study is aimed at analyzing and developing a set of economic and mathematical models and methods for assessing the risk of market activity of structural divisions of a holding, their clustering in terms of risk level and selection of the optimal production and investment strategy of the holding with regard to risk factors. As part of the analyzed indicators, it is suggested to take into account those characterizing the risks in the main areas of the market activity of the structural divisions of a holding company: operational, financial and investment areas. In the paper, financial coefficients – risk indicators of the holding structural divisions in these areas were selected and justified for effective use of the regulatory approach to risk assessment, and numerical algorithms for their calculation were proposed. A numerical method for clustering the holding subdivisions according to the level of risk is presented. The economic-mathematical models and numerical methods for selecting the optimal investment strategy of the holding company were developed and verified, based on the Cost-Benefit Analysis (CBA) approach. The originality of the work lies in the proposed "end-to-end" procedure for assessing and managing the risks of an integrated production structure.

Keywords: integrated group of enterprises; risk; clustering and grouping methods; cost-benefit analysis; optimization model; mathematical programming problems; discrete optimization

JEL Classification: C61; D61; G32

Introduction

A significant (multiple) increase in investment in the real sector makes the basis for the growth of the Russian economy and the economies of Eastern European countries. The experience of developed countries with a market economy clearly demonstrates the following trend: the technological and product innovations is advanced by small venture enterprises taking risks and using the flexibility factor of the production program and labor mobility, and these innovations are implemented by large and, primarily, integrated structures focused on the growth of market efficiency by means of saving at a scale and diversifying risks according to the areas of activity. These features of integrated production structures and their main form - a vertically integrated holding company enable to increase the efficiency of production and investment strategies in conditions of a managed increase in the synergy of combining specific assets and reducing risks in the main areas of market activity: production, financing and investment. This explains the relevance of the topic of this research.

The main tasks of the study include selection and justification of financial coefficients – risk indicators of structural units of an integrated group of enterprises (IGE) in the production, financial and investment spheres of market activity; the development of methods for clustering subdivisions of the holding company into groups of structural business units that are homogeneous in terms of risk; development and verification of economic and mathematical models and numerical methods for optimal management of the investment activity of a vertically integrated holding company with regard to risk.

A vertically integrated production holding company whose subdivisions function in the conditions of uncertainty and risk of commodity, material and financial markets is the object of the study. Economic and

mathematical models and numerical algorithms for optimal management of the production and investment spheres of vertically integrated holding companies, taking into account the risks and limitations for own and company-wide resources are the subject of the study.

1. Literature Review

The problems of analysis, evaluation and accounting of external and internal risks in the planning tasks of production and financial activities of economic entities are sufficiently detailed by researchers as: Apalkova and Mishchenko (2017), Batkovsky (2015), Ehrhardt and Brigham (2009), Brodtsky and Baybuza (2015), Granaturov (2010), Maximov (2011), Maximov and Khalikov (2012), Mishchenko *et al.* (2017), Knight (1921), Stupakov and Tokarenko (2005), Tikhomirov and Tikhomirova (2010), Tapman (2002), Khalikov (2009), Khalikov and Maximov (2015), Sheremet (2011), Mishchenko and Khalikov (1993). It should be noted, however, that the manifestation of risk under conditions of vertical and horizontal integration and its impact on the magnitude of the synergistic effect of the IGE have not been adequately studied, as noted in a number of cited papers and, in particular, by Khalikov and Maximov (2015).

The development of a frame of models and methods for clustering subdivisions - structural business units according to the level of risk adapted to the market conditions of the IGE, enabling to select a substantiated investment strategy for a group of enterprises in conditions of intra-company competition for investment resources remains an important problem. The arsenal of models and methods for clustering the market environment objects according to the level of risk is widely represented by Abbyasova and Shabalina (2016), Dubrov, Mhitaryan and Troshin (1998), Duran and Odell (1974), and Mynin (2008), whose works predetermined the possibility of its use within the framework of this study.

The range of problems relating to the selection of priorities and directions for the implementation of the IGE investment strategy is important in the framework of providing insight into the prospects for integrating enterprises in the context of completion of market reforms. There is a certain scientific and practical reserve here, which should include the following researches (Apalkova and Mishchenko 2017, Batkovsky *et al.* 2015, Brodetsky and Baybuza 2015, Maximov and Khalikov 2012, Mishchenko *et al.* 2017, Shabalina 2017, Shchepilov 2004, Chursin *et al.* 2016, Kiselakova *et al.* 2016, Maximov and Khalikov 2016, Sycheva *et al.* 2017).

Conclusion

Risk assessment and accounting are important components of financial and investment management, and a risky approach to the tasks of financial and investment planning and management based on the use of mathematical tools adequately describes the nature of the risk and its impact on the results of market activity and the economic stability of a vertically integrated group of enterprises of a production holding company.

The paper presents a complex of economic and mathematical models and methods for assessing the risk of units of an integrated group of enterprises in the main spheres of market activity, clustering of the holding company's subdivisions in terms of risk level and selecting the optimal investment strategy of the holding company with regard to risk. The authors proposed an original method of two-level discrete optimization of the investment program of an integrated group of enterprises that implements the idea of the Dantzig-Wolfe method based on mutual information exchange (IP performance indicators are 'beamed down' by the holding units to the management company, and in the reverse order investment strategies that are effective from the viewpoint of the IGE are directed to the SBU groups differing by the risk level). In the model presented, the 'discrete estimates' which allow finding a close-to-optimal solution of upper-level discrete problem already at the first step are the estimates of the IP efficiency. In this case, it is not necessary to have in advance all probable IPs of individual groups of the SBUs. Moreover, these projects can be 'implemented' in the model by separate groups at each consecutive iteration.

The paper presents a control example that confirms the adequacy and practical significance of the developed models and methods for managing the investment activity of the holding company, taking into account the risks of individual structural divisions - SBEs: a set of investment projects satisfying the conditions of optimality and consistency has been obtained.

The strengths and weaknesses of the developed models have been identified and directions for their improvement have been proposed.

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Risk Management and Optimization of Bank Loans Allocation in the Project Financing Program

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Abstract:

An additional selection criterion for the banks involved in the implementation of the Program for Support of Investment Projects is proposed in this article, and the formula for the optimal distribution of bank loans between the projects is derived. The loans are provided by the banks selected according to the criteria established by the state Program for Support of Investment Projects Based on Project Financing. The ratio of the bank loans granted to the value of the bank's own funds is economically justified and proposed by the authors as an additional selection criterion for the banks. The formula for the optimal bank loans distribution between the projects is derived to reduce the risks and improve the funds utilization efficiency. The risks are associated with a failure to fulfill timely the planned project implementation activities and with a significant allocation of the funds by one bank for several investment projects. The study results have shown that a failure to perform timely the planned activities results in the increase in the project costs, and have also indicated the presence of a local maximum (of?) financial result for the bank loans distribution between the investment projects. The example of the risk appraisal by points and calculation of the economic effect as a result of the optimal bank loans distribution between two investment projects are presented herein.

Keywords: project financing; bank lending; investment project; support program; own funds; bank loans granted; financial risks; optimal allocation; economic effect

JEL Classification: G21; G24; G32

Introduction

Since 2015, the state "Program for Support of Investment Projects Implemented in the Territory of the Russian Federation Based on Project Financing" (hereinafter – the Program) has been accomplished in Russia in order to finance the investment projects on the basis of project financing (The State Program for Support of Investment Projects Based of Project Financing, 2015). The program provides for the creation of a financial mechanism for long-term and preferential bank lending to economic entities in the real economy sector. For this purpose, several domestic banks and international financial organizations, issuing loans at a rate of 11% per annum, have been selected.

The Bank of Russia refinances the loans granted by commercial banks at a rate of 9% per annum and provides the state guarantees for these loans, but at a maximum rate 25% of the cost. The investment projects included in the Program meet the established selection criteria. These are a few paragraphs of general and additional requirements regarding the project implementation period, the volume and security of the obligations, the limits for the full cost of the loan, the loan currency, the restrictions on the volume of the loan, and the list of documents, including domestic credit organizations. As for the selection criteria for Russian credit institutions for participation in the Program as authorized banks, there are only four of them: the minimum amount of own funds equal to 100 billion rubles; the absence of an interdiction of the Central Bank to attract the monetary assets of individuals to the deposits and to open their bank accounts; the experience in the implementation of at least 10 projects over the past 3 years for at least 3 billion rubles each and the existence of a structural unit for lending the investment projects selected for participation in the Program. In our view, these requirements for the selection of credit institutions to participate in the Program are insufficiently clear, which can result in the risks of liquidity loss for the banks associated with the allocation of a large amount of cash by one bank for several investment projects. The realization of such risks negatively affects the allocation of the borrowed funds by the banks for the

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development and implementation of investment projects and the activities of the credit institutions themselves, withdrawing from circulation a certain, and, sometimes, significant, part of the monetary assets.

1. General Part

The world practice of financing and implementing investment projects shows that project financing in comparison with many other types of financing is riskier for several reasons. First, this can be explained by the long period of development and implementation of large-scale investment projects; second, by the uncertainty of external, and sometimes, domestic conditions of bank financing, as well as a low predictability of future results. Project financing involves the participation of many entities, their high responsibility and the mandatory implementation of all contractual terms. A financial mistake from the part of any participant may lead to the failure of the investment project. The project activity consists of a set of simple forms of activity – commercial, industrial, credit, settlement, scientific and technical, insurance and other operations. Separately, all these operations themselves are risky enough, and in combination they significantly increase the total financial risks. Such a feature of project financing as its international character (project financing can be provided by participants from different countries or project operations can be carried out in several countries at the same time), which increases the level of political and country risks, should also be noted. The implementation of investment activity in Russia has always been related to the conditions of increased uncertainty, which is due to the instability of the Russian economy, its low predictability and the processes of globalization. In order to prevent and improve the predictability of the consequences of implementation of the risks to finance investment projects, a general classification of possible risks is performed by the authors. In general, such risks can be divided into the following groups.

Construction risks. They can be associated with the delays in commissioning works and project start-up for the further operation. In this case, it is required to impose the penalties for the suppliers and contractors and oblige the borrower to cover all overhead costs, which should be reflected in the contract and taken into account in the process of investment projects financing by the banks.

Production risks. To protect the investment project from technical and economic risks, it is necessary to use proven technologies, advance additional technical expertise, to insure the unforeseen failure in delivery of raw materials and labor, the sales of the finished products.

Managerial risks. They can be caused by the incompetence and low level of qualification of the management personnel, top, and sometimes, middle managers. It is required to coordinate the personnel for the project in advance.

Sales risks. These risks are associated with the changes in prices and in the volume of the sales market. To avoid this type of risk, it is required to conclude the contracts in advance with potential buyers and insurance companies in order to insure the price risks and the risks of low sales of products.

Financial risks. The risks of this type are associated with the change in the interest rate on the loan; they may adversely affect the implementation of the investment project. The financial risks should be diversified, and the currency risks should be hedged.

Country risks. The political risks can be avoided by using the state guarantee program and the insurance by export-import agencies. The country risks can be reduced by using specially designed ratings.

Risks related to natural disasters. They are the most unpredictable risks – earthquakes, tsunamis, tornadoes, fires, etc. It is required to insure the investment project against the onset of such force majeure circumstances.

Thus, it can be concluded that the most significant mechanisms to reduce the investment project risks are the following: the careful preparation of the contractual framework in order to effectively distribute the risks among the participants; the use of the guarantees; the insurance, the diversification, the special ratings.

In general, it should be noted that the key to successful implementation of the investment project is a comprehensive monitoring of the investment process. Such monitoring should be handled by a specialized unit, which is determined by the creditor bank carrying out the project financing. The effective monitoring will ensure the prevention and minimization of the potential risks of investment projects.

Conclusion

The study has made it possible to obtain the following results and a number of conclusions and proposals:

- there is an objective need to increase the number of the banks selection criteria for the state Program for Support of Investment Projects Based Project Financing in order to prevent the emergence of the risk of loss of liquidity of the banks in the course of financing of two or more investment projects;
- the classification of the risks accompanying the investment project does not allow taking into account the industry specifics of the participants implementing these investment projects; it does not give a clear and reliable picture of the causes of occurrence of the investment projects' risks and methods of their management;
- the appraisal of the investment projects risks by points should be carried out in conjunction with other risk assessment methods accompanying the investment projects to improve the objectivity of the results;
- the existence of the local extremum corresponding to the maximum economic effect in the process of the optimization of the allocation of the volumes of bank lending between investment projects is proved.

Acknowledgments

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APPENDIX - *Example*

The determination of the economic effect achieved as a result of the optimal allocation of the bank loans among the investment projects. To illustrate the dependence of the financial result on the volume of invested loan funds, see Table 6.

Table 6. The allocation of the bank loans among the investment projects 1 and 2, mln rub.

Total bank loans	The bank loans volume in the investment project 1	The bank loans volume in the investment project 2	Economic effect
50.00	0.00*	50.00	496.75
100.00	15.69	84.31	593.36
150.00	37.26	112.74	681.40
200.00	58.84	141.16	761.59
250.00	80.41	169.59	834.37
300.00	101.98	198.02	900.18
350.00	123.55	226.45	959.40
400.00	145.12	254.88	1,012.41
450.00	166.70	283.30	1,059.57
500.00	188.27	311.73	1,101.20
550.00	209.84	340.16	1,137.62
600.00	231.41	368.59	1,169.13
650.00	252.98	397.02	1,196.01
700.00	274.56	425.44	1,218.51
750.00	296.13	453.87	1,236.89
800.00	317.70	482.30	1,251.38
850.00	339.27	510.73	1,262.21
900.00	360.84	539.16	1,269.58
950.00	382.42	567.58	1,273.68
1000.00	**403.99**	**596.01**	**1,274.71**
1050.00	425.56	624.44	1,272.84
1100.00	447.13	652.87	1,268.23
1150.00	468.70	681.30	1,261.04
1,200.00	490.28	709.72	1,251.42

Note: * Due to the insignificant amount of financing, the estimated value of the indicator x_1 is negative, thus we assume it is equal to 0.

Figure 1 Dependence of the financial result on the volume of the bank loans granted to the investment project 1 and the investment project 2
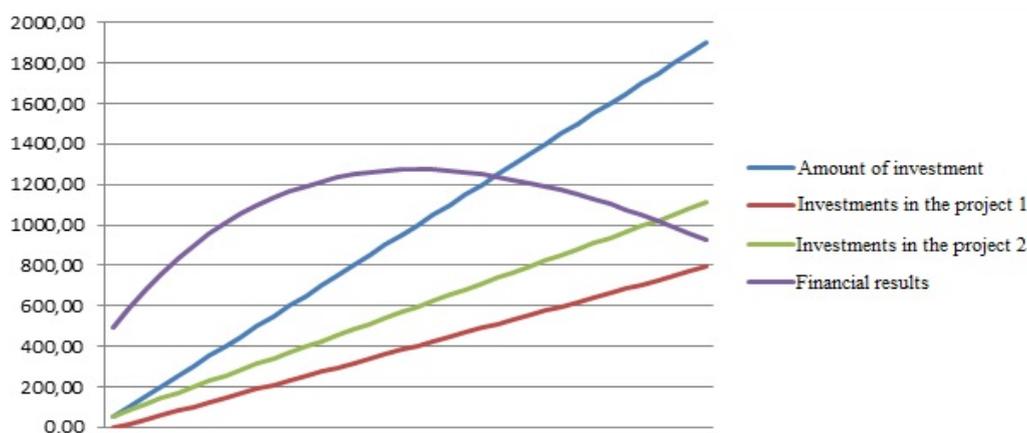
The data presented in Table 6 show that the maximum financial result indicator for the indicators *S* under consideration, taken in steps of 50, is located in the neighborhood of S_{opt}. With a loan volume of 1,000 million rubles and the allocation of the bank funds between the investment project 1 in the amount of 403.99 million rubles and the investment project 2 in the amount of 596.01 million rubles, the maximum economic effect will be 1,274.71 million rubles. An illustration of the results obtained is presented by the graph of the financial result versus the indicators of the bank loans granted to the first and the second investment projects (S , x_1 and x_2) (Figure 1).

The Use of Selected Payment Instruments by Companies Operating in Foreign Markets

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Abstract:

The paper focuses on payment terms companies opt for when trading on international markets. More specifically, it analyses the use of different payment instruments that were dealt with among companies based in the Czech Republic in a five-year period (2012–2016). In total, five payment instruments were included in the survey: bill of exchange (B/E), documents against payment (D/P), documents against acceptance (D/A), letter of credit (L/C), and bank payment obligation (BPO). The goal of the research was to discover to which extent and for which main motives these five selected payment instruments, used nowadays in international business environment, were introduced by companies into their international sales contracts. The main finding of the investigation is that most companies from the survey did not prefer to use any of the five proposed payment instruments, as they used others that can be considered as easier to handle.

Keywords: payment instruments; international business; Czech Republic; risks

JEL Classification: B27; F14.

Introduction

A risk and uncertainty are an important attribute of most human activities, especially of business activities (Hnilica, Fotr 2009). For companies, being present and doing business on foreign markets represents a large array of risks that can be classified into different categories. However, risks can be classified from many aspects (Hnilica, Fotr 2009), and thus different classifications are findable both in scientific and business literature. For example, Salcic (2014) claims that the risks covered by export credit agencies (ECAs) "are usually defined in ECA standard terms as political and commercial risks". The Salcic's presented division into two categories only can however be seen as abridged, since it is taken from the point of view of ECAs that provide credit, insurance or guarantee services, but usually more categories of risks are identified, depending on how broad authors' views are.

If continuing with commercial risks, these can also be understood differently. Dinu (2015) argues that "commercial risk refers to probable losses arising from the market or the transaction partners". However, probable losses arising from the market can be seen or called as market risks: the division of risks into different categories among which commercial risks and market risks figure is indeed performed by some authors, such as McNaull and Loy (2008) or Machková *et al.* (2014). In turn, commercial risks as per the Commonwealth Bank of Australia's understanding include exchange risk, risk of non-delivery/performance, credit risk and transfer risk (Commonwealth Bank of Australia 2006).

The examples just provided are enough to show that commercial risks can be indeed understood differently. In this text, we will consider commercial risks as such that concern specific commitments between two parties, usually between a seller and a buyer, i.e. in the narrow sense of the term. However, regardless of how far one considers the term "commercial risks", inability to pay (usually due to insolvency) and unwillingness to pay traditionally belong to this category and are those risks that originate at the latter party, *i.e.* buyer. From now on, we will focus only on the fact that a price agreed in a contract must be settled.

To protect seller's interest to be paid for goods or services delivered to a customer, it is possible to recommend different strategies. The first of them can be to find enough information on the counterparty before signing anything so as to learn whether the counterparty is reliable enough, but this tool, no matter how much it is

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helpful and recommended, may not be sufficient. The second way is to insure the probability that the buyer will not eventually pay – this option however can cost the seller a lot, the chosen insurance company may not be willing to cover all the commercial risks or not to cover them fully, and the main problem is that the insurance usually rather "fights the fire", sometimes very inefficiently (prevention can be seen only in the form of a deductible if this applied). The third strategy to adopt is to receive money from someone who is willing to take over seller's accounts receivables before these reach their maturity, e.g. it may be a factor or a forfaiter, but not all of such persons or institutions will accept to bear the *del credere* risk, so if the debtor refuses to pay after several reminders received, the seller will be asked to reimburse the money, thus not getting anything from the sales contract. Moreover, handing over seller's accounts receivables means some part of the money involved is sacrificed to a third party. The fourth way can be to address a debt collecting agency, but such an agency may not accept all uncollectible debts and if it accepts, the deduction on the debt sold will represent quite a high share of the value originally set in the sales contract. The fifth option does not require someone's assistance and this is to agree with a customer appropriate terms of payment at the moment of drafting a sales contract, thus limiting the risk of non-payment from the beginning, while enabling to adjust the wishes of both parties involved in a contract.

The real life teaches us that usually a combination of some or even all of the just mentioned strategies will turn out inevitable, but if terms of payment are clearly and well defined, then the risk of non-payment (as well as other commercial risks) can be significantly limited. While one setting terms of payments of a future contract, the use of different payment instruments can be agreed so as to enhance the quality of the commitment, not only from the seller's point of view, but also from the buyer's point of view.

In this paper, we decided to analyze how different companies settled in the Czech Republic currently use some of the existing payment instruments. We have chosen five of them: *bill of exchange (B/E), documents against payment (D/P), documents against acceptance (D/A), letter of credit (L/C), and bank payment obligation (BPO).* In literature and practice, some of the instruments may not necessarily be called instruments, but methods or arrangements, nonetheless for the purpose of the article we call all of them "instrument". This is possible, since for example:

- a bill of exchange is named as an instrument by a team from the Department of Mercantile Law of University of South Africa (2009);
- documentary collections, *i.e.* documents against payment and documents against acceptance, are named instruments by Giovannucci (2007);
- a letter of credit is named as an instrument by the US Department of Commerce (2008) or Seyoum (2009);
- bank payment obligation is named as an instrument by SWIFT (2016).

Before continuing, it makes sense to provide brief definitions of the payment instruments in question.

A bill of exchange can be defined as "an unconditional written order by one party (the drawer) that orders a second party (the debtor or drawer) to pay a certain sum money to the drawer or a designated third party (Seyoum, 2009)." In a contract of sale, it is common to draw a bill of exchange on the buyer or on his bank (in a L/C) that will pay at the maturity to the drawer, *i.e.* seller.

A letter of credit is „a promise by a bank on behalf of the buyer (customer/importer) to pay the seller (beneficiary/exporter) a specified sum in the agreed currency, provided that the seller submits the required documents by a predetermined deadline" (Credit Suisse 2017). There are two types of documentary collection: documents against acceptance (of a draft/bill of exchange) and documents against payment. Generally said, documentary collection is "a payment instrument whereby the exporter (seller) sends documents to the importer (purchaser) through the bank in order to get payment. The bank does not assume any payment obligation and plays the role of an agent/document remitter only" (Ararat Bank 2017).

Bank payment obligation is the newest payment instrument and can be characterized as "an irrevocable undertaking of one bank to pay another bank upon the successful matching of predefined datasets using a data matching engine such as SWIFT's Trade Services Utility (TSU). The BPO enables companies to conduct open account trade with risk mitigation and liquidity benefits similar to that of a letter of credit (LC)" (Morgan 2013).

In four of the five herein presented instruments, the participation of banks is always inevitable. The first mentioned instrument, *i.e.* bill of exchange, can be used independently, but can also be used in a L/C and in both types of documentary collections. B/E is therefore a useful tool that is able to enhance a commitment alone, but can also be used with other instruments wherein it can play a securing or acknowledging role of an obligation, among others.

It can be said that most of the existing payment instruments are useful in the sense they provide (or under some conditions can provide) some level of protection and do not serve as a channel for transfer of money only.

We intentionally chose those instruments where it was clear that they are used in practice in order to provide some protection to the seller as regards his interest to get paid. However, we did not work with advance payment/cash with order, because these are rather methods that – even if providing some kind of (or even 100 %) protection for the seller – do not require any work with additional written documents and do not require any special knowledge from companies using them. So, the sense of our investigation is to learn how companies can handle more complicated payment instruments to be protected against the risk of non-payment, and to learn if they use them.

This curiosity arises mainly from the fact that trading, and consequently the use of payment instruments, in the world in 2017 is different than it was 10 years ago and is much different than it was 20 or 50 years ago. As early as in 2007, National Westminster Bank in one of its leaflets found that "traditional methods of payment, such as issuing cheques or drafts are used less in today's business world as faster, cheaper and more efficient means of paying for goods and services are now available." However, at the time where this statement appeared, the bank payment obligation was not defined yet by the International Chamber of Commerce – this happened in 2013 – and there was hardly anyone who could imagine this step would come. The demand for an instrument such as BPO which would ease commerce by reducing administrative and financial burden and at the same time would keep a high level of security for companies was provoked by the recent global crisis (Sato *et al.* 2014). So said, our statement on the changing environment is true and shows that it is worth investigating how several payment instruments are nowadays used among companies.

At this point it is worth stressing that terms of payment defined in a contract are usually a result of mutual negotiation and not dictated unilaterally by the seller. In many cases, it is the buyer that has the main word in the final appearance of the terms of payment put in a sales contract. Furthermore, it is necessary to point out that the five selected instruments, even if protecting the seller against the risk of non-payment, can at the same time protect some of the interests of the buyer, too (protection against wrong performance, delays in delivery, etc.), and that their use also requires some knowledge from the buyer, too. For these two latter reasons, we decided not to exclude importing companies (buyers) from our survey.

Conclusion

The goal of our research was to discover to which extent and for which main motives five selected payment instruments used nowadays in international business environment are introduced by companies into their international sales contracts. Such research has never been conducted before. In particular, we chose those payment instruments which help the seller limit the risk of non-payment, which is definitely one of the basic commercial risks regardless of how much one considers the broadness of the group of commercial risks. The use of these instruments, among others, may enable the seller the attainment of positive cash flow, thus reducing his need to turn to bank loans. Nonetheless, the instruments we selected lay between open account and cash in advance/cash with order trading in the sense they do not protect exclusively only the seller or only the buyer against the commercial risk they perceive. At the same time, the selected instruments are tied to the transfer of some document(s), at least of a mere bill of exchange (draft). This, of course, requires some kind of advanced business knowledge from the companies that decide to use these instruments.

In the research, we worked with companies based in the Czech Republic and used a specialized database where thousands of contacts are stored. The survey ran from late February to late March 2017. Although we expected to find figures that would be relevant enough to disclose the motives that are behind the choice of a specific payment instrument, we finally only found out that the use of the five instruments we selected is low and that we would need much more respondents to interpret some relevant conclusion on the investigated motives.

However, our research can result in the finding that today most companies avoid using instruments where extra business knowledge is needed and where administrative and financial burden is potentially higher than in other payment instruments. This finding appears to be in accordance with the findings of the authors presented herein, specifically of Niepmann and Schmidt-Eisenlohr (2014), and Antràs and Foley (2011) who pointed out the relatively low use of L/Cs in D/Cs in today's business world.

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Appendix 1. Summary of the questionnaire

Question No.	Wording of the question	Possible answers
1	Your company (only one possible answer):	• Only exports • Only imports • Both exports and imports • Does not trade with abroad
2	Indicate, please, if your company during trading with abroad used in the past five years (2012–2016) at least one of the following instruments: B/E, L/C, D/P, D/A, BPO.	• Yes • No
3a	Your company used the named instruments in the period 2012–2016 (for every instrument, respondents could answer only one of the four possible options):	• In all cross-border deals • In most cross-border deals • Only in selected cross-border deals • Never
3b	Your company proceeded to the use of the named instruments in that period especially with respect to (for every instrument, respondents could choose only one reason):	• The value of the deal • The nature of the deal • The wish of the counterparty • Obtained information on the quality of the counterparty • The territory in which the counterparty is located • Other reason(s) • Irrelevant (we did not use this instrument)
4a	Mark instruments where you perceive the highest (only one instrument for every searched aspect could be chosen):	• Level of security for your business interests • Administrative burden of the instrument • Financial burden of the instrument
4b	Mark instruments where you perceive the lowest (only one instrument for every searched aspect could be chosen):	• Level of security for your business interests • Administrative burden of the instrument • Financial burden of the instrument
4c	You usually consider the use of the named instruments as (for every instrument, respondents could choose only one reason):	• Necessary • Desirable • Reasonable • Enforced (e.g. by the counterparty) • Useless • We cannot judge
5	Which of the five instruments listed below will most likely be used by your company between 2017 and 2021 (only one possible answer)?	• B/E • L/C • D/P • D/A • BPO • Other • We are not able to determine in advance
6	In which region is your company (or Czech representation) based (only one possible answer)?	14 Czech regions were offered as per the official administrative division
7	To which field of business activity do you dedicate yourselves (only one possible answer)?	21 fields were offered as per NACE Database.
8	What was the (net) turnover of your company in the last closed accounting period (in the case of an international company, the turnover of the Czech representation is meant) (only one possible answer)?	• Up to 50 mil. CZK • From 51 million CZK to 250 million CZK • From 251 million CZK to 1,000 million CZK • From 1,001 million CZK to 4,000 million CZK • Over 4,001 million CZK
9	How many employees does your company have (only one possible answer)?	• Up to 50 employees • From 51 to 250 employees • From 251 to 1,000 employees • Over 1,000 employees

System Approach to Diagnostics and Early Prevention of a Financial Crisis at an Enterprise

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Abstract:

The article is devoted to the development of a system approach to diagnostics and early prevention of a financial crisis at an enterprise. It was found that the early detection of signs of a financial crisis at enterprises was the priority objective of financial diagnostics. It was determined that the analysis of the system of financial parameters on which the potential viability of the enterprise depends was required within the framework of financial diagnostics. It was proved that failure to account for qualitative parameters of the enterprise's activity was the main drawback of integral financial diagnostics. It was found that value-based indicators did not allow to fully alarm about the threat of default. It was stated that the approach based on forecasting the debt coverage indicator ignored capital expenditures and the performance indicators achieved. It was substantiated that an insufficient level of assessment of the potential solvency of the enterprise was a weak point in both integral and value-based financial diagnostics.

Keywords: diagnostics; finance; crisis; process; approach; system.

JEL Classification: G01; G10; G17

Introduction

Application of the system approach allows to solve the problem of crisis diagnostics to a certain extent. In general, the system approach describes the direction of the research method, which consists in studying the object as an integral set of elements in their totality and the links between them, *i.e.* consideration of the object as a system.

The authors share the point of view of the authors (Ershov and Kuzin 2016, Pichugin 2015, Chen, Chi and Kuo 2014), who understand the system approach as the study of economic processes as complex systems that are in a causal relationship and should belong to the basic requirements for the enterprise diagnostics.

The system approach to the analysis of the activities of economic entities is based on the understanding that each such entity represents a complex system of elements united by a multitude of links both with each other and with the external environment. It is impossible to analyze particular aspects of the enterprise activity in isolation – this should be done only taking system links into account. This allows not only to comprehensively assess the state of the object in the context of incomplete information, but also to reveal the problems in its functioning, as well as to find ways to solve them, taking fluctuations in the system parameters into account. From the standpoint of this approach, it is possible to study the system functioning modes in general (Savenko 2013, Uspenskaya 2013, Ajupov, Kurilova and Kovalenko 2015). At the same time, the methodical system approach to financial diagnostics has been undeveloped until now.

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Conclusion

The lack of consideration of qualitative parameters of the enterprise activities and implicit costs of capital are the main drawback of the integral financial diagnostics. Value-based indicators do not allow to fully and promptly alarm about threat to default. Besides, the value-based approach does not take all the parameters of the financial position of the enterprise into account.

At the same time, the approach based on forecasting the debt coverage indicator ignores the implicit costs of capital and the achieved performance indicators, and takes the key financial parameters of the enterprise into consideration only partially. This means that with stand-alone use, none of the approaches will provide an objective picture of the threat of a financial crisis.

Therefore, each of the justified approaches only partially fulfills the tasks set for financial diagnostics. In the case of financial diagnostics of Maxwell LLC, two of the described methodical approaches (integral indicator of financial position and projected debt coverage ratio) revealed no threats to the enterprise, but the value-based diagnostics revealed threats for the enterprise.

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Evaluating the Success Factors for Development and Sustenance of Low-Cost Regional Airports in India using Fuzzy Multi-Criteia Decision Making Method

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Abstract:

The current study attempts to evaluate the success factors for development and sustenance of low-cost regional airports in India. The Fuzzy multi-criteria decision making (MCDM) method has been utilized for the above pertaining. The findings of the study exhibit the importance to keep low investment cost in the development, low levies from the airport users' efficient airport operations and due diligence prior to development to measure the demand for air transport effectively. The paper fulfills the gap in the literature by integrating the stakeholder's view in low-cost regional airport development. Methodically, the paper contributes by developing and demonstrating the application of the Fuzzy based MCDM model for evaluation of the success factors for low-cost regional airport development.

Keywords: low-cost airport; low-cost airlines; success factors; fuzzy multi-criteria decision making; airport strategic planning

JEL Classification: C52; C44; C61; R40; R58

Introduction

The unprecedented growth of Indian aviation has mandated for the capacity addition in airport infrastructure. Based on Naresh Chandra committee's policy framework Government of India (GOI), introduced Public-Private Partnership (PPP) model to modernize, develop and operate the brownfield Delhi and Mumbai airport in 2006 (ICAO 2015). Two Greenfield airports of Bangalore and Hyderabad has also been operationalized since 2008 on the same model (ICAO 2015). While the Cochin International Airport has been the first Greenfield airport under PPP mode which has been founded in 1994 and has been operational since 1999 (ICAO 2015). The five major airports under PPP mode are catering to the need of 60% of the country's air traffic (Nayar 2013). The Airport Authority of India has modernized and expanded Kolkata and Chennai airport (Nayar 2013). Also, 35 non- metro airports have been modernized with capacity enhancement under the 11th Five-year plan (Nayar 2013).

Keeping in view the success of airport operating under PPP mode, GOI has decided to transfer four existing airports Chennai, Kolkata, Ahmedabad and Jaipur and two Greenfield airport projects at Navi Mumbai and Goa into PPP model in order to attract investments from private players. In May 2015, GOI has further approved 15 Greenfield airports under PPP mode.

At present, out of 464 airstrips/ airports in India, only 116 are operational (AAI 2017). Recently GOI has announced the construction and development of 200 low cost 'No-Frills' airports within the budget of USD 7 million

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to USD 15 million each with the purpose to enhance the regional air connectivity (Ministry of Civil Aviation India 2016). In line with the stated plan, 160 non-functional airports were announced to be developed at a cost of INR 50-100 crore each in partnership with state government under the Union Budget of 2016. As GOI is planning to develop low-cost airports on a massive scale, it is essential to understand the key requirement of Low-Cost Airlines and other key stakeholders in the airport.

Regional airport development is critical for India's economic development and regional integration but it should be given a thoughtful consideration of meeting the needs of key stakeholders. Since 2009, GOI has spent over USD 50 million on eight non-functional airports with intent to develop it as no-frill airports; however, after development, they were unable to attract and retain their airline customer (Reuters 2015). Airports such as Jaisalmer, Sahnewal, Gondia, Mysore, Pondicherry, Kanpur, Juhu, Kolhapur, Sholapur, Akola, Jalgaon, Bhatinda, Pathankot, Malda, Cooch Behar, Warangal andCuddupa are some of the examples of developed but non-operational airports in India (The Telegraph 2015). The industry experts opine that the above failure has occurred due to lack of a well-structured, demand driven and airline oriented plan in the low-cost airport development (CAPA 2017). *In sum and substance lack of integration of key stakeholder's interest in low-cost regional airport development is contributing in existence of developed but non-operational airport in India.*

The current paper attempts to identify and evaluate key success factors for development and sustenance of Low-Cost Regional airport in India using Fuzzy MCDM method. The current study would be addressing the gap of integrating the stakeholder's view in low-cost regional airport development in India. There is an immense need for investigation with systems based thinking that aligns the airport strategies with its key stakeholders. There is earnest need to understand the key success factors required to attract and retain the key stakeholders of the non-operational regional airports in India.

Conclusion

The current paper identifies and evaluates the key success factors for development and sustenance of Low-Cost Regional airport in India using Fuzzy MCDM method. The findings of the study point that the design of terminal building and Airport's authority promotion policy are the most important dimension for low-cost airport development. High weight has been obtained for all the factors of the dimension terminal building signifying the need to keep the low investment cost and efficient operations in airport development.

The factor low levy of airport tariff and airport authority support attitude has gained high weight in the dimension Airport Promotion Policy signifying them to be the key enablers for the development and sustenance of low-cost regional airports. The factors related to 'demand for air travel' have also attained high weight necessitating the need to assess and evaluate them effectively prior to the development of low-cost regional airport development.

The factor efficient air traffic control services and compatibility of aircraft type of prospective LCA and airside facilities have also obtained high weight. It can be inferred that the key stakeholders opine that low levy from airport users, efficient airport operations, efficient baggage handling system and efficient ramp operations have emerged as a key success factor for the low-cost regional airport in India.

This paper furnishes the evaluated success factors for low-cost regional airport development and sustenance in India which fulfills the gap in the literature by integrating the stakeholders view in low-cost regional airport development. Methodically, the paper contributes by developing and demonstrating the application of the Fuzzy based MCDM model for evaluation of the success factors for low-cost regional airport development.

As to contribute to future research in this domain, comprehensive functional success factors need to be explored and included in the evaluation model. Also, some more strategic critical factors related to airport development should be explored through expert interview may be included in the further study.

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Work Intensity in Slovakia and its Dependence on Selected Factors

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Abstract:

One of the indicators currently used in relation to labor market is a share of people living in households with very low work intensity. The size of the population living in low work intensity households is also being followed with a goal to reduce poverty and social exclusion under the EU 2020 Strategy. The socio-economic structure of an individual or a household (education, type of household, income and work status) and also the demographic structure (gender, birth region) have a significant impact on this indicator. The goal of this article is to describe and also to assess the influence of selected factors on the work intensity of households in Slovakia with the use of multiple correspondence maps. The analysis is based on the categorized data obtained from the EU-SILC 2015 Statistics on Income and Living Conditions. The SAS 9.3 statistical software is used for calculations.

Keywords: labor market; poverty and social exclusion; work intensity; EU SILC; correspondence analysis

JEL Classification: I32; C39; J82

Introduction

The labor market is influenced by the same factors as other types of markets, but it shows specific features that arise from the specifics of labor as a factor of production. Work does not exist alone and only people - the labor force - are the creators of the so-called human capital. It is important to keep in mind that there is a general consensus about the idea that investment in human capital is a key source of labor productivity and economic growth (Schultz 1961, Becker 1964).

This statement confirms many other publications that are consistent with theoretical models of the importance of human capital in the process of economic growth. Human capital can also influence long-term economic growth by adopting technologies produced abroad (Nelson and Phelps 1960). On the other hand, human capital not only increases the productivity of one specific worker, but also the productivity of his colleagues (Lucas 1988). In a similar way Tanzi and Howell, 1995, note that improvement in worker´s qualifications leads to increased economic activity and allows efficient use of new machinery and technologies.

Human capital is equally important in terms of successful functioning of the labor market in line with the Europe 2020 strategy whose goal is to increase the employment rate of the population aged 20 to 64 up to 75%, the level of total investment in research and innovation - up to 3% of GDP and, last but not least, reduce the share of early school leavers to less than 10% and, on the contrary, achieve at least a 40% share of 30-34 year-olds with completed college education. The ultimate goal, which is also the focus of this article, is to reduce poverty and social exclusion. This means the reduction of the proportion of Europeans living below the poverty line in each country by 25%, which would mean that more than 20 million people would go above the poverty line[14].

The main objective of the article will be a description and an assessment of the influence of selected factors on the work intensity of households, which is one of the indicators of labor market activity as well as the indicator of poverty level. We performed the analysis of the categorized data obtained from the EU-SILC 2015 database. We used the statistical software SAS 9.3 for calculations (tool Market Research).

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Conclusion

In the analysis of multidimensional data, we often face the problem of "quantifying qualitative data" which is found, for example, in the form of factors that influence some event. Correspondence analysis is diferent from other internal dependence techniques by its ability to process such non-metrical data as well as non-linear relationships. Although it is similar to factor analysis, it exceeds it. With the help of this method we can accomplish dimensionality reduction through subjective mapping. On the other hand, it is a graphical survey method that does not include statistical hypothesis testing.

The results of the multiple correspondence analysis in this article allow to monitor the real dependence of selected categories of factors from the work intensity of Slovak households in the reference year by means of correspondence maps. Work intensity was divided into 5 intervals, and we came to the following conclusions:

- from the regional point of view, the highest incidence of very low work intensity was observed in the Banskobystrický region and the lowest incidence of very high work intensity was in the Prešov region. These are regions with a lower number of job offers which has an impact on the use of their work potential. The least vulnerable to very low work intensity were the households in the Bratislava region where higher concentration of job offers could be seen because of its location near the capital;
- in regard to urbanization, the labor potential in the households living in sparsely populated areas was the least used, while densely populated areas are associated with very high work intensity;
- the number of children may be, on the one hand, as an incentive factor, on the other hand, childcare does not allow the full use of parents' work potential. Very high and high work intensity are associated predominantly with households of two adults, but also with other households without dependent children;
- there was a statistically significantly higher work intensity in households headed by the employed person than in households headed by an inactive, retired or unemployed person;
- the best used work potential is between married couples. However, the category of very high work intensity is mostly associated with households of single or divorced persons;
- households with a healthy head have statistically significantly higher work intensity than households with a head in poor or average health;
- correspondence analysis only confirmed the importance of education and its impact on the use of a household's work potential. The better use of their work potential is in households headed by a person with a first to third degree of higher education;
- households in low population density area can be again seen in the Banskobystrický and Prešov regions with the already mentioned very low and low work intensity. On the contrary, a high population density area is associated with the Bratislava region and a very high work intensity;
- better use of work potential can be seen more in men. Women, due to their maternity duties, often work shorter working hours.

Indeed, work intensity range of 0 to 0.2 characterizes households with very low work intensity, which is considered to be one of poverty indicators. According to the indicator of very low work intensity, in 2014 in Slovakia a household can be considered at risk of poverty if it meets one or several of the criteria: it is a household from the Banskobystrický and Prešov region, it is located in a low population density area, it is an incomplete household or a household with higher number of children, a head of household is a woman, unemployed, widow with bad health and lower level of education.

Surprisingly[15], Slovakia in the year 2014 was among the countries with a relatively low value of very low work intensity (7.1%) and, on the other hand, with one of the highest unemployment rates (13.2%). When we compare these data with international findings in 2014, the total EU-28 population of working age lived in households with very low work intensity of 11.2%. The rate of low work intensity was 17% between foreigners that were born outside the EU-28. Unemployed people live in households with a very low work intensity (49.5%) and also in households with one parent (28.8%).

Households as a source of workforce constitute a supply of workers while companies determine a demand for work. Households as consumers that depend on retirement (wages are a substantial part of it), are forced to enter the labor market and look for jobs. It is, therefore, important, while deciding on the job offer to which the work intensity is related, to consider not only the wages for this job but also the factors that affect the level of wages.

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Appendix 1. Examined variables selected from the EU-SILC 2015 database for Slovakia

Variable in EU SILC	Variable name and nomenclature	Variable categories	Variations	Explanations
RB210	Status of basic economic activity EAS	at work	1	Employed
		Unemployed	2	Unemployed
		Retired	3	Old-age pensioner, early retirement pensioner
		inactive_person	4	other inactive person
HT	*HT Type of household*	1adult	5	single-person household
		2adult_0ch	6	Household 2 adults, both aged 65 years
		2a_1r	7	Household of 2 adults, at least 1 at age 65+
		other_0ch	8	Other households without dependent children
		1a_at_least_1ch	9	Household 1 parent with at least 1 dependent child
		2a_1ch	10	Household of 2 adults with 1 dependent child
		2a_2ch	11	Household of 2 adults with 2 dependent children
		2a_at_least_3ch	12	Household of 2 adults with 3+ dependent children
		other_with_ch	13	Other households with dependent children
PB190	*MARITAL_STATUS*	Single	1	Single
		Married	2	Married
		Widowed	4	Widowed
		Divorced	5	Divorced
PEO40	*The highest level of education achieved (ISCED) EDUCATION*	less_than_secondary	0	less than primary
			1	primary
			2	lower secondary
		upper_secondary	3	upper secondary
		post_secondary	4	post secondary (not tertiary)
		tertiary_1	5	short cycle of tertiary education
			6	bachelor education
		tertiary_2_3	7	master's degree or equivalent
			8	doctoral education or its equivalent
DB100	*URBANISATION*	Dense	1	region with dense population
		intermediate	2	region with overall dense population
		Sparse	3	region with sparse population
PH010	*HEALTH*	Good	1	really good
			2	good
		Fair	3	average
		Bad	4	bad
			5	very bad
REGION	*REGION*	BA	1	bratislavský
		TT	2	trnavský
		TN	3	trenčiansky
		NR	4	nitriansky
		ZI	5	žilinský
		BB	6	banskobystrický
		PE	7	prešovský
		KE	8	košický
RB090	*GENDER*	Male	1	
		Female	2	

Source: EU-SILC 2015, author´ own creation

Managing Human Resources Using the Best Practice. Best Fit Approach

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Abstract:

Based on the results of the authors' research cooperation, the goal of the paper is to summarize the theoretical basis of the best practice/best fit approach to human resource management and demonstrate what system of human resource management, how and why managers should apply to effectively attract, employ and develop enough qualified and motivated employees to perform agreed work, achieve desired performance and reach expected goals of the organization. Achieving the goal of the paper is based on both the analysis of available scientific literature and academic journals focused on human resource management and the results of the authors' questionnaire survey focused on the application of best practices in human resource management. The respondents of the questionnaire survey were HR directors, HR managers and HR specialists of well-known and successful organizations in the Czech Republic. The relevant data were obtained from 100 organizations. The results support the suggestion that from the perspective of meeting the objective of human resource management in the organization managers should apply proven best practices in talent, performance, diversity, compensation and knowledge management to effectively attract, employ and develop enough qualified and motivated employees to perform agreed work, achieve desired performance and reach expected goals of the organization.

Keywords: human resources, human resource management; organizational performance; best practices; Czech Republic.

JEL Classification: O10; O15

Introduction

Human resource management is an integral part of organizational management. It refers to practices that enable any organization to attract, employ and develop enough qualified and motivated employees to achieve expected goals of the organization (Konušíková and Kucharčíková 2015). The basic human resource functions performed in every organization include employee selection, appraisal, compensation and development (Fombrun, Tichy and Devanna 1984). These functions are usually performed by managers, in some organizations, mostly in organizations with a greater number of people, normally with support of human resource professionals. Managers are responsible for managing other employees to successfully perform agreed work, achieve desired performance and reach expected goals of the organization. The successful fulfilment of this task differentiates successful and unsuccessful organizations.

The fundamental results of the ongoing worldwide research on the relationship between human resource management and organizational performance show that qualified and motivated employees represent a critical source of the organization (Grenčíková, Španková and Karbach 2015) and many researchers have demonstrated the positive impact of various practices in human resource management on employee and organizational performance (Guest 2011). It is obvious that employee performance determines organizational performance. So if managers apply appropriate practices in human resources management, they can positively influence organizational performance through influencing employee performance. It supports the assumption that the positive impact of human resource management on organizational performance is based on application of appropriate

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practices in human resource management that help to achieve expected organization's results through achieving desired employees' abilities, motivation and outputs.

As appropriate are referred various best practices in human resource management applied by the best organizations operating in similar conditions and pursuing similar goals that demonstrably improve organizational performance (Suttapong, Srimai and Pitchayadol 2014). The purpose of applying various best practices is to achieve continuous improvement of organizational performance by critical assumption of conceptual and system practices in management of the best organizations in specific sector or region. Their application should be a guarantee of optimally managed organization (Axson 2007). The tool of their application is benchmarking that represents systematic comparisons of organizational performance with the performance of the best organizations in specific sector or region. The purpose is to understand why comparable organizations are better, how the organizations have become the best and then take advantage of this knowledge to achieve continuous improvement of organizational performance in accordance with one's own conditions and requirements (De Castro and Frazzon 2017).

The application of best practices in human resource management is closely associated with the research on the relationship between human resource management and organizational performance, when the approach based on application of best practices in human resource management is considered to be one of the alternative approaches to research the link between human resource management and organizational performance (Delery and Doty 1996).

The approach based on application of best practices in human resource management assumes that there are universally applicable practices connected with employee selection, appraisal, compensation or development in human resource management, whose application has a positive effect on employee and organizational performance more or less regardless of conditions of their application. To this approach is the approach based on application of best fit in human resource management that assumes that no practices in human resource management can be applied universally, but always in accordance with conditions of their application (Harris, Brewster and Sparrow 2003). The explanation of the positive effect of human resource management on organizational performance and the validation of the assumption of the applicability of the approach based on best practices and/or best fit in human resource management are among the fundamental objectives of the ongoing worldwide research in the field of human resource management. Although the researchers often adopt a different conception of human resource management as well as a different conception of organizational performance, and therefore often reach different results about the essence of the positive effect of human resource management on organizational performance, they usually demonstrate the positive impact of various practices in human resource management on various indicators of organizational performance. It is obvious that employee performance determines organizational performance. But the question is what constitutes a positive effect of human resources management on organizational performance, in other words, what practices in human resource management, how and why managers have to apply to achieve expected organizational performance. Convincing answers to these questions are still missing (Armstrong 2006).

Similarly, there is still lacking a clear validation of the assumption of the applicability of the approach based on best practices and/or best fit in human resource management. However, the results of the research support the idea that assumptions of both approaches (best practices and best fit) are valid and are crucial in explaining the essence of the positive effect of human resource management on organizational performance (Nikandrou, Campos and Papalexandris 2006). In human resource management, there are universally applicable best practices whose application has a positive effect on organizational performance (motivating jobs, selective selection, performance management, performance-related pay, systematic training or creation of favourable working conditions), but their application requires best fit to all external and internal conditions of the organization that determine the positive effect of applied best practices in human resource management on achieved organizational performance.

Conclusion

The authors' survey results support the suggestion that from the perspective of meeting the objective of human resource management in the organization managers should apply proven best practices in talent, performance, diversity, compensation and knowledge management to effectively attract, employ and develop enough qualified and motivated employees to perform agreed work, achieve desired performance and reach expected goals of the organization.

The authors' survey results include answers of 100 HR directors, HR managers and HR specialists of well-known and successful organizations in the Czech Republic. Although the current survey results do not allow authors to draw general conclusions, they confirm main findings of earlier research results cited in the paper and they show some interesting tendencies in the application of the best practice/best fit approach to human resource management that are worth attention from the point of view of managers and human resource professionals in various organizations and their current human resource management practice.

In the case of the importance of human resources, 96% of respondents agreed that employees are valued as the most important source in their organizations. According to the respondents, an employee can be considered as the most valuable source if the employee has development potential or creates added value to the organization. The data analysis showed no significant difference among small, medium and large organizations or between organizations from industry and services.

In the case of the link between human resource management and organizational performance, 95% of respondents agreed that human resource management positively influence results of their organizations, including results related to both individual employees, as well as the entire organization. The data analysis showed no significant difference among small, medium and large organizations or between organizations from industry and services.

In the case of the system of human resource management in the organization, 92% of respondents agreed that their organizations are managed in accordance with known best practices in human resource management and 70% of respondents agreed that their organizations systematically compare achieved performance with the performance of the best organizations in the specific sector or region to apply appropriate best practices in human resource management. According to the respondents, potential best practices in human resource management include systematic training, performance-related pay, leadership, regular performance review, talent management, motivating jobs, positive selection, work-life balance or performance management.

In human resource management, there are useful best practices that positively influence organizational performance, but their application requires best fit to external and internal factors that determine the positive effect of applied best practices in human resource management on achieved organizational performance. This is the basis of the authors' model of human resource management in the organization, when the system of human resource management should be seen as a subsystem of organizational management that is developed in accordance with the competitive strategy, with regard to the business environment and in the interest of stakeholders. Within the system of human resource management, to meet the objective of human resource management in the organization, managers should apply proven best practices in talent, performance, diversity, compensation and knowledge management to effectively attract, employ and develop enough qualified and motivated employees to perform agreed work, achieve desired performance and reach expected goals of the organization.

Any organization seeking to achieve excellent performance and sustained competitiveness must be a good employer to fulfil the potential of qualified and motivated employees, as well as a good trader to fulfil the potential of regular and satisfied customers. The connection of qualified and motivated employees and regular and satisfied customers through quality products and services leads to return on investment and satisfaction of important stakeholders, which is fundamental for achieving expected organizational performance and competitiveness. The effective system of human resource management in the organization based on proven best practices in talent, performance, diversity, compensation and knowledge management helps managers to attract, employ and develop enough qualified and motivated employees and through the effective use of their abilities, motivation and outputs to produce and distribute demanded products and services, gain and maintain regular and satisfied customers and achieve expected organizational performance and competitiveness.

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Do Universities Use Competitiveness Indicators in Their Development Programs? An Evidence from Russia

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Abstract:

Most higher education systems set objectives to improve competitive positions of the national universities as an instrument to increase country competitiveness. The goal of the paper is to analyze which indicators of competitiveness are used by the Russian universities in their development programs. Research undertaken included content analysis of the development programs and strategies of 81 Russian universities from all groups and categories, and further comparison of the results using 6 main indicators (education, employability, research, faculty, differentiation, strategic positioning) to see the gaps and make recommendations for the strategic planning. Research results show that universities in the top categories of Federal, National Research, and Core institutions, which need to meet specific government requirements in strategy and planning, have balanced development programs in all the competitiveness areas. Most other universities responsible for the mass of country's human capital education often neglect such areas as positioning, identification of the target audience and defining the strategic vision for the future. Common drawbacks in using the competitiveness indicators were identified, and recommendations about the structure and methods of development programs assessment were formulated to assist higher education institutions in analyzing past success and planning future efforts.

Keywords: higher education; strategic planning; development program; competitiveness indicators; university positioning

JEL Classification: I20; I23; M210

Introduction

Modern higher education systems all over the world are driven by similar factors, such as new jobs typology, middle-class role in the developing markets, geopolitical transformations, increased life expectancy, big data technologies and robotization (World Economic Forum 2016). The drivers being similar, organizational, economic and financial mechanisms are specific for each system and each country (McClure 2016, Kuzminov *et al.* 2013, OECD. Better Policies for Better Lives 2015). The higher education system needs flexibility to adapt to the changes as they happen and proactivity to foresee and prepare to the changing requirements and preferences of consumers and society (Bano and Taylor 2015, West 2012, Vinogradova 2015). Every country wants its higher education system to be competitive globally, and its universities to be able to serve the needs of national economic development and meet the international quality standards, attract international students and strengthen the country competitiveness (Sala-i-Martin 2010, Štimac and Šimić 2012, Degtyareva *et al.* 2013). These goals and objectives are set in various government documents, leaders' appeals and government programs (Law on Education of the Russian Federation 2017-2016, Russian Education)

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In Russia there are currently several priority programs in the sphere of higher education: "Universities as innovation centers" focuses on achieving by 2025 the global competitiveness of the leading Russian universities and their presence in the top 100 of the universities rankings (Russian Information Bureau 2016). "Modern digital education environment" (Passport of the Priority Project "Modern Digital Educational Environment in the Russian Federation" 2016) is supposed to provide conditions for education quality increase and lifelong education opportunities using digital technologies and e-learning platforms[19]. To improve the attractiveness of Russian higher education among foreign students a new project was introduced in 2017 - "Developing export potential of the Russian education system" involving thirty-nine Russian universities and aiming at three times increase of the number of international students by 2025 (Russia's Government 2017).

Such interest in the competitiveness of the Russian higher education is a reflection of economy globalization, as it is now possible to compare the performance of different systems internationally, including education. The modern concept of "lifelong learning" makes the demand for educational services of a specific educational organization serve as the criteria of quality and transforms the education system into a valuable resource for the further development of the country (Sokolov 2013, Štimac and Šimić 2012).

The notion of competitiveness as an economic category is used today to describe all types and fields of activities (Moore 1993, Balkyte and Tvaronaviciene 2010, Bhawsar and Chattopadhyay 2015). The competitiveness of higher education as a system and of its institutions is a common objective of many countries and regions, but the very concept of university competitiveness and its indicators are often misunderstood or presented in a general way. The goal of this paper is to analyze which indicators are used in the university development programs of different groups of Russian universities assuming that the goals and specific, detailed objectives will facilitate the achievement of an improved competitive position of the university. Using the literature review of the publications on university competitiveness, the analysis of the international rankings, accreditation systems and the indicators used by the Russian Ministry of Education and Science (MES), competitiveness indicators were selected from those present in all the four inspected fields. The resulting 6 sets of indicators were used to analyze the current development programs of 81 Russian universities representing all university types in the country. Documents for the analysis were the development programs or strategies of the universities published in their official web-sites or selected by the Internet key-words search. The paper includes the results of literature review, description of the research methods and process, presentation and discussion of research results and recommendations to improve strategic planning in the Russian universities.

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[19] In 2015 8 leading Russian universities initiated a project to create a national platform for open education.

Conclusion

Though many authors writing on modern higher education issues agree to use competitiveness as a notion describing modern education market, there is no uniform definition of competitiveness for universities. Using research literature analysis, a set of current effectiveness indicators of the Russian Ministry of Education and Science, requirements used in international university rankings and most well-known accreditation systems, a set of six competitiveness indicators was selected: faculty quality, education, graduate employability, research and development, strategic vision and differentiating features. Combining performance indicators with differentiation characteristics and strategic vision indicators provides a framework for further discussion, as well as a framework for action, focusing on the competitive advantages the institution can build or enhance using the existing resources, development opportunities and relating its strengths to the target audience needs. Our research identified a gap between competitiveness indicators description in the scientific literature and indicators used by the Russian universities and governing bodies in practice. Focus on performance indicators in the Russian MES university effectiveness exercise resulted in omission of strategic positioning and differentiation indicators in most of Russian university development programs.

The analysis of the competitiveness indicators used by the Russian universities in their strategies and development programs showed that universities in the top categories of Federal, National Research, and Core institutions, which need to meet the government requirements in strategy and planning, generally have well-balanced development programs including all competitiveness areas identified.

The content analysis of universities' programs provided data for further comparison of higher education institutions. Comparison revealed that universities which are not part of the top groups (marked as "other" in the research) score lower on some indicators (especially strategic vision and differentiating features). This can be partially explained by the absence of formal requirements to the content and structure of universities' strategies and development programs resulting in these schools either restricting their competitiveness indicators to the effectiveness criteria used in the annual effectiveness exercise of the Ministry of education and science, or some of the schools copying the indicators used by the top universities.

This situation does not provide stakeholders of the Russian higher education organizations with relevant information about their current positioning and future areas of development, which can negatively influence the decision-making process and the competitiveness of the higher education institutions. The research draws from and extends previous conceptual research on higher education competitiveness in the literature surveyed by providing evidence on the usage of competitiveness indicators by the Russian universities. Research addresses the need to specify strategic objectives of a university and include indicators which can lead the institution to developing competitive advantages and strengthening the positioning relevant for the target consumers and university stakeholders.

Though the research was limited to only registering of the presence or absence of the competitiveness indicators in the universities programs, the inclusion of all types of Russian institutions of higher education provided good evidence of the present situation and influence of the MES guidelines and rankings on selecting a balanced set of the strategic development indicators. The development programs assessment using the competitiveness indicators set can be useful for universities outside the leading group, and can help those who are analyzing past successes and failures, as well as those planning future efforts.

Further measures to improve the situation can include the provision of support and consultations for universities to use relevant competitiveness indicators in their strategic planning. Possible areas of further research may include the in-depth analysis of the differentiation and strategic positioning of the Russian universities to identify the metrics which can be used for improving the competitiveness of the educational organizations.

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Appendix 1. 100 Best Russian Universities

2017 position	2016 position	University name	Ranking potential	Rank for quality education	Rank for graduates' employability	Rank for R&D quality
1	1	Lomonosov Moscow State University	4.729	1	2	1
2	2	Moscow Institute of Physics and Technology (MIPT /Moscow Phystech)	4.603	3	5	3
3	3	National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)	4.424	7	4	2
4	5	Saint-Petersburg State University	4.244	4	12	5
5	7	Moscow State Institute of International Relations (MGIMO University)	4.223	2	7	34
6	6	National Research University Higher School of Economics (HSE, Moscow)	4.216	5	6	15
7	4	Bauman Moscow State Technical University	4.136	10	1	11
8	8	National Research Tomsk Polytechnic	4.100	6	15	7
9	9	Novosibirsk State University	3.957	8	16	6
10	11	Peter the Great Saint-Petersburg Polytechnic University	3.890	12	13	8

Source: https://raexpert.ru/rankings/vuz/vuz_2017/#2

Appendix 2. Russian Universities in the QS Rankings 2016-2017 and 2015-2015

	University	2016 - 2017	2015 - 2016
1.	Lomonosov Moscow State University	108	108
2.	Saint-Petersburg State University	258	256
3.	Novosibirsk State University	291	317
4.	Bauman Moscow State Technical University	306	338
5.	Moscow Institute of Physics and Technology (MIPT /Moscow Phystech)	350	431-440
6.	Moscow State Institute of International Relations (MGIMO University)	350	397
7.	Tomsk State University	377	481-490
8.	National Research Tomsk Polytechnic	400	
9.	National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)	401-410	501-550
10.	National Research University Higher School of Economics (HSE, Moscow)	411-420	501-550
11.	Peter the Great Saint-Petersburg Polytechnic University	411-420	471-480
12.	Kazan (Volga region) Federal University	501-550	5510600
13.	Far Eastern Federal University	551-600	651-700
14.	National Research Saratov State University	551-600	601-650
15.	Southern Federal University	551-600	601-650
16.	National University of Science and Technology MISIS	601-650	701+
17.	RUDN University	601-650	601-650
18.	Ural Federal University	601-650	601-650
19.	Lobachevsky University	701+	701+
20.	Plekhanov Russian University of Economics	701+	701+
21.	Voronezh State University	701+	701+
22.	Novosibirsk State Technical University	701+	

Source: QS Quacquarelli Symonds, https://www.topuniversities.com/university-rankings/world-university-rankings/2016

Current Questions of Managerial Function – Decision - Making in View of the Global Economic Crisis in the Conditions of the Slovak Republic

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Abstract:

The content of managerial functions is constantly evolving and responding to changing environmental conditions. These include the economic crisis, which is a certain milestone, a sudden disruption of how the businesses used to operate until then. Global economic crisis is one of the most significant environmental changes influencing all managerial functions – including decision-making. The crisis has removed the prejudice that only higher-level management managers make decisions in the companies. A corporate-wide approach is being preferred in decision-making, involving managers on different management levels and with different expertise. In this paper we examine the changes in given function due to the economic crisis and we test the hypothesis whether the currently increased participation of employees on decision-making processes is conditioned by the crisis. The statistical hypothesis is tested on the significance level of 0.05 with 115 foreign and domestic companies participating in the research and running their business in the Slovak Republic.

Keywords: economics crisis; collaborative decision-making; trends; Slovak Republic

JEL Classification: D70; M16

Introduction

After the fading crisis and revival of the labor market, several managers approached the need to assess the crisis and post-crisis period in order to learn from the situation and prepare for further unforeseen events. Theorists and practitioners agree that decision-making became much more demanding than during the times of prosperity and greater security in the markets. In the current business environment marked by the economic crisis, globalization, the development of information and communication technologies, *etc*. there is a need of prompt and accurate decision-making. In the pre-crisis period, managers have done a number of fast decisions on a daily basis, some of which were described by the critics as risky and led to the economic crisis. (Sahlman 2010) (Stiglitz 2014) Currently they are not inclined to this "trend" and they consider more the accuracy and reliability of the results of the decision-making process.

The goal of the submitted article is to examine the impact of the economic crisis on managerial decision-making function. We are focused on three different areas – usage of sophisticated decision-making methods, involvement of lower managerial levels in decision-making process and information sufficiency for decision-making process. Our research contains the comparison of present and crisis period for all these three areas.

Conclusion

In our paper we have presented research results on the impact of the economic crisis on managerial decision-making. We state that the crisis had a significant impact on decision-making and decision-making methods used by companies.

The results of our research are interesting and practical. We have discovered that during the crisis period managers were deciding in a group, encouraged fellowship in decision-making, and relied more on their intuition and experience rather than complicated decision-making methods.

Lack of relevant information was the main shortcoming during the crisis, which in the critics' opinion led to several risky decisions that led to the start of the economic crisis. Our respondents confirmed this statement also. The lack of information was felt especially during the crisis period. Currently, there are 50% more companies that are sufficiently informed to conduct quality decision-making processes.

Our research opens questions about deeper causations of our results that should be explained with further research.

Acknowledgement

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Management of Intangible Assets' Potential at Oil Companies: Market Positioning, Place and Role of Business Reputation – Goodwill of Companies

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Abstract:

The article substantiates the necessity to revise basic trends in the intangible assets' potential management market of oil companies and their competitive positioning. In recent years, due to market competition for buyers, especially buyers of products of famous brands, and for innovative technologies, world companies invest a lot in creation and improvement of intangible assets. This implies the percentage growth of brand value in the total value of companies due to products and technologies upgrade. Note that in 2015 the world market, among the expected oil company market trends, showed a sharply rising interest in information and communication technologies. Nowadays, the growth of intangible assets' value of oil companies due to investments in the patent and license market, improvement of business reputation and reinforcement of brands is worthy of special attention. The case studies of Rosneft and TNK-BP formed the basis of this research.

Keywords: intangible assets; oil company intangible assets' marketing; brand; goodwill; licenses and other intangible assets.

Jel Classification: G12; M31; O13

Introduction

The intangible assets' market, on the one hand, is clear and almost defined, but its marketing processes require closer discussions and analysis. For example, production outsourcing gives opportunities for deeper management of the brand and other marketing functions. Within the market pressure period, it helps to reinforce the brand, if available, or to build the brand in the shortest possible time. The understanding of the importance of the intellectual capital potential management resulted in a special type of marketing – company intangible assets' marketing.

The intangible assets' market means a complex of economic relations, where technologies, patents, know-how, licenses, brands, that is, company intangible assets, belong to purchase and sale objects. In this market, the sellers are companies having new technologies, famous trademarks, know-how, patents, *etc*., and the buyers are companies that desire to get certain intangible assets, which are sold in this market at a definite price.

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Conclusion

Thus, we have made the competitive evaluation and performed the marketing-financial monitoring of value positioning of oil companies in terms of intangible assets (Kitova, Kolmakov, Dyakonova, Grishina, Danko, and Sekerin 2016). Rosneft's share of intangible assets is not large. Please note that the crisis of 2014-2015 affected the consumers' demand, the companies under research inclusive: consumers began to analyze their costs and to choose companies with good performance and accepTab. prices. So, the quality of services becomes a topical issue. The reinforcement and growth of intangible assets enabled these companies to raise the profit, to strengthen the leading positions (Panova 2014), sustainability, shares inclusive, and to increase the brand value in global ratings. Tangible products are transferred into the intangible aspect. In the era of globalization, the increasing urgency of political, economic and ecological situation, the consumers' choice is increasingly determined by the brand, which is an intangible asset of the company (Danko, Ekimova, Bolvachev, Zarova, Shemetkova, Solovyova, and Sekerin 2016).

The role of rating agency evaluation grows; the brands struggle. And thus, business attitude changes from "produce and sell" towards "feel and react". Company's value increasingly depends on intangible assets, among which the reputation holds a prominent place influencing company's market stability. It should be noted that intangible assets (the business reputation in value terms is shown through intangible assets or separately as goodwill) of all leading companies have a substantial ratio in company's balance sheet (Varlamov, Kostin, Mamedov, Omarov, Belyaev, Danko, and Sekerin 2016). So, if company aims at being among the best world companies, it should pay attention to both product manufacturing and creation of intangible assets, which will make an essential part of company's value in the world market in future.

At the moment, the existing reporting does not show the depth of the intangible assets' market, while we have found out that the main part of intangible assets belongs to the reputation, trademark exclusive rights, licenses and patent holder's rights to invention.

The awareness of intangible assets' value and their competent utilization can strengthen company's market positioning and protect it during crisis to some extent, because intangible assets do not burn within a crisis period. Besides, innovations, a large number of patents, licenses, that is, intangible assets, mean that production is highly technological, and, thus, the quality of products and labor efficiency are high.

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Indication of the Influence of Motivational Significance of Values Underlying Young Consumers' Preferences for Basic Consumer Products

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Abstract:

Young people are an important part of the modern consumer market and make up just under a quarter of the world's population. In marketing, there continues a search for tools aimed at using "higher-level values" as motivational factors. In this study, the authors focused on the possibility of indicating the motivational significance of young consumers' value orientations.

The purpose of the study was to develop a methodology for calculating the indicator of value trends for the youth student audience. The conducted research should be referred to search-based marketing research. The sample accepted for processing was made up of 233 questionnaires. The sample was formed with the use of the "snowball" method from undergraduate students of the first year of studies. The research was carried out with the use of the on-line survey method on the basis of a structured questionnaire.

The following categories were used as marker products: "Mobile phone or smartphone", "Tablet / laptop", "Everyday clothes", "Footwear for everyday wear", "Cool drinks and juices", "Snacks and chocolate bars", "Mobile services and the Internet in the home region". The study was carried out with the use of frequency analysis, ρ-Spearman's rank correlation indices (ρ), as well as Gatev's methods of analyzing structural shifts. The volume and structure of the sample correspond to the search-based character of marketing research, which characterizes a small sample size. There was no stratification or quota allocation. Gender and social representativeness were not supposed to be covered in the study. The results of the search-based study make it possible to conduct further research with a statistically significant result on the basis of the approved methodology. The study confirmed the absence in the studied audience of significant gender differences in the influence of higher-level values. The obtained results confirm that there are significant differences between the influence of "higher-level values", as guiding life principles and their impact, as a motivational factor in the choice of marker products.

The results obtained in the study made it possible to propose a methodology for indicating the motivational significance of young consumers' value orientations. Analyzing the dynamics of the motivational influence of "higher-level values" will allow companies to use it as a basis for positioning goods and services, and developing marketing communications targeted at the youth audience.

Keywords: young consumers; consumer values; gender differences; activity reference point; Schwartz's human values; Plekhanov's indicator

JEL Classification: M30; M31; D11; D12

Introduction

This study explores the presence of gender differences that affect the value orientations of young consumers belonging to the student audience and the correspondence of these values to their "consumer values (preferences)". The use of the system of human values system according to Schwartz (1994b) and the concept of

value in marketing (Kotler *et al.* 2010) are the basic premises of the study. The research methodology allows the authors not to analyze the whole "system of values" and "sub-values", as activity reference points and is aimed at studying the relationship between the higher-level values (HLV) and consumer behavior in the choice of certain marker products.

The obtained results made it possible to identify the absence of significant gender differences in the influence of higher-level values on the motivation of young consumers. This allows the use of communication marketing tools based on HLV, without gender division of the student audience. At the same time, significant structural differences were revealed between the influence of higher-level values, as the guiding life principles of the student audience, and their impact as a motivational factor in analyzing their preferences for marker products. Analysis of the results shows the need to take into account the differences between values declared by the student audience and their consumer preferences in order to manage communications based on HLV.

Based on the obtained results, the authors proposed Plekhanov's indicator, built on the results of wave research, which is supposed to show the dynamics of the motivational significance of HLV in choosing the selected marker products.

Structurally, this work consists of several sections. The section following the introduction shows the place of this research among the works studying and describing the influence of values on consumer preferences. This is followed by a description of the data and the methods used in the study. After that, the results of the analysis are presented, as part of the discussion in the context of previous studies. The final part contains conclusions and proposals.

Conclusion

In view of the above, it is difficult to draw conclusions as to how universal the obtained results are in describing the influence of HLV on consumer behavior. At the same time, the authors consider that the methodology itself is universal and can be used in other studies on the influence of HLV, regardless of the country of study and the chosen population.

In the authors' opinion, the results of the study are useful for solving a number of strategic marketing tasks for companies operating in the youth market of goods and services:

- the values of the higher-level can be more widely used as the basis for positioning goods and services aimed at the youth audience;
- results of research into the influence of values on the choice of products can be used in the development of new products, design and packaging;
- creative solutions for marketing communications with consumers should take into account the priorities of value orientations for groups of products. First of all, this refers to the choice of the content of advertising for products intended for the youth (student) audience.

Further development of this direction presupposes:

- improving the research methodology by expanding the geography and the profile of the audience as well as the categories of goods and services;
- carrying out wave studies among cohort audiences in order to reveal the dynamics of value preferences of youth student audiences. This will allow a comparative analysis of consumer behavior under the influence of HLV for different generations.

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Innovations and New Product Development: Evidence from Enterprises Active in Slovak Republic

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Abstract:

The study investigates innovations and a new product development process in Slovak Republic. The findings extend and update existing innovations knowledge at a firm level. Relationships between the researched parameters were identified based on the market data given by enterprises. There is a need to increase awareness of innovations superiority as a way of development, to stimulate innovations more actively, including additional incentives from the government, to update sets of using methods *etc*. Positive relationships were confirmed between innovativeness of launching products and acceptance of projects' risks, number of developing products and number of successfully launched products, experience of enterprises and share of successfully launched products, product innovativeness and period of its development. Relationships between product innovativeness and the size of enterprise were not proved.

Keywords: innovations; new product development; enterprises; Slovak Republic.

JEL Classification: O3

Introduction

Innovations and a new product development (NPD) process are the key direction, which can support economy actors' sustainable growth for the long term (Drucker 1985), (OECD 2007). Enterprises are not able to avoid the impact of the constant environmental changes, such as increased competition, widespread and rapid diffusion of knowledge, as well as the rapid growth of expenditures in research and development, the reduction of products and technologies' life cycles. A commercialization process is of high interest. Despite the critical importance of innovation, there is still a very low percentage of new products successful launches. Many researchers (Stevens and Burley 1997), (Cooper 2000), research agencies and enterprises claim it. According to research company Nielsen, no more than 10% of all launched products stay in the market and less than 0.5% shows breakthrough results (Nielsen 2016). The post-socialist Central and Eastern European countries have lower share of Research and Development expenditures and number of patents (OECD 2017). In particular, the present approach to innovations doesn't support constant remarkable growth of the innovation performance in Slovak Republic. The country belongs to moderate innovators group with stable scores during the last several years. It ranked on the 22th place among 28 European Union countries (European Commission 2016). This study analyses and evaluates the innovation process with a focus on NPD activities conducted by enterprises in Slovak Republic.

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1. Literature Review

Over the past decades, many authors discovered different aspects of innovations – concepts, types, models, value chains, effectiveness and efficiency, a new product development with theoretical and empirical approaches on different levels. In terms of citations, the highest impact was done by an open innovation paradigm proposed by Henri Chesbrough (Chesbrough 2003) as the opposite to close innovations. Innovation models discovered by Von Hippel (Hippel 1988) – end-user generated innovations; the stage-gate model (Cooper 2008); the chain-interactive model (Caraça 2007); the triple helix innovation model (university – industry – government) (Etzkowitz and Leydesdorff 1995); the quadruple helix innovation model (added civil society) (Yawson 2009), (Arnkil *et al.* 2010), (Carayannis *et al.* 2012); classifications of innovation models (Marinova and Phillimore 2003) *etc*. Types of innovations were examined by multiple authors (Clayton 2003), (Barbero 2014) *etc*. Institutional context researched by other authors (Colwell and Narayanan 2010), (Boso *et al.* 2013), (Wu 2013), (Ma *et al.* 2014). Measuring and communicating the value of innovation activities and investments are discovered by Rochina-Barrachina *et al.* (2010), Eisend *et al.* (2016) *etc*. Consumer participation and co-creation in NPD had a great response in peer academic journals – *e.g.* Fang discovered effects of a customer participation on innovativeness and the market launch speed (Fang 2008), co-creation in NPD (Hoyer *et al*. 2010), the returns of customer participation on NPD performance (Chang and Taylor 2016), multinational companies' specifics (Griffith and Lee 2016). Separate parts of NPD from fuzzy front end to a launch of new products to the market were the key topic for Schatzel and Calantone (2006), Kuester *et al.* (2012), Wei *et al.* (2016). Laursen and Salter (2006), Huston and Sakkab (2006), Wan and Quan (2014), Oh *et al.* (2015) discovered an industry and a firm experience. Nevertheless, there are much less empirical studies of innovations and NPD at a firm level for specific smaller European countries.

At the same time, innovation activities and its stimulation in enterprises, as one of the most important agents in macro system, is an essential path of countries development. Success in the domestic market requires that firms develop new goods and services that respond to local context of market characteristics, customers' and firms' needs. Knošková and Kollár (2011) discovered the success factors of innovation activities in firms, which are active in Slovak Republic; Makó *et al.* (2013) – organizational innovations in service firms of Slovak Republic and Hungaria, Kubičková *et al.* (2016)– relationships between innovations and productivity in the services in the Slovak economy.

Consclusion

Insufficient understanding of innovative advantages at a firm level and neglecting of modern achievements has created a significant gap for the country's innovation performance. In terms of innovation activity, Slovak Republic performs below the average European Union level with minor changes in the analysed period.

In the article has shown that moderate country innovator status corresponds with the low level of innovation activities at a firm level as well as the relatively limited total number of all enterprises engaged in innovation activities (one third of all enterprises). Such challenges as financial and human resources are still the key for smaller enterprises during NPD process while larger enterprises face technological, marketing and organizational challenges in the first place. The inability or unwillingness of some managers to innovate takes place at enterprises. The environment does not provide enough support to bust innovations.

Set of impacts at different levels is required to improve the efficiency of innovations, a new product development process and achieve meaningful changes at a firm level. At the government level, it is necessary to effectively manage the conditions for financing innovations, strengthen local funds, cooperation of university – industry – government – civil society, and improve innovative infrastructure. Another need is to intensify efforts to combat corruption and reduce its level. Work in this direction will help to create a favorable investment climate and stimulate the development of strong innovators communities.

At a firm level, there is a need to raise awareness of innovation activity superiority as a way of development, to stimulate innovations more actively, to update sets of using methods, practices and to share successful innovation experience. It is required to stimulate implementation of more open innovation model with the purpose to decrease period of NPD, expenditures, share risks. Building effective communications should be conducted based on interactive network technologies, allowing to speed up the collection and processing of information.

The dominant part of enterprises prefers more stable and highly predictable projects. Nevertheless, the adoption of projects with a higher risk has positive relationships with the innovativeness level of the products being launched. Smaller enterprises should be aware that high innovativeness products are not developed only by large enterprises. Positive relationships between number of developing products and number of successfully launched products were confirmed. The more experienced enterprises usually have higher share of successfully launched products. Updating the sets of applied methods using modern methods based on ICT technologies, such as crowdsourcing, simulation test marketing etc., will help to improve the efficiency of the NPD process. It is necessary to predict and measure not only the results of a product launch, but also pay special attention to predict and measure the NPD stages before a product launch. The most innovative and open-minded enterprises will remain part of the future market.

As a measure of success, we took a number and a share of successfully launched products by enterprises active in Slovak Republic. At the same time, different products may vary a lot by importance and impact on financial performance. For a deeper understanding, both monetary values and quantitative parameters are required. On the other hand, it is worthwhile to collect a larger sample to analyze groups of enterprises from certain areas of economic activity, to compare approaches in local and multinational enterprises, which usually have higher level of standards, staff qualification and financial opportunities. We proved that positive relationships exist between number/quantity of methods, number/quantity of applying indexes and high share of successfully launched products. Taking into account technology advances, it matters to study innovative and financial performance of enterprises applying emerging technologies such as Artificial Intelligence, Augmented and Virtual realities, Internet of Things, 3D Printing, Robots, Drones etc. compared to the other firms.

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Evaluations and Prospects for Developing Logistics System of the Commodity Distribution Network in the Regions of Kazakhstan

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Abstract:

The logistics system of the distribution network has the greatest impact on economic growth and structural development of the economy.

Despite the results achieved with the development and improvement of methods and models for constructing a commodity distribution structure for a country with a huge territory but sparsely populated regions like Kazakhstan and, accordingly, with undeveloped infrastructure of the commodity distribution network, further research and differentiation of approaches in managing the development of the commodity distribution structure, taking into account their investment attractiveness and logistic potential is required. Based on the formed group of indicators, characterizing the logistics infrastructure of the distribution network, an assessment of the investment attractiveness and development of the distribution network's infrastructure, describing the logistical potential of the regions of Kazakhstan through comparative analysis and ranking was carried out. Based on the regions' classification, three types of territories were identified depending on the level of the logistics business attractiveness and the potential for infrastructure development of the distribution network of regions. The recommended differential approach for state support and stimulation of the transport and logistics infrastructure development for these groups is based on considering the current state of economic development and the developing trends in the transport and logistics potential of the regions. In the program of regional development, it is proposed to differentiate measures for stimulating the commodity distribution network development: taxation system, investment, structure and composition of the logistics system for commodity circulation.

Keywords: logistics; commodity distribution network; logistics potential; region; investment attractiveness

JEL Classification: O18; L5; L9; R1; R5; H54

Introduction

The effectiveness of logistics development in general affects the development of the country's economy, its competitiveness and ability to attract investment, and reflects the levels of socio-economic development of the country's regions.

Therefore, the assessment of the potential for the distribution network infrastructure development is important, as it provides an opportunity to take measures for its further modernization and stimulation of development.

Analysis of international and domestic experience in the development of logistics and its infrastructure reveals the following tools for stimulating and developing logistics: the construction of infrastructure facilities at the expense of the state, the use of public-private partnership mechanisms, the provision of various benefits, as well as the creation of the necessary administrative conditions to attract private capital for the development of infrastructure facilities (Wilmsmeier, Monios and Lambert 2011).

However, in order to determine the optimal instrument for influencing the development of logistics and the providing infrastructure of the commodity circulation system in the region, it is necessary to classify regions according to the extent of their economic attractiveness and the companies that work there, and then take actions to develop them.

Conclusion

The paper has analyzed the long-run dynamics of inward foreign direct investment and economic development in Cambodia, Laos, and Vietnam during the 1994-2016 period. In addition to trends and patterns, the study has assessed the long-run linkage between the two economic phenomena as well as the quantitative impact of FDI on development for each country separately. Thus, by providing information on the growth effect of FDI, the empirical study has contributed in expanding the rather still limited evidence on the subject for those emerging economies, using the same sample period, data source, and series in all countries examined. In particular, the results of the cointegration analysis indicate that there exists a long-run equilibrium relationship between inward FDI and economic development in all of the three emerging ASEAN economies over the study period. Our analysis also reveals that the countries differ with respect to the quantitative impact of FDI.

The long-run elasticity of FDI shows a similar magnitude in Cambodia and Laos, with the latter country having a slightly higher one. Vietnam exhibits a substantially higher elasticity compared to the other two emerging ASEAN economies. This suggests that the long-run impact of FDI on economic development is considerably larger in Vietnam. The findings support the view that FDI and economic development are closely linked in a stable interrelationship over the long-term and that the inflow of foreign capital in the form of direct investments has contributed towards rising levels of real GDP per capita in the three countries under examination. Finally, the long-run dynamics reveal that there has been a steady and sizable upward trend in FDI over the study period, during which Cambodia, Laos, and Vietnam have been increasingly integrating with ASEAN and other countries. Thus, overall our empirical analysis implies that policies promoting further economic integration and inward FDI would be expected to foster significantly the economic development process in the three emerging ASEAN economies examined.

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Competitive Advantages through Entrepreneurship Orientation and Innovation in Creative Batik Industry in Jember District

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Abstract:

This study aims to examine and analyze the effect of Entrepreneurship Orientation and innovation to gain the competitive advantage of batik entrepreneurs in Jember. The research used explanatory research and quantitative approach method. Path analysis was used to analyze the data of 10 batik entrepreneurs under the guidance of the department of industry and commerce in Jember as sample. The results of this study are the independent entrepreneurial orientation, (X1) has signification effect to innovation capacity (Z), intervening innovation capacity competitive advantage (Y) and entrepreneurial orientation (X1) has significant effect to competitive advantage (Y). It can be concluded that the entrepreneurial orientation plays an important role in developing innovative products and results, innovation and entrepreneurial orientation and competitive advantage.

Keywords: competitive advantage; entrepreneurial orientation; innovation capacity; Batik

JEL Classification: O31; O32

Introduction

In the 1990s, the emerging 'creative industry' as a policy discourse and instrument signaled the government's desire to harness cultural production of a new economic era (Banks and O'Connor 2009). The creative industry which includes audiovisual products, design, new media, performing arts, publishing and visual arts is not only one of the most rapidly growing sectors of the world economy. Around the world, the creative industry has become an increasingly important part of the global economy, serving as a bridge of culture, business, and technology. The creative industry has shown its prominence as it continues to expand during the recent global financial and economic crisis. With the growth of technology and income from developing countries, it seems that the creative economy will be the future of the global economy. The world sees challenges in the development of the creative economy, not to mention Indonesia with various untapped potential markets.

In Indonesia, creative industry defined as an industry which came after the use of individual creativity, skill, and talent to create welfare and job occupancy by creating and exploring individual creativity and innovation (Kementerian Perdagangan 2009). The creative industry is a group of industries that consist of different groups that linked to the process of the idea or intellectual property exploration to change something worthy that would create welfare and job vacancies ((Kementerian Perdagangan 2009). Based on Creative Industries Mapping Study Based Department of Commerce Republik Indonesia, creative industries are advertising, architecture, arts, crafts, design, fashion, video, film and photography, interactive games, music, art performing, publishing and printing, computer services and software, television and radio, research and the last is culinary (Kementerian Perdagangan 2009).

When the scope of creative industry is viewed, most of does not need a high production scale. It is not the same as manufacture industry that focus on product quantity, but the creative industry depends on human resource creativity. Creative industry mostly has arisen from the group of middle-up industries. Although the products not in a huge number available, the creative industry could deliver the significant positive contribution to our national economic situation.

Conclusion

Here are some general conclusions based on the researched fact of Batik small-medium enterprises in Jember district. The concept of creative economics is innovative and creativity, both of them could elevate local image and identity in order to establish culture, heritage and local value that proven by a fact that Batik entrepreneur in Jember district could elevate local value on Batik shades which has its specific character and reflecting Jember, such as tobacco, clove and Jember Fashion Carnaval (JFC) which became the priority product of Jember district.

Upgrading and exploiting organization creativity are great resource for all and become the sustainable competitive advantages.

Jember Batik uniqueness with tobacco ornament is not common because it's not a traditional Batik pattern, not standard, creative and never been taught by the ancestors. Thus Batik entrepreneurs in Jember district is requested to keep Jember Batik uniqueness authentic and cannot be copied either perfectly or not.

At the time a company has a high level of Entrepreneur Orientation, it will support marketing performance to be created at a high level to gain competitive advantages. An extra approach and coaching are required for small-middle enterprises that geographically so hard to be reached by public transportation, since they are on the remote area, and human resource management approach is also needed to be done.

Since the potential local asset, Jember Batik, specifically Sumberjambe has still not known widely. Thus the local government is suggested to have the specific programme, especially in localizing Batik and prioritizing. Batik as special product of Jember District. Jember Fashion Carnaval which is held annually is a potential event for Batik entrepreneurs in Jember district and local government may conduct a promotion programme in this event.

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Managing Competitiveness of Agro-Industrial Production in Russia

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Abstract:

The paper analyses the issue of competitiveness of the Russian Agro-Industrial Complex (AIC). Basing on the main factors of competitiveness there is presented the assessment of the competitive potential of the industry. The authors evaluate the dynamics of the AIC complex indicators and determine the level of agro-industrial production competitiveness with account for the three groups of factors: Natural biological resources, Capital and Labour. To calculate complex indicators of competitiveness factors of agricultural production there was used the methodology of data normalization. Based on correlation analysis there was revealed a relationship between the calculated complex indicators of competitiveness of agribusiness. The paper substantiates strategic directions which form the environment for raising competitiveness of the agro-industrial production in the Russian Federation.

Keywords: agro-industrial complex; competitiveness; factors of competitiveness

JEL Classification: Q10; Q13

Introduction

Competitiveness of a country is determined by the competitiveness of its industrial complexes. The strategic goals of ensuring food security of the Russian Federation (RF) in order to satisfy the demand in food products and to enhance the socio-economic efficiency of the RF agriculture stipulated the need to raise efficiency of managing competitiveness of the national Agro-Industrial Complex (AIC). Only highly efficient and competitive agro-industrial production can serve as foundation for addressing top priority goals of developing socially responsible economy of the country and building a civilized agro-industrial market.

The issue of the Russian AIC competitiveness became even more important when Russia joined WTO. Initial expectations of new opportunities for Russian producers on the global food markets were soon replaced by realities of tough competition with foreign producers on the domestic market. Such situation prompted an increase in research. A considerable part of the impressive body of the research on the subject considers AIC competitiveness on a regional level. This direction is represented by Kormishkina and Semenova (2014), Seredina and Anokhina (2010), Pecherceva (2016) and others.

Of particular interest are the research papers written by Kazakovtseva and Gumarova (2014), Kendjukh (2014) and others, which examine the impact of AIC competitiveness on food and economic security of the country.

Having been a focus of research of many experts and academics, nowadays, with the recent developments, AIC competitiveness should be explored at a more complex and deeper level. The aim of the present research is to substantiate the directions which will lead to building conditions for raising competitiveness of the AIC of the Russian Federation. This presupposes the necessity to find solutions for the following conceptual tasks:

▪ to develop methodology of assessing the complex indicator of AIC competitiveness taken as the function of three main groups of factors 'Natural biological resources', 'Capital' and 'Labour';
▪ to determine strategic directions of managing the Russian AIC competitiveness.

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Conclusion

At present managing competitiveness of agro-industrial production in Russia reveals opposing trends and is not systemic. Basing on the revealed problem areas the following activities should be considered as strategically necessary to realize:

- To increase cost-effectiveness of the agricultural producers as the financial foundation of the AIC competitiveness.
- There should be ensured such level of cost-effectiveness and profitability of agriculture, which will be sufficient for extended reproduction, investments and scientific-technological progress. It is advisable to support the cost-efficient level of agricultural production through fixed prices for the main types of agricultural produce.
- To increase intensification of agro-industrial production as the technological foundation for AIC competitiveness.
- This should be done through differentiated subsidies, with the rates scientifically specified in accordance with the industrial and regional characteristic features. It is impossible to increase level of AIC competitiveness without large-scale modernization of the AIC, introduction of advanced technologies, cutting edge information technologies and qualified workforce.
- To give an impetus to the domestic market of food distribution as the structural foundation for AIC competitiveness. An increase in consumption of the main food products will encourage an increase in physical index of the corresponding segments of the food market and will prompt the food producers to increase their supply. As a result, this will create environment for raising AIC competitiveness. Within the framework of this strategic initiative and in keeping with the role of AIC in the national economy, the main directions should include the increase of household income, securing rational food consumption, protectionist policy towards the domestic agricultural producers, increase in quality and environmentalisation of the domestic food products.
- To ensure the development of the social sphere of the agro-industrial production as the infrastructural foundation for the AIC competitiveness.

This strategic initiative is the most difficult to be implemented because it focuses on creating a positive opinion of the public about the role and place of agriculture in the life of the nation. To be able to influence public opinion, the priority should be given to building the economic basis for such changes. First and foremost, there should be provided material conditions for people's life activities in the rural areas in keeping with social standards, including an increase in levels of payment comparable to average in economy and implementation of infrastructural projects in full volume in accordance with the current development programs. The goal of the long-term strategic initiative for rural social sphere development is to assign top-priority to the agriculture as the core structure of a human society, which provides the powerful stimulus for overall progress of the national economy. This requires a significant change in the public perception of agricultural labour and will make it more attractive.

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Development of the Meat and Dairy Area of the Procesing Industry in the Republic of Kazakhstan under the Modern Conditions

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Abstract:

The article reveals basic tendencies and dynamics of developing the meat and dairy area of the processing industry in the Republic of Kazakhstan. The provision of meat and dairy production with raw materials, dynamics of production, and changes of prices for raw materials, and ready products are analyzed. The meat and dairy production is strategically important for the Republic of Kazakhstan because it is one of those industries that provide the food security of the country. Due to the geographical position and natural and climate conditions, Kazakhstan has a rather high potential for developing this area not only to service the domestic market, but also to expand export. Cattle breeding and meat and milk processing are traditional for the Kazakh population. These types of activity were formed in the ancient times. That is why the development of cattle breeding and meat processing industry is a top priority task for Kazakhstan due to the rooted lifestyle and traditional nutrition. Due to the changing market conditions, under the impact of various factors, meat and milk processing enterprises suffer a crisis because volumes of the national raw materials are limited, production funds are not sufficiently modernized, and imported products are often cheaper. It is possible to successfully solve the existing problems only subject to joint work of agricultural producers, meat and milk processing enterprises and support of state authorities. The authors defined the main problems of the meat and dairy processing industry and showed the ways to solve them.

Keywords: meat; milk; production; cattle breeding; import; agriculture; industry; processing.

JEL Classification: O10; O13

Introduction

The reproduction and processing of agricultural products, and high quality and affordable food production are a top priority task of the state. It is substantiated not only by the need to provide the Kazakh population with food, but also by the opportunity to develop this area as one of the priorities for the country's economy.

The main share in the structure of food production is related to the grain processing industry (19.4%), dairy area (16%), bread and bakery (15.5%), meat processing (13.8%), fruit and vegetable (9.4%), fat and oil (9%), and other industries (16.8%) (Master plan for developing the processing industry in the Republic of Kazakhstan 2013).

The meat industry is a branch of the food industry that processes livestock. Enterprises of the industry manufacture and slaughter livestock, poultry, rabbits and produce meat, sausages, canned meat, semi-finished products, cutlets, dumplings, and pre-cooked food. This sector gives ¼ of the republic's products in the volume of the whole industry. According to its ratio, it is on the top. Along with the production of food, dry animal feeds, valuable medicines (insulin, heparin, linocaine, *etc.*), as well as glues, gelatin and feather products are produced. Based on the developed livestock breeding, an extensive network of meat and milk enterprises was established

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(Food industry in the Republic of Kazakhstan. Basic areas of development, and their centers. Development dynamics, *n. d.*).

Enterprises specializing in meat processing quite often extend their activities towards processing milk and producing dairy and fermented milk products. The most important part of the country's economy is the agro-industrial complex because the economic potential and the vital agricultural production are concentrated here (Fadeyev 2011).

One of the top priority branches of the agro-industrial complex of Kazakhstan is livestock production. It is primarily due to the national characteristics and traditions of the nomadic people's life historically established in the past. The dairy and meat processing industry of the national economy aims at full meeting the demand of the country's population for meat and dairy products as the main source of nutrition. In each region of Kazakhstan, there are hundreds of both small and medium-sized meat and milk processing enterprises. The majority of them face the problem related to the shortage of raw materials. The state and enterprises take certain steps to solve this problem.

Conclusion

According to the Master plan for developing the processing industry in the Republic of Kazakhstan up to 2020, the following top priority areas for developing this industry were defined:

- processing of milk (production of butter, cheeses, milk powder);
- meat processing (production of sausages, canned meat);
- production of fat-and-oil products (margarine and vegetable oil);
- deep processing of cereals (production of pasta, cereals);
- processing of fruits and vegetables;
- production of sugar;
- primary processing of livestock skin ("Agrobusiness - 2020" program on developing the agro-industrial complex in the Republic of Kazakhstan for 2013 – 2020).

The main problems and ways to solve them in the area of meat and milk production are shown in Table 6.

Table 6. Problems and ways to solve them in the area of meat and milk production

Main problems	Ways to solve them
Low milk quality, irregular milk supply to processing enterprises	Establishing technically equipped milk reception stations in the areas of agricultural units; State investment subsidization for buying milk trucks by processing enterprises
Interruptions in the supply of meat and high cost of raw materials	The increase in the volume of meat raw materials, improvement of the meat purchase system, the use of cattle carriers by meat processing enterprises for the uninterrupted supply of meat, state investment subsidies for equipment and specialized transportation
Insufficiency of the producers' working capital	Subsidizing credit lines to replenish current assets of the enterprise
Low quality of products that do not comply with international standards	Improving the quality of the ready meat and dairy products by implementing international quality standards, technical reequipment of the production process
Extending the range of ready products	Monitoring the meat products market, the purchasing power of the population and its preferences
Management improvement	Efficient management, systematic improvement of the level of employees' skills, stimulating their remuneration, as well as increasing the staff's interest in scientific developments in the industry.

State support for measures to develop the industry through subsidies, preferential credit conditions and tax remissions for enterprises of the meat and dairy industry are important.

Thus, the creation of comfortable conditions for the development of processing enterprises will help domestic producers to increase export, improve the quality of the product, expand production, create new jobs and enter new markets. In its turn, the development of the food processing industry will help Kazakhstan to create the worthy competition to other partners of the Customs Union.

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Agriculture Financing – a Basic Premise for Ensuring Food Security in Kazakhstan

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Abstract:

The main idea of the article is to prove the dependence of agriculture on the amount of financing, as an important condition for achieving food security in Kazakhstan. The urgency of ensuring food security is confirmed by an active interest on the part of scholars, international organizations and the world statistics. To date, there are also issues related to food security in terms of nutrition and food availability in some countries. For Kazakhstan, to maintain food security is one of the strategic tasks. There was a gap in Kazakhstan in studying the impact of agricultural financing on the formation of food security, which determined the purpose of the study. The research was conducted on the existence of a relationship between the productivity of the agricultural sector, the volume of investment in fixed assets, and the farm production expenses. Structural analysis of the agro-industrial complex financing is given, which showed that the main amount of financing is carried out at the expense of own funds and the volume of state investments is less than own resources. The Global Food Security Index figures calculated for Russia, the country having common historical past and large territories, and for South Korea, a country developing an active innovative agricultural policy and having high rates of agricultural productivity in the presence of smaller territories were used to compare the food security of Kazakhstan. The conducted analysis made it possible to draw conclusions about the dependence of agriculture on financing. A recommendation has been formulated on the need to increase government funding for the village economy as the main condition for ensuring food security.

Keywords: financing; agriculture; food security; Global Index; investment; government subsidies; agrarian sector; food products

JEL Classification: Q14; G00; Q18; O13

Introduction

At present, national food systems are affected by trends of a global scale, which lead to the formation of potential threats to food security and the need for government financial support for the agricultural sector of the economy. Economists and politicians call a number of arguments of a global nature in favor of such support.

1. *Rapid economic growth and population increase in many emerging economies.* The outpacing growth rates of the population's effective demand for food in comparison with supply in countries such as China, India, Brazil and other newly industrialized countries have violated the balance in the world food system. As known, demand exceeding supply leads to higher prices. Rising food prices undermine the country's development process, which also causes a slowdown in the growth of agricultural production, especially in the economically developed countries that are main exporters of farm products. At the same time, the world demand for food will always grow, as the population annually increases by 80 million people or by 1.4% (Altukhov 2010). The number of beggars and starving people is increasing approximately by as many annually. Every year they become more, and food is less.

In addition, the increase in food prices exacerbates the problem of poverty, increases social tensions and the stratification of the society.

2. *Accelerated development of biofuel production and use.* The use of agricultural feedstock for the production of liquid biofuels contributes to the growth of demand for agricultural products, and also affects the markets of other agricultural products. The growth of biofuel production not only affects the prices of agricultural crops used to produce it, but also leads to the emergence of a potential link between changes in the prices of oil and agricultural feedstock for industrial production and other food products. It should be noted that in recent years, rising oil prices have contributed to higher prices for food crops such as wheat, corn, and oilseeds, and resulted in an increase in retail prices for basic food products.

Rapid development of biofuel production and use caused a reduction in the supply of food to the world market, especially grain, which is a basic food product, not replenished by increasing production of agricultural products in the importing countries. In recent years, in foreign countries, farmers have massively reduced the planting acreage of food grain crops in favor of corn and rapeseed. About 80% of the EU biofuel produced is made from rapeseed. Brazil is the leader in its production among the developing countries due to cultivation of cheap sugar cane. The world production of ethanol and biodiesel is expected to increase rapidly (Dadalko *et al.* 2011)

3. *Reduction in the level of world food supplies and, in the first place, of the carry-over stocks of grain.*

4. *Global climate change.* Over the past 100 years, the global average temperature has risen by 0.3-0.6°C on the planet. In the future, it is also expected to rise by 1.5-4.5°C. Global climate change will significantly affect agriculture and cattle husbandry, it will increase the degradation of soil and water resources, and significantly complicate food security provision. An increase in the average annual temperature may lead to a reduction in the world output of food products and cause an increase in prices for them. And in the countries of the southern group, rainfall and crop yields are expected to decline, while in the countries of the northern group, crops yields may increase.

Thus, the considered modern global challenges to food security are the most important arguments in favor of the need for the government financial support in the agricultural sector of the economy.

The availability of food is a problem for all states, and especially for the developing countries. Food security means providing access to a sufficiently nutritious and culturally acceptable food for each member of the family for a healthy lifestyle, in socially acceptable ways.

Conclusion

The agro-industrial complex of Kazakhstan has both advantages and disadvantages, which make their impact on the productivity of AIC entities. When studying the composition and structure of investments in the agro-industrial complex of Kazakhstan, it can be stated that the internal funds of the agrarian sphere entities make up the main volume of financing; the share of budget funds is very low. In accordance with the regression-correlation analysis conducted, the agro-industrial complex, being the basis for the formation of food security in Kazakhstan, depends on the investment in fixed assets, as well as on the production costs. The results of the comparative analysis show that Kazakhstan has lower values of the Global Food Security Index, in comparison with Russia, having a larger territory, and South Korea, having a smaller territory; hence further development of the agro-industrial complex needs an active innovation policy.

According to the research results, it is obvious that food security of Kazakhstan depends on the volume of financing of the agricultural sector, but for the current period, agriculture financing is carried out at the expense of internal funds and the state does not influence food security sufficiently. Having proved the dependence of agricultural productivity on financing and expenditures, the state needs a significant increase in the amount of financing of the agro-industrial complex to achieve the country's food security and improve the technological effectiveness of the industry.

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A Study on Agrarian Sustainability Impact of Governance Modes in Bulgaria

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Abstract:

Despite big academic and practical importance, in Bulgaria and other countries in East Europe, there are very few empirical studies on dominating governing structures in agriculture, and their impact(s) on agrarian sustainability. In this paper the interdisciplinary New Institutional Economics framework is incorporated, and the impact of diverse market, private, collective, public and hybrid modes of governance on agrarian sustainability at the current stage of development in Bulgaria assessed.

First, the methodological framework of the study is outlined. After that dominating governing modes in Bulgarian farms of different juridical type, size, specialization, ecological and geographical location are identified, and their impacts on agrarian sustainability and its economic, social, and environmental pillars evaluated. In conclusion implications for further research, public policy improvement, and private managerial strategy formation are presented. Agricultural producers of different type use quite unlike mixture of effective market, private, collective and hybrid modes for governance of their activities and relations. Individual factors and modes most contributing to improvement of agrarian sustainability at the current stage of development are: manager's personal convictions and initiatives, farms resources and innovation potential, near future profit and benefits strategies, market prices levels and dynamics, area-based EU subsidies, and informal agreements. Research on relations between the governing structure and agrarian sustainability is to continue though increasing representation, and the spectrum of specific governing modes used by farms of different type as well as assessments of the impact of institutions on agrarian sustainability and the impact of the governance at different hierarchical levels.

Keywords: agrarian governance; sustainability; market; private; collective; hybrid modes; Bulgaria

JEL Classification: Q13; Q12; Q18; D23; E61; H23; L14; L22; L33; L51

Introduction

Achievement of diverse economic, social, environment conservation, intergenerational, etc, goals of sustainable development greatly depend on the specific system of governance in different countries, industries, regions, communities, etc. (Furuboth, Richter 1998, North 1990, Williamson 1996). Having in mind the importance of agrarian sector (in terms of employed resources, contribution to individuals and social welfare, positive and/or negative impacts on environment, *etc.*), the improvement of the governance of agrarian sustainability is among the most topical issues in Bulgaria and around the globe (Bachev 2010), (Bachev 2016, 797-816), (Bachev, Ivanov, Toteva and Sokolova 2016, 639-663), (Raman 2006), (Sauvenier, Valekx, Van Cauwenbergh, Bachev *et al.* 2005), (Terziev and Radeva 2016, 175-179).

In Bulgaria, with very few exceptions (Bachev 2010) there are no empirical studies on dominating governing structures in agriculture, and their impact(s) on agrarian sustainability. In this paper interdisciplinary New Institutional Economics framework (combining Economics, Organization, Sociology, Law, Political and Behavioural Sciences) is incorporated, and the impact of diverse private, collective, public and hybrid modes of governance on agrarian sustainability at the current stage of development in Bulgaria assessed.

First, the methodological framework of the study is outlined. After that dominating governing modes in Bulgarian farms of different juridical type, size, specialization, ecological and geographical location are identified, and their impacts on agrarian sustainability and its economic, social, and environmental pillars evaluated. In conclusion implications for further research, public policy improvement, and private managerial strategy formation are presented.

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Conclusion

Our empirical study has just been a first attempt to identify the complex links between the governing forms employed by the Bulgarian farms and the level of agrarian sustainability in the country. It made it possible to identify the mechanisms and modes of governance mostly used by the agricultural producers, and assess their impact on agrarian sustainability as a whole, and in different subsectors, geographical and administrative regions, (agro) ecosystems, and type of farming enterprises. We have found out that in the specific socio-economic, institutional and natural environment agricultural producers of different juridical type, size, specialization, and location use quite unlike mixture of effective market, private, collective and hybrid modes for governance or their activities and relations. Individual factors and modes which most contribute to improvement of agrarian sustainability at the current stage of development in the country are: managers' personal convictions and initiatives, farms resources and innovation potential, near future profit and benefits strategies, market prices levels and dynamics, area-based EU subsidies, and informal agreements.

Nevertheless, evolution of the system of agrarian governance and the level of agrarian sustainability depends on various economic, political, behavioural, demographic, technological, international, natural etc. factors. Individual, joint and spill over effects of all these factors are to be accounted for and assessed in further research in that new area. Particularly, it is important to incorporate into analysis and assess the impact of the formal and informal components of institutional environment which are critical and eventually determine agents' behaviour and level of agrarian sustainability. Besides, always there is a certain "time lag" between the "improvement" of the system of governance, and the positive, negative or neutral impact on agrarian sustainability, and its economic, social and environmental aspects. All these factors are to be studied in such assessments as estimates also made on the "dynamics" of the impact over a longer time horizon.

Research on the relations between the governing structure and the (level and dynamics of) agrarian sustainability is to continue though expansion of the number and representation of surveyed holdings, and the spectrum of the specific governing modes used by the farms of different type as well as assessments of the impact of institutions on agrarian sustainability. What is more, applied methods are to be enriched in order to specify better the complex relations between the agrarian governance and sustainability. Furthermore, modes of governance at higher hierarchical levels (sector, national, transnational) have to be specified and their separate and/or complementary impact on agrarian sustainability evaluated.

Having in mind the importance of comprehensive assessments of the impacts of governing system on agrarian sustainability, and the enormous benefits for farm management and agrarian policies, this type of studies are to be expended and their precision and representation increased. The latter however, requires a close cooperation between all interested parties, and participation of farmers, agrarian organizations, local and central authorities, interest groups, research institutes and experts, etc. Moreover, the precision of estimates has to be improved, and besides on the estimates of farm managers to incorporate other relevant information – experts and stakeholders' assessments, monitoring, report, statistical, etc. data, studies on "actual" (rather than declared) behaviour of various agrarian and non-agrarian agents, and associated "effects" on agrarian sustainability, *etc*.

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Corporate Tax Incidence and its Implications for the Labor Market

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Abstract:

The paper investigates the relationship between corporate taxation and labor market indicators. This research supports the idea that the increase in corporate income tax rates in the open economy will lead to the capital outflow to the low-tax jurisdictions, resulting in tax incidence on labor with consequent decrease in labor productivity. An empirical analysis demonstrated the negative relationship between labor freedom index and corporate tax rate. In countries with higher GDP per capita the strength of such relationship differs from countries where GDP per capita is relatively low. In terms of corporate tax incidence, this means that in developed countries the corporate tax burden is shifted onto workers in lesser extent compared with developing and emerging economies. The estimation of specific elements of labor freedom index allowed to identify main tendencies of impact of change of the corporate income tax rate on certain labor market indicators in countries with different GDP per capita. We suggested that corporate tax incidence diversely affects the labor productivity in countries with different GDP per capita, and the direction of such impact is determined by composition of labor force and openness of economy.

Keywords: corporate income tax; labor; tax burden; tax incidence; comparative analysis; labor productivity

JEL Classification: C10; E20; E24; H22; H25; O57

Introduction

Musgrave and Musgrave (1989) in their «Public finance in theory and practice» classified the tax incidence as statutory incidence, determining the statutory obligation for economic agents to pay taxes, and effective incidence, which refers to the tax bearer – a person who really bears this tax burden (Musgrave and Musgrave 1989, 237).

The obligation to pay taxes far from always means that such tax agent bears an appropriate tax burden. Therefore, the question of tax incidence arises. Corporate income tax (CIT) incidence can have either direct or indirect impact on workers. The direct impact relates to the change of employment income, while the implicit effect concerns changes of employment conditions arising when a company does not cut wages. This can result to the decrease in labor productivity and average value added per worker, which in turn can lead to the slowdown in economic growth. Therefore, the paper aims to investigate the relationship between level of corporate taxation (in terms of corporate income tax rate) and labor market indicators in countries worldwide to identify the suggested corporate tax incidence and its potential causes.

The paper is structured as follows. Section II provides research background on incidence of the corporate tax on labor for both the open and closed economy cases. Section III describes methodology, and Section IV provides results of empirical analysis of relationship between corporate taxation and labor market indicators in countries. Section V concludes.

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Conclusion

The tax theory suggests that in the open economy the corporate tax burden is partially (or entirely) shifted onto labor. This burden can be shifted either by cutting wages or by worsening employment conditions – in case when companies do not cut wages.

The conditions of employment in countries worldwide generally can be determined by labor freedom index: the higher is its value the better are terms of employment in country (conditions for hiring and dismissals, rigidity of hours, amount of mandatory severance *etc.*).

An empirical analysis for 145 countries demonstrated the negative and statistically significant relationship between labor freedom index and corporate tax rate, which varies depending on the level of GDP per capita. This could be evidence that corporate tax rate increase leads to the worsening employment of conditions since companies do not want or cannot to cut wages. Moreover, in countries with higher GDP per capita the strength of such relationship differs from countries where GDP per capita is relatively low.

In terms of corporate tax incidence this means that in developed countries with higher GDP per capita the corporate tax burden is shifted onto workers (particularly, by worsening their employment conditions) in lesser extent compared with countries with relatively low GDP per capita.

Further analysis for 62 countries with changes of CIT rates allowed to suggest that such change in countries with low GDP per capita affects labor productivity, identifying the potential tax incidence, due to a large share of labor force employed in low-skilled and unskilled jobs, and also due to capital inflow as a result of capital market integration, that affects labor market.

For countries with higher GDP per capita is the suggested corporate tax incidence is determined by a significant part of tax-favored activity, notably R&D with high value added per worker, and also by government incentive participate in international tax competition.

Consequently, the corporate tax incidence diversely affects the labor productivity in countries with different GDP per capita, and the direction of such impact is determined by composition of labor force and openness of economy.

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Retail Price Endings and Consumers' Buying Behavior: Evidence from an Emerging Economy

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Abstract:

The practice of odd-even pricing is pervasive in Indian retail sector. This study empirically examined the impact of the pervasive use of the price-endings on consumers' perception and buying behavior. A structured questionnaire using a 5-point Likert scale was used to do a mall-intercept survey in the capital cities of Delhi, West Bengal, Maharashtra, Tamil Nadu, Orissa, Bihar, Uttar Pradesh, Punjab, Madhya Pradesh, Jharkhand, and Karnataka. The collected responses were analyzed using structural equation modeling (SEM). The findings show that Indian consumers perceive prices like 999, 99.95, 349.99 as low and discount prices. Also, the prices like 1000, 100, 350 which are a little bit higher than 999, 99.95, 349.99 are perceived as high-prices. This price perception partially mediates consumers' buying behavior. Most of the time, consumers purchase products priced with odd-ending because they think that the products are on sale or special offer also, the consumers who are brand conscious purchase the products priced with even-ending.

Introduction

The contemporary retail market is uncertain and very competitive. It is very challenging for a retailer to be sustainable and to grow with leveraged sales and profitability. For sustainability and continuous growth with augmented sales and profitability, the retailer needs capital, which is one of the forms of money, comes from the sales prices of products or services. Price is the amount of money charged from customers for the products or services, sold and rendered to them by the retailer. Coughlan and Mantrala (1994) have stated price as a competitive tool. Marketing management describes price as one of the elements of 4 Ps of the marketing mix, is the only revenue generating element or variable while other elements such as product, place, and promotion are expenses for a retail organization (Kotler *et al.* 2014). Therefore, it is very crucial for a retailer to price its products or services practicing the most appropriate pricing strategy. The retailers practice different pricing strategies based on the category of the products or services. The practice of psychological pricing or odd-ending pricing is the most common and widespread in the retail market (Holdershaw *et al.* 1997). The odd-ending pricing is used by the retailers as a rational way of dealing with the uncertainty of the market (Gedenk and Sattler 1999). "The psychological pricing is the practice of structuring and presenting prices to appeal to consumers' emotions and to influence their decision-making process" (Pride and Ferrell 1997). In literature, psychological pricing is referred to as odd pricing, just below pricing, charm pricing, magic pricing, intuitive pricing, irrational pricing, or rule-of-thumb pricing (Boyd and Massy 1972, Dalrymple and Thompson 1969, Gabor 1977, Kreul 1982, Monroe 1990, Rogers 1990, Sturdivant 1970, Holdershaw *et al.* 1997, Kumar and Pandy 2017).

Many retailers tend to set the prices of their products or services just below round numbers such as $99.49, $999.99, $599.95, or $199. This tendency of setting the retail prices is referred to as odd-pricing or psychological pricing (Kreul 1982, Schindler and Kirby 1995, Twedt 1965). The exact origin and time of initiation of practicing the psychological pricing are not certain (Dalrymple Thompson 1969). However, (Hower 1943) has stated that this pricing strategy could have been started in the middle of the 19th century. Though psychological pricing has been in practice for more than 100 years, this was first studied by the academic researchers only in the 1930s (Bader and Weinland 1932) and afterward. Though the history of the practice of psychological pricing is this much longer

in the academic field, however, there is still a little knowledge about the effect of psychological pricing on sales of the products or services (Holloway 1973). There is little evidence regarding the origin of psychological pricing, but the existence of its practice is assumed to be more than 100 years back (Schindler and Wiman 1989). According to a theory, the psychological pricing or the odd-pricing originated after fixed pricing became the norm in the USA, after the Civil War ended (Georgoff 1971) also, the standardization of currency is considered one of the reasons. Another commonly cited reason is that psychological pricing emerged as a measure to avoid combat theft by the employees (Hogl 1988, Sturdivant 1970, Twedt 1965). The psychological pricing was started by Melville Elijah Stone in 1875 first time in a newspaper pricing competition (as cited in Kumar and Pandey 2017). The practice of psychological pricing is now common especially in the USA (Rudolph 1954, Twedt 1965, Schindler and Wiman 1989), Germany (Hogl 1988), and New Zealand (Holdershaw 1995). However, in India, though the practice of odd-pricing or psychological pricing is pervasive in price advertisements of products or services in the daily newspapers, in off-line retailing and in online retailing as well, even then there is a dearth of study about the psychological pricing or odd-pricing and its impact on the buying behavior of Indian consumers.

The aim of this study is to examine whether there is any effect of psychological pricing on perception and buying behavior of the Indian customers. There are many studies done on the effect of odd-pricing or psychological pricing on consumers' buying behavior. However, they have got mixed results (Ginzberg 1936, Daryample and Haines 1970, Georgoff 1972, Blattberg and Wisniewski 1987, Gendall et al. 1997). The outcomes of these studies are not consisting. Two of the above studies found statistically insignificant effects of price-endings on the consumers' buying behavior; the other two studies found that the effect of price-endings is on some of the products whereas the last study has reported a positive impact of odd-ending pricing or psychological pricing on the consumers' buying behavior. On the basis of these mixed outcomes about the effects of odd-pricing or psychological pricing on the consumers' buying behavior, we have done this study to check if there are any effects of psychological pricing on the perception and purchasing behavior of the Indian customers.

The psychological prices are structured as odd-prices, a little less than an encircled number, such as $9.99, $8.95, $1.67, $2.98 or $199 (Dunne et al. 2015). The customers have a propensity to perceive "odd-prices" as being extensively lower than they actually are. Thus, prices such as $6.99 and $9.98 are considered to spend $6.00 and $9.00 instead of considering to spend $7.00 and $10.00. This is so because the customers read prices from left to right, therefore, they round off the prices near to the leftmost digit, and because of this $6.99 and $9.98 are perceived as $6.00 and $9.00. This technique of perceiving the prices is called left-digit-effects (Thomas and Morwitz 2005). Since, a 9-ending price conveys a low price image, called price-image-effects and also, the 9-ending price conveys an impression of the low-quality of the product, called quality-image-effects (Schindler and Kibarian 2001).

Discussion and Conclusion

The retailers practice odd-even pricing to influence the consumers' price perception and buying behavior, is crucial in this competitive business world. The consumers' price perception and the psychology behind it have a greater influence on the consumers' buying behavior. The review of previous research studies, books, journals, articles, newspapers, and working papers on price endings and consumers' buying behavior concludes that price-endings *i.e.,* odd-ending prices are pervasive in the retail sector and do lay an impact on consumers' price perception and buying behavior, which is contextual. That is odd-ending pricing generally works on new products. In other words, if the consumers have not seen the product before which is presented with odd-price, then purchasing probability of that product by the consumer's increases.

However, in India, price endings are not context dependent *i.e.,* the Indian consumers purchase the products or avail the services priced with odd-endings whether the products or services are new or not (*i.e.,* whether they have seen the products or experienced the services previously or not). The consumers read prices of products and services from left to right, and because of this, they perceive that the products priced with odd-ending pricing are on sale or special offer. The consumers perceive an odd-ending price as a discount price because they round down an odd price near to the leftmost digit (*e.g.,* a price of 999 is round down to the leftmost digit 9 and therefore 999 is perceived as 900 instead of perceiving it as 1000). This phenomenon creates an illusion of low price.

Therefore, consumers perceive 999 as a discounted price. This happens because the consumers have very limited capacity to process price information. This price perception of consumers makes them think that this price is associated with a low-quality product or service. A price ending with '0' is perceived as associated with a good quality product or service. The customers who are brand conscious prefer to purchase even-ending priced products or services. This study tried to unveil the mystery why the customers buy products or services priced using odd prices and even prices, which could have implications for retail-organizations, pricing managers, researchers and our understanding of how the customers make inferences from the given price information.

The present study made the concept of psychological pricing understandable which can help the organizations increase their sales and profitability and at the same time, the consumers can know why do they purchase the products or avail the services priced using psychological pricing. This study empirically investigated retail price endings impact on the consumers' perception and buying behavior and found that the consumers' price perception partially mediates the consumers' buying behavior of odd-even ending priced products or services. Also, price endings directly influence consumers' shopping behavior.

There is a dearth of study on price-endings and consumers' buying behavior in India. The advertisements of odd-pricing are pervasive in newspapers, home drop advertisements and at the point of purchase and so a further study may be conducted on the impact of advertisements of price-endings on the consumers' price perception and buying behavior. Further studies may use demographic variables as moderators as well.

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