

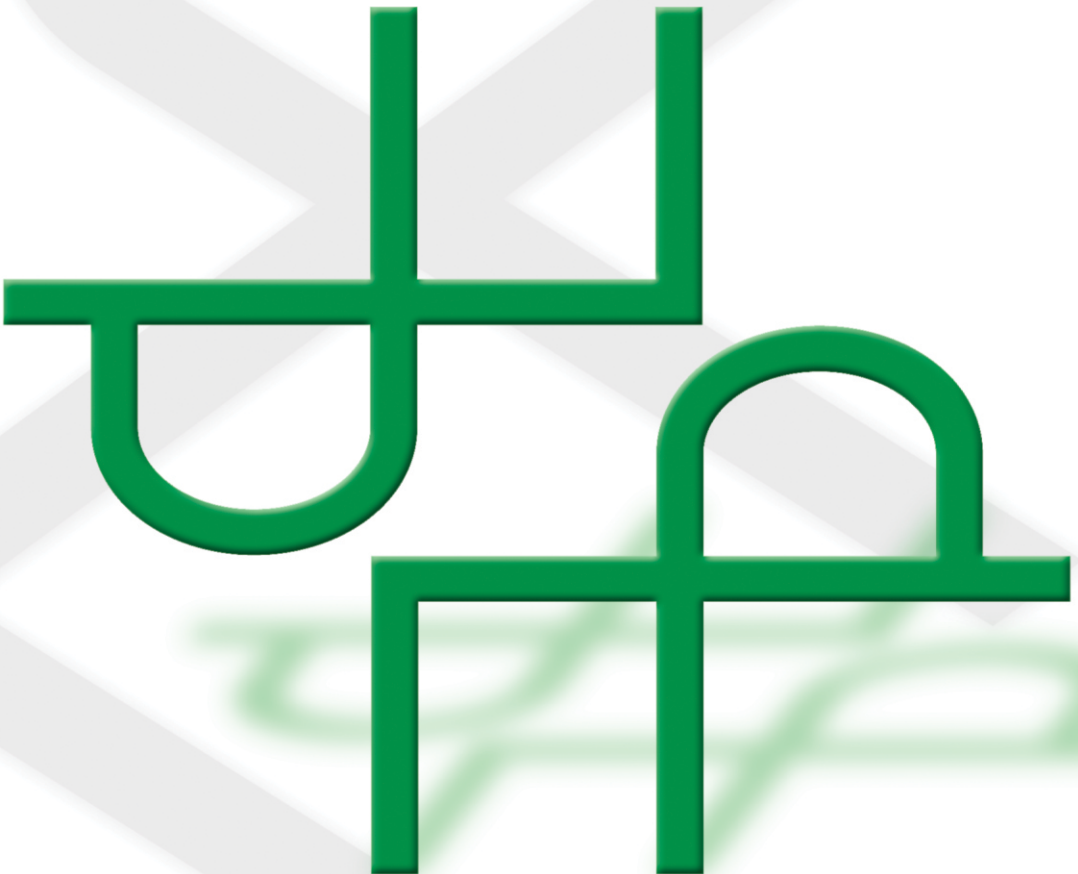
ISSN 0350-137X

UDK: 338 (497,1)

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4



LXII

NIŠ, 2016

МЕЂУНАРОДНИ ЧАСОПИС
ЗА ЕКОНОМСКУ ТЕОРИЈУ И ПРАКСУ И ДРУШТВЕНА ПИТАЊА



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Часопис излази четири пута годишње

Година LXII, X-XII 2016, број 4

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2. Часопис су покренули Друштво економиста Ниша и Друштво инжењера и техничара Ниша (остало као издавач до краја 1964. године). Удружење књиговођа постаје издавач почев од броја 6-7/1958. године. Економски факултет у Нишу на основу своје одлуке броја 04-2021 од 26.12.1991. године постао је суиздавач “Економике”. Такође и Економски факултет у Приштини постао је суиздавач од 1992. године. Почев од 1992. године суиздавач “Економике” је и Друштво за маркетинг региона Ниш. Као суиздавач “Економике” фигурирали су у току 1990-1996. године и Фонд за научни рад општине Ниш, Завод за просторно и урбанистичко планирање Ниш и Корпорација Винер Брокер Ниш.

3. Републички секретариат за информације СР Србије својим Решењем бр. 651-126/73-02 од 27. новембра 1974. године усвојио је захтев “Економике” за упис у Регистар новина. Скупштина Друштва економиста Ниша на седници од 24. априла 1990. године статутарном одлуком потврдила је да “Економика” има статус правног лица. На седници Скупштине Друштва економиста Ниш од 11. новембра 1999. године донета је одлука да “Економика” отвори посебан жиро-рачун.

4. Према Мишљењу Републичког секретариата за културу СР Србије бр. 413-516/73-02 од 10. јула 1973. године и Министарства за науку и технологију Републике Србије бр. 541-03-363/94-02 од 30. јуна 1994. године “Економика” има статус научног и ранг националног часописа “Економика” је поћев од 1995. добила статус међународног економског часописа.

5. УРЕДНИЦИ: др Јован Петровић (1954-1958), Миодраг Филиповић (1958-1962), Благоје Матић (1962-1964), др Драгољуб Стојиљковић (1964-1967), др Миодраг Николић (1967-1973), др Драгољуб Симоновић (1973-1984), др Миодраг Јовановић (1984-3-4/1988) и др Драгољуб Симоновић (1990-до данас).

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Штампа:

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18000 Ниш

Тираж: 300 примерака

INTERNATIONAL JOURNAL
FOR ECONOMIC THEORY AND PRACTICE AND SOCIAL ISSUES



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The Journal is issued four times a year.

Year LXII, X-XII 2016, Vol. 4

PUBLISHER: Society of Economists "Ekonomika", Nis

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1. The journal EKONOMIKA was initiated in July 1954. It was published as "Nis Economic Messenger" till June, 1957 and as "The Economic Messenger" till the end of 1969. The title "Science and Practice" it had till the issue 1/1973 when it changed its name into EKONOMIKA as it entitled today.

2. The Journal was initiated by the Society of Economists of Nis and the Society of Engineers and Technicians of Nis (the latter remained as the publisher till the end of 1964). The Society of Accountants became its publisher starting from the issue no. 6-7/1958. The Faculty of Economics, Nis, on the basis of its Resolution No. 04-2021 from December 26, 1991, became the co-publisher of EKONOMIKA. Likewise, the Faculty of Economics of Pristina became the co-publisher since in 1992. Starting from 1992, the co-publisher of EKONOMIKA has been the Society for Marketing of the Region of Nis. Other co-publishers of EKONOMIKA included, in the period 1990-1996, the Foundation for Scientific Work of the Municipality of Nis, the Institute for Spatial and Urban Planning of Nis and the Corporation Winner Broker, Nis.

3. The Republic Secretariat for Information of the Socialist Republic of Serbia, by its Resolution No. 651-126/73-02 from November, 27, 1974, approved of EKONOMIKA's requirement to be introduced into the Press Register. The Assembly of the Society of Economists of Nis, at its session on April 24, 1990, by its statutory resolution, confirmed the legal status of EKONOMIKA. At the session of the Assembly of the Society of Economists, Nis, on November 11, 1999, the resolution was adopted the EKONOMIKA was to open its own bank account.

4. According to the Opinion of the Republic Secretariat for Culture of the Socialist Republic of Serbia No. 413-516/73-02 from July 10, 1973 and the Ministry for Science and Technology of the Republic of Serbia No. 541-03-363/94-02 from June 30, 1994, EKONOMIKA has the status of a scientific and national journal. Starting from 1995, EKONOMIKA has been having the status of international economic journal.

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Printed by:

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ПЕТАР ОГНЯНОВИЧ, ДРАГАН МОМЧИЛОВИЧ

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Расчетный счет: 160-19452-17

Печать:
„GRAFIKA GALEB”
18000 Ниш
Тираж: 300

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ORIGINAL SCIENTIFIC ARTICLE

doi:10.5937/ekonomika1604001T

Received: November 09, 2016

Accepted: November 29, 2016

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THE IMPACT OF OPERATING EXPENDITURES ON FIRM PERFORMANCE IN TURKEY: EVIDENCE FROM TECHNOLOGY SECTOR

Abstract

The purpose of this study is to analyze the effect of operating expenditures consisting of research-development, marketing and general administrative items on firm performance. For that purpose, data of 16 companies for 2008-2015 operating in technology sector trading in Istanbul Stock Exchange were utilized. In the study operating expenditures items (research-development (R&D), marketing-sale-distribution expenditures (MSDE) and general administrative expenditures (GAE)) were used as an independent variable and Return Of Equity (ROE) was used as a dependent variable. The relationship between firm performance and operating expenditures in the study was analyzed through Pedroni Panel Cointegration analysis. According to analysis results, there is a long term relationship between firm performance and operating expenditures items consisting of general administrative expenditures, marketing-sale-distribution expenses and research-development. When the coefficients for this long term relationship are analyzed, we can see that general administrative expenditures and firm value has an adverse, but marketing-sale-distribution expenditures and research-development has a direct relationship. i.e. while marketing-sale-distribution and research-development expenditures increase firm performance, general administrative expenditures decrease.

Key Words: *Research and Development (R&D) Expenditures, Marketing Expenditures, Firm Performance, Technology Sector, Operating Expenditures, Turkey.*

JEL Classification: C33, D22, G32, M21.

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УТИЦАЈ ОПЕРАТИВНИХ ТРОШКОВА НА ПРЕФОРМАНСЕ ФИРМИ У ТУРСКОЈ: ДОКАЗИ ИЗ ТЕХНОЛОШКОГ СЕКТОРА

Апстракт

Циљ ове студије је да се анализира утицај оперативних трошкова који се састоја од истраживања-развоја, маркетинга и опитих административних ставки на перформансе фирме. За ту сврху су коришћени подаци о 16 предузећа за 2008-2015 који послују у технолошком сектору трговине на Истанбулској берзи. У студији оперативних трошкова ставке (истраживачко-развојних (R&D), трошкови маркетинга-продаје-дистрибуције (MSDE) и опитих административних трошкова (GAE)) коришћени су као независна варијабла и повратак капитала (ROE) је коришћен као зависна варијабла. Однос између оперативних трошкова пословања фирми у студији је анализиран кроз Педрони панел коинтеграционе анализе. Према резултатима анализе, постоји дугорочна веза између расхода пословања фирми и радних предмета који се састоје од опитих административних трошкова, трошкова маркетинг-продаје-дистрибуције и истраживачко-развојних трошкова. Када се анализирају коефицијенти за овај дугорочни однос, можемо видети да опити административни расходи и вредност фирме су негативни, али трошкови маркетинг-продаје-дистрибуције и истраживачко-развојни трошкови имају директну везу, односно док маркетинг-продаја-дистрибуција и истраживачко-развојни трошкови чврсто повећавају перформансе, опити административни трошкови се смањују.

Кључне речи: Истраживање и развој (R&D), расходи, маркетинг трошкови, перформансе фирме, технолошки сектор, оперативни трошкови, Турска.

1. Introduction

Research-development and marketing-oriented investments are significant determiners for businesses to reach their long term sustainable growth and profit targets in fierce competitiveness. In today's conditions, the businesses which are faster than their rivals in producing new products, services, projects and technology and developing current system and products, provide changing customer demands with quality and lower costs, emphasize customer satisfaction and loyalty with customer-centered understanding, after all conduct a good marketing and research and development strategy create difference and become successful.

R&D in broad meaning is the use of creative effort and the knowledge conducted at a systematic base in new applications in order to increase scientific and technical knowledge. In narrow meaning R&D is a systematic and productive study for emerging new products and new production processes in businesses (Ünal and Seçilmiş, 2014: 203 quoting from Barutçugil, 1981: 17). As the importance to innovation and knowledge-based production and R&D expenditures increase in businesses, new technologies

providing cost and time saving in production process can be used, sales and profitability increase through the developed new products and as a result of this efficiency and productivity increases can be provided.

Besides R&D, another key factor for the businesses to be successful in their activation markets is the marketing activities. Marketing activities are the expenditures that may contribute to increase also the firm and brand value besides realizing the traditional targets such as changing the customer attitudes, providing customer addiction, increasing the sales or market shares (Topuz and Akşit, 2013: 54 quoting from Day and Fahey, 1988). i.e. all marketing activities aim to provide incomes by creating a value for customers. Also marketing expenditures are expected to increase the expected incomes of the firm in future by creating a positive effect on brand awareness and value and affect the firm value positively with the increasing demand of the investors for the stock (Çıtak, 2015:50 quoting from Simon, Sullivan, 1993: 32:).

Although there is an expenditure item under the headline of operating expenditures in marketing and R&D expenditures income statement, indeed these expenditures should be considered as investment tools that would increase the sales, profitability and cash flows of the business, therefore the firm value especially in long term. Thus, positive relationships were identified between R&D and marketing expenditures and firm profitability and firm value in studies analyzing the relationship between operating expenditures and firm performance in general. Certain variables such as net profit for the year, operation profit, pre-tax profit, assets profitability, Tobin Q rate, equity profitability, market value, investment profitability, stock income rate, sale profitability are generally observed to be used as a performance indicator in related studies. The firms that can change rapidly for technological developments have the potential for both high profitability and long life as the leaders in their sectors. At that point R&D expenditures for technology firms is very important for protecting their current market potentials and having an absolute life by developing constantly. Finding place of newly developed products in current market most effectively would be possible through an effective marketing strategy and management. At that point, these three items constructing operating expenditures gain much more importance for technology firms. Thus, this study is important for the firms included in the analysis. Moreover, the use of up-to-date econometrical methods in the study besides the commonly used statistical methods is also important for the reliability of the results. Therefore, this study differs from the current studies in terms of analyzed period, used analysis methods and sampling.

Finally, when general administrative expenditures in operating expenditures that will be included in the analysis are analyzed as concept within the firms trading in Istanbul Stock Exchange, we can see that the expenditures of administrators such as wages, journeys, counselling, education, communication have a great role. Therefore, since these expenditures are related with the decisions of administrators at general administration status, the increase in general administrative expenditures is expected to cause a positive effect on sale profitability in the sector (Çiftçi, 2014:239). Indeed, the people who are supposed to make rapid and correct decisions about many topics with strategic importance apart from marketing and research-development and act dynamically in following improvements in rapidly changing competitiveness and get in harmony are the educated experienced risk-taking administrators with vision. Therefore, while general administrative expenditures increase the profitability on one hand, administrative wages

will also increase in parallel with the profitability increase as a result of correct decisions on the other hand.

The purpose of this study is to analyze the effects of R&D and marketing expenditures by technology firms trading in İstanbul Stock Exchange on firm performance (profitability). For that purpose, data of 16 firms registered to İstanbul Stock Exchange for 2008-2015 were utilized. The study consists of four parts. After the introduction part in second part the literature review about the topic is included, however, in third part models and variables used in empirical analyses are introduced. Analysis results are included in fourth part. In last part a general evaluation is made on this basis of obtained results.

2. Literature review

In literature there are studies analyzing the relationship between R&D and marketing expenditures and financial performance in different perspectives. In most of these studies operating expenditures are not examined as a whole, but the relationship between R&D expenditures-firm performance or marketing expenditures-firm performance separately is tried to be established. In the following, studies dealing with the relationship between R&D and marketing expenditures and firm performance of companies in international and national literatures will be included.

In a study by Paton and Williams (1999) using 1991-1993 data of 325 English firms it was identified that marketing expenditures were effective on firm performances. In a study by Yücel and Kurt (2003) in order to measure the effect of marketing and R&D expenditures on business profitability and sales, 2001 data of 64 firms registered to İstanbul Stock Exchange were utilized. As a result of the study, it was found out that marketing expenditures were positively related with operating profits and sales but negatively related with net profits, however; there was not a significant relationship between R&D expenditures and profitability and sales.

Tsai and Wang (2004) in their studies that they analyzed the effect of R&D expenditures on firm performance used 1994-2000 data of 136 firms operating in Taiwan and as a result of the study they identified a positive relationship between R&D and firm income rates.

In a study by Shah and Stark (2005) on firms operating in England and covering 1990-1998, it was determined that marketing expenditures had a significant effect on market values and future profits of firms.

In a study by Conchar, Crask and Zinkhan (2005), on USA firms between 1985-2004 period using least squares method a positive relationship was concluded between marketing expenditures and firm performance.

Czarnitzki and Kraft (2006) determined that R&D expenditures in determining credit rating had a positive effect in West Germany, but negative in East Germany in a study result that they analyzed the effect of R&D expenditures on credit ratings of the firms and financial difficulties.

Ogawa (2007) in his study that they analyzed the relationship between borrowings and R&D expenditures found that unpaid borrowings for 1988-2001 period in Japanese manufacturing firms with intensive R&D expenditures had a negative statistically

significant effect on R&D expenditures. Moreover, significant relationships were observed between R&D expenditures and total productivity growth at firm level in the study.

Qureshi (2007) in his study by using 1998-2003 periodical data of the firms operating in England utilizing least square method found a positive and statistically significant relationship between marketing expenditures and market performance.

Anagnostopoulou and Levis (2008) in their studies that they analyzed the relationship between R&D expenditures and firm performance by using the data of 2182 English firm between 1990-2003 period found a positive relationship between R&D intensity and sales and the growth in gross income. Also in the study significant relationships were found out between R&D intensity and abnormal stock incomes corrected according to risk and R&D intensity was identified to create sustainability in abnormal stock incomes.

Anindita, Prashant and Anantha (2008) in their studies using 2000-2007 periodical data of 172 firms in India used multi regression, Anova and correlation methods and as a result of the studies they obtained a statistically non-significant relationship between marketing expenditures and Tobin's Q and profitability.

In a study by Krasnikov ve Jayachandran (2008) positive and statistically significant results were obtained between marketing and R&D and firm performance, but the level of relationship between marketing expenditures and performance was found higher.

Karacaer, Aygün and İç (2009) in their regression, correlation and t-test results using the data of 84 firms registered to İstanbul Stock Exchange identified a positive relationship between research and development expenditures and stock profits and asset profitability. Also as a result of the research it was seen that the firms with R&D activities had larger and more personnels.

Krishnan, Tadeballi and Park (2009) in their studies based 201 American firms and researched whether the firms with more R&D and marketing investments had higher performances through regression analysis. As a result of the research, it was found out that while R&D investments did not affect the performance alone, marketing investments affected.

Morgan and Rego (2009) in their studies on 72 American firms found a positive relationship between marketing expenditures and cash flow levels of the firms, but a negative relationship between cash flow variables. However, no relationship was found out between marketing expenditures and Tobin Q.

Çifci, Doğanay and Gülşen (2010) in their studies made the panel data analysis by using 2000-2008 periodical data of 82 firms registered to İstanbul Stock Exchange. As a result of the study, it was identified that marketing expenditures, general administrative expenditures and size of total assets affected the performance of the businesses positively and the most important variable among these was the marketing expenditures.

Siong (2010) also used the least squares method in his research on firms registered to Malaysia Stock Exchange for 2004-2008 period and found a positive and statistically significant relationship between marketing expenditures and firm performance.

Bogliacino and Pianta (2010) used 1994-2006 periodical data of 38 firms in manufacturing sector in different countries in the study that they researched the effect of R&D activities and innovative approaches on profitability and concluded that on-going and past R&D expenditures had a significant effect on the profit.

Candemir and Zalluhoğlu (2011) analyzed 1997-2010 periodical data of nine firms in food sector on İstanbul Stock Exchange through panel data regression analysis in their study that they analyzed the effects of marketing expenditures, research-development expenditures and some macroeconomical variables (growth, inflation) on firm performance for especially crisis periods. As a result of the analysis, a positive significant relationship was identified between marketing and R&D expenditures and net sales and it was found out that increasing marketing expenditures in crisis periods had positive effects.

The effect of marketing expenditures of the businesses on stock profits was analyzed through panel regression analysis by Topuz and Akşit (2013) using 2000-2010 periodical data of 18 firms in İstanbul Stock Exchange food sector. Study results indicated that marketing expenditures in general had a positive effect on stock profits in current period and the relationship between marketing expenditures and stock profits was concave.

Ünal and Seçilmiş (2014) in their study analyzed the efficiency of R&D expenditures of 2005-2010 period for 29 firms in Gaziantep on firm sales and the profitability on R&D expenditures through dynamic panel data model. As a result of the research, a positive relationship was found between R&D expenditures and net sales of the firms and periodical net profits and R&D expenditures.

Kocamış and Güngör (2014) analyzed the effect of R&D expenditures of the businesses on profitability by using 2009-2013 periodical data of 16 firms in İstanbul Stock Exchange technology sector through SPSS. As a result of the study, a positive significant relationship was identified between profitability values consisting of R&D expenditures and operating profit of the firms, pre-tax profit and net profit for the period.

Çiftçi (2014) in his study researched the effect of R&D expenditures, advertizing-marketing-distribution expenditures and general administrative expenditures on gross profit margin by using 1998-2009 periodical annual data of the firms in manufacturing industry sector in Turkey. As a result of the study, it was identified that in small scaled firms only marketing expenditures, in middle scaled firms R&D expenditures and marketing expenditures and in large scaled firms all variables had a positive effect on profits.

Doğan and Mecek (2015) used multi regression and correlation analysis methods in their study that they researched the effect of marketing expenditures on firm value using 2009-2012 data of 120 firms trading in İstanbul Stock Exchange in manufacturing sector. In the study “Return of Assets” (ROA) and “Return of Equity” (ROE) and Tobin’s q (Q) rate, market-based performance indicator, were used. A positive and statistically significant relationship was identified between marketing expenditures and firm value as a result of conducted analysis.

Makizadeh and Abtahi (2015) in their study analyzed the effect of marketing expenditures on net sales by using 2002-2012 periodical data of 25 firms in İran. As a result of the study in which dynamic panel data model was used, it was identified that increasing marketing expenditures especially in financial crisis periods and recession period after crisis would increase net sales.

As a result of a gradual regression analysis by Yücel and Ahmetoğulları (2015) using 2000-2014 data of 135 firms in technology, software and information sector registered to İstanbul Stock Exchange, an isochronal positive relationship was identified between the change in R&D expenditures and the change in net profits. Again, the effect of R&D expenditures on the profits per stocks was identified as three-term lagged.

Çıtak (2015) in his study that he analyzed the effect of marketing investments on firm performance made data cladding analysis by using 2012-2013 periodical data of the firms in İstanbul Stock Exchange SME Industry Index. As a result of the study it was found out that the efficiency of marketing investments of SME was low in general, however; the scale efficiency of the firms with higher asset size was larger than the ones with lower asset size.

Xu and Jin (2016) analyzed the lagged and cumulative effect of R&D expenditures on firm performance by using 2011-2013 periodical data of 30 firms registered to Shanghai Stock Exchange. As a result of this study in which Multi Lineer regression model was used, it was identified that R&D expenditures did not have a significant effect on current firm performance, however; they increased the profit margin at first lag stage and at the end the cumulative effect of R&D expenditures on firm performance was negative.

Chua et.al, (2016) analyzed the relationship between R&D expenditures and firm performance through panel data model by using 2008-2011 periodical data of 593 manufacturing firms in total from 8 countries. As a result of the study they identified a positive relationship between sales, profitability and cash flow and R&D expenditures.

3. Methodology

In the research the existence of a long term relationship between operating expenditures consisting of R&D, MSDE and GAE of the frims in İstanbul Stock Exchange Technology Sector and firm performance was analyzed through Pedroni Panel Cointegration analyzsis. Before this analysis unit root analysis of the variables was carried out with Levin, Lin, Chu (2002) and Im, Pesaran and Shin (2003). However, long term relationship coefficients were estimated with FMOLS.

3.1. Unit Root Tests

The null hypothesis for the presence of common unit root in the panel is tested in Levin, Lin, Chu (2002) panel unit root test. In this test Augmented Dickey Fuller (ADF) equation is used.

$$\Delta y_{it} = \delta y_{it-1} + \sum_{j=1}^{p_i} \beta_{ij} \Delta y_{it-j} + X'_{it} \alpha + \varepsilon_{it} \quad (1)$$

In the equation above

$i=1, 2, \dots, N$ represents cross-section units,

$t=1, 2, \dots, T$ represents time dimension,

X_{it} , indicates a stable effect or external variables including individual trend component,

ε_{it} , indicates independent error terms and p_i , indicates the lag length. With this test;

$H_0 : \delta = 0$

$H_1 : \delta < 0$ hypotheses are analyzed.

If the coefficient is not equal to null under $H_0 : \delta = 0$ hypothesis, we decide that the series do not have unit root (Levin et.al, 2002:4-8).

However, in Im, Peseran and Shin (2003) test the null hypothesis for the presence of individual unit root in the panel is tested unlike Levin, Lin, Chu (2002) panel unit root test. The model handled in Im, Peseran and Shin (2003) is as following:

$$\Delta y_{it} = \alpha_i + \beta_i t + \rho_i y_{it-1} + \sum_{j=1}^k \phi_k \Delta y_{it-j} + u_{it} \quad (2)$$

First of all, a different ADF test is implemented for each cross-section in the panel in Im, Peseran and Shin (2003) test and the average of individual ADF statistics is calculated to get the unit root test statistics in the panel. Hypotheses created according to Im, Peseran and Shin (2003) test are:

H_0 : Panel is rooted.

H_1 : At least one cross-section is stable.

While the tested main hypothesis Im, Peseran and Shin (2003) test indicates that all series in the panel are not stable, alternative hypothesis tests that some of the series are stable.

3.2. Panel Cointegration Test

After analyzing the unit roots, whether there was a long term relationship between the series through Pedroni Panel Cointegration analysis. Not only this test allows only dynamic and stable effects to be different between the sections of the panel but also it allows the cointegrated vectors to be different between sections as well (Güvenek and Alptekin, 2010: 181). The following hypotheses are tested through Pedroni Panel Cointegration test (Pedroni, 2004:599).

H_0 : There is no cointegration relationship for all cross-sections.

H_1 : There is a cointegration relationship for all cross-sections.

In Pedroni Cointegration analysis seven different cointegration tests are presented in order to cover the effects within the sections and between the sections in the panel. These tests consist of 4 pooled tests in “within” dimensions and other 3 tests in “between” dimension (Asteriou and Hall, 2007: 374).

$$\text{Panel } v \text{ – Statistic } Z_v = T^2 N^{\frac{3}{2}} \left(\sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} \hat{\epsilon}_{it-1}^2 \right)^{-1} \quad (3)$$

$$\text{Panel } \rho \text{ – Statistic } Z_\rho = T\sqrt{N} \left(\sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} \hat{\epsilon}_{it-1}^2 \right)^{-1} \sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} (\hat{\epsilon}_{it-1} \Delta \hat{\epsilon}_{it-1} - \hat{\lambda}_i) \quad (4)$$

$$\text{Panel } t \text{ – Statistic (Non – Parametric) } Z_t = (\hat{\sigma}_{N,T}^2 \sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} \hat{\epsilon}_{it-1}^2)^{-\frac{1}{2}} \sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} (\hat{\epsilon}_{it-1} \Delta \hat{\epsilon}_{it-1} - \hat{\lambda}_i) \quad (5)$$

$$\text{Panel } t \text{ – Statistic(Parametric) } Z_t^* = (\hat{S}_{N,T}^{*2} \sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} \hat{\epsilon}_{it-1}^{*2})^{-\frac{1}{2}} \sum_{i=1}^N \sum_{t=1}^T \hat{L}_{11i}^{-2} \hat{\epsilon}_{it-1}^* \Delta \hat{\epsilon}_{it}^* \quad (6)$$

$$\text{Group p – Statistic } \check{Z}_p = TN^{-\frac{1}{2}} \sum_{i=1}^N \left(\sum_{t=1}^T \hat{\epsilon}_{i,t-1}^2 \right)^{-1} \sum_{t=1}^T \hat{\epsilon}_{i,t-1} \Delta \hat{\epsilon}_{i,t} - \hat{\lambda}_i \quad (7)$$

$$\text{Group t – Statistic (NonParametric) } \check{Z}_t = N^{-\frac{1}{2}} \sum_{i=1}^N \left(\hat{\sigma}_i^2 \sum_{t=1}^T \hat{\epsilon}_{i,t-1}^2 \right)^{-\frac{1}{2}} \sum_{t=1}^T \hat{\epsilon}_{i,t-1} \Delta \hat{\epsilon}_{i,t} - \hat{\lambda}_i \quad (8)$$

$$\text{Group t – Statistic (Parametric) } \check{Z}_t^* = N^{-\frac{1}{2}} \sum_{i=1}^N \left(\hat{\sigma}_i^{*2} \sum_{t=1}^T \hat{\epsilon}_{i,t-1}^2 \right)^{-\frac{1}{2}} \sum_{t=1}^T \hat{\epsilon}_{i,t-1}^* \Delta \hat{\epsilon}_{i,t}^* \quad (9)$$

If the calculated statistics are higher than the critical values, the null hypothesis is rejected. We decide that there is a long term cointegration relationship between the variables included in the analysis. The long term coefficients between the variables with long term relationship were estimated according to FMOLS method. This method is implemented as two stages. Firstly, each cross-section is estimated by using FMOLS estimator. Then, the average of cointegration coefficients obtained from FMOLS estimation belonging to each cross-section is taken. t-statistics of group average panel FMOLS estimators are obtained by taking the average t-statistics belonging to cointegration coefficient obtained from FMOLS estimation for each cross-section.

4. Data set

Data set used in the research consists of the operating expenditure items and return of equity of the firms in Istanbul Stock Exchange Technology Sector. The data within the research were obtained from the balance sheets and income statements of related firms. Related financial statements were taken from www.kap.gov.tr. Research period is between 2008 and 2015. All analyses were for 16 firms in 8 year of period. According to this, the firms included in research scope are as in Table 1.

Table 1. Name of Firms Included In The Research

Table 1. Name of Firms Included In The Research		
CODE	NAME OF FIRM	
1	ALCTL	ALCATEL LUCENT TELETAS
2	ANELT	ANEL TELEKOM.
3	ARENA	ARENA BİLGİSAYAR
4	ARMDA	ARMADA BİLGİSAYAR
5	ASELS	ASELSAN
6	DGATE	DATAGATE BİLGİSAYAR
7	DESPC	DESPC BİLGİSAYAR
8	ERICO	ERİCOM TELEKOMÜNİKASYON
9	ESCOM	ESCORT TEKNOLOJİ
10	INDES	İNDEKS BİLGİSAYAR
11	KAREL	KAREL ELEKTRONİK
12	KRONT	KRON TELEKOMÜNİKASYON
13	LINK	LİNK BİLGİSAYAR
14	LOGO	LOGO YAZILIM
15	NETAS	NETAŞ TELEKOM.
16	PKART	PLASTİKKART

For eight year of period, return of equity (ROE), operating expenditures (general administrative expenditures (GAE), marketing-sale-distribution expenditures (MSDE) and research-development (R&D) of each firm were used. The purpose of this research is to analyze the long term effect of these three items for operating expenditures on firm performance. Therefore, the effect of related operating expenditure items on firm performance is evaluated by identifying the long term relationship between general administrative expenditure, marketing-sale-distribution expenditure and research-development expenditures.

5. Empirical results

Unit root analysis results for operating expenditure items and return of equity variables are as in Table 2.

Table 2. Results of Unit Root Tests

Variables	LLC		IPS	
	I(0)			
	Istatistics	Prob.	Istatistics	Prob.
ROE	-8,536*	0,000	2,258	0,988
GAE	-0,374	0,354	2,000	0,977
MSDE	-1,0275	0,152	1,955	0,974
R&D	-0,732	0,231	-0,253	0,399
	I(1)			
ROE	-14,897*	0,000	-1,638**	0,050
GAE	-7,080*	0,000	-2,0717**	0,019
MSDE	-11,898*	0,000	-3,408*	0,000
R&D	-5,234*	0,000	-3,150*	0,000

*, **, *** indicate the significance at 1, 5, 10 levels, respectively. The relevant lag length was determined according to Schwarz information criterion. BarlettKernel method was used in LLC test and Bandwith width was determined by Newey-West method.

According to two different unit root tests implemented for all series, H_0 hypothesis is accepted for level values (except for ROE). Therefore, all series are not stable at I(0) and include unit root. When the first difference of the series is taken, H_0 hypothesis is rejected. Therefore, all series are stable when they are I(1). i.e. they do not included unit roots.

Pedroni Cointegration Analysis was used in order to identify whether there was a long term relationship between series after unit roots were researched. The equation established for Pedroni Cointegration Analysis is as following.

$$ROE_{it} = \alpha_{it} + \beta_1 GAE_{it} + \beta_2 MSDE_{it} + \beta_3 R\&D_{it} + u_{it}$$

However, Pedroni Cointegration Analysis results implemented for variables are as in Table 3.

Table 3. Results of Pedroni Panel Cointegration

$ROE_{it} = \alpha_{it} + \beta_1 GAE_{it} + \beta_2 MSDE_{it} + \beta_3 R\&D_{it} + u_{it}$				
Within-Dimension				
	Statistic		Weighted	
	Statistic	Prob.	Statistic	Prob.
Panel v-Statistic	0.985	0.162	-2.309	0.989
Panel rho-Statistic	0.782	0.783	1.644	0.949
Panel PP-Statistic	-9.244*	0.000	-8.540*	0.000
Panel ADF-Statistic	-6.946*	0.000	-4.321*	0.000
Between-Dimension				
	Statistic	Prob.		
Group rho-Statistic	3.027	0.998		
Group PP-Statistic	-14.040*	0.000		
Group ADF-Statistic	-5.166*	0.000		

*, **, *** indicate the significance at 1, 5, 10 levels, respectively. The relevant lag length was determined according to Schwarz information criterion.

According to cointegration analysis results, there is a long term relationship between operating expenditures consisting of R&D, MSDE and GAE and firm performance. Four of the seven different test statistics used for Pedroni Cointegration Analysis support this situation. FMOLS method was implemented for the estimation of coefficients of the long term relationship between operating expenditures and firm performance. However, the coefficients obtained from FMOLS result are as in Table 4.

Table 4. Results of FMOLS

$ROE_{it} = \alpha_{it} + \beta_1 GAE_{it} + \beta_2 MSDE_{it} + \beta_3 R\&D_{it} + u_{it}$				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PAZARLAMA	3.041	1.267	2.399**	0.019
GYG	-6.300	1.412	-4.460*	0.000
ARGE	3.471	0.954	3.637*	0.000

*, **, *** indicate the significance at 1, 5, 10 levels, respectively.

According to Table 4, research-development expenditures and marketing-sale-distribution expenditures from operating expenditure items have a positive and statistically significant relationship with firm performance in long term. However, general administrative expenditures have a negative and statistically significant relationship with firm performance.

5. Conclusion

Businesses choose to increase firm values to maximum level as a prior target in order to sustain their existence in financial markets. Return of equity used as an indicator for the firm value consists of net profit and equity amount. At that point, net profit amount is a highly effective value on firm value. However, operating expenditures have an important role in establishing net profit. Operating expenditures have a decreasing effect on establishing net profit figures and these expenditures are essential factors in establishing firm value in long term. In this research the effect of operating expenditures on firm value was also analyzed. For that purpose, 16 firms in Istanbul Stock Exchange Technology sector in 2008-2015 period were included in the research. According to analysis results for 8 year of period with 16 firms, there is a long term relationship between operating expenditures consisting of R&D, MSDE and GAE and firm value. When the coefficients for this long term relationship are analyzed, we can see that GAE and firm value have a reverse relationship, but MSDE and R&D have a relationship in the same direction. In other words, while marketing-sale-distribution and research-development expenditures increase the firm value, general administrative expenditures decrease it. This situation indicates that the firms in Istanbul Stock Exchange Technology sector will contribute to increase their firm values by making more marketing-sale-distribution and research-development expenditures.

The finding of the research that marketing expenditures increase firm performance is coherent with most of the studies in literature (Paton and Williams, 1999; Shah and Stark, 2005; Conchar, Crask and Zinkhan, 2005; Qureshi, 2007; Krasnikov and Jayachandran, 2008; Krishnan, Tadepalli and Park, 2009; Çifci, Doğanay and Gülşen, 2010; Siong, 2010; Candemir and Zalluhoğlu, 2011; Topuz and Akşit, 2013; Çiftçi, 2014; Doğan and Mecek, 2015). Also Anindita, Prashant and Anantha (2008) in their study could not identify a statistically significant relationship between marketing expenditures and firm performance.

Similarly, the study finding that R&D expenditures increase firm value is coherent with some studies in literature. (Tsai and Wang, 2004; Anagnostopoulou and Levis, 2008; Krasnikov and Jayachandran, 2008; Karacaer, Aygün and İç, 2009; Bogliacino and Pianta, 2010; ; Candemir and Zalluhoğlu, 2011; Ünal and Seçilmiş, 2014; Kocamış and Güngör, 2014; Yücel and Ahmetoğulları, 2015). However, in some studies a negative relationship was identified between R&D and firm performance as different from these study findings. (Guo et. al, 2004; Çifci, Doğanay and Gülşen, 2010). Çifci, Doğanay and Gülşen, (2010) stated that this result may occur since there are not stable and regular R&D expenditures especially in our country and there are not any R&D expenditures in most of the firms in analyzed years. (Çifci, Doğanay and Gülşen, 2010:101). However, Yücel and Kurt (2003) in their study could not identify a significant relationship between two variables.

In the study a negative relationship was identified between general administrative expenditures and firm value and this result is not coherent with Çifci, Doğanay and Gülşen's (2010) study identifying a positive relationship between general administrative expenditures and firm performance. Similarly, Çiftçi (2014) also in his study concluded that general administrative expenditures were more effective on R&D and marketing. As the reason for this result, the author explains that the effect of administrator qualifications

and the decisions within this qualifications on profitability is high (Çiftçi, 2014:248). Leahy (2012) and Okwo and Ugwunta (2012) again in their studies identified a positive relationship between general administrative expenditures and firm profitability (Çiftçi, 2014:239). Indeed, when it is considered that the expenditures such as executive wages construct the biggest share in general administrative expenditure items, the increase in profitability is possible as a result of operational decisions especially in R&D and marketing fields as qualified and professional managers, CEO and counsellors in a firm increase.

Sales and profitability of firms may be increased in long term due to a general marketing strategy stated in other studies with parallel results with study findings in general and supported by an effective R&D policy with the potential new product/technology/process development and innovations. Therefore, business administrators should comprehend the long term effect of R&D and marketing activities on business performance and increase R&D and marketing budget and develop a stable R&D and marketing strategy and action plans and apply then effectively. This is the only way for businesses to reach sustainable growth, leadership in the market and profitability targets in long term.

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ORIGINAL SCIENTIFIC ARTICLE
doi:10.5937/ekonomika1604017S

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Received: September 08, 2016
Accepted: October 05, 2016

KEY DETERMINANTS OF INFLUENCE IN THE PROCESS OF ORGANIZATIONAL LEADERSHIP

Abstract

As an organizational phenomenon that means the ability to influence followers to engage in achieving organizational goals, leadership is largely based on the ability to deliver leadership influence. The paper will consider the most important determinants of the influence of leaders on followers in the process of leadership in the organization, where we will point out the basic mechanisms of its implementation, as well as the sources of power on which the leadership influence is based, with particular emphasis on its positional and personal dimension. We will consider essential techniques of leadership influence, as well as basic factors that determine them, with special emphasis on the impact of national and organizational culture.

Keywords: leadership, influence, power, leadership process, organization

JEL Classification: L26, D23, O31, M13

КЉУЧНЕ ДЕТЕРМИНАНТЕ УТИЦАЈА У ПРОЦЕСУ ОРГАНИЗАЦИОНОГ ЛИДЕРСТВА

Апстракт

Као организациони феномен који означава способност утицаја на следбенике да се ангажују у остварењу организационих циљева, лидерство се, у великој мери, базира на способности реализације лидерског утицаја. У раду ће бити разматране најзначајније детерминанте утицаја лидера на следбенике у процесу лидерства у организацији, при чему ће се указати на основне механизме његове реализације, као и на изворе моћи на којима се базира лидерски утицај, са посебним акцентом на њену позициону и персоналну димензију. Биће разматране суштинске технике лидерског утицаја, као и основни фактори који их детерминишу, са посебним освртом на утицај националне и организационе културе.

Кључне речи: лидерство, утицај, моћ, лидерски процес, организација

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Introduction

Leadership is the ability to influence followers to engage in achieving organizational objectives, using appropriate motivational techniques of influence based on power and formal or informal authority (Isam, Rehman & Ahmed, 2013, p. 81). The very definition of leadership implies the fact that it is an activity that essentially relies on a process of influence, which, in turn, is based on different sources of the leadership power. The process of leadership involves a set of activities involving leaders and followers, who work together to achieve organizational goals and it refers to multidimensional relationships that can be achieved only through active participation of all relevant stakeholders in the leadership process. This implies that the process of leadership is two-sided and involves a two-way mutual influence of leaders on followers, and followers on the leaders, which is why it can be argued that the leadership process is a function of three essential variables: leaders, followers and situations (Yukl, 1998; Northouse, 2008; Daft, 2011). The highlight of influence in most leadership definitions clearly indicates that it is a social process, which by no means can be one-sided. What makes its essence and represents a fundamental mechanism for its operation, without which, in fact, we could not talk about the phenomenon of leadership, is precisely the process of influence, which represents the core of the leadership process, because mobilization and commitment of followers is being realized through it (Stoner, Freeman, 1995).

The mechanisms that ensure the influence of leader and the support of followers are a source of controversial opinions of theorists, resulting in the different definitions and diverse theoretical concepts that interpret the phenomenon of leadership. It is these mechanisms, their sources and factors that will be the subject of this paper.

The aim is to highlight the importance of the phenomenon of influence in the leadership process, the specific tactics of leadership influence, the factors that affect influence, as well as the most important sources of power on which the influence of a leader is based. Consequently, the aim is to draw the attention to the fact that the quality of the leadership process, in addition to the characteristics of leaders, followers, and the peculiarities of the situation, is significantly caused by specific mechanisms for achieving leadership influence.

In this study, qualitative methodology was applied. It was based on a descriptive study, comparison and interpretation of scientific achievements identified as relevant within a defined problem area, in order to synthesize the different positions, based on which the general conclusions about the significance of the influence of the leadership process were derived. Theoretical verification was achieved by applying the method of analysis, synthesis, deduction and induction, with the aim to come to the adequate general conclusions by abstraction and generalization.

Bearing in mind the object and purpose of the research, after introductory remarks, the paper is divided in four parts. The first part deals with the essence of leadership influence, followed by the second part where the most important sources of power on which the influence of leaders is based are pointed out. Thereafter, the third part provides an overview of the most important tactics of leadership influence, while in fourth part we consider the impact of national and organizational culture on the selection of tactics of influence in the process of organizational leadership.

The essence of leadership influence

The influence is any action or behavior that leads to changes in attitudes or behavior of another person or group (Yukl, 1998).

An important feature of any leadership process is that it always takes place in the context of certain groups and the specific situation, and in this light to be seen, the different aspects of leadership influence should be considered. There is no doubt that this is an extremely subtle phenomenon, which, despite many years of research is still not fully understood. One theory, which is often used to explain this process, is a theory of exchange, which sees leadership as a process in which a specific exchange of benefits between leaders and followers is performed (French, Bell, 1999, p. 284). Depending on the position in the exchange, superior and inferior actors are formed, and therefore one party will be able to realize a position of power and influence other actors in exchange. The benefit of the exchanges may be tangible or intangible (psychological, emotional) value, and is defined depending on the situation, which made frequent attempts to explain the process of leaders' influence on the other actors based on psychological categories. This is quite acceptable if one takes into account the fact that both sides of this process are people with different cognitive schemes and psychological characteristics. In this regard, nowadays the so called “emotional aspects” of leadership influence are very present. These aspects assume that the leader-follower relationship is often difficult to explain rationally, and more likely connected to emotional reasons (Hollander, 2000). Among the psychological theories that attempt to define and explain this relationship, the theory of identification occupies the special place, indicating the human need to identify with other people, especially with the members of the group, in certain situations, which is listed as one of the determining factors for the design of the leadership process (Hollander, 2000). The question of who will be singled out as the person who can exercise influence over others in this process, i.e. as a leader, depends on many factors and many situational variables.

As a very important component of leadership process, the influence is a complex category. There is no doubt that the level of influence is closely correlated with the amount of power that a leader possesses. However, since the model of influence includes other components, it can be concluded that power is only a potential for a leader to influence the behavior of certain social actors. The degree of effectiveness of the entire leadership process depends on the extent in which this potential will be realized. This is because an attempt to influence can result in three basic types of reactions (Du Brin, 1997):

1) *Acceptance and commitment* - the person that is an object of influence agrees with the decision or request of the other person and makes great efforts to implement the requirements or enforce the decision. From the standpoint of one who seeks to influence, this is the most desirable outcome.

2) *Compliance* - a person is ready to do what is required, but does that reluctantly and with minimal effort. This is about the impact on the behavior, not the attitudes of target actors who agree to implement the decision, although they are neither convinced of its accuracy, nor the positive effects of its application.

3) *Resistance* - the target person is not ready to accept the demands of leaders and actively trying to avoid or sabotage them. In this case, it is difficult or completely impossible to achieve effective influence.

Understanding the essence of the process of influence is associated with basic psychological categories (which often explain the leadership process in whole), such as instrumentalization, internalization and identification, which also serve to highlight the different mechanisms of leader's influence on followers (Hollander, 2000).

Instrumentalization is based on compliance with the requirements in order to achieve the desired benefits (rewards) or to avoid penalties controlled by a person who makes an influence (the leader), where, as already mentioned, both categories can be tangible or intangible (Yukl, 1998; Shamir, House & Arthur, 1993). Basic driving forces of this behavior are purely instrumental in nature, and are related to practical reasons, primarily, rational behavior directed towards an attempt to avoid punishment or gain a reward.

The process of *internalization* is based on the commitment of followers who are willing to carry out the requirements of leaders, because these requests are internally desirable and aligned with their own values, beliefs and personal preferences. In this case, the requirements are integrated into the dominant system of values of people who are targeted, which is why they are ready to implement them, regardless of the expected benefit (or detriment) (Shamir, House & Arthur, 1993). Thus, internal motivation is affected and people are encouraged to focus on the internal incentives, such as self-expression, advancement and self-respect, but that it is not contrary to the interests of the organization. At this stage, the values compatible with the value system of followers are being attributed to the leader, after which the leader is perceived as someone similar to the followers, and therefore worth of engagement and investment of energy by followers, thus paving the path for the realization of leadership influence. This variant of attribution is known as “egocentric attribution”, and refers to the natural tendency of every individual to better evaluate people estimated similar to themselves, on any criterion (sometimes even by attributes related to physical appearance) (Bowditch, Buono & Stewart 2008; Janićijević, 2008).

The process of *identification* refers to the identification of target people with those who exert influence, whereby the fulfilment of demands occurs as a result of the desire for acceptance and respect. The influence exerted in this way can be achieved deliberately or spontaneously, although it is very strong in both cases, given the strong psychological triggers that make up its surface. This type of influence is especially peculiar to charismatic leadership, which is based on the strong appeal of leaders to followers and their need for approval and acceptance by the leaders (Bowditch, Buono & Stewart, 2008). Personal identification with the leader of one of the key elements in leadership development and is present in the majority of followers, and especially in the type of followers with the problems of personal identity, low self-esteem and a high need for dependence on authority. Equally important is the process of social identification, which includes tendency of people to define themselves primarily through membership in a particular group or organization, seeing it as an important part of their social identity (Yukl, 1998; Shamir, House & Arthur, 1993). When the social identification is extremely high, people are willing to subordinate their individual needs to the group ones, sacrificing personal interests in favor of the group and the leader. Followers attribute to the leader those traits that they perceive as desirable, irrespective of whether the leader really possess them or not. Effective leaders are able to increase the level of social identification, and thus their influence, in different ways (for example, by giving a group of specific features, symbols, rituals, making it so different from other groups).

The power in the leadership process

As an instrument that a leader uses in the process of establishing the influence on the followers, the power is one of the key aspects of research on the phenomenon of leadership „*Power is a potential ability to change behavior, course of events, to overcome resistance and force people to do things they otherwise would not do.* „ (Senior, 1997, p. 152).

Like leadership, power is obviously a social category and is manifested in the process of group dynamics, which is why it is considered to always be a function of certain social relations. It is not absolute, but relative category, which depends on how it is perceived by different social constituents, as well as what its primary sources are. Despite the fact that the literature identifies a number of sources of power in the organization, it can be concluded that, basically, the power derives from two main sources: from the position that a person occupies in the organization, or the attributes related to its holder and the connections that are established in the superior - inferior relations (Yukl, 1998).

It is known that the classical organizational theory recognized formal authority as the sole source of power. This type of authority is based on the perception of the duties and responsibilities that are inherent to a specific position in the organization, and includes the right of those who occupy a given position to influence certain aspects of the behaviour of members who work in other organizational positions, mainly via manipulation of rewards and punishments. Early studies of organization suggested that formal authority springs from tradition and that it is legalized through customs, practices and beliefs that certain positions in the organization carry a natural right of their holders to affect people in other positions, in the form of command, establishment of rules, requirements and expectations that these requirements are met (Senior, 1997, p.152).

Although it is specified in organizational chart, job description or other official document, the degree of leader's influence arising from positional power will be much stronger if his selection is supported by the majority of organizational members. Also, the intensity of the influence will be much greater if the values of leader are compatible with the values of followers or with generally accepted social norms. Otherwise, the formal authority based on position will be sufficient to secure a short-term impact, which cannot be regarded as a good basis for the realization of leader's power.

The second group of sources consists of different types of power that do not arise from the formal position that a leader occupies in the organization, but from his personal characteristics. One of the most important sources of personal power stems from the expertise or the ability to solve specific problems and carry out tasks in the organization. What is important for this kind of power is that it is not absolute, but relative, which means that it often does not depend on the real but a perceived amount of knowledge and information compared to other professionals in the organization and outside of it, so sometimes a little extra expertise, can bring a large volume of power and influence, and vice versa (Yukl, 1998). This is the so-called *reputational aspect* of expert power, which is based both on the actual amount of knowledge shown in critical situations, and the follower's idea of the leader's knowledge and expertise (Yukl, 1998). Expert power is an integral component of professional credibility and is closely linked to other forms of leadership power, which is called the power of emulation or referent power (Handy, 1993). This form of power largely corresponds to the process of leadership, and is based

on the desire and willingness of people to comply with the requirements of those entities that they admire and feel attracted to. As mentioned, a particularly powerful form of leadership power is reflected in the process of personal identification, in which followers who identify with the leader strive to be accepted and imitate his behavior, so a leader who is accepted can make a significant influence by promoting their own behavior as an example to be followed. Referent power is a subtle form of power and is based on the psychological impact of leaders and feelings of attraction and loyalty that develop gradually over a longer period of time.

Modern literature, with a certain critical review of traditional theories that explain the phenomenon of power, points out the invisible or hidden sources of power and influence. It is believed that most of the sources of power are in some way connected with the process of decision-making, whereby the power is explicitly being manifested by imposing the alternative that best suits those who have the most power. In this way, in direct confrontation in the process of solving problems, it is possible to clearly observe who the key holders of power in the organization are. Another aspect of power is reflected in the fact that certain solutions are imposed out of the decision-making process, so placing a question on the agenda is not allowed at all, or that a certain group of people is excluded from the decision-making process, whereby their leader presents its solutions as the only ones correct and acceptable, but without the use of visible force. This practically refers to the power of creating awareness, ideas and attitudes of followers in order to perceive the beliefs and attitudes of a leader as their own. Although this form of power is treated separately and is usually called interpretive power (Janićijević, 2008), it must be based on one of the other sources of power, so it should always be considered in the context of the position or the personal characteristics of leaders.

In the context of the strategy of increasing the power of a leader in the framework of the political process, there is a question of balancing its structure, or a combination of different sources and forms of power, as well as the question of the quantity of power necessary for the realization of the desired impact on followers. Although it is now considered that the ideal solution is a combination of positional and personal power, the classical theory of organization and management advocated the idea that positional power sources provide long-term opportunities and stronger influence. Over time, these stances have been misinterpreted and brought to the counterfeits, so in a large part of modern civilization some kind of aversion to positional power has been developed, which has become synonymous with the threat, fear and manipulation. It is necessary, however, to emphasize that the positional power is extremely important, not only as a significant source of influence, but also because it can be used to increase personal power leader, and create conditions for its implementation (Yukl, 1998). So, for example, control of information complements the expert power, based on technical skills and other skills, while the power of rewarding facilitates the development of deeper relationships among the members of the organization and can increase the referent power of a leader. A certain amount of power of punishment is needed to support the legitimate and expert power where necessary to ensure compliance with rules and procedures, which are unpopular, but necessary to perform a specific task and for the successful functioning of the organization.

However, regardless of necessity, excessive level of positional power can be counterproductive and even detrimental. Leaders who have their influence based solely on positional power often miss other opportunities to exercise influence on followers.

It sometimes happens that leaders with strong positional power tend to turn such power into domination and exploitation of subordinates, as in some national cultures led to the formation of the saying that “power corrupts”, which primarily relates to the power of the position. On the other hand, personal power provides less opportunity for abuse, due to the fact that the impact based on this source of power can quickly be eroded if the behavior of a leader is not in line with the expectations of followers.

Given the fact that the influence is primarily based on power, it may be seen that each of the above influence processes has its stronghold in one of the typical sources of power: the instrumentalization is linked to the power of punishment and reward, internalization, mainly to the expert power and power of information, while identification is primarily based on the referent power. It should be noted that the aforementioned processes are not mutually exclusive, but they complement each other in an ideal situation.

The amount of overall leader’s power that is necessary for the realization of the influence depends on several factors, of which two are the most important (Yukl, 1998):

- 1) The objectives to be achieved or the requirements of the situation in which the leadership is manifested;
- 2) Leader’s ability to use the available power effectively.

Certain circumstances require more leadership power than others. A typical situation is related to the process of organizational change. A large amount of power is particularly necessary when there is a strong obstruction of changes, and when a long period of their implementation is expected, with no significant short-term results. These situations require activation of combined sources of power, and very often the application of different political processes and strategies, with the main intention of all holders of power reduced to its use for the exercise of leadership influence - substantive variables are directing the behavior of followers in the desired direction.

Basic tactics of leadership influence

Many years of practice have shown that more than one technique can be used in order to exercise or increase leadership influence. The most important techniques are the following: (Falbe, Joun, Yukl, 1993):

- Rational persuasion,
- Inspirational appeal,
- Integration,
- Exchange tactic,
- Personal appeal,
- Pressure tactic and
- Participation.

Rational persuasion is one of the traditional techniques of influence, and is based on the use of logic, facts, and arguments for the persuasion that a particular proposal or a request is the best way to achieve a certain goal. This technique provides the best results when the person to whom the influence is directed shares the same goals with the leader. The expert knowledge and rhetorical skills of leaders create a base from which the arguments that underpin the power of persuasion and influence on followers arise.

Unlike the logical and rational arguments, technique of *inspiracionog appeal* relies on emotions and personal values. It focuses on the development of enthusiasm and commitment, by fostering strong feelings, connecting requests or suggestions to the needs, expectations, desires or ideals of the target entity. The nature and content of inspirational appeal and the manner of its presentation depend on a series of incentives that serve as the driving force behind the behavior of leaders and followers (Green, 2008). In addition, its structure is caused by the complexity of the problem being solved, the risk level and the degree of deviation from the regular, everyday activities. The effective application of these techniques requires knowledge of the system of values, desires, beliefs, fears, emotions, etc., and the whole complex of factors that make up a psychological profile of a subject to which the influence is directed.

The exchange tactic is based on the implicit or explicit offer of rewards in exchange for obedience to a particular request. It is useful especially when the target person is indifferent or unwilling to accept a particular task, because its implementation requires great effort and does not offer any significant benefit. An essential prerequisite for its implementation represents a control of potential sources of remuneration which can be very diverse, and whose use is again conditioned by various factors motivating the person to whose behavior the influence is directed.

Personal appeal is the technique of influence, which is based on friendship and loyalty. Compliance with the requirements of the leaders in this case is motivated by purely personal attractiveness to the leader and a sense of closeness and loyalty by followers, which proceeds from the mutual friendly relations, and most commonly, informal relationships. *The integration tactic* is closely connected with the personal appeal. It is designed to develop a positive attitude towards the person who makes an influence, where giving compliments and doing extraordinary, often unexpected services, as well as show respect and friendly behaviour are the key means. If this kind of leader's behavior is perceived as genuine, it can lead to the formation of positive attitude of the target person towards the leader, which will result in a greater willingness to accept the influence. However, if applied directly before trying to influence, it can be perceived as manipulation and have the opposite effect, which is why this technique is significantly more effective as a long-term, than as a short-term strategy of influence.

The pressure tactics include threats, warnings and coercion, in order to ensure compliance with the requirements of a leader. Although there is a threat of conflict and adverse reactions in the form of obstructive behavior, there are cases where this technique is the preferred alternative, necessary to ensure discipline and respect of important rules and procedures on which the survival of the organization depends (eg. safety regulations). However, the pressure tactic by no means should become the dominant way of achieving influence in the leadership process.

In recent years, particularly popular influence tactic is related to the *participation*. It is based on the inclusion of the target person in the decision-making process, which increases their motivation and involvement in the implementation of those decisions. It is based on the fact that the size of the influence is not fixed, but rather a variable category, which can be divided between two or more individuals (Kelly, 2012). It is believed that the process of participation increases the weight of the overall influence of the leadership process, and, consequently the ability of a leader to influence the behavior of other actors of the process. This tactic figures as the foundation for the creation of modern leadership

styles that place the emphasis on the division of power, authority and responsibility, which will be discussed later.

Evident correlation of power and influence, in the light of the selection and effectiveness of certain tactics, can be manifested in several key directions (Falbe, Joun, Yukl, 1993):

1) The dominant form of power that a leader possesses, directly determines the choice of tactics of influence that will be applied in the leadership process. The use of certain tactic is caused by specific types of power that are *conditio sine qua non* of application of the most techniques of leadership influence. So, for example, the technique of rational persuasion requires the presence of expert power, the exchange tactic requires the power of remuneration, and the pressure tactic requires the power of punishment. It must be noted that in most cases for exercising influence the perceived power is much more relevant than the real power of the leader. Therefore, it is important to convince the target person that the leader has a certain power and that he can use it, regardless of whether it matches the real situation or not.

2) It is possible that the power of the leader acts as a moderating factor in the influence process, increasing or reducing its effect in situations where the application of certain tactic is not directly associated with certain types of power as in the previous case. For example, a leader with high referent power will be able to achieve greater success in the implementation of techniques of rational persuasion than someone who does not possess this type of power, regardless of the fact that this technique is not directly related to the referent, but to the expert power. Also, a strong expert power can significantly strengthen an attempt to influence, even in cases where the expertise of leaders is not a primary factor for stimulating specific alternative choices.

3) There is a possibility that the power of a leader influences the response of individuals, even if the leader does not intend to exercise any influence on the behavior of that individual. People tend to behave much more polite and agreeable to the people who have significant power of rewards and punishments, which is manifested even when there is neither the direct dependence on the holders of this type of power, nor their ability to directly use it. The point is that people perceive the potential effects of such behavior and the possible reaction of the leader in the future and accordingly adapt their current acts, which in the end results in an influence that a leader is not even aware of.

Certain studies have shown that some of the tactics of leadership influence are more efficient in one than in other situations (Du Brin, 1997). So, for example, inspirational appeal and pressure tactics produce the best results when used in a top-down variant; personal appeal and exchange tactics are more successful in lateral relationships, while rational persuasion tactics are the most effective when applied to the lower organizational levels.

The impact of national and organizational culture on leadership influence tactics

The choice of tactics of leadership influence and dominant sources of leadership power are influenced by the characteristics of national and organizational culture within which the observed organizations and their leaders are functioning. It is known that all national cultures may vary in relation to the four primary dimensions (Hofstede, 2001):

Individualism versus collectivism identifies whether the culture dominantly reflects an individual or a group. Individualism means weak social ties and social structure in which the individual cares only for self, they early become independent from their primary family and they are considered to be responsible for their own destiny. In collectivist cultures, people are attached to the collective, often to the extent that their own identity is experienced only through a social community. The members are loyal to the group, which is expected to protect and help them, and in turn they provide maximum support whenever necessary. In individualistic cultures, individuals are responsible for making decisions, whereas in collectivist culture the responsibility is shared by the group members. In collectivist cultures, there is a much greater tendency for group members rely on the authority of the position in the decision-making process, which is why the influence of leaders is more based on positional, rather than on personal sources of power.

Power distance describes the extent to which a society accepts that power in institutions and organizations is distributed unequally (Hofstede, 2001, p. 340). In cultures with higher power distance, there is a dominant view that the unequal distribution of power is natural and desirable or necessary for the functioning of society. In these societies the authoritarian consciousness prevails, the degree of centralization is higher, and the organizations are characterized by clear hierarchy, formalized structures and unquestionable obeying to the people in the positions of power. In contrast, in the cultures with low power distance, there are aspirations for greater unification of power among members of society. Those who have the power - try not to expose it, the decision-making is decentralized on all the levels, while the organizational structures are more flexible, less rigid and inclined to informal models of structures, favoring personal power of the leaders.

Uncertainty avoidance identifies the willingness of members of a culture to accept uncertainty, risk and change. National culture with a high degree of uncertainty avoidance is characterized by an extremely low tendency for people to change in the private and professional spheres, fear of everything new and unknown and low tolerance of differences on any grounds. In these cultures there is a pronounced distrust of individuals and groups who in any way deviate from standard behavior patterns, as well as of those who belong to other national cultures. As a result of such attitudes, organizations in cultures with a high degree of uncertainty avoidance are based on a number of formal rules to regulate the behaviour of employees, standardization and formalization, in an attempt to provide as much stability and predictability, which is why those organizations incline to a greater use of positional power and tactics of leadership influence based on it.

Masculine versus feminine values in the literature are often defined as the quantity versus quality of life. In cultures with a predominant masculine values, there is a dominant need for achievement, success and acquisition of material goods, which are the basic criteria for the assessment of one's capabilities and value. In contrast, in cultures with prevailing female values, there is a dominant need for social contacts, providing support and assistance, the development of harmonious interpersonal relationships, respect and dignity. In these cultures, power is based more on personal than on the positional sources of power.

Besides to the characteristics of national culture, the choice of tactics of leadership influence and the dominant sources of power is also influenced by organizational culture. *Organizational culture as a system of common values, attitudes and ways of thinking*

shared by employees of the organization (Bratton, Gold, 2003, p. 485) defines a set of beliefs and assumptions about how employees should behave, what is important for the organization and how it should be positioned in relation to the environment (Eric Nielsen, 2015). Organizational culture consists of its dominant values, and, from that point of view, can extract as many cultures as there are types of different systems of values and beliefs (Cooke, 2003). One of the most famous classifications of organizational cultures is one given by Harrison and Handy, who divided all cultures into four types: power culture, role culture, task culture and person culture (Petković, Janičijević et al. 2014). Each of these types of culture promotes the domination of some sources of leadership power, and therefore the basic sources of leadership influence.

Power culture is neither based on rules and procedures, not burdened by bureaucracy, so the decisions may be made very quickly. This culture is mainly present in a small organization, although it can be found in the organizational units of the larger systems. The system relies on the central figure of the leader, who is the holder of power, resulting in a structure that is able to rapidly change in an attempt to respond to external challenges. Communication is intense and informal, and political processes and the struggle for power are very pronounced and strong. The autocratic leadership, in which the resource control or personal charisma is a main source of power of a leader, is most commonly applied.

Role culture is often referred to as bureaucratic, because there are clearly defined procedures of behaviour, formal rules, standards and descriptions of roles. It is based on logic, reason and rationality. The power of a leader ensues from the position and is generally depersonalized. This is an organization with clear hierarchical levels and inclined to centralize decision-making. Its advantage is the predictability and stability, while the disadvantages are reflected in inflexibility, inertia, tightness and slow response. This culture creates a highly structured, stable organization, bureaucratically accurate job descriptions and roles of individuals, in which work is controlled through procedures and rules which are far more important than the person who applies them.

Task culture is based on the assumption that solving problems is the purpose of the organization. The emphasis is on results and how to get the job done in the best possible way. Individuals have broad discretion and control over the work they perform. This culture is flexible and adaptive. The organizational structure is often based on teamwork, flexible and can be transformed depending on the current task. The organization does not have such solid and clear boundaries between the segments as is the case with the role culture. The power of a leader stems from expertise, so much more from the knowledge than from his position. Performance is viewed in terms of results achieved and problems solved, and the success and achievement are the most appreciated values. Talent, creativity, team problem solving and cooperation are also favored.

Person culture favors the interests and goals of the individual who is the central figure in the organization, which exists precisely to serve as a support to other individuals. The highest value of the organization is the person's autonomy and its members believe that they are, in a sense, superior to the organization. Individual goals dominate the organizational ones, so that the survival of the organization can be difficult and uncertain, which is why this culture is rarely present in the entire organization, but rather can be found in its smaller parts. It is characterized by a small number of rules and procedures, is extremely decentralized when it comes to decision-making, there is a wide dispersion of power and insistence on individual freedoms. Given that the source of power lies in the competence and inventiveness

of employees, the advantage of this organizational culture may be in creativity and innovation, which is why it is usually related to scientific research institutions.

Conclusion

One of the primary characteristics of the process of leadership is to be largely based on the influence that is being realized with the use of any source or a form of power. The power is an instrument used by the leader in order to establish the influence on followers. Regardless of whether it is a positional or personal dimension, the power is an essential component of the analysis of any leadership process.

Given the fact that the amount of leadership influence is not a fixed category, it can be increased by using different tactics, depending on the specifics of the situation. It can therefore be concluded that the influence of a leader is a specific contingent variable, which is formed under the impact of various situational factors, but there are circumstances that require a combination of multiple tactics of influence and more sources of leadership power, and one of those situations is connected to the context of organizational changes, which are an essential precondition for the survival and functioning of the organization in the modern environment.

The scientific contribution of this work, in theoretical terms, is reflected in the emphasis on the importance of research of the phenomenon of influence and power in the leadership process, as well as in highlighting the role of various factors in the choice of tactics of leadership influence and giving benefits to certain sources of power, in the process of organizational leadership. Theoretical approach synthesized in the paper is the basis for possible future theoretical and empirical research, and its practical contribution is reflected in provision of the guidelines for leaders in the organizations in order to more actively consider the effects of certain tactics of influence, power sharing and their adjustment to the requirements of specific situational circumstances.

The fact is that the tactics of leadership influence, with the support of the power that makes their essential back-up can lead to routing the behavior of followers in the desired direction, and to inspire people to engage in achieving a certain goal, which is the essence of leadership process. The extent of this influence and manner in which people respond to an incentive or an influence attempt, depends primarily on the degree and nature of their motivation. Therefore, the motivation can be considered as the third link in the chain of leadership process, which is very important, and future research will be aimed, *inter alia*, to this problem area.

The biggest limitation is reflected in the lack of empirical research that would explore the effects of certain tactics of influence, in the context of cultural and organizational specifics of domestic enterprises, and examine concrete relations of influence in the process of leader-member exchange in organizational leadership in our country. It is evident that the process of leadership in organizations cannot be carried out independently of the application of power, and that the effectiveness of the overall leadership process is largely conditioned by the strength and the form of the leader's influence on the followers. In this context, we should expect an increasing number of empirical studies in this problem area, which will be one of the directions of future research of the author of this article.

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ORIGINAL SCIENTIFIC ARTICLE
doi:10.5937/ekonomika1604031J
Received: October 21, 2016
Accepted: November 18, 2016

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INFLUENCE OF EXTERNAL FACTORS ON BUSINESS OF COMPANIES IN SERBIA

Abstract

Business environments can be internal and external. In this paper you will see how external business environments affect business enterprises. They can affect business results positively or negatively. Empirical research was conducted on 60 companies in Serbia. The results show that the external environment is not influencing their businesses favorably. The most negative factors are political. In order to eliminate the negative impact of these factors, it is necessary for the government to take certain measures.

Key words: Business environment, Company, External factors

JEL classification: B21, L20, M21

УТИЦАЈ ЕКСТЕРНИХ ФАКТОРА НА ПОСЛОВАЊЕ КОМПАНИЈА У СРБИЈИ

Апстракт

Пословно окружење може бити интерно и екстерно. У раду се указује како екстерно пословно окружење утиче на пословање предузећа. Они могу да делује позитивно или негативно на пословне резултате компаније. Сprovedено је емпиријско истраживање на 60 компанија у Србији. Резултати показују да екстерно окружење не делује повољно на њихово пословање у Србији. Најнегативније утичу фактори из групе политичког окружења. У циљу отклањања негативног утицаја ових фактора потребно је предузимање одређених мера од стране владе.

Кључне речи: Пословно окружење, Компанија, Екстерни фактори

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Introduction

Every organization has its own internal and external environment. Understanding the external environment is very important for a successful business. External factors affect almost every aspect of business, whether it is the location of the market, product price, product distribution etc.

The subject is to determine the impact of external factors on the management of the company. The main goal is to present the external factors that have the most negative influence on the operations of companies in the Republic of Serbia.

The paper consists of 2 parts. The first part defines the concept of the business environment. The terms internal and external environment are described in it. In addition, the factors of the internal and external business environment are shown. The second part presents the results of empirical research. The survey tested 60 companies. The survey contains key external environmental factors that may impact the organizations management. The results indicate that factors from the political and legal environments have a negative impact on the operations of the company.

Hypothesis 1: Many external environmental factors affect the business of companies in Serbia, the most important of which are from the political and legal environment.

Hypothesis 2: Companies in Serbia do not hold to a detailed assessment of operating costs in high regard, so factors of the economic environment are ignored.

Business environment

All companies have internal and external environment. The internal environment is associated with human resource management and business organization. To some extent, the internal environment can be controlled and changed through the planning and management of business processes. Internal environment factors are human resources, organizational culture, organizational structure and management. (Đuričić, 2013)

Knowledge, experience and workforce capabilities are a decisive factor for a company's success. This is why a great deal of attention is directed toward the recruitment of qualified workforce and staff training in particular. Achieving these goals is often limited by financial resources. However, staff training is an essential aspect of good business management. Keeping that In mind, this goal should be achieved even in a difficult financial situation. (Obradović, Fedajev, & Nikolić, 2012)

The success of any company depends on the ability to adapt to the environment in which it operates. For example, when the government changes its policies, the organization should adopt such changes. Similarly, changes in technology can make existing products outdated, such as computers succeeding typewriters or color TV's succeeding black and white TV. Also, fashion changes may affect the distortion in the market of a particular product. For example, the demand for denim clothing has influenced the decrease in demand for traditional clothing. All these cases represent external factors which cannot be controlled by the company. Therefore, if the company wants to continue its business, it must adapt to changes. (Wong & Mohd, 2013)

The term external business environment refers to an aggregate environment that may have a direct or indirect impact on the performance of companies. It can also be defined as a set of external factors, such as economic, social, political and legal factors, demographic factors and technical factors, which cannot be controlled and which affect the efficiency of the company. (Isiac, 2014)

The survival and success of any company depends on its economic environment. The main factors affecting the economic environment are economic politics, economic situation and factors such as energy prices, transport costs, the price of telecommunications services, quality standards, the influence of the banking sector etc. (Živanović, 2014)

The economic situation of the nation refers to a set of economic factors that have a major impact on the operations of the company. This includes the gross domestic product, the market of goods and services, foreign exchange reserves, the growth of foreign trade, the availability of capital, the power of capital markets etc. The economic situation of the nation has an impact on patterns of consumer spending. An increase in interest rates and / or high levels of unemployment will reduce consumption of non-essential goods and services. For example, if people experience financial difficulty, they will spend less money on sports and recreation, vacations, new cars and luxury goods. (Semolic, 2007)

Social environment includes social factors such as customs, traditions, values, beliefs, literacy, life expectancy etc. Social structure and the values that a society cherishes has a significant impact on the company's functioning. (Kennerley & Neely, 2013)

For example, before “Microsoft” bought “Nokia”, Nokia had mainly been operating in the Western market. It was important to fully understand social factors in this market, as well as to constantly improve technology. The growing trend towards smart phones has led to people only buying these phones, and the demand for standard phones falling significantly. Nokia's task was to recognize such a set of circumstances. However, the company management decided to take it another step forward and develop the next generation of smart phones. Due to the slow progress of such enterprise, Nokia has lost competitive advantage, product sales, and financial power. This has led to the purchase of Nokia by Microsoft, and termination of this brand. (Hueske, Endrikat, & Guenther, 2015)

The political environment includes the political system, government policy, the attitude towards the business community, trade unions etc. All these aspects have an impact on the design of corporates strategy. The stability of the government will also send a signal of strength and confidence to potential investors. Political factors affecting the business are important. All companies must obey the law, and managers need to recognize how upcoming laws will affect business. (Yunusa, Bustamanb, Wan, & Wan, 2014)

Technological environment includes methods, techniques and approaches adopted for production of products and services and their distribution. Technology is a key factor in economic development. Due to the advancement of international communication, the growing economic interdependence of countries, as well as serious shortages of vital natural resources, transfer of technology has become a major preoccupation of developed and less developed countries. (Unknown, 2015) Huge changes in the technological environment have occurred over the past 30 years, mostly in sections such as the chemical, pharmaceutical and electronics industry. It is very important for companies

to keep up to date with these changes, not only because it will enable innovative new products, but will also give them a competitive advantage. (Yoo, Sawyerr, & Tan, 2015)

The legal environment is derived from the political situation in the country and has three dimensions: the laws in the country, the laws of the foreign market and international laws. The basis of all commercial activity is a contract. The purpose of the contract is to determine rights and obligations of the parties. In this way, the possibility of conflicts between parties is reduced. In the context of international business, which brings a number of risks and complexity, the contracts assume a key role in, for example, booking forwarding companies, shipping lines, airlines etc. (WTO, 2015)

There are many demographic factors affecting business such as income, age structure, geographical area, changes in the size and structure of population etc. These factors can be presented as a range of properties that are used to determine consumer preferences. Many companies identify their key customers through the analysis of these traits. Then they target consumers with similar characteristics through advertising and promotions. Targeted consumers with similar demographic characteristics help the company increase its sales and profit. (Peterson, Rhoads, & Vaught, 2001)

Case study - impact of external factors on business of companies in the Republic of Serbia

*Table 1. Importance of external environmental factors on company's operations
in the Republic of Serbia*

<i>Rang</i>	<i>Factors name</i>	<i>Average rating</i>	<i>Max. rating</i>	<i>Min. rating</i>
1	High tax rates	4.32	2	5
2	Problems with the collection of receivables	4.21	1	5
3	High levels of corruption	4.16	2	5
4	Finding appropriate business partners	3.95	1	5
5	Fluctuation of exchange rate	3.74	1	5
6	Political instability in the domestic market	3.63	1	5
7	Lack of incentives for local authorities	3.62	1	5
8	Lack of adequate infrastructure	3.53	1	5
9	Inadequate legislation	3.42	1	5
10	Inadequate workforce on market	3.40	1	5
11	The efficiency of the judiciary	3.37	1	5
12	Complicated export procedures	3.27	1	5
13	Implementation of legislation	3.25	1	5
14	Energy price	2.24	1	5
15	Lack of information on foreign markets	3.16	1	5

16	Inadequate bank support	3.14	1	5
17	Failure to fulfill contractual obligations	3.05	1	5
18	Tariff barriers	2.89	1	5
19	The fulfillment of the necessary quality standards	2.85	1	5
20	The high level of prices of telecommunication services	2.79	1	5
21	Lack of raw materials	2.68	1	5
22	Difficulties in the purchase / lease of business premises	2.62	1	5
23	High transport costs	2.21	1	5

In this section, the analyzed and presented results of an impact assessment of external environmental factors on the operations of companies with 5 to 30 employees will be shown. Firstly, they identified key external environmental factors that may impact the business of an organization. A sample of 60 companies was analyzed on the territory of Serbia.

The research results are presented in tables. In Table 1 results are shown and ranked by the influence of external environmental factors that may affect the business. The factors are ranked according to the average rating of answers. A minimum and maximum rating is given in addition to the average rating for each factor according to the responses given. External environmental factors were evaluated by the impact from 1 to 5 (1 - least affecting, 5 - most affecting).

The resulting ranking list points to the major problems faced by companies in Serbia. If you look at the results shown in Table 1, you can come to a conclusion that the tax rates, the issue of debt collection and high levels of corruption are the most important external environmental factors that affect the business of the companies. Based on ranking factors listed in Table 1, it can be concluded that the first 10 ranked factors are typical for political and legal environments, which was one of the six external factors considered in the business environment, and thus confirming the hypothesis 1.

To the contrary, the least significant external environmental factors that may affect the operations are the fulfillment of the necessary quality standards, high prices of telecommunication services, lack of raw materials, difficulties in purchase / lease of business premises and high transport costs, which are specific for the economic environment, which was also subject to external environmental factors considered, and thus confirming the second hypothesis.

Conclusion

The term external business environment involves external forces, factors and institutions that are operating beyond companies' control, which affects the functioning of the organization. Changes in the external business environment are unpredictable, vary from city to city, region to region and from country to country. Analysis of the

environment can significantly facilitate the work of managers in dealing with business challenges.

There is a close interaction between the organization and its environment. This interaction helps the company's development, growth and efficient use of resources. As already mentioned the external business environment is complex and dynamic by nature and has a long lasting impact on the survival and development of business. A proper understanding of the social, political, economic, legal, demographic and technological environment helps companies identify opportunities and threats, focus on growth and continuous learning, achieve competitiveness and identify strengths and weaknesses.

Based on the conducted tests, the importance of external environmental factors can be seen. The research results can provide important information about the impact of external factors on the business of companies in the Republic of Serbia, based on empirical results, to managers of companies and potential investors.

The results of this research should be interpreted with caution, due to certain limitations. The main source of limitations is in the survey itself, which covers only the most important external environmental factors. Surveys were completed by one person, which is, in most cases, the owner of the company. Other than that, the survey is also affected by the fact that the respondents cannot be impartial, as well as the competence of the interpretation of the environmental factors. In addition, a relatively small sample of 60 companies that participated in the survey had been used, mainly those that operate in the township of Niš.

This work may be subject to further examination, which may include medium and large companies that would set up a hypothesis confirmed on a larger sample.

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ORIGINAL SCIENTIFIC ARTICLE
doi:10.5937/ekonomika1604039P
Received: November 22, 2016
Accepted: December 06, 2016

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STUDENT FEEDBACK AS A GUIDELINE FOR HIGHER EDUCATION QUALITY ENHANCEMENT

Abstract

Increasing competition present in the higher education in B&H has conditioned the trend that institutions need to “fight” for each student via quality development at higher education institutions. This paper deals with means of enhancing quality at eMPIRICA College through continual investigation of students’ satisfaction.

For the purpose of this research, we used a quality questionnaire related to quality, satisfaction and loyalty of students. The research was carried out at the start and end of the academic year. This approach ascertained a gap with respect to quality, satisfaction and loyalty of students of eMPIRICA College.

Using factor analysis the statements were grouped in 3 quality dimensions. The results of multivariate analysis of variance (MANOVA) showed that there is a significant statistical difference between expected and perceived quality, satisfaction and loyalty on the part of the students. Based on that, a gap between expectations and perceptions was ascertained. The use of t-test revealed that some statements have significant statistical difference in the area of expected and perceived quality, satisfaction and loyalty of students.

Key words: Higher education, quality assurance, multivariate analysis, gap

JEL classification: I23, C38

ИСПИТИВАЊА МИШЉЕЊЕ СТУДЕНАТА У ЦИЉУ ПОВЕЋАЊА КВАЛИТЕТА ВИСОКОГ ОБРАЗОВАЊА

Апстракт

Повећањем конкуренције у високом образовању у Босни и Херцеговини усло-

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вило је тренд да се високошколске установе е морају “борити” за сваког студента кроз развој квалитете. Овај рад се бави начином повећања квалитетом на Високој школи еМПИРИЦА кроз континуирано истраживање задовољства студената.

За потребе овога рада кориштен је анкетни упитник који се састојао од тврђњи везаних за квалитет, задовољство и лојалност студената. Истраживање је проведено на почетку и на крају академске године. На овај начин је утврђен јаз у погледу квалитета, задовољства и лојалности студената на ВШ еМПИРИЦА.

Примјеном факторске анализе груписане су тврђе унутар квалитета у 3 димензије квалитета. Резултати проведене мултиваријационе анализе варијансе (МАНОВЕ) су утврдили да постоји значајна статистичка разлика између очекиваног и перцепираног квалитета, задовољства и лојалности студената и на основу тога је утврђено постојање јази код очекивања и перцепције студената. Примјеном *t*-теста је утврђено код којих појединих тврђњи постоје значајне статистичке разлике у оквиру очекиваног и перцепираног квалитета, задовољства и лојалности студената.

Кључне речи: Високог образовања, осигурање квалитете, мултиваријационе анализе, јаз

Introduction

Higher education in Bosnia and Herzegovina (B&H), as in Europe, is facing numerous challenges. Those include: a need for quality enhancement and harmony between teaching and learning on one hand, and the wider social needs and market demands on the other; adjustment to globalisation and an increasing number of students and higher education institutions in the whole world; an increase and dissemination of higher education services using new technologies such as massive open online courses or blended learning (Nanić, 2014, p, 923).

Specific tendencies in higher education in B&H and beyond have influenced the work of higher education where quality as a means to attracting students has become more important. However, Senthikumar and Arulaj (2011) claim that overall higher education quality lags behind primary and secondary education, and more attention needs to be given to higher education.

Higher education institutions as leaders of society development need to offer users a specific quality in their work. Specificity of education is that within its system knowledge is transferred onto the users, and students are the primary users of the educational system. Students acquire new knowledge and competencies in the higher education which they utilise in all segments of life.

Students are the best instruments to measure the quality of higher education since they are the primary users of the educational system. In order to enhance quality system at a higher education institution, it is essential to investigate the satisfaction of students in that institution. Comparison of satisfaction of students in two time periods can give us an

insight into what has improved/worsened in the system. The investigation is conducted by determining the gap between the expectations and perceptions of students. Through implementation of Bologna Declaration in B&H educational system, the quality keeps developing. The higher education institution needs to actively apply the quality system as it is the only way to receive all necessary licenses and accreditations (Puška et al., 2015, p. 16). According to the official records retrieved from the website of Centre for Information and Recognition of Qualifications in Higher Education in B&H, currently there are 10 public and 38 private higher education institutions which have a license. Out of these, 18 HEIs have received an institutional accreditation and 12 more are in the process of becoming accredited, which puts the quality culture at a higher level in B&H.

The topic of the paper is to investigate methods of enhancing quality system at eMPIRICA College through determining the gap in the quality system. Determining in what statement there is a gap helps in providing guidelines for enhancing the overall quality level.

Main aim of this paper is enhancement of quality system via determining the gap between the expectations and perceptions of the students. Supporting aims of this paper are to:

- Group the statements on measuring quality into quality dimensions,
- Determine if there is a statistically relevant discrepancy between expectations and perceptions in quality, and satisfaction and loyalty of the students,
- Investigate in which quality statements there is a gap between expectations and perceptions.
- Provide guidelines using the results of the research to enhance quality at eMPIRICA College.

Conceptual framework of the research

Higher education quality

Quality in HEIs is equivocal and encompasses teaching delivery (a high-quality curriculum adjusted to the market), high-quality work conditions (well-equipped schools), competent teaching staff (qualified to offer knowledge to students), competent HEI employees (Students' office clerks, expert associates, etc.), etc. (Puška et al., 2015a, p. 16).

Due to its complexity and multidimensionality, the quality needs to be observed from various angles, out of which students' opinion is the most important as they are direct participants in the higher education system. So as to maintain the quality level, all actors and work conditions at a higher education institution have to be oriented toward quality enhancement.

Quality system is not merely introduced so as to meet legal regulations, but the quality needs to serve in building satisfaction of the student, who will be loyal. (Puška et al., 2015b, p. 104)

The system of quality assurance guarantees that the subject of higher education pays attention to the purpose of its existence, to the processes that contribute to the creation of experts and to people who plan and conduct education processes and scientific an research work (Mencer, 2005, p. 241).

Main tendencies in the field of assuring and enhancing quality of higher education are conveyed through (Lazić, 2007, p. 1):

- Ascertaining unique criteria of assuring and guaranteeing the quality of education within the frame of Bologna process,
- Developing, determining and balancing national systems of accrediting HEIs and study programs and
- Elaborating on and introducing the quality management system based on different QMS models.

Establishment of quality system in European countries is conditioned by Bologna Declaration on development of higher education. “A wide spectrum of evaluation and accreditation programs of individual countries in the EU and the rest of the world considerably hinders the establishment of unique quality standards in higher education, comparison of accredited programs, curricula or institutions, as well as mobility of students and staff” (Petković, Jašarević, 2005, p. 288). It is precisely curricula, teaching staff and students that are key parameters of development and enhancement of quality in higher education.

Guolla (1999) deems that positive perceptions of quality can lead to students’ satisfaction and an increase in the number of students at the institution. Each HEI strives to achieve a competitive advantage and attract new students and keep the existing ones by enhancing the quality system (Temizer, Turkyilmaz, 2012, p. 3802).

Instruments for measuring quality in higher education

Different research applied different instruments to measure quality in higher education. Many researchers have readjusted SERVQUAL model for measuring quality for the purpose of investigating students’ satisfaction with the quality. Original SERVQUAL, created by Parasuraman et al., (1988) had its 10 dimensions reduced to 5, those being: tangibles, reliability, responsiveness, assurance and empathy.

By readjusting SERVQUAL model Owlia and Aspinwall (1996) suggested six dimensions to measure quality in higher education, those being: tangibles (appropriate equipment and facilities), competence (vocational classes, practical and theoretical knowledge), attitude (understanding needs of students, friendliness, personal care, etc.), content (practical application of curriculum, knowledge flexibility, etc.), delivery (effective presentations, feedback from students, etc.), reliability (trust, solving complaints and problems etc.). As it was mentioned above, HEI services are specific as they are used to transfer knowledge to students and for that reason it is not possible to apply the classical instrument for measuring service quality. Furthermore, Ho and Wearn (1996) incorporated SERVQUAL into HETQMEX model which is excellence model for higher education, while Klarić and Kulašin (2011) have developed SERVQUAL into HEDUQUAL model for measuring higher education quality.

In addition to SERVQUAL model for measuring higher education quality, the following models are also used:

- SERVPERF measures service quality based on the perceived service factors. It is in essence SERVQUAL model that differs in that it measures students’ perceptions, not expectations.

- HEdPERF was developed by Firdaus (2006) and it serves as a measuring instrument of service quality exclusively for higher education which consists of the following dimensions: non-academic aspects, academic aspects, reputation, approach and understanding. It is precisely SERVPREF and HEdPREF that represent the best instruments for measuring higher education quality, but it is not possible to determine which one is better (Camgoz-Akdag, Zaim, 2012, p. 875).
- EduQUAL is specifically suggested for education sector. It is used for measuring satisfaction level of different participants (Mahapatra, Khan, 2007, p. 289). This measuring instrument consists of the following dimensions: learning outcomes, responsibility, physical facilities, personality development and academic aspects.
- EDUSERVE was developed based on SERVQUAL measuring instrument which served for measuring the expectations and perceptions of quality in Mauritius high schools (Ramseook-Munhurrin et al., 2010). It consists of the following dimensions: empathy, school facilities, reliability, responsiveness and assurance of students' discipline.

Satisfaction and loyalty of students

Satisfaction is defined as a rate of the total service and service experience in the preceding period (Lin et al., 2010). Loyalty is a term connected to dedication of clients to a specific brand, shop or supplier based on the positive attitude and is reflected in the repeated purchase (Ningsih, Segoro, 2014, p. 1017). When applied to higher education system satisfaction is experience with higher education service while loyalty is students' dedication to higher education institution they attend, as well as their desire to continue their education there. The most important indicator in HEI quality research is precisely loyalty and satisfaction of students. A loyal and satisfied student helps in development of that higher education institution. Keeping the levels of loyalty and satisfaction of students is impossible without the implementation of quality system at that HEI (Puška et al., 2015a, p. 17). Connection of these two concepts with quality was dealt with in numerous studies. Puška et al., (2015a and 2015b) in their two studies connected quality perception with satisfaction and loyalty of students using multiple regression and canonical-correlation analysis and proved that a satisfied student is a loyal student. Negricea et al., (2014) investigated the connection of quality perception with satisfaction of students. Dib and Alnazer (2013) investigated how quality system is connected to satisfaction and loyalty of students. Dado et al., (2012) connected quality system with students' behaviour. Temizer i Turkyilmaz (2012) investigated how quality perception affects students' satisfaction index and its connection to loyalty.

Investigating loyalty and satisfaction is very important for each HEI. “Students transfer their satisfaction with work and quality of a HEI to others, and in that manner s/he represents that institution in the best possible way. On the other hand, a dissatisfied student will not represent the institution in the best way and in that manner the reputation and image of the institution suffers, which can result in a fewer number of enrolled students and migration of students to another institution.” (Puška et al., 2015b, p. 103).

If the university meets the expectations, the student will be satisfied and will be the best promoter of the university. The aim of education service flow is the satisfaction of the student, which leads to loyalty and projects itself to the continuation of the studies (masters, doctoral

studies, etc.) or initiates positive references to potential students and partners (general public) (Gajić, 2011, p. 73). Due to everything abovementioned for each HEI, it is very important to monitor its quality system, as well as the satisfaction and loyalty of its students.

Hypotheses of research

Higher education institution influences students through the established quality system. Yahnong Li and Kaye (1999) conducted a research on the sample of 228 students and proved that students' expectations are relatively stable in a period of time, while their perception of service quality changes during their studies and the perceived level of quality decreases as the studies progress. This research showed that all students have high expectations from HEIs, but the perceived quality decreases. For that reason it is necessary to enhance the quality system in HEIs so as the expected and perceived quality levels are approximately the same so that the students are satisfied with the HEI. Based on this and similar research the first hypothesis is formulated as follows:

- There is a significant statistical difference between quality dimensions based on expected and perceived quality level with students.

Satisfaction is the key factor of business success and implementation of quality system (Lin, Tsin, 2008). Due to that fact, it is very important to investigate satisfaction of students and determine if it changes over a period of time and if students' satisfaction increases or decreases during their studies. If students' satisfaction decreases during their studies, they will not be interested in continuing the following cycles at that HEI, and it is debatable if they will complete the current cycle at that HEI. Based on the abovementioned the second hypothesis is formulated as follows:

- There is a significant statistical difference in students' satisfaction at the start and end of the academic year.

Since the quality system is connected to satisfaction, and satisfaction, in turn, to loyalty of students, it is necessary to investigate if and how the loyalty of students changes. The mentioned studies have shown that these three research variables are mutually related. Loyal students continue other cycles at that HEI and recommend it to others (Temizer, Turkyilmaz, 2012). Based on that, it is necessary to investigate if and how the loyalty of students changes so as to enhance the quality at the HEI. For that purpose, the third hypothesis is formulated as follows:

- There is a significant statistical difference in students' loyalty at the start and end of the academic year.

To prove the proposed hypotheses the research will use multivariate analysis of variance (MANOVA). Based on that, the following variables are proposed: independent variable – conducted research in two time periods and dependent variables – quality dimension, satisfaction and loyalty of students.

Research methodology

For the purpose of this paper, empirical research was conducted at eMPIRICA College on two occasions. The first research and collection of primary data was conducted at the start of academic year 2014/2015, while the second research was conducted at the end of

the same academic year. The research was conducted on two occasions so as to determine the gap between expected level of quality, satisfaction and loyalty (the research at the start of the academic year) and perceived level of quality, satisfaction and loyalty (the research conducted at the end of the academic year). The point of this research is to monitor and enhance quality at the HEI.

Both pieces of research used the same questionnaire taken from our co-founder Ljubljana School of Business, Slovenia which consisted of 4 parts:

- 15 statements related to quality which encompassed different segments of a higher education institution: teaching and administrative staff, availability of information, facilities and equipment, as well as reaction of the institution to the needs and desires of students. Due to variety of statements, factor analysis will be used to determine quality dimensions,
- 5 statements to measure students' satisfaction,
- 5 statements to measure students' loyalty,
- Participants' characteristics (gender, year of study, study program, mode of studying).

First three groups of the questionnaire used five-level Likert scale, where students were required to provide their level of concurrence with the proposed statements (1 - strongly disagree, 5 - strongly agree). The fourth group of questions is related to the characteristics of the students: their gender, year of study, program study and mode of study. In both cases a web-based questionnaire was used which was uploaded to the scientific portal - lka.si - and the students received the link to the questionnaire. In the first research, the questionnaire was filled out by 85 students, which is 75 percent of the total number as there are 112 students in all three years of study. Due to the low total number, the research used purposive sampling, that is, the link was sent to all students via a personal message through e-learning platform – eCampus.

Overall statistical data analysis was carried out in the software package SPSS 20.0. which used several statistical methods. The reliability of the acquired data was measured using statistical analysis called Cronbach' alpha. Factor analysis investigated reliability of data based on Kaiser-Meyer-Olkin (KMO) test and Bartlett's test.

Apart from the need to investigate the proposed hypotheses, it is necessary to determine what statements within quality dimensions show the gap between the expected and perceived quality level and to what extent, so as to provide guidelines for enhancement of quality at eMPIRICA College. This approach will also determine the gap between satisfaction and loyalty of students so as to enhance loyalty and satisfaction of students at eMPIRICA College. In the course of proving this hypothesis and aims the following methodology will be used:

- Step 1: Grouping statements into quality dimensions using factor analysis,
- Step 2: Investigating reliability of the collected data using Cronbach alpha,
- Step 3: Investigating the proposed research hypotheses using MANOVA and
- Step 4: Investigating the gap between the expected and perceived quality using t-test.

Results of the research

The questionnaire was filled out by 84 students the first time, and second time it was filled out by 85 students and the following table shows the general characteristics of the subjects.

Table 1: General characteristic of the subjects

Factor	Category	Percentage in the 1st research	Percentage in the 2nd research
Study program	Engineering Informatics	46.4 %	50.6 %
	Business Informatics	53.6 %	49.4 %
Mode of studies	Full-time studies	26.2 %	27.1%
	Distance-learning studies	73.8 %	72.9 %
Gender	Male	89.3 %	84.7 %
	Female	10.7 %	15.3 %
Year of study	First	23.8 %	28.2 %
	Second	37.0 %	38.8 %
	Third	39.2 %	32.9 %
Total number of students		84	85

Source: Research results

Since the questionnaire was anonymous, it was not possible to compare the answers of the specific students and determine the discrepancy between them. However, since the general answers will be observed in two pieces of research and it will not be dealt with subtle differences in the observed categories of the subjects, these characteristics are considered acceptable for the further investigation.

To examine the reliability of the factor analysis results, we used Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett test of sphericity. KMO indicator ranges from 0 to 1. If the value of that measure is below 0.6, the correlation matrix will not be appropriate for the factor analysis. With Bartlett's test it is desirable that the significance value is below 0.05 ($p < 0.05$).

In the course of running factor analysis the analysis of main components was used, as well as Varimax factor rotation with Kaiser normalization. In the choice of number of factors we used unit root method, that is, Kaiser criterion.

Table 2 : Results of factor analysis on quality dimensions

Factor	Quality-related statements	Factor value	Statement code
1	Employees provide support to the students	.780	VAR06
	Employees help students in solving problems encountered in the course of the studies	.754	VAR03
	Employees always think in students' best interests	.753	VAR04
	The College looks after students' wellbeing	.740	VAR07
	Students' complaints are solved quickly	.738	VAR02
	The College keeps promises it has made to the students	.731	VAR05
	Employees in the College pay attention to the specific needs and wishes of the students	.717	VAR01
	Administrative staff at the College is pleasant	.530	VAR08
Explained variance 53.672%, Cronbach's alpha 0.921			

	Lecturers are available via electronic media	.803	VAR12
	Lecturers connect theory and practice	.674	VAR11
2	Lecturers treat students in a transparent way	.661	VAR13
	Lecturers use modern scientific methods in transferring knowledge	.653	VAR10
	College employees are always at students' disposal	.624	VAR09
Explained variance 7.393%, Cronbach's alpha 0.853			
3	The College has solid equipment	.837	VAR14
	College facilities are comfortable	.792	VAR15
Explained variance 7.137%, Cronbach's alpha 0.796			
KMO = 0.927; Bartlett's test p < 0.000; Total variants explained 68.202%			

Source: Research results

Before the factor analysis results are interpreted, it is necessary to determine values of Bartlett's test and values of KMO test. Measure of sampling adequacy is represented through KMO test and using Bartlett's test of sphericity it is aimed to determine the meaning of correlations within correlation matrix. Results obtained through factor analysis show that the data are adequate for factor analysis since value of KMO test is 0.9279, which is almost 1. Specificity test is of significant importance since it implies that the correlation matrix is not unit, which the test has proven.

Factor analysis results (table 2) have shown that in accordance with 15 statements that were used to measure quality at the higher education institution, 3 dimensions stand out, which are shown as factor 1-3.

Factor 1 - Administrative help provided for students. This first quality dimension describes students' needs and help provided for their wellbeing using 8 statements. The first factor explained 53.67 % of the variance of the main group so the reliability of the collected data is very high. The value of Cronbach's alpha is 0.937 as the values for Cronbach's alpha range from theoretical 0 (zero) to 1. If the values of this indicator are close to zero then that data is said to be unreliable. If those values are close to one it can be said that the data is reliable.

Factor 2 - Satisfaction with the administrative and teaching staff. This second quality dimension is described using 6 statements which are related to student's satisfaction with administrative staff and information they received from the College. The second dimension explained 7.39 % of the variance and it also has a high reliability of the collected data. Cronbach's alpha value is 0.890.

Factor 3 - Facilities. The third quality dimension consists of merely 2 statements related to satisfaction with College equipment and facilities as well as College's keeping promises. This factor explains 7.137 % of the main group variance and the value of Cronbach's alpha is 0.766. It does not represent a high reliability, but it can be taken into consideration. It is necessary to point out that that "if all values of this indicator are below and equal to 0.75 one should reconsider if that data should be taken into account" (Leontitsis, Page, 2007: 336). Since the value of Cronbach's alpha is over 0.75 the data will be taken into consideration.

After the quality dimensions have been determined factor analysis of the remaining two variables was done, those being satisfaction and loyalty.

Results of the factor analysis (table 3) have shown that all the conditions for conducting this analysis have been fulfilled, which is corroborated by KMO and Bartlett's test results. All five statements used to investigate satisfaction have been grouped in one factor and it explained 74.9 % of the main group variance. There is a high reliability present in these data as the value of Cronbach's alpha is 0.915. Based on factor analysis and Cronbach's analysis, it has been shown that the statements used for satisfaction of students are related and reliable.

Upon conducting factor analysis on satisfaction of students, factor analysis for statements on loyalty of students will be conducted as well. Results of KMO and Bartlett's test show that the used matrix is not a unit matrix and that there is a relation between the used statements which fulfilled the propositions for the use of factor analysis.

Conducted factor analysis has shown that there is only one factor related to students' loyalty and that factor explains 75.3 % of the main group variance. Cronbach's alpha test shows that the data are reliable since its value is 0.919.

Table 3 : Results of factor analysis on satisfaction and loyalty variables

Factor	Student satisfaction statements	Factor value	Statement code
	I think I have done the right thing by selecting education at this College	.901	VAR16
	I do not regret enrolling in this College	.893	VAR17
	I am satisfied with my College choice	.868	VAR18
	My experience of this College is very pleasant	.853	VAR19
	Generally speaking, I am satisfied with this College	.806	VAR20
Explained variance 74,825%, Cronbach's alpha 0,915			
KMO = 0,837; Bartlett's test p < 0.000			
Factor	Student loyalty statements	Factor value	Statement code
	I would recommend the College I attend to others	.909	VAR21
	If I had to choose again I would choose the same school	.890	VAR22
	I am proud to be a student of this College	.855	VAR23
	I only say good things about this College	.854	VAR24
	If given an opportunity to continue my education, I would do it at this College	.841	VAR25
Explained variance 75,732%, Cronbach's alpha 0,919			
KMO = 0,876; Bartlett's test p < 0.000			

Source: Research results

Upon investigating the reliability of the used data we move on to test the proposed research hypotheses. Testing hypotheses will be carried out using MANOVA analysis and using Wilks' Lambda indicator. MANOVA is the extension of variance analysis which is used when there are more than one (two or more) dependent variables. "MANOVA compares groups and shows if it is probable that the mean differences in group influences on that combination of dependent variables are correct and if it shows the possibilities those groups manifest". (Memet, 2011, p, 76).

Examination of the hypotheses will be carried out with 95 % reliability of accepting the correct hypothesis, that is, p-value should be below 0.05. In the course of conducting this analysis, the most important things are the indicator of significance and F-test value. For the level of significance, the lower p-value, the better, while the higher F-test value, the better, since it is precisely that which proves that there is greater statistical difference between two or more observed groups. With MANOVA analysis the results from two pieces of research are taken as an independent variable – one for the start of the academic year and the other one for the end of the academic year. As a dependent variable with the first hypothesis we took quality dimensions, with the second hypothesis we took students' satisfaction variable and with the third hypothesis we took students' loyalty variable.

Table 4 : MANOVA analysis results using Wilks' Lambda indicator

Dependent variables	Value	F	Sig.	Hypothesis status
Quality dimensions	.794	2.650	0.001	Accepted
Students' satisfaction	.929	2.497	0.033	Accepted
Students' loyalty	.846	5.952	0.000	Accepted

Source: Research results

MANOVA results show (table 4) that in proving the third hypothesis there is the greatest statistical difference in students' answers. F-test result is the greatest and it is 5.952. The lowest one is the significance level. P-value is 0.000, which makes the third hypothesis acceptable, with 0.0 % risk level that the true hypothesis will be rejected. Furthermore, this analysis has the lowest value of Wilks' Lambda indicator and it is $\lambda = 0.846$.

Furthermore, MANOVA results show that the first hypothesis is accepted, that is, that there is a significant statistical difference between quality dimensions based on expected and perceived quality level by the students. With proving this hypothesis, the value of F-test is 2.650, while the level of significance is 0.001, which makes this hypothesis acceptable with 0.1 risk level that the true hypothesis will be rejected. The value of Wilks' Lambda indicator with this analysis is $\lambda = 0.794$.

The second hypothesis proposed can be accepted since there is a significant statistical difference between students' satisfaction at the start and end of the academic year, which is also supported by the level of significance. P-value is 0.033, while the value of F-test in this analysis is 2.497. In this analysis the value of Wilks' Lambda indicator is $\lambda = 0.929$. However, examination of the second hypothesis shows that there is 3.3 % probability that the true hypothesis is rejected.

By examining the given results of t-test (table 5) we can see that only one statement has a positive value of this test because expectations for that statement were lower than the perception at the end of the academic year. That statement is “Administrative staff at the College is very pleasant” and its value is 0.06681. Examining other values we can observe that with the statement that the “College has solid equipment” there is the largest gap between students' expectations and perceptions and it is -0.62591. Observing the significance level (sig) it can be seen that in all but three statements this level is lower than 5 %, that is, the p-value is <0.05 . Those statements are: “Employees always think in students' best interest”, “Administrative staff at the College is pleasant” and “College employees are always at

students' disposal". It can be said that for these three statements there is the smallest deviation from students' perceptions and expectations.

Based on t-test results, it can be concluded that eMPIRICA College needs to work more on quality enhancement so as to decrease the gap between students' expectations and perceptions on providing information to students and improve equipment and facility quality. Based on this test, it is evident that all but one statement show a negative difference, that is, students' expectations were higher than the perceptions at the end of the academic year. This College's Management should analyse in more detail these results and make decisions so as to enhance the quality system at this institution and thus reduce the gap between expectations and perceptions of that quality.

Table 5 : Difference between expectations and perceptions of students regarding quality

Statement Code	Perception mean	Expectation mean	t-test	Freedom degree	Sig.	Mean difference
Quality dimension - Administrative help provided for students						
VAR01	3.8824	4.2381	-2.848	167	.005	-.35574
VAR02	3.7176	4.2024	-3.316	167	.001	-.48473
VAR03	4.1412	4.3929	-2.200	167	.029	-.25168
VAR04	3.9647	4.1667	-1.473	167	.143	-.20196
VAR05	3.7059	4.1190	-2.908	167	.004	-.41317
VAR06	4.2000	4.4286	-2.118	167	.036	-.22857
VAR07	3.8588	4.2857	-3.397	167	.001	-.42689
VAR08	4.3882	4.3214	.590	167	.556	.06681
Quality dimensions - Satisfaction with the administrative and teaching staff						
VAR09	4.2235	4.4524	-1.853	167	.066	-.22885
VAR10	4.0941	4.4762	-3.307	167	.001	-.38207
VAR11	4.1412	4.3810	-2.122	167	.035	-.23978
VAR12	4.2588	4.5833	-2.862	167	.005	-.32451
VAR13	4.3294	4.5595	-2.196	167	.029	-.23011
Quality dimension - Facilities						
VAR14	3.5765	4.2024	-4.029	167	.000	-.62591
VAR15	3.8235	4.3452	-3.795	167	.000	-.52171
Student satisfaction						
VAR16	4.1765	4.4524	-2.427	167	.016	-.27591
VAR17	4.1882	4.4643	-2.192	167	.030	-.27605
VAR18	4.1882	4.5357	-3.012	167	.003	-.34748
VAR19	4.0353	4.4048	-3.117	167	.002	-.36947
VAR20	4.0706	4.4167	-2.797	167	.006	-.34608
Student loyalty						
VAR21	4.0000	4.5476	-4.185	167	.000	-.54762
VAR22	3.9176	4.2381	-2.186	167	.030	-.32045
VAR23	3.9647	4.3214	-2.841	167	.005	-.35672
VAR24	4.0941	4.4881	-2.969	167	.003	-.39398
VAR25	3.8941	4.4524	-4.068	167	.000	-.55826

Source: Research results

Conclusion

The research in this paper has been conducted on two occasions: at the start and end of the academic year with the aim of examining the gap between expectations and perceptions of the students. The results have shown that there is a negative difference in all research variables, that is, the expectations exceed the perceptions of students and average deviation is from 4 to 12 percent. Only with the statement “Administrative staff at College is very pleasant” there is a positive difference, that is, a positive gap. Based on the calculated gap and results of ANOVA and t-test, the conclusions can be made as to what statements need more work so as to enhance the quality system at higher education institutions.

In the course of examining quality at eMPIRICA College, we used 15 statements which were grouped into 3 quality dimensions using factor analysis. Since the questionnaire was taken from eMPIRICA College co-founders, it had some disadvantages as it did not include some other statements and dimensions used in e.g. SERVPERF and HEDPERF models for measuring quality. This research has shown that it is necessary to separate teaching staff from administrative and technical staff in the course of measuring quality of the staff and treat them as separate quality dimensions as higher education institutions primarily transfer knowledge onto students via teaching staff and by using equipment and facilities. It is also necessary to include more statements on equipment and facility quality and reduce statements related to the needs and help to students.

The recommendations for the future research are that in the course of creating a new model for measuring quality at higher education institutions it is necessary to include more different statements and determine which dimensions are of primary significance for the quality. Furthermore, it is necessary to apply this questionnaire to different HEIs so as to gain more complete information from students rather than merely conduct this type of research on only one HEI. Only in that way can we get a valid model for measuring quality at higher education institutions.

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ORIGINAL SCIENTIFIC ARTICLE
doi:10.5937/ekonomika1604055M
Received: November 21, 2016
Accepted: December 06, 2016

NATURE AND CHARACTERISTICS OF MANAGEMENT CONSULTING IN SERBIA⁴

Abstract

Given the current trends in the consulting countries of our region, as well as the degree of development of guidelines consulting with EU countries, the market for consultancy services in Serbia has not been significantly developed in the past. Owners and managers of companies are still not enough to feel the need for external services, which would solve business problems. Bearing in mind the level and quality of demand, not offer to consult services has not reached the required level. Accordingly aim at this paper is to examine the nature and developmental aspects of management consulting in Serbia in the transformation of the economy towards market business model. The research results show that the development of the market of consulting services is not a simple or easy task that can be accomplished in a short period and with modest financial contribution to the country. Local private consulting sector often lacks not only an interest in this area, but the real capacities, and entrepreneurs are willing to spend their time and money only to services from which they can see direct benefits in a very short period of time. In such circumstances, private market these service can hardly be generated independently.

Key words: consulting, development factors, education and awareness, affirmation of market economy.

JEL Classification: M21, M54

ПРИРОДА И КАРАКТЕРИСТИКЕ МЕНАЏМЕНТ КОНСАЛТИНГА У СРБИЈИ

Апстракт

С обзиром на актуелне трендове консалтинга у земљама нашег региона, као и степена равоја консалтинга у земљама ЕУ, тржиште консултантских

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⁴ This paper work is result of the project No. 46006 – III „Sustainable agriculture and rural development in function realizing strategic goals of the Republic of Serbia in framework of Danube region“, financing by the Ministry of Education and Science of the Republic of Serbia.

услуга у Србији није се у значајној мери развило у протеклом периоду. Власници и менаџери предузећа још увек довољно не осећају потребу за екстерним услугама, којима би решили пословне проблеме. Имајућу у виду степен и квалитет тражње, ни понуда консултантских услуга није достигла потребан ниво. Сходно томе циљ рада је да се сагледа природа и развојни аспекти менаџмент консалтинга у Србији у условима трансформације привреде ка тржишном моделу пословања. Резултати истраживања показују да развој тржишта консултантских услуга није ни једноставан ни лак задатак који се може реализовати у кратком року и уз скроман финансијски допринос државе. Локалном приватном консултантском сектору често недостаје не само интерес за ову област, већ и реални капацитети, а предузетници су спремни да потроше своје време и новац само на услуге од којих могу да виде директну корист у веома кратком временском периоду. У таквим околностима приватно тржиште ових услуга тешко да може самостално да се генерише.

Кључне речи: консалтинг, фактори развоја, образовање и информисаност, афирмација тржишног пословања.

Introduction

Management consulting is one of the most important management techniques developed over the last fifty years. The secondary effect of this invention is the rapid development of new frameworks, tools and techniques in a number of companies. Surprisingly, however, this appears not much to write. Partly this is due to the small number of people interested in this subject - is still to be seen as the inability of a large number of managers to recognize the benefits of the services of consultants (Kubr, 1976). In other work, this may be due to the fact that the consulting company is very secretive and discreet, and therefore their activities is difficult to analyze and explain. Creating attractive business enterprises initiated the need for consulting. Consulting organizations helps companies to achieve their goals, solve problems related to business and management, to identify and exploit new opportunities, increase their knowledge and put into practice the proposed changes. In the domestic economy, a lack of knowledge in the field of business planning, which is essential for the opening of small and medium-sized enterprises. The essence of the necessary changes can be defined as a new entrepreneurial society that encourages risk-taking and creating new entrepreneurial skills. Consulting services is the professional assistance in establishing businesses, but also in the identification, diagnosis and resolution of problems relating to different areas and aspects of the business and enterprise management (Mihailović, 2007).

In our conditions the goal of consulting is to increase the level of business efficiency, which is one of the key factors of successful change in a profitable business. The dominant model of consulting, which in our practice is a combination of expert and models Doctor - patient. Process consulting is still unknown in the national consulting practice. The most common domestic leaders ordered a study on the development strategy and organizational design on which to engage teams of consultants (Janićijević,

1992). The consultant must be competent, informed, objective, and in many cases, a good psychologist, in order, through dialogue with the employees in the company, to penetrate the problem. There is a tendency to standardize activities of consultants, to a recipe that has proven successful applied in all situations. This of course makes the business consultant, but the main question: Is such a problem-solving approach produces results? (Mihailović, 2007). One successful solution should not be generalized and applied to the forthcoming engagement.

The concept and importance of management consulting

Consulting is often defined as “a service provided by an independent and qualified person or persons in the determination and investigation of issues concerning policy, organization, procedures and methods, recommending appropriate activities and assisting in their implementation” (Guide to membership, 1974). The definitions used by other professional associations with management consultants, such as the Association of Management Consulting Engineers in the US are very similar to this. In all of them management consulting is a special service to which managers can call if they need to obtain help in solving any problems. Consultancy work starts from conditions that are considered to be unsatisfactory, and which, according to expert estimates, can be repaired; ideally, ends with what is perceived as an improvement (improvement, refinement). Some specific features of management consulting should be noted at the outset of this study (Kubr, 1976).

First, consulting (counseling) is an independent provider. However, this independence is limited by the fact that consultants are entering into a very complex relationship between their client organizations and people who work in them. Basically, the consultant team is added to the existing organization that asks for help, where his capacity additions at the same time its main role. The consultant has no direct authority to decide on the changes and apply them - but this should not be considered as defects. He needs to master the skill of deep consideration changes of giving up their independence. So firstly ensures the highest level of involvement in the work of the client, so that ultimate success is shared success.

Secondly, consulting is essentially advisory services, which means that you do not hire consultants to manage organizations or to make delicate decisions on behalf of desperate managers. They are advisers (advisers) and their responsibility is to the quality and validity of the advice given. It is not just about giving the right advice, but also about giving advice at the right time and in the right way - these are basic skills consultant. Of course, in practice there are many variations on consulting and many degrees of “consultation”. The client in turn has to be very active in the process of receiving advice arising from the consultant, trust them, and adopt as their implementation in your organization, because, ultimately, they bear full responsibility for the consequences of which are still there.

Third, consulting is a service that provides professional knowledge and skills that are essential for the practical solution of the problems of management (administration). An individual becomes a management consultant in the full sense of the word accumulation of knowledge about the different situations of management and organization and the

adoption of the necessary skills for problem solving - to determine the problem, finding relevant information, analysis and synthesis (assembly and disassembly information), choosing the right solution when there is a larger number possible, communicate with people and so on. What is special to consultants is that over the years, going through a number of organizations and learn how to use their accumulated experience of previous assignments to the new conditions. In addition, professional consultants are constantly trained in methods and techniques of management, including those that are used at universities and in research Institution's; convey this experience of customers and help them in the implementation. They work as a link between theory and practice in management. It is understood that managers must also possess certain types of skills, especially in the implementation of new ideas.

Fourth, not a consulting service that provides an easy and simple solution is too severe management problems. It would be a mistake to view consultants as a wizard that can help you in all situations. Consulting is hard, systematic and disciplined work based on solid analysis of facts and research of all possible solutions. Strong management commitment to solving the problems of organization and cooperation between the client and the consultant are of equal importance to the quality of the advice being received and for outputting.

In today's conditions, when all services are primarily oriented to the user, is important to measure their level of satisfaction. The consulting firm can hardly continue its successful business without the continuous improvement that is achieved by using the data obtained from the analysis of user requirements and their positive regimen. It is important to consider the different types of users that are associated with the project. Three types of users exist on almost every aspect of consulting intervention (Philips, 2000). In short, customer satisfaction is the key of success and can be achieved in various ways that focus on success is getting early feedback is essential. Otherwise, projects can easily slip from the planned and designated times. Also, one should never rule out the possibility that the project does not comply with the outset that the selected project is sometimes a bad solution to a specific problem, it is necessary to find out at an early stage of its implementation, in order to enforce the timely correction and thus prevent the occurrence of weather misunderstanding, misinterpretation, poor communication, etc.. If corrections are insufficient or impossible, poorly defined project can be replaced by a better, more efficient easily and quickly before it comes to more serious problems.

Forms and methodology consulting

In modern conditions competitive success of the company depends primarily on its ability to hire and effective use of their intangible resources, the ability to quickly adapt to ever-changing environmental conditions and other pre recognize and meet the constantly changing needs and requirements of consumers (Gajic, 2004). Consequently, consulting developed as external and internal services (from the aspect of the organization which uses consultants).

An external consultant is administratively and legally totally independent of the organization for which he works. Internal consultant is part of a special working unit enterprises - companies, groups of companies, government ministries, etc.. The precise

boundary to these two types is difficult to withdraw - an autonomous consulting bureau that helps the minister for the economy can be regarded as an internal unit as it is part of government services, but can have the same working relationship between public companies as well as independent external consulting firms. In practice consulting organizations of the public and private sectors and the use of internal and external consultants (Bols, 1971). Internal consulting services are often considered a better solution to problems that require a deeper understanding of a very complex internal relations, procedures and political factors in large organizations because of the presence and awareness of the different functions of the organization or the specific limitations which affect the business. If there is a constant demand for advice related to special methods and techniques, internal consulting service can be cheaper and more productive. However, eskterni consultants are better even in organizations that have internal consultants when these workers do not meet the internal criteria of impartiality and confidentiality or have no knowledge of certain areas. In some cases, complex tasks are delegated to the external and internal consultants, or from internal consultant may be required to precisely define the tasks of external consultants and to cooperate with them with the aim to learn as much as possible about the things that are resolved.

Basic principles and methods of consulting apply equally to the activities of external and internal consultants. As for the specific management functions and techniques that will engage consultants, this profession has gone through several stages of development. During the twenties of the last century a number of consultants in the United States began offering services primarily in the areas of production - in research work, production planning and rationalization. The next big area that they faced was accounting. Consulting in the general area of management (management) was associated with questions about structure and procedures. In the postwar period, consulting with marketing, and also in various recent managerial techniques, operations research and system design, he began to develop rapidly. At this point the profession could not claim to provide a complete set of consulting services. After this, there has been a rapid expansion and changes from the general concepts of consulting management problems by adopting the perspective of business strategy, long-term planning, decision-making, and more recently, the development of the organization.

A significant problem of the field of training and development, present for years, is the lack of transfer of learned knowledge. In many situations the acquired knowledge is not transferred to the real working environment. During the consulting intervention participants may be involved in a number of learning activities, but it is essential to ensure that this learned knowledge to the business.

Management consulting

In developed market economies consulting organizations to specialize its services based more on specialization of its clients. The oldest form of specialization was the following functional principle (Mihailović, 2011). This means that the consultants specialize in one of the control functions (production management, finance, marketing, ...).

Over time, the importance of specialization received by sectors: banking, small business, transportation, construction, etc. (Blečić, 2005). Consulting organizations

of Serbia is mostly organized on a functional basis, or insufficient specialization in individual sectors. This is evident if observed offer consulting organization that focuses on business issues of particular functions of the companies clients. Consequently, the development of consulting services in Serbia is in its initial phase, which is similar to the beginnings of consulting services in developed economies.

The regulatory and institutional factors of development of management consulting in Serbia

Given the current trends in the consulting countries of our region, as well as the degree of development of guidelines consulting with EU countries, the market for consultancy services in Serbia has not been significantly developed in the past. Owners and managers of companies are still not enough to feel the need for external services, which would solve business problems. Bearing in mind the level and quality of demand, not offer consulting services has not reached the required level. In such circumstances, donor assistance in the past has significantly been given to promotion of conditions for the development of this market. Specifically, within the EU “Non-financial support for the development of SMEs sector in Serbia”, in 2002-2004. year made significant steps in the creation and strengthening of the training and consultancy services in the Republic of Serbia. This project is through a network of republican / regional agencies for the development of SMEs (small and medium enterprises and entrepreneurs) conducted 820 training programs for future entrepreneurs and owners of SMEs, in line with the recommendations and suggestions of the analysis of training needs. Also, in the previous phase of this project have been identified as available local resources that are able to provide adequate training and consultancy services in various areas (realized basic training for coaches and executed process akreditacije service “providers”). Having regarded with the underdevelopment of the market of consulting and training services in the Republic of Serbia, especially outside Belgrade, in the framework of this project is not realized and the Scheme to encourage education and consulting (Service Support Scheme - SSS). The main objectives of “SSS”, in whose implementation involved 7 regional agencies / centers to support SMEs with service providers as subcontractors, were providing access to existing and potential entrepreneurs with quality consulting services (mostly assistance in developing a business plan) and training at affordable (subsidized) prices, as well as the realization of smaller regional projects of importance for the development of SMEs. Realization of SSS was aimed to strengthen the role of regional SME agencies as a catalyst of entrepreneurial development and market development consulting services for SMEs in Serbia in joining the European Union.

In countries that joined the EU observed the three prevailing trends: (1) the convergence of economic and social systems to EU standards, (2) economic development and (3) development of the sector of consultancy services. Comparative analysis of the consulting market in Central and Eastern Europe suggests that there is a significant correlation between the rate of growth of the consulting market and the growth rate of gross domestic product (GDP). In fact, in all the countries that have had positive growth rates of GDP from 3.7% to 8.1%. recorded positive growth rates of consultancy market from 4% to 35% (International Management Consulting, 2006). The average growth rate

of consultancy markets in the analyzed countries in 2004 amounted to 15.17%, while the average growth rate of GDP was 5.08%. Consequently, in these countries the sector consulting at the rate of growth is running ahead of the general economic development and at the same time on it retroactive effect. Today, no advanced market economy can not be imagined without consulting a superior. However, in Serbia, institutional and infrastructural factors are still the “bottleneck” of market development consulting services (Mihailović, Cvijanovic, 2011).

Based on the results of empirical research (Mihailović, 2011), we can conclude the following: The three most important factors of the development of consulting services are: education and information, development projects and affirmation of market economy. the greatest impact on the development of consulting services in Serbia are those variables that, following their nature, might call education and information. This shows that Serbian companies not well informed for the role and significance of consulting services have that training as personnel, in this sense, is not enough. This observation clearly indicates when you need to focus primarily and consulting organizations and companies that use consulting, but also the state, because of improvements to education and awareness in this area had all the advantages: consulting organization would put more jobs (and therefore more money, to intensify its development); the company would, using the services of consulting organizations, significantly accelerated their development and improve performance; the state would, if nothing else, get richer sources of budget financing.

Capacity building for non-financial support to enterprises and entrepreneurs and development consultancy services

In the local public consulting services usually include assistance in drafting a business plan, which is used when applying for a loan, or approximate training for potential entrepreneurs. Entrepreneurs in starting and developing their own business, it is necessary to help, primarily in the form of non-financial support to their businesses grew and remained on the market in transitional conditions (Cvijanovic, Mihailovic, Simonovic, 2009). It reflects the consulting services providing information, consultation, mentoring, training and training in different fields of importance to conduct business. Entrepreneurs who start independent operations generally have no experience in the management and running of the company and do not have formal education in this field. In such conditions, assistance and support during the initial period can significantly increase their chances of success. In the future it is necessary to continue to support the development of various forms of consulting services for the SME sector by public, private and NGO (non-governmental organization) sector, in cooperation with donors.

According to the traditional approach, the implementation of the program of state aid in the field of non-financial supports to the development of the SME sector takes place through the established dedicated regional and local agencies. Used as direct state intervention in the form of organization, in order to compensate for the lack of these services in the local market and at subsidized prices or free of charge for users, which, unfortunately, has not proved to be a long term cost effective solution. In practice, such organized services of non-financial support mostly, in the opinion of users, overly

generalized, unadjusted real needs and generally of poor quality, the ability to hamper the development of local private supply and increase the cost of services.

Modern approach to non-financial support to small and medium-sized enterprises based on the principle of building a private local service market for business development that meets the needs and capacity to pay small businesses, in order to create long-term sustainable, market solution. State intervention in the form of subsidies on the demand side, in the transitional period shall be used for the implementation / privatization of trusted programs that were previously implemented local agencies from the public sector, by private consultants and capacity building service providers (Paraušić, Cvijanovic, Mihailovic, 2007). On the supply side are used grants and vouchers, which are parts from entrepreneurs to them, according to their own needs, seize to cover part of the cost of services of private consultants. The role of local development agencies is gradually shifting from the provision of specific services to help connect entrepreneurs with private bidders for these services, improving the offer, the range and quality of services for business development in a particular territory and strengthen awareness of entrepreneurs about their own needs and the importance of these services. Development of the market of consulting services is not a simple or easy task that can be accomplished in a short period and with modest financial contribution to the country. Local private consulting sector often lacks not only an interest in this area, but the real capacities, and entrepreneurs are willing to spend their time and money only to services from which they can see direct benefits in a very short period of time. In such circumstances, private market these services can hardly be generated independently. At the same time, it is unrealistic to expect that a whole range of services for business development can be implemented on a commercial basis, without the intervention of the state, as part of the services, especially those aimed at start-ups, are not sufficiently profitable.

Conclusion

In Serbia, since 2000, the consultancy has become very topical. Demand for consulting services is growing with the objective needs and dictates them: privatization, valuation of companies, establishment of new small and medium enterprises as a prerequisite of faster development of the market economy, new products, the search for new markets, etc... Serbia, for objective and subjective reasons, is late with the transition, and, in order to catch up with other countries, rapidly privatize public property, often clumsily, sometimes inadequately controlled and under, to put it mildly, unclear circumstances. Following the effect of these processes is inevitably rapid development consulting services. It is natural that the advice be similar to what happens in the economy: an intense, aggressive, almost uncontrolled, so no wonder it is often the vulgarized.

Accordingly an initiated economic reform, development of the market of consulting services is directly dependent on the current process of transition and restructuring of domestic companies. At the same time, the elimination of external constraints and the return to Serbia into international economic flows caused a significant increase in demand for new knowledge, experience and expertise, including those in the form of consultancy services. Particular interest is related to the programs of rehabilitation and restructuring of enterprises, but also in the formulation and implementation of development strategies

and networking with economic actors on the international market, the introduction to information technology, improving the performance of the basic functions of management companies, joint ventures, technological cooperation and others. The privatization of the company requires a lot of knowledge and creativity, which is a significant area of consulting organizations. The introduction to market business with a company in Serbia represents a stimulus for consultants to expand the range of consultancy services, especially as the clients must be prepared to the rational use of internal and external professional and creative potential.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604065M
Received: November 16, 2016
Accepted: November 12, 2016

CONSUMER PROTECTION - ORIENTED MARKET SURVEILLANCE

Abstract

The strategic goal of the Republic of Serbia is full membership of the European Union (the EU). In addition to other reforms, this goal requires the development of competitive market economy, which would be conducive to the free flow of goods in the EU market, as regulated by the EU law.

The basic subject of this paper is the research into the strengthening potential of market surveillance in Serbia, which would entail various products offered in the market, with the aim of achieving the optimal safety in their usage. In this paper, I have analyzed market surveillance in Serbia with respect to consumer protection, as a specific prerequisite to ensuring full membership of the EU. This can be done by adopting and implementing the existing standards and recommendations of the European Commission, within the limits of acceptable financial cost.

The focus is on observing key elements of market surveillance with respect to technical products presupposing CE marking. The appropriate marketing surveillance system would enable satisfactory consumer protection aligned with the individual requirements in support of each market participant. The stress is on the improvement of domestic consumer protection and aligning the consumer protection system in Serbia to the standards of the European Union, whereby both the companies and the consumers would be treated equally.

Key words: market surveillance, market participants, competition, consumer protection.

JEL Classification: L22

ТРЖИШНИ НАДЗОР У ФУНКЦИЈИ ЗАШТИТЕ ПОТРОШАЧА

Апстракт

Стратешки циљ Србије је пуноправно чланство у Европској унији (ЕУ). Овај циљ поред осталих реформских обавеза, захтева развој конкурентне

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тржишне привреде, као и њено оспособљавање за успешно такмичење и побољшања у области слободног кретања добара на тржишту ЕУ, које је уређено одговарајућим позитивним прописима.

Основни предмет овог рада је истраживање могућности јачања система тржишног надзора у Србији за различите производе који се нуде потрошачима на тржишту, а све у циљу постизања њихове пуне безбедности за употребу и коришћење. У раду се анализира тржишни надзор у Србији у функцији заштите потрошача, као посебан услов који ваља испунити како би се осигурало пуноправно чланство Србије у ЕУ, усвајањем и применом важећих стандарда и препорука Европске комисије уз прихватљиве економске трошкове.

Фокус у раду је на опсервацији основних елемената тржишног надзора за техничке производе који претпостављају ЦЕ - навођење. Успостављање одговарајућег система надгледања тржишта треба да омогући висок степен заштите потрошача, повезаног са потребама подрике свим тржишним актерима. Унапређење заштите домаћих потрошача и усаглашавање националних прописа и стандарда са адекватним у ЕУ, под истим условима на тржишту како за компаније учеснике тако и за потрошаче, посебно је наглашен аспект.

Кључне речи: *тржишни надзор, тржишни актери, конкуренција, заштита потрошача, ЦЕ означавање.*

Introduction

In the era of global competitiveness and globalization, the contemporary market is overwhelmed with supply of various types of manufactured and non-manufactured goods. We are looking at manufacturers with diversified production, connected by various forms of industry concentration, all of which is integral to contemporary business practice. Numerous companies realize concentrations with the aim of market expansion, or maintaining current market position. In some cases, concentrations may result in significant limitation of market rivalry, as well as weakening the competition. The market rivalry practice acknowledges harmful effects of concentrations, in addition to certain disputed forms of concentration. All of this affects consumer/customer satisfaction.

Contemporary commercial practice dictates that companies enhance their overall business performance in order to survive in the market. Meanwhile, the traditional company rivalry model has been changing due to joint ventures and mergers and acquisitions that have introduced new forms of strengthening competitiveness. This goes hand in hand with technological innovations, which have reshaped rivalry as well. These processes lead to the inevitable conclusion that the essence of competition lie not exclusively in rivalry, especially not in its exhausting aspect, considering that intense rivalry limits company profitability, and, consequently, affects the consumer satisfaction. The above mentioned processes of strengthening the concentration and competition among companies in the market impose the need for strengthening the market surveillance system with respect to said processes, with the aim of consumer

protection. Companies direct their supply based on consumer demand which is directly linked with profitability in the long run, thereby making consumers direct participants in their market surroundings. Regardless of the fact that the high level of market saturation in various goods should ensure high product quality, consumer protection is regulated by positive legislation of the EU, the prospective membership of which the Republic of Serbia strives to. Therefore, in accordance with the EU directives, its consumers are formally provided with continual protection.

In such an environment, the Republic of Serbia is making preparations to join the EU and operate in the EU market, while taking measures to achieve a high level of economic integration into international markets. However, the fact remains that a national economy cannot be competitive without producing competitive products which are in accordance with technical and safety market standards, namely, those with CE marking. Organizing and strengthening the market surveillance system for all products that require CE marking is an obligation not only for Serbia as a prospective EU member state, but also the active member states.

This being said, the purpose of market surveillance in the EU is to ensure the safety of all products circulating in the EU market, in accordance with the law, and based on mutual recognition and cooperation between member states. The achievement of these goals in Serbia will depend on its ability to efficiently follow the commodity, financial, technological standards of market surveillance, as well as other open flows of changes.

The purpose of this paper is to point out the main problems of and limitations to implementing the market surveillance system in Serbia aligned with the EU laws, but beneficial for the economy.

The basis of market surveillance

The basic goal of a unified EU market is the free flow of goods [Velloso, 1991]. Serbia joining the EU will provide domestic consumers with a significantly higher supply, at the same time encouraging competitiveness. For this goal to be realized, the trading barrier between the member states and Serbia as a prospective member needs to be removed, mutual acknowledgement of test results and certificates received, and technical harmonization achieved.

Serbia, as well as the member states, takes on the responsibility of continually adopting measures and building national infrastructure, so as to ensure that, identically to the internal EU market, the products coming into the market are aligned with the EU directives, and if properly installed, maintained and used, do not endanger public health and safety or other public interests. The options for adequate market surveillance in the EU are provided by the member states, and they are the same both for products made in the EU countries, and those made in countries not belonging to the EU, including Serbian products. Clearly, all market participants outside the EU, including Serbia, have to know and abide by the regulation and directive requests of the new approach and regulated market surveillance.

Organizing successful market surveillance in Serbia should be based on premises similar to those of the EU member states, regarding food products and non-food products alike. This means that appropriate regulation is implemented for certain product groups,

whereby the government jurisdiction in market surveillance implemented by a designated authority depends on the type of product.

The strengthening of the market surveillance system in Serbia has been supported by the EU under the IPA program, for food and non-food products. This facilitation measure aims at helping domestic government institutions, (inspectories, customs, etc.), to strengthen market surveillance capacities, in order to achieve the desired level of product safety and domestic consumer protection, with minimal economic cost. Setting up an adequate and continuous system of market surveillance is one of the prerequisites to the full EU membership of Serbia, which all of its citizens will benefit from.

The need for continuous market surveillance in the EU is dictated by the internal market regulations on product safety. The point to market surveillance in the EU is ensuring the alignment with the laws and legislation enforced in the entire Union, and based on the mutual acknowledgement and recognition of documentation of the member states, as well as their cooperation. Serbia should follow in their footsteps, keeping in mind that it is vital that consumers in Serbia enjoy the right to the same level of protection as their EU counterparts, regardless of product origin. Surveillance itself is important for the interests of business entities, because it contributes to eliminating unfair competition.

An established market surveillance system in Serbia, in accordance with EU standards, will enable successful control of products in the market. With this respect, it is important that manufacturers, official distributors, traders, and the authorities in charge acknowledge the stipulations of market surveillance relevant to specific product and types and activities.

Inefficient functioning of market surveillance is the key factor to product nonconformity in any national market, including Serbian. To improve the Internal Market for goods and ensure the success of market surveillance on the EU Market, the New Legislative Framework was adopted [NLF - *New Legislative Framework*], whose market surveillance essence is entailed in [3] Regulation EC no. 765/2008, and [4] Decision CE no. 768/2008/EC, accepted by Serbia.

Consequently, the key option to implement is the New Legislative Framework directive. [9] This option is widely used in member states regarding non-food products, with the goal of meeting the surveillance requirements set by the EU, whereby CE marking is mandatory. The CE mark is the proof that the product has been designed and manufactured in line with all applicable EU directives. This mark also means that the product meets important safety and healthcare, environmental and proprietary regulations, and serves public interests. [Kanjevac-Milovanović, 2014, p. 47-48] The product bearing the CE mark, with the appropriate declaration of conformity issued by the manufacturer, has a free access to and passage through the EU market.

The member states, including our country which has signed the Stabilization and Association Agreement, [Veljković, 2013] have the responsibility of enforcing the EU laws, as stated in the founding Treaty. As the means of implementation, NLF *Regulation* gains importance when measures are taken to determine whether products meet the consumer protection requirements, and whether actions are taken with respect to product conformity.

Entailed in the NLF, [7] accepted by Serbia, is the high level of consumer protection, while all the member states are required to take the appropriate measures to ascertain that the products, including those made in Serbia, are released on the market only if health

and safety of the public and other public interests protected by NLF directives are in no way threatened. In other words, products have to be safely manufactured, installed and serviced, and used for their particular purpose. This calls for the realization of an effective and all-encompassing market surveillance on the part of the prospective EU members as well, so as to detect product non-conformity, thereby protecting not only the interests of consumers, but those of other business entities.

All the EU member states appoint authorities whose jurisdiction is market surveillance. In addition to being fully authorized, these authorities are fully equipped to perform the market surveillance activities, thus ensuring technical capacity and professional integrity of their staff. It is imperative that the authorities act independently, without discrimination, applying the principles of proportionality. As per the NLF directives, our country, alongside the member states, is to allow the free flow of products that conform to technical common practice. However, this practice does not exclude the right of said countries to deny the free flow of products with significant non-conformity issues, under the “safeguard clause”.

Adequate market surveillance in Serbia entails following the EU trends, whereby the member states are under the obligation to notify the EU commission or other member states of the internal market condition. Disclosure of information gathered during the internal market surveillance activities has not been specified, due to directives which pertain to certain products regulated by confidentiality of information. [10] Confidentiality pertaining to specific business subjects is based on national legal systems, which are different in each member state, especially in ours. Health and safety of consumers is the exception to this rule.

Choosing the form and modality of implementing market surveillance directives

In the EU, the choice of form and method of directive implementation falls in the hands of members states, provided that unbiased market surveillance implementation is ensured. What this means is that each member state can decide on its own market surveillance infrastructure, for example, removing all limitation on assigning responsibility to relevant parties in on functional or geographical basis, [Kos, Uzunović R., 2004] as long as surveillance is successful nationwide.

In Serbia, market surveillance is carried out by the authorities, as regulated by legal and administrative procedures. The authorities responsible for market surveillance are allowed to enter manufacturing and storage facilities, obtain relevant information, choose a random sample and have it tested, in order to fully protect the existing and future consumers. In the EU, General Product Safety Directive, GPSD, contains precise description of the duties of the member states to organize market surveillance and provide adequate means of surveillance. In the case of non-food and food products under special directives and laws of the EU, founded on full harmonization and entailing regulation in all safety aspects aligned with the directives, the General Directives do not apply. Nevertheless, these general directives can be used as a model of market surveillance of different consumer goods.

Efficient market surveillance in Serbia is indispensable in protecting the health of its nationals. To fall in line with the internal EU market, the relevant authorities need

efficient administrative cooperation in market surveillance in Serbia. As each country has jurisdiction over implementing market surveillance, this process is feasible.

Serbian market surveillance authorities must have the necessary resources and authorization for their surveillance activity, thus operating at full capacity when it comes to monitoring the quality of all the goods in the market, and ensuring product conformity. In terms of human resources, authorities must have the appropriate number of adequately trained, professionally competent and experienced employees. The authorities in charge also have to be independent and unbiased. In other words, market surveillance should be carried out in accordance with the principle of proportionality, which means that the surveillance activity must be proportional to the risk. The point is that the influence of surveillance must not be stronger than that needed to fulfill its purpose. With respect to ensuring the quality of assessment data, the equipment and operation of the laboratory used for this purpose must conform to EN/ ISO 17025 standard.

An independent body can be commissioned by the authorities to assess or control surveillance activities and function as technical support, provided that the authority in charge reserves the responsibility for its decisions, and eliminates any conflict of interest in evaluating the conformity of the independent body and its activities regarding surveillance. The responsibility for any decision to be made based on authorized surveillance, must be made by the lawful authorities. In the event of the authorized body and market surveillance authority being under the patronage of the same supervising administration, the limits of responsibility should be set so as to avoid the conflict of interest between their respective activities, as is the practice in the EU.

Market surveillance realization

Effective consumer protection is necessary in order to ensure the efficient functioning of the market economy. This protection will depend on the development of administrative infrastructure in order to secure control of the market and law enforcement in this area. [14]

The EU legislation imposes the obligation on the member states to secure the implementation of market surveillance in their respective countries. Each state is solely responsible for handling this issue within its own legal limits. The biggest portion of surveillance over the unified EU market is in hands of market inspectorates of member states, followed by labor inspectorates (the use of product in the workplace), energy inspectorate (during usage), health inspectorate (healthcare), mining inspectorate (in mines), human environment and transport inspectorate for marine traffic, etc...Such a surveillance process entails the exchange of information between the inspectorates.

It is, therefore, clear that key market surveillance presupposes activity on the part of national supervising authority, which must control the conformity of products circulating in the market with the directives of the national legislation, modified by the NLF directives. Following are the activities of done in realization of conformity with NLF approach, when and where necessary.

Product conformity check at the moment of its release on the market/ putting it to use, is the very purpose of surveillance. The NLF directives include documents that allow the market inspectorate to obtain product information:

- EC- declaration of conformity - provided to the market inspectorate on request and
- Technical documentation - the inspectorate usually uses the abridged version, and asks for detailed data only if there is a doubt in a product's conformity with the law, thus protecting public health and safety and public interests as per the directive.

Realization of market surveillance in Serbia, as in other member states, calls for the involvement of many different institutions (market inspectorate, customs, etc.), that would monitor a specific product group or a specific area. The main task of the market inspectorate is to check whether the products conform to legislation, once they have been released on the market, and during their usage. Market surveillance cannot be realized in planning and production phases, that is, prior to the manufacture assuming formal responsibility for product conformity by marking their product with a CE mark. These activities, not only in the EU, but also in our country, do not exclude cooperation between the market inspectorate, the manufacturer and the deliverer, before the product has come on the market.

Considering the impossibility of organizing market surveillance activities in the planning and production phases, the success of implementing the regulations in Serbia requires that the supervising authorities cooperate with manufacturers and deliverers, in order to eliminate products that do not conform to standards being sold on the market. The information relevant to the authority is the EC declaration of conformity and technical documentation.

The focus of surveillance must be on areas where the greater probability of danger exists, or where the non-conformity is more common, in other words, where there is a specific public interest. When a product has all the necessary documentation and marking, it thereby satisfies the formal criteria of functioning. In the interest of a more successful market surveillance, the authorities in charge (inspectorates) should:

- be familiar with the regulation of every surveillance directive (e.g. the availability of EC- declaration of conformity, handling manual with product specification and the proper choice of criteria for assessing conformity),
- Plan their activities in advance and adequately respond to information provided by or gathered from the public (consumer complaints and consumer organization information, etc.)[11],
- Continuously oversee industrial, commercial and storage facilities; constantly patrol workplaces and premises where products are used, or operate; announce regular and organize random controls, and take product samples for testing.

The customs administration has its rightful place in the market surveillance process, not only in the EU, but also in Serbia. Regulation EU EEC no. 339/93 on the assessment of conformity with product safety standards in third world countries demands that the customs administration be fully involved in market surveillance activities. Their task is to temporarily or permanently ban the import of goods that might pose, or poses imminent threat to health and safety, according to the established regulation and terms of use. Regulation EEC no. 339/93 applies to all products imported from the third countries, which comprises the ones entailed in the NLF directives. These products are thoroughly checked for CE marking by the customs, especially if their packaging, label and stickers indicate they were made for the EU market without additional processing. [10]

The Serbian customs office, identical to the procedure in the EU, duly informs the market inspectorate about their decision to impose a temporary import ban on a certain product, causing the inspectorate to take the necessary measures on their part. In addition, market inspectorate has a duty to inform the customs about their conclusions regarding products imported from third countries [Despotović, 2016]. The responsibility for such products in the EU is taken by the authorized distributor, or a dealer with a head office in the member states. In Serbia, such responsibility lies with the dealer/distributor.

When a decision is made on the part of Serbian supervising authority about limiting, banning product placement, or product recall, precise reasons must be provided.

As for the general product safety directive, it is a legal basis for functioning of a system for information exchange in emergency situations. This rapid alert system for dangerous non-food products posing a risk to health and safety of consumers (RAPEX) is a general and horizontal system of early warning and monitoring [5]. Its purpose is to obtain information which would allow the authorities to act accordingly when a product poses a serious threat. Serbia has a long way to go before it develops such a system.

The Internet market in the EU is regulated by E-commerce directive 2000/31/EC, whereby the party offering goods/services, situated in the EU, has to fulfill the criteria set in the directive. If a certain product offered on the market fails to meet the criteria, it has to be clearly marked. A product cannot be marketed on the Internet for the EU market, until it is actually available on the said market. In Serbia, regulations covering this market are insufficient.

In the end, these activities serve a purpose of ensuring health and safety protection for consumers, and proper functioning of the market system.

Conclusion

As a prospective EU member, Serbia has to develop and harmonize its market surveillance institutions according to standards and directives of the New Legislative Framework. Future development entails domains of infrastructure quality, standardization, accreditation, intellectual property and network of institutions in charge of product conformity and control. Serbia, having the biggest trading volume with the EU countries, in other words, exporting goods and services largely to the internal EU market, has to accommodate every request on the part of EU and conform to its legislation, and ensure appropriate and synchronized consumer-oriented market surveillance.

The improvement of market surveillance system comes at a price, which is why it is especially important for this process to take place with acceptable economic expenses. Before, strengthening the market surveillance system in Serbia for food and non-food products had been supported by the EU through the IPA project. The purpose of this project was to increase the market surveillance capacity in domestic institutions (inspectorates, customs, etc.), thus adopting and implementing relevant EU regulation, with the ultimate goal of ensuring complete product safety and protecting the consumers. Serbia faces a lot of things that need to be done in terms of conforming domestic regulation to the valid EU directives, before it gains the status of an EU member state.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604075S
Received: October 30, 2016
Accepted: November 22, 2016

THE ROLE OF ENVIRONMENTAL TAXES IN SERBIAN TAX SYSTEM

Abstract

The aim of this paper is to point out the lack of giving importance to ecological taxes and the low participation of dedicated revenues in the structure of these taxes in the tax system of the Republic of Serbia. Environmental taxes have gained in importance, especially through the ecological tax reform in a number of European countries, which have proved to be significantly more effective compared to other available instruments in the struggle against environmental problems. The premise of this paper is that the inadequate structure of environmental taxes has a negative impact on allocations in the field of environmental protection. This hypothesis will be tested by using statistical methods and comparative analysis.

Key words: environmental taxes, Republic of Serbia, ecological tax reform, excise.

JEL Classification: H21, H50, Q01, Q57

УЛОГА И ЗНАЧАЈ ЕКОЛОШКИХ ПОРЕЗА У ПОРЕСКОМ СИСТЕМУ СРБИЈЕ

Апстракт

Циљ овог рада је да укаже на недовољно давање значаја еколошким порезима као и ниско учешће наменских прихода у структури ових пореза у пореском систему Републике Србије. Еколошки порези су добили на значају, нарочито кроз еколошку пореску реформу у великом броју европских држава, где су се показали знатно ефикаснијим у односу на остале доступне инструменте у борби са еколошким проблемима. Полазна хипотеза овог рада је да неадекватна структура еколошких пореза има негативан утицај на издвајања у области заштите животне средине. Ова хипотеза ће бити тестирана употребом статистичких метода и компаративном анализом.

Кључне речи: еколошки порези, Република Србија, пореска еколошка реформа, акцизе.

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Introduction

Contemporary humankind is facing a number of serious environmental problems. These problems have arisen as a result of ongoing efforts to increase current economic wealth and insufficient care for the environment in the past. This is why in a number of EU member states, as well as some of the countries that are not members of the EU has been a greening of the tax system through the ecological tax reform. In contrast to these European countries, the Republic of Serbia did not carry out an environmental tax reform. Therefore to ecological taxes and to environmental problems, opposed to the EU Member States, Serbia do not give enough importance.

In the Republic of Serbia within the framework of the environmental taxes from the fiscal point of view is dominated the excise tax on petroleum products. As is well known that excise taxes, as a kind of public revenues do not have a dedicated character, and are not used for the realization of environmental objectives, but for the satisfaction of the usual needs of the state. Particularly big problem is that in Serbia there is no adequate differentiation of rates for the taxation of different types of petroleum products according to their environmental friendliness, which is not the case when the EU countries are concerned. Also insufficient participation of dedicated revenues in total environmental taxes and very often inadequate spending of earmarked funds make the process of solving environmental problems in Serbia even more complex.

The concept and importance of environmental taxes

Taxes are the most important public revenue of all modern states. In modern conditions in addition to its basic functions, to cover public expenditure, some types of taxes received and other functions (social, health, environmental, development). So there are a number of taxes, which are defined as ecological, and where environmental function is even more important than their fiscal functions.

Green taxes (environmental taxes or taxes on pollution) are charges paid by polluters of the environment or which are paid on goods which use pollutes the environment. Such taxes are introduced in order to reduce the occurrence of external effects, such as pollution and are called corrective or Pigouvian taxes. Green taxes do not only generate income, they also help in connecting private incentives and social benefits, which leads to improved overall efficiency of the economy (Stiglitz, 2004).

In a broader sense environmental taxes include environmental charges and fees, and even registration fees, fees for non-compliance with environmental standards, given that these instruments have the impact that they bring environmental standards to a higher level (OECD, 2006).

Environmental charges, or fees for environmental protection are payments for specific services such as waste collection, sewage treatment and collective facilities for water purification (Barde, 2004). Unlike environmental charges, environmental taxes are in most countries as a whole revenue of the state budget, whereas in the case of charges this is not so. Also unlike environmental taxes, charges have a predetermined purpose. So in a broad sense environmental charges are part of a package of environmental tax reform and a part of the environmental taxes. In the strictest sense there is a difference between environmental charges and environmental taxes (Maatta, 2006).

Environmental taxes are the subject of interest of many ecologists and economists for a long time because they can contribute to increasing the quality of the environment. These taxes are more efficient and cheaper instrument than other instruments for the protection of the environment. But they besides this benefit create conditions for the realization of additional positive effect with regard of providing additional tax revenues (Kronenberg, 2007).

The additional tax revenue that the state provide by a green tax reform, or by greening of the tax system can be used in different ways. As some of the uses of these revenues, can be mentioned: investment in clean environment, investment in research and development of new techniques and technologies, investment in education in order to develop environmental awareness etc. (Goulder, 1995).

However, if we look at the countries that have implemented environmental tax reform, it can be seen that these additional tax revenues are most often used as a basis for the reduction of other taxes, which already exist in the tax system. These countries' goals were to ensure revenue neutrality. This was done by decreasing tax revenues (by reducing tax rates or narrowing of the tax base) of the existing taxes, which was offset by the same amount of tax revenue growth from environmental taxes (Bovenberg, de Mooij, 1994).

Excise taxes as a part of the environmental taxes in the Republic of Serbia

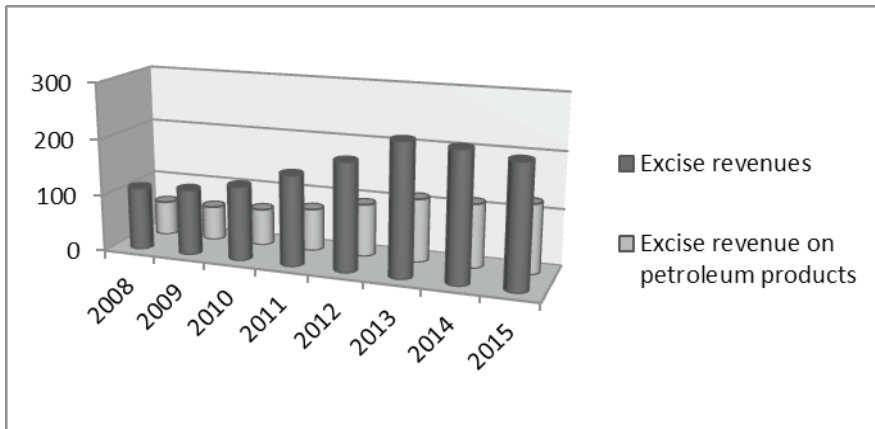
In Serbia, excise taxes which are defined as a part of environmental taxes are:

- Excise duties on petroleum products and
- Excise duties on electricity.

Excise duties on petroleum products certainly represent the most significant excise tax in fiscal term, as can be seen from the graph 1. From this graph it is clear that revenues from excise taxes on petroleum products account the half of total excise revenues, suggesting to their significance as the most abundant of excise revenues (Đurović-Todorović, Đorđević, 2013). This high share of excise taxes on petroleum products in excise tax revenues and excise revenues in total revenues in the budget shows that in the Republic of Serbia are set a high excise tax rates, as well as that consumption of this products, covered by the excise taxes, are quite high.

Excise duties on petroleum products, as has been said are the part of environmental taxes. However, unlike most EU countries, in the Republic of Serbia is not made adequate differentiation of tax rates. That means that it is not high enough range between the tax rates for different types of petroleum products, depending on that how their consumption affect the environment.

Graph. 1. The share of revenues from excise taxes on petroleum products in total revenues from excise taxes in the Republic of Serbia, 2008-2015.



Source: Budget of the Republic of Serbia for 2008-2015., Illustrated by the authors.

In European Union countries the rate of excise duty on liquid petroleum gas, which is considered to be ecological fuel since it emits a smaller amount of harmful particles in the air, is several times lower than for example for leaded and unleaded gasoline. In the Republic of Serbia this is not the case. Of the EU countries only Sweden and Denmark have higher excise duty on liquid petroleum gas compared to Serbia. According to the recommendations of European Commission for liquid petroleum gas as motor fuel is a stipulated minimum rate of 125 € per tonne (European Commission, 2015). In Serbia excise tax for this fuel is much higher, given that for one ton of liquid petroleum gas tax rate is 333 € (Stojanović, 2016).

In Slovenia, for liquid petroleum gas prescribed rate of excise duty is 0.1275 euro per kilo (OECDa, 2012), while for unleaded gasoline is 0.485 euros per liter (El-Agraa, 2011). Thus spread between rates is quite high, with a view to encouraging the use of liquid petroleum gas. The reason is good environmental characteristics of LPG compared to other types of fuel.

This comparison suggests that it is not enough the excise taxes just to be high, in order to achieve positive effects on the quality of the environment. It is well known that the price elasticity of demand for energy products is rather low. And for achieving positive effects for the environment, it is essential that the alternative fuels which less pollute the environment, to be taxed at lower rates. This milder taxation in the analyzed case of liquefied petroleum gas would enable through the cross-elasticity of demand, to come to growing demand for this fuel. This would lead to reduction in demand for other fuels which can be substituted with LPG, what would ultimately have positive effects on the reduction of greenhouse gas emissions.

In the latest amendments to the Law on Excise Duties were introduced excise tax on electricity consumption (Zakon o akcizama, čl. 2). From 1 August 2015 it is introduced the payment of excise tax on final electricity consumption at a rate of 7.5%. Under the final consumption of electricity, in accordance with the Law is considered delivery of electricity to the final consumers in the Republic of Serbia, but also the consumption of

electricity by the supplier for its own purposes calculated on the basis of consumption reading through measuring devices.

The basis for the calculation of excise duty on electricity is quite broadly defined (Centar za zaštitu potrošača „Forum” Niš, 2015). This is the reason why this excise is criticized in the public. Center for Consumer Protection “Forum” in Nis, indicates that excise duty should not be levied on other elements of the tariff system, but only on the basis of the number of kilowatt hours of electricity consumed. They emphasize that these other elements do not have any connection to the electricity consumed energy.

Among the other things, this excise duty has an impact on the decline in demand, which before its introduction was not enviable. The fall in demand has definitely a negative impact on other economic trends in the economy. So the exclusion of other elements, except the actual consumption of kilowatt hours of electricity, would alleviate the negative effects.

In addition to these negative implications of the newly introduced excise duty on electricity, there are some facts that may be described as positive. The introduction of the excise tax, in fact represents one segment of our alignment with the tax system of the European Union. It is also positive that through this excise great importance is given to renewable energy sources.

Ecological charges in the Republic of Serbia

Environmental charges are part of a system of environmental taxes in a broad sense, in accordance with the Law in the Republic of Serbia are prescribed the following charges (Zakon o zaštiti životne sredine, čl. 84, 85 i 87):

- charge for use of natural resources;
- charge for environmental pollution and
- charge for the protection and improvement of the environment.

All of these charges are earmarked revenues, which means that their purpose is predetermined and are used for the protection and improvement of the environment. The aim of the charges as an economic instruments of environmental protection is to promote the reduction of environmental damage, based on respecting the principle of “polluter pays” and “user pays” (Andre, Delisle, Reveret, 2004).

By 2012, part of the charges that were collected at the national level, were streamed into the Fund for Environmental Protection. From this Fund they were deployed for specific projects and programs in the environmental field. However, from the entry into force the Suspension of the Law on the Fund for Environmental Protection, the Fund for Environmental Protection has ceased to exist. So the charges that are related to environmental protection, have become the general revenue in the budget (Zakon o prestanku važenja Zakona o Fondu za zaštitu životne sredine).

Revenues from charges have a great importance for the preservation and improvement of the quality of the environment, given that in total expenditure for the environment in the Republic of Serbia participate with 32%, based on data for 2014. In total sources of financing protection and improvement of the environment, the largest share of expenditures are from the budget for these purposes 36%. The sectors of the economy allocates 19%, and international donations 13% of the funds invested for this purpose (Krunić-Lazić, 2015).

Revenues from charges in 2014 amounted 0.27% of gross domestic product. The total funds intended for environmental protection in the same year amounted 0.85% of gross domestic product. What is also negative is that the funds that were intended for the environment protection in 2013 was higher for 21% compared to funds for 2014 (Krunić-Lazić, 2015). These allocation of funds are considered to be quite low. Unlike the Republic of Serbia, national allocations at EU level are amounted about 2.1% of GDP for environmental protection (Eurostat, 2016). It is necessary in the future to give to this question further attention in Serbia, in order to achieve the same level of environmental care as in the European Union.

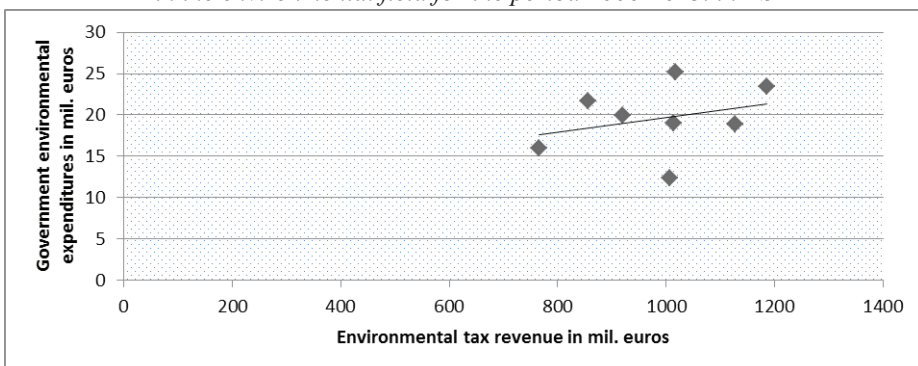
Analysis of environmental taxes and expenditures for the environment in Serbia

Revenues from the tax groups, which are among the environmental taxes in Serbia are fiscal significance. On the other hand, only a small portion of the revenues are set aside by the state in the field of environmental protection. One reason for this situation is that most of the revenues from environmental taxes is collected from excise taxes on petroleum products, which do not have a dedicated character, as is the situation in Turkey (OECD, 2012). Also, a large number of economic problems Serbia is faced with, have the influence on the allocation of revenues in other areas.

Analysis of the situation of environmental taxation in the RS in the paper is implemented by graphical analysis, descriptive statistics, as well as through comparison of the expenditures for environmental protection in Serbia compared to other countries, with the aim to determine what is the position of Serbia in this field.

On graph 2, it can be seen that there are significant deviations from the trend line, indicating a weak correlation between those two variables. Or in the Republic of Serbia in some years the revenues are higher than in the other analyzed years, but expenditure in those years is much lower, and vice versa.

Graph. 2 Diagram of dispersion revenue from eco-taxes and government expenditures in the environmental field for the period 2006-2013. in RS



Source: <http://ec.europa.eu/eurostat>, access date 20/03/2016. The diagram illustrated by the authors.

Based on the results shown in the table no. 1, it can be seen that in the observed period the average income from eco taxes was amounted to 986.77 million euros. In the same period, the average expenditure for environmental protection by the state was amounted to 19.56 million euros. The median, show us the value which separate the higher half of a data sample, from the lower half. In this example median for income equals 1,010.530, or 19.48 million euros in the case of expenditure.

The largest amount of revenues from environmental taxes, which was collected on an annual basis was 1186.58, and the least 766.18 million euros. In the case of the maximum amount of expenditure was 25.22, and 12.37 million euros was minimum on an annual basis.

The standard deviation is high in the case of both observed variables, indicating that there are significant deviations from the average value calculated for the observed period.

The coefficient of skewness is negative for both variables. It suggests that the distribution of frequencies is shifted to the left. Kurtosis indicates that the distribution curve is less convex. Jarque-Bera test shows that there is a normal distribution of frequency.

Table. 1 Results of descriptive statistics, revenue from environmental taxes and expenditures for environmental protection by the government in the Republic of Serbia, 2006-2013.

	Exp_for_envl_protection	Rev_from_env_taxes
Mean	19.56375	986.7675
Median	19.47500	1010.530
Maximum	25.22000	1186.580
Minimum	12.37000	766.1800
Std. Dev.	4.089170	137.2295
Skewness	-0.383621	-0.144924
Kurtosis	2.403167	2.143987
Jarque-Bera	0.314957	0.272257
Probability	0.854295	0.872731
Observations	8	8

Source: Stojanović, M., Efikasnost poreza u rešavanju ekoloških problema.

In countries that have implemented environmental tax reform, percentage share of expenditures for environmental protection in the harvested revenues from environmental taxes have a significant participation. In the Republic of Serbia it is not the case. Table no. 2 shows that participation by years in Serbia and as it can be seen in data presented, percentage share was ranged from 1.23% in 2010 to 2.53% in 2007.

Table. 2 Overview of revenues and expenditures for environmental protection in Serbia, 2006-2010.

Year	Environmental tax revenues (mill. €)	Government environmental expenditures (mill. €)	Percentage share
2006	766,18	15,95	2,08
2007	856,66	21,67	2,53
2008	919,25	19,94	2,17
2009	1.014	19,01	1,87
2010	1.007,06	12,37	1,23
2011	1.126,98	18,92	1,68
2012	1.017,43	25,22	2,48
2013	1.186,58	23,43	1,97

Source: Stojanović, M., Efikasnost poreza u rešavanju ekoloških problema.

With the aim of comparing the situation in Serbia with some of both developed and developing countries, in Table. 3 is shown percentage share of expenditures for environmental protection in the harvested revenues from environmental taxes by countries in 2007.

As can be seen from the table in selected developed countries share ranges is from 11% to 24.4%. From developing countries the situation is favorable from an environmental aspect in Chile, where 10% of eco tax revenue is allocated for environmental protection by the State. In Turkey the situation is extremely unfavorable and participation for 2007 amounts only 0.69% of environmental tax revenue.

Table. 3 The percentage share of expenditure for the environment in the revenues from environmental taxes in selected countries in 2007

Country	Percentage share
Germany	24,43
Finland	11
Estonia	13,54
Slovenia	11,86
Norway	25
Sweden	19,55
Chile	10,9
Turkey	0,69
Serbia	2,53

Source: Stojanović, M., Efikasnost poreza u rešavanju ekoloških problema.

This presented situation in the field of environmental protection in the Republic of Serbia, certainly is not commendable. Therefore in the future in this area should be made significant reforms, with the aim to harmonize national practices with EU practice.

Conclusion

Environmental taxes are very important in solving environmental problems. Through these taxes, their taxpayers are encouraged to change their behavior in terms of its compliance with the requirements of health and environmental quality. But in Serbia, despite significant fiscal abundance of these taxes, primarily due to the excise tax on petroleum products, their ecological role is significantly limited.

The main reasons for this limitation is the poor differentiation of tax rates according to environmental criteria. Especially when the excise duty on petroleum products are taken into consideration. Also a small financial participation of dedicated revenue in total environmental taxes makes this limitation bigger. In order to resolve this situation it is necessary for Serbia in line with the EU: to perform more adequate differentiation of tax rates for environmental taxes, provide better design of existing taxes and charges and to introduction new charges, provide better control of spending earmarked funds, and to allocate more funds from non-dedicated part of revenues for environmental protection in Serbia.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604085P

Received: October 10, 2016
Accepted: November 16, 2016

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IMPACT OF PROMOTIONAL ACTIVITIES ON THE DEVELOPMENT OF AUTOCHTHONOUS FOOD PRODUCTS MARKET

Abstract

Consumers who eat industrial food products often forget traditionally produced food. In this case, it is necessary to remind consumers on already well-known products through series of promotional activities, i.e. get them familiar with the advantages implied by their consumption. The goal of this paper is to point out to the significance of promotional activities for the development of autochthonous food products market. A consumer is informed by the promotion, he/she forms a positive attitude, which represents an important influence on a decision whether to buy autochthonous food products.

While planning the autochthonous food products promotion, it is necessary to choose activities that are going to be implemented. Regarding that autochthonous food products are the subject of the research, the special significance have the improvement of sale, personal sale and publicity which enable the communication to potential consumers. Other promotional activities are also significant. It is important to emphasize that coordinated or united activity of the promotional mix selected instruments represents an imperative for a successful promotion of autochthonous food products.

Key words: *promotion, autochthonous food products.*

JEL Classification: Q13

УТИЦАЈ ПРОМОТИВНИХ АКТИВНОСТИ НА РАЗВОЈ ТРЖИШТА АУТОХТОНИХ ПРЕХРАМБЕНИХ ПРОИЗВОДА

Апстракт

Потрошачи, који се хране индустријским прехранбеним производима, често забораве на прехранбене производе који су произведени на традиционалан начин. У том случају потребно је, помоћу низа промотивних активности, потрошаче подсетити на већ познате производе, односно упознати их са предностима које њихово конзумирање подразумева. Циљ рада је да се

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укаже на значај промотивних активности за развој тржишта аутохтоних прехранбених производа. Путем промоције, потрошач се информише, формира позитиван став, што представља значајан утицај на одлуку о куповини аутохтоних прехранбених производа.

При планирању промоције аутохтоних прехранбених производа потребно је одабрати активности које ће бити примењене. С обзиром да су предмет истраживања аутохтони прехранбени производи, посебан значај имају унапређење продаје, лична продаја и публицитет који омогућавају комуникацију потенцијалним потрошачима. Такође, и друге промотивне активности немају мањи значај. Важно је поменути да координирано, односно обједињено, деловање одабраних инструмената промоционог микса представља императив успешне промоције аутохтоних прехранбених производа.

Кључне речи: промоција, аутохтони прехранбени производи

Introduction

Autochthonous food products are significant, because they realize, by their production, an added value in regard to similar industrially produced food products. These products have the characteristics which separate them from the industrial products. According to an added value they achieve a high price on the market, while consumers have satisfaction by their production.

Depending on a region, i.e. a local area where the production realizes, the products have different characteristics. Promotion of the characteristics which characterise the specific autochthonous products can have multiple benefits. Besides a profit made by selling the autochthonous products, there also promotes a locality related to the production of these products.

The promotions in form of events which represent a series of manufacturers of a specific type of autochthonous food products are especially important, and in that unobtrusive way, often followed by a cultural program, they promote products characteristic for that region, i.e. for the specific locality. The autochthonous products are cultural heritage of the specific locality and they promote it in the traditional and characteristic way.

Results and discussions

The need for satisfying the realistic expectations of interest defined groups of enthusiasts to share their knowledge and skills in the production of autochthonous food products is obvious. It is necessary to analyse the possible ways, acceptable social educations, aiming to hasten their openness towards challenges offered by the market itself. Herewith an interest group must not at all be put into position to think that possibly adjustment to new trends and commercialization of their cultural norms of behaviour, acquired by tradition, will be discredited in self-respect, to which every source-oriented

group aspires. The population mobility has helped the cognition of breeding/growing standards and the development of varieties and manufactured products, based on tradition. Specific characteristics of geographic origin of autochthonous varieties in plant, spices production, which use in diet and preparation of manufactured products, have contributed to the dissemination of knowledge of specific features of nutritional and organoleptic characteristics of autochthonous meat products.

It is inevitable to recognize and especially to consider and analyse the marketing possibilities and accordingly to redesign and adjust the marketing systems, conceptions and strategies of positioning and differentiation of production to the interest environment characteristics. Demographic data, ethnicity, cultural, traditional background, collected by a comparative method of population diversity analysis and their quantitatively-expressed features and specific features, aim to recognise the causal-consequential factors which objectively affect the creation of a demographic profile of the population. According to a demographic structure of a population group, it is possible to outline the process of planning, organization and control of a marketing mix concept, in that way that the attractive and unattractive, decreasing and increasing production and sales opportunities can be determined.

Geographic parameters, defined by topographical features and climate, the historical and cultural identity don't allow the changes in traditional, cultural and specific pattern of behaviour and habits of population. The population on different geographic regions have different needs and habits in the production and preparation of the specific food products. Nowadays, the traditional technologies complete with modern technologies in food production and they not in any way diminish the elemental features of autochthonous products. Food production is becoming more and more diverse and the economy of scale is greater, and therefore it is inevitable to balance supply and demand. Demand is no more caused by emotions, but the consistent quality of specific tastes, nutritional characteristics with all elements of prestige.

In order to increase the demand for autochthonous products, although it already exists, it is necessary to legalize production and implement the necessary veterinarian-health control and achieve as higher as possible level of standardization, especially of meat manufactured products. *Vlahović and associates (2010)* stated that the production of autochthonous products must be on a high level of hygiene, along with the application of modern technology, but with the dominant elements of tradition.

In order to reduce uncertainty and eventual suspicion of potential buyers, it is necessary to make efforts to find a way to actualise the specificity of taste, searching for physical indicators of a manufactured product quality. Selection of elements, which will be necessary to use while trying to concretize the organoleptic effectiveness, provide availability and sale of products, and in that way bring closer to a target group, comes down to: first, a name of an autochthonous product will be chosen, that will point out to quality and will be easy to remember; then, letters, mark and logo will be designed; a slogan will be chosen, which will complete the name of product, emphasize the geographic origin, name of the region and location, and all these will be protected, along with the previous adjustment with the national legislation, after the EU recommendations, and then the geographic origin will be ensured.

The geographic origin protection of products represents an important part of the EU Stabilisation and Association Agreement, which refers to agriculture and food

industry. EU expects from Serbia to protect its original products and register them after the group regulations. Many EU member-countries make conditions in order to protect particularities in agricultural production and food industry, by the method well-known as the geographic origin. Protection of geographical indication is very important tool for the development of a region, especially rural areas and it represents the opportunity for Serbian manufacturers of traditional products to brand their product by using this protection and, in that way, to increase competitiveness (higher selling price, recognition on the market) (*Paraušić and associates, 2007*).

From the autochthonous products production point of view, there is no great number of protected designations of origin registered in the Republic of Serbia. In Table 1 are shown only some of the protected designations of origin.

The geographical indications, according to the *Law on Geographical Indications* („Official Gazette of RS“, no. 18/2010), use for marking the natural, agricultural and industrial products, home craft products and services. The geographical indication is an indication which identifies a specific product as a product from the territory of a specific country, region or locality, where the specific quality, reputation or other characteristics of products can essentially be attributable to their geographical origin and which production and/or processing and/or preparation is realised on the specific limited area. The geographical indication is also the name which is not the geographical name of a certain country, region or locality, but which has become generally known, by its long-lasting use in turnover, as the traditional name of a product from this area. In order to register the geographical indication, it is necessary to submit an application to Intellectual Property Office. The application implies the following: 1) description of a geographic area, 2) data on the specific products characteristics (data on method and procedure of production, data on special features and quality of products, 3) authorised organisations which carry out the control of products quality.

Table 1: List of selected protected geographical indications of autochthonous food products registered in the Intellectual Property Office of RS

Beef prosciuto (smoked ham) from Uzice	Pork prosciuto from Uzice	Bacon from Uzice	Srem paprika-flavoured sausage
Homemade sausage from Srem	Krivovir kashkaval cheese (type of hard cheese)	Homolje sheep-milk cheese	Homolje goat-milk cheese
Homemade aivar from Leskovac	Petrovac sausage	Pork cracklings from Valjevo	Wine Bermet
Kashkaval from Svrlijig	Sheep-milk cheese from Sjenica	Cow-milk cheese from Sjenica	Kashkaval from Stara Planina
Cow-milk kashkaval from Pirot	Cabbage and sauerkraut from Futog	Honey from Homolje	Linden honey from Fruska Gora
Kacer honey	Lemes paprika-flavoured sausage	Vrsac ham	Zlatar cheese

Source: Intellectual Property Office, Republic of Serbia

A manufacturer will find the veracity of tradition and originality in consumers by this relation towards its autochthonous product; then, he will engage experts, skilled and attentive people, who will help building the awareness on a product and a product's image. These elements suggest quality and often make that a product, as well as its benefits, become preferable and tangible.

A consumer analyses and assesses a set of products before he buys, based on their qualitative characteristics, organoleptic specificities, value-nutritional indicators, but also originality. The product is expected to satisfy a need and a certain benefit, which will develop a set of beliefs about brands, which furthermore makes a brand image.

Striving to a consistent quality of a product, and taking into consideration an evident potential for stability and effectiveness of a product, manufacturers try to resort to the quality standardization, which, despite the aforementioned, contains also the concept of development and promotion of products as the possibilities for good advertising of a national or regional brand. The concept of promotion comprises the process of providing logistical support with goals and possible difficulties, and keeps tracking consumers' satisfaction via surveys, where they express their perceptions in forms of complaints and suggestions.

With the rational analysis of all relevant, continuously collected data and information, the marketing experts by coordinated functioning of all available processing departments, get to know with the needs of consumers, primarily, by perceiving the impact of qualitative and specific stimulus on buyers' decisions whether to buy or not. According to the conclusions of an analysis, they will faster, more efficient and more effective bring the marketing decision and establish easier the integrated marketing communication aiming to stimulate sale.

Costs which follow the promotion, depending on the results they want to achieve, can be high. In order to implement successfully the promotion, it is not desirable that planned segments of a promotional mix miss, or to be less present. This exactly can be the case if there is insufficient budget for the implementation of an entire promotion plan. As it was previously mentioned, the promotional activities must be coordinated, i.e. to be unified, in order to accomplish the full promotion effect.

Association of manufacturers imposes itself as the solution of the problem, based on common characteristics of products or localities, and then also financing the promotional activities aiming to achieve mutual goals.

Communion in the promotion implies an implemented system of products quality, as a guarantee of the unique products quality of all manufacturers within the association. This especially refers to manufacturers who joined according to the same products promotion. If there promotes a certain autochthonous food product with known features, which is related to a specific locality (for example, sausage from Petrovac, cheese from Sjenica), a buyer has to be sure that he will get a product with the same organoleptic features with every purchase and there won't be any quality fluctuations.

The promotion goals are that the potential consumers become familiar with products, as well as that the old consumers remind themselves on the specific products they have already consumed. Important form of promotion represents events, related to a particular type of food product. Most frequently these are meat manufactured products, but also the products which are fruit and vegetable manufactured products. There are significant numbers of events on the territory of the Republic of Serbia, related to one

or more food products which are prepared in a traditional way. Most of events have the maintaining tradition of over ten years, and the most famous are:

Sausage-event in Turija – international festival of sausages, which is held once a year in the village Turija, located in Backa. The festival has more than 10,000 visitors every year. Main attraction of every Sausage-Event is the sausage longer than 2 km. The length of the sausage is extended for 1 meter every year and in that way the Guinness record is broken every year. This event holds every year in February.

Srem sausage-event – Srem sausage-event is the cultural-gastronomic event, which organizes in Sid, in February. The event lasts for two days. On the first day, there organizes the competition in butchery preparation and processing of Srem homemade sausage in a traditional way, while on the second day, the experts commission assess dry Srem homemade sausages.

Srem Paprika-Flavoured-Sausage-Event. It holds in May, in Erdevik, in the vicinity of Sid. This event is characteristic by a fact that, while evaluating, there treats particularly paprika-flavoured-sausage produced in a natural intestine, and particularly paprika-flavoured-sausage produced in an artificial intestine. It is also important to mention that a manufacturer of best paprika-flavoured-sausage in a natural intestine becomes an absolute winner of the Srem paprika-flavoured-sausage event.

Prosciutto-event in Mackat is the traditional Fair of delicatessen in Mackat, which holds every year in January. The prosciutto event is the traditional competition fair of delicatessen, which holds every year in January in the village Mackat, in the vicinity of Uzice and Zlatibor. The best Serbian delicatessen are chosen at the fair, and around 20 manufacturers represent beef, pork and sheep prosciutto, bacon and sausage from Uzice.

Cabbage-event in Futog is the event which is held for many years in Futog and it promotes the traditional dishes whose main ingredient is cabbage. The original cabbage from Futog has been grown in this region for over 250 years.

Cabbage-event in Mrcajevci is the event which has been hold in Mrcajevci since the year 2003. The competition in preparing the „wedding cabbage“ in a crock, numerous competitions of agricultural character along with the rich cultural program is realised within the bacon-event. It lasts for three days and holds every year, every third weekend in September.

Bacon-event in Kacarevo has been hold in the village of Kacarevo for more than two decades. It is the fair of bacon, meat and meat products. Various competitions take place within the bacon-event, such as the competition in cooking stew „Zlatni kotlic“, rendering of bacon „Zlatni cvarak“, pig slaughter in a traditional way, grabbing suckling pig from a sack, which represents an additional program of this event.

Barbecue-event in Leskovac has been held every year in Leskovac, at the beginning of September and it has been lasting for seven days. During this event, the most diverse barbecue culinary specialties are prepared. It is on the top of Serbian tourist event, with around 300,000 visitors per a year. What is characteristic for this event is that the biggest burgers are prepared on it, and they compete in beating previous records within the Guinness' book of records. Besides, there the competition in fast eating of hot red peppers is held.

Strudel-event in Novo Milosevo is the traditional cultural-tourist event, which has been holding every July in Novo Milosevo. Among other things, the record in strudel length breaks every year. Besides, the competition for the best strudel holds, as well as the competition in fast eating of strudels.

Festival of yeast cake with raisins is the first such festival which has been held since the year 2002. This event's goal is to preserve and popularize the yeast cake with raisins, which used to make on the territory of Vojvodina.

Fair of plums in Osecina. The traditional fair of plums is held in the centre of plum production, in Valjevo. The fair is a commercial-tourist and cultural-entertaining event which aims to make a Serbian brand out of plum. From the promotion point of view, it is significant that plum-based manufactured products, manufactured in a traditional way, are exhibited at the fair.

The promotion is necessary to direct to target consumers. Production of autochthonous food products is limited, and thereby there is greater opportunity for the promotion budget to be limited. From the aspect of autochthonous food products promotion, the specific instruments of a promotional mix stand out by their significance and the priority application. Improvement of sales, publicity and personal selling are the instruments of a promotional mix which can stand out in regard to an amount of financial resources that are possible to set aside for the promotion of autochthonous food products.

Encouraging sales is inevitable to implement through promotions, i.e. by tasting products on the counters. The promotions can organise in the facilities visited by many people, who come to buy (markets), but also in busy areas, such as pedestrian zones in the cities. In this case, it is necessary that there is also the possibility for sale if the reaction of a potential buyer, after tasting the product, is positive and if there is a need for buying.

Conclusion

The development of rural areas is stimulated by the production and sale of autochthonous food products, along with the preservation of national identity and there enriches the region's supply. Autochthonous food products, besides the sociological have also the economic significance, which reflects in competitiveness, profitability of manufacturers, which perceive the performance from consumers' satisfaction point of view. The specific associations (traditional, domestic, natural, etc.) can create an added value while placing at the domestic market. Based on added value, these products achieve a higher price on the market, while consumers are satisfied with their consumption. Higher production and supply increase the competitiveness, which have a positive effect on the increase of quality.

Designed with style and tastily, intriguing defined strategy of the promotional activity forms the consumers' positively balance attitude, with a present dose of emotional satisfaction. Promotional activities get their significance and base future cooperation between manufacturers and consumers. Exactly the continuance of their interactive coordinative cooperation, in sense of desires and possibilities for their fulfilment, justify the engagement of cumulative intellectual and resource potentials of marketing promotional efforts. Manufacturers enjoy in presenting almost forgotten products, while consumers expose the reflection of their pleasure by the aspiration for more frequent encounters with products of such representative and nutritional-qualitative level. However, with all respect of such stimulating events, which find their sponsorship also in the local authorities, in the interest of tourist organizations due to their peculiarity and

which promotionally represent a locality, region, there should point out to the necessity of standardization of forms, shapes and uniformity of autochthonous products tastes.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604095K

Received: September 30, 2016

Accepted: November 16, 2016

GLOBALIZATION AND THE KNOWLEDGE SOCIETY

Abstract

Globalization is a multi-layered, long-running and irreversible process, which includes intensive changes, deterritorialization and acceleration of social activities. One vitally important aspect of globalization concerns its impact on the knowledge society. Through Americanization of universities and the Bologna Process, globalization has commercialized higher education, turning knowledge into a type of commodity. Under the influence of market forces, the university is starting to lose its long-guarded autonomy, becoming just another subject of corporative capitalism. Homogenization, standardization, specialization, economies of scale, marketing concepts, consumerism, as well as the primacy of knowledge that contributes to economic growth and higher profits are some of the key factors that directly affect higher education systems and institutions throughout the world. The goal of this study is to determine whether globalization is altering the essence of higher education-and how. In conclusion, we may state that future research ought to be increasingly aimed at examining the chances and threats of globalization in the context of the knowledge society.

Keywords: *globalization, the knowledge society, the Bologna Process*

JEL Classification: A14, F20, F60

ГЛОБАЛИЗАЦИЈА И ДРУШТВО ЗНАЊА

Апстракт

Глобализација је вишеслојан, дуготрајан и незаустављив процес, који обухвата интензивне промене, детериторијализацију и убрзавање друштвених делатности. Један од најзначајнијих аспеката глобализације тиче се њеног утицаја на друштво знања. Преко американизације универзитета и Болоњског процеса, глобализација је комерцијализовала високо образовање, знање претварајући у робу. Под утицајем тржишних сила, универзитет почиње да губи свој дуго чувани карактер аутономности, постајући тек још један од субјеката корпоративног капитализма. Хомогенизација, стандардизација, специјализација, економија обима, маркетинг концепти, конзументизам, те примат знања која доприносе економском развоју и повећању профита неки

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су од кључних чинилаца који непосредно делују на системе и институције високог образовања широм планете. Циљ ове студије јесте да утврди да ли глобализација мења суштину високог образовања – и како. Долази се до закључка да наредна истраживања треба све више усмеравати ка испитивању шанси и претњи глобализације у контексту друштва знања.

Кључне речи: *глобализација, друштво знања, болоњски процес*

Introduction

In recent years, the term Globalization has begun to be widely used. Numerous researches on this topic are published on a daily basis. Despite this fact, there is no precise definition of the aforementioned term. This is mostly a consequence of the complexity of the term, which is difficult to define. In addition, it is a result of the vividness of the issue, which doesn't adhere to a theoretical framework. In academic parlance, the term globalization has been incorporated with the aim of emphasizing that the world has entered a new epoch at the end of the 20th century; the period is marked by intensive changes, deterritorialization, and acceleration of social activities. The post modern world (Bauman, 2000), the late modern world (Giddens, 1991) or the second modernity (Beck, 1992) cannot be considered separately from globalization, which can be conceived as a process which creates a widespread network of economic, technological, political and cultural interchange, where the rise of similar models on the wider social basis becomes a characteristic of modern times.

The number of attempts to highlight the complexity of interwoven parts in defining globalization is booming. Even though the scope of globalization is wide, there is a dimension of this process which is superior to others. It falls under the economic dimension; it is related to the universalization of capitalism, as well as to the open market as an unstoppable force, to whose needs every aspect of social life subdues. Indeed, there is no structure of consciousness which is saved from the influence of the all-pervasive logic of the market, not even higher education. By transforming universities into enterprises, by making them inferior to the law of supply and demand, the economic dimension of globalization has a decisive impact on academic institutions. Since the 1980s, the market has become a dominant force, enslaving the university, while the society and the state are playing supporting roles. The investigation of the relation between globalization and higher education, therefore, requires a thorough analysis of these phenomena.

Does globalization change the essence of higher education? Does the market invade the autonomy of educational systems and institutions? Is there place on the university for values which are not expressed in money? Does globalization incorporate consumerism into the field of education? Are we witnessing the development of the economy of highly educated or fachidiots? Should objectives of the humanistic view of education take second place to the economy and job market? This paper tries to provide answers to some of these questions.

The roots of change – the global economy and the knowledge society

During the second half of the 20th century, and especially during the 1970s, drastic changes occurred in the global economy. According to Fredric Jameson, it was about a third great original expansion of capitalism around the globe which followed after the earlier expansions of the national market and the imperialist system (Jašović, 2005). Industrial capitalism, also known as Fordism, was replaced with Postfordism. Impressive growth of trade and competition, surges in capital flow, progress in information technology, development of flexible manufacturing systems, the need for constant increase and expansion of market, the rise of international marketing, as well as the reinforcement of the role of multinational corporations and financial conglomerates, are some of the crucial changes in the system of global economy. Through privatization and deregulation, the adoption of neoliberal policies has resulted in general decrease in public spending and social security. By establishing a widespread neoliberal capitalist system, the growth-share matrix is expanding to those areas of social activity which have not previously been the center of its attention. (Liessmann, 2009; Hromadžić, 2008).

Various authors have differently named these rapid and long-term socio-economic changes. In literature, we come across terms about cognitive capitalism; post-industrial society, neoliberal society, the information society, entrepreneurial society, post-capitalist society, risk society, and even about boring society. However, in accordance with the widespread belief according to which the knowledge is the foundation of competitiveness in the global economy, a term “the knowledge society“ has become commonly accepted. This term derives from Peter Drucker. The fact that the knowledge has become the most important resource, and not just a resource, is what makes our society post-capitalist, Drucker points out. The modern market economy is a business world in which individuals and organizations can survive only if they possess certain kind of knowledge and skills. Primarily, it is about the knowledge of instrumental character. It can be understood as means to accomplishing social and economic results. It is tangible, practical, useful knowledge. According to Drucker, what we now perceive as knowledge should by all means be highly specialized. The knowledge workers work in the knowledge society, whereby the results are not accomplished by individuals, but by organizations. According to Drucker, the knowledge worker must possess knowledge at an advanced level of expertise and be prepared to live in a global and tribalized world. (Avramovic, 2008).

Consequently, with the development of global economy, higher education has obtained a new strategic role as a central resource of competitiveness, a measure of capacity for attracting and retaining highly qualified workforce and investments. The university acquires a vital role in economic growth, as well as the role of indirect source of profit for corporations. Established by the listed beliefs, the domination of neoliberal doctrine has encouraged authors to think about the role of higher education through productivity measures. Corporate university has been established on the basis of neoliberal ideology and the knowledge society. Knowledge is perceived as goods; a product which is offered and its value depends on the needs and demands of the market.

The preponderance of economies - the United States and the Bologna Process

When it comes to commercialization and performance on the market, American universities have been ahead of European ones for decades. In the modern commercial practice of American universities, its existence is not new, but its enormous scope. Commercialization in the true sense of the word was limited to the sphere of the university life. However, since 1975, universities have become more aggressive in their attempt to profit from their research or educational activities. Many institutions have set up programs for patent licensing, profitable educational endeavors over the Internet and wide range of other commercial activities (Bock, 2005). Although commercialization emerged due to a myriad of reasons, none of them would have been successful if there hadn't been a chance to make more money; a chance which was ensured by technologically sophisticated economy based on knowledge. Namely, universities have become the main source of factors which represent the basis of constant growth and progress – highly specialized professionals with specialist knowledge and achievements in the field of science, which others could use to produce new products, treatments or medicine (Pavlovic, 2013). The sudden increase in possibilities to exchange education, expert advice and scientific knowledge for exorbitant sums of money, has resulted in the fact that the commercialization prevails in American universities (Bok, 2005).

While educational institutions in the USA were left to their own devices since their foundation, and thus as such developed an entrepreneurial approach – academic culture in Europe was quite different. After all, the idea of university is a European creation. The idea of university, whose origin can be traced back to educational institutions in Ancient Greece, experienced its last fundamental changes at the beginning of the 19th century, when, under the influence of Wilhelm von Humboldt, the medieval university underwent a major transformation. Humboldtian model of higher education, often called the ideal model, has had a significant impact in the past two centuries, becoming an integral part of the global educational system. However, since the end of the 20th century, the perception of the development of higher education in Europe has significantly changed. After it was established in World War II, a strong connection between university and state was shaken and then broken. Since it depended on the existence of a stable welfare state, this kind of coexistence implied that university, as an independent science, was to be supported and largely financed by public body. The increasing intensity of competition in global market, gradual weakening of the role of the state, falling behind regarding efficiency and flexibility of USA universities and the need for young workforce in order to maintain competitiveness, in the meantime has imposed the need for reviewing and redefining the role of institutions in higher education. Encouraged by the newly developed situation, European countries united and adopted the Bologna declaration in June of 1999, which imposes the basic principles of reform of universities. Among other things, the declaration demands that the countries coordinate their education policies, create a unique “European Higher Education Area“, adopt a system of easily readable and comparable degrees and a system based on two main cycles.

Economic changes had an impact on the position of universities and had a considerable influence on the change of objectives of the higher education. The process of extinction of the welfare state, i.e. its transformation into administrative-bureaucratic

agents of the neoliberal market, with the purpose of maintaining economic competitiveness of the European Union in a race against Japan and the USA, consequently leads to the transformation of all social aspects, including higher education (Hromadzic, 2007). In Europe, the Bologna process has significantly changed the character of European university by distancing it from a traditional academic culture and adopting the American model of higher education. General market-oriented economy, the establishment of a system of credits (ECTS) as a standard unit which enhances employability and mobility, shorter period spent at the university, and ISO certified diplomas, can be considered as an Americanization of European universities. This can be interpreted in many ways, but the fact is that with the adoption of the Bologna declaration, European countries have for the first time influenced the organization and the content of universities. This is against the basic principle of how the university should function – *autonomously*. The forsaken autonomy of university includes economic dimension – independency over rules of capitalist market in the social structure. Thus, higher education becomes a subject of corporate capitalism.

Global(ized) studying and teaching – the virtual university

The most dramatic improvement in the area of non-traditional education has certainly been the spread of distance learning with the help of the Internet. By describing university campus and buildings in it as “highly unsuitable and totally useless”, Peter Drucker predicted that university, as an institution in which a person spends a certain amount of time, will not withstand (Bok, 2005). These kinds of long-term predictions are not a novelty; they were always following the development of new technologies during the entire 20th century. However, the real impact of these findings, according to the rule, was significantly minimal than its proponents had expected.

Be that as it may, the technology did expand the range of possibilities for learning. The Internet truly has characteristics which make it an attractive teaching tool. Primarily, this medium is interactive; it allows easy updates of teaching material, and the development of adapted curriculums. The Internet enables teaching to be available all around the world. Through teleconference, students can have a discussion with participants from all over the globe. Distance learning also offers significant educational opportunities for people who are not able to physically attend the university. Besides these characteristics, the Internet is not an effective replacement for traditional university education. A lot of things that are crucial for the students’ development originate from the experiences which one cannot get online. For instance, communication with others. And because of this, it is believed that the virtual community cannot replace the real one. Furthermore, it can be said that the concept of distance learning changes the role of the educator, teacher and professor in the educational process. Unlike the traditional way of teaching, the Internet courses are not designed by one person; they demand the entire team of people: course designers, writers, technicians, instructors, and others (Bok, 2005). When the teaching staff and courses are transferred to the Internet, administration gains total control, which allows room for monitoring, organizing, discipline and even censure.

The potential market of distance learning seems to have no boundaries. The possibilities of the Internet have spread beyond the USA, creating a global space for

virtual education. A large number of potential students from countries which do not have respected universities, are now a part of the universities in the USA, Great Britain, Australia and other developed countries. Even little-known institutions offer *online* courses for students from all over the world. For universities, this is a convenient way to decrease costs of teaching, while simultaneously increasing the number of students. The University of Phoenix, which was established as a for-profit college of vocational education, has managed to enroll 110.000 students until 2001, and many of them pursue their studies online (Bok, 2005).

Foreign students are very important for a lot of universities. The need to “export” higher education in this way is motivated by the fact that it is profitable. The aim is to create a market in order to offer a wide range of educational services. The recipe for earning money from this kind of education is to gather a large audience. In addition, the expenses should not be enormous. In other words, it would be good to use likable teachers, add attractive visual tools, but to avoid providing a lot of feedbacks and keep interaction at a minimum. According to this, these courses would not use the full potential of technology. However, the one thing that technology provides is the development of interactive lectures, which use stimulations, games and other things that stimulate discussion. But, this is the most expensive kind of distance learning, the one that costs as much as the traditional lectures. In that way, it can be observed that technology is used to make profit rather than enhance the quality of and access to the higher education.

Market relations and profit, the McDonaldization of Higher Education

The tendency to perceive education as a private good is increasing the competitive spirit among different sectors and institutions of higher education. This is achieved by promising certain incentives and rewards. Thereby, the competition is not a problem. On the contrary, it is desirable. However, the problem is that the competition is initiated by the profit. While trying to make a profit, universities aspire to reduce expenditure and increase revenue, which inevitably changes the essence of education and jeopardizes some basic academic values.

The need for money is a chronic condition of the corporate university. Under the influence of the market, a trend of decreasing the public participation in the financing higher education has developed, despite the increased number of students. Universities, including state ones, are forced to find new sources of funds – tuition fees, donations, and, especially, research revenues. The burden of financing higher education is falling on the individuals, thus eliminating those who cannot afford expensive tuition fees. Since donation requires a return of favor, the influence of those donating is getting greater, thus changing the form of the institution. The massification of higher education reduces the quality of education students are receiving, making it inferior to the quantity and economies of scale, which can be seen when an unprofitable course is cancelled. Courses which are not able to attract an abundance of students and fill classrooms, and in that way use economies of scale, are simply removed from the curriculum.

Scientific research activities stress the relation between universities and corporations. That relation of multinational companies and academic institutions is symbiotic, and those

companies can invest their resources in researches. The knowledge, which was previously free and available to everyone, is now confidential and aimed at the market. Nowadays, universities make contracts with different enterprises; they even open their own enterprises, designed for commercial exploitation of discoveries (Srećković, 2008). It is true that this leads to important scientific results and also to the reallocation of funds to researches at the expense of teaching. Also, a certain gap has been created between commercial and non-commercial disciplines. Lastly, ethical problems are appearing because of the conflict of interest, which has emerged from the relationship between the company which finances research and those researchers who are conducting it. However, universities can carry out research only if it is profitable. This creates winners and losers, and highlights the differences between the smaller number of those research institutions which are successful and a greater number of those universities which are mediocre (Jung, 2003). The ‘race’ to make a profit turns into a battle for survival.

The expansion represents one of the most important trends in higher education. Before World War II, 5% of people living in Western Europe and the USA were enrolled at a university. Now, the student population has grown to 30% in Western Europe, and 50% in the USA. According to UNESCO, there were about 138 millions of students in 2005. 21 million of which were studying in China, 20 million in the EU, 18 million in the USA, and 11 million in India (Dolenc, 2007). These statistics are the best indicators of the transition of universities from elite to mass institutions. University’s connection with the market has resulted in the fact that it is not on the top of the ivory tower anymore. Globalization inevitably changes the university, transforming it into a sort of *Mc University* – a widely available, standardized service.

Education has definitely become a product. The tendency towards standardization of knowledge, which is reflected through increasingly present engineering component, which strives to develop methods and algorithms that will make curriculum equal at every level, can be spotted in the products of multinational companies. However, the process of determining ingredients of hamburger or making a refreshing drink has its explanation – the ability to achieve economies of scope through increased efficiency leads to success and global domination. When it comes to academic institutions, things are not that simple. Within the context of higher education, the fear of homogenization can be expressed through imperialism, the need to impose Western values, and diminish cultural specificities. When it comes to colonization, it should be considered as a market colonization, rather than American. (Milosevic, 2006).

No matter how efficient it might be, without appropriate propaganda, manufacturing process will not lead to success. Although the reality is completely different, McDonald’s, Coca-Cola, and other similar companies, will convince the consumer that their products taste nice, and that they will feel better if they spend money on them. Truly, it seems that education is achieving the same result – a well-packed, promoted product, but it is in its essence extremely empty and mostly hazardous. The reality tells us that universities, perceiving their future students as consumers, are in an identical way humoring their expectations by using well-known marketing concepts. Seduction is also manifested in educational context, which leads to a brand new and scary form of *consumerism*. The essence takes second place, students are happy with a brand; the act of shopping is much more important than the purchased product. We can only guess all the devastating results this logic, with its dehumanizing consequences, could bring.

The principles of corporate capitalism are prevailing in the universities today. An academic institution is treated as an enterprise which produces knowledge and sells curriculum and scientific services to the free market. Accordingly, it is believed that university, no matter if it is private or public, should be managed according to the principles of economic management, that its performance should be measured by the profit rate, and that rectors and deans should be considered as managers. The university is becoming a factory, its main task being to produce a certain number of specialists, train them and direct them to perform assignments.

Education is increasingly viewed in terms of economics terminology. It will gradually stop being a part of social policy, and become a part of political economy. Numerous studies, which are dealing with this problem, mostly investigate the connection between investment in education and the percentage of economic growth. Nowadays, education is explained quantitatively through calculation of profit which brings investment in human resources; by connecting it to finances, development of human resources, efficiency, effectiveness, economies, and revenues and expenses. The perception of higher education as an investment in the human resources has become an integral part of educational policies all around the world, and especially in developing countries. This kind of narrow and instrumentalist view cannot be perceived as an achievement in the area of education. It is the product of mechanistic perception of the world, where people are viewed as tools and shaped in order to successfully fulfill different functions in economic machinery of the society. Beside practical usefulness, education and learning are concerned with the nature and essence of man, society and its structure. They contribute to the growth and development of personality, and are aimed at its spiritual and intellectual part, rather than just at tangible. Hence, education is good and valuable (Savicevic, 2007). Instead of talking about human resources, it is more useful to speak about *human potential* – about a man with all of his abilities and creative capabilities.

It is clear that the aforementioned tendencies in science education policy are aimed at the existence of that knowledge which doesn't bring any profit and which isn't productive. Measured by criteria of economic rationalism, the knowledge which is not applicable on the market is considered useless. Adjusting the university to the demands of the market has blurred, if not even excluded from its program, the knowledge which humanistic social science brings forth. They have been replaced by techniques characteristic for the management of corporations and business systems (Risman, 2010). The exams are even designed in the similar manner, with scales, points and charts, dumbing down and rationalization of the curricula, which instead of rewarding talented individuals who possess critical thinking skills, reward those who think in terms of surviving.

Conclusion

It is hard to predict how universities are going to escape from the grip of the increased hyperspecialization, to which there is no end in sight and which is responsible for the phenomenon of students and professors who possess extremely narrow views of the world. All fields, of course, have their scope and they encourage students to

choose some professions, but that should not be done on behalf of creating a devastating **Fachidiotismus** and abandonment of intellectual freedom. Therefore, the classroom is at the risk of becoming a morose, expressionless place which apart from offering and licensing has little to give. Before, professors gave lectures; nowadays, they are mostly professionals, entrepreneurs and careerist, just like in the business world. Intellectuals who come out from those conditions are only experts who do not possess an understanding of moral and social demands of their calling.

In these kinds of conditions, the term which refers to the general or universal education is questionable. Even the term *education*, which is related to the formation of a mature person and to the process of becoming a versatile being – could be abandoned in favor of training, teaching and practicing.

The process of differentiating knowledge is ambivalent, since it contains a narrow view of the reality as a whole, and an attempt to broaden the knowledge of its parts. Therefore, it is about an increased knowledge which tries to focus on the little things. However, if we dare to take a step back in order to view the *image* from a distance, instead of looking at it up close, we will notice that similar difficulties are present on a global level. It is has to do with insight and perspective. Namely, it is a paradox, which can be reflected in the growth of the processes of globalization on one hand and fragmentation of knowledge on the other hand.

With this in mind, one simple question remains unanswered: How can the partly educated people solve global problems? Indeed, due to the lack of thorough consideration of reality, the intellectual conformism, which was created by technisistic type of thinking which destroys diversity, has a difficult time in dealing with the praxis, even though it strives for it.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604105A
Received: August 08, 2016
Accepted: November 03, 2016

STORYTELLING AS A MODERN TOOL OF CONSTRUCTION OF INFORMATION SECURITY CORPORATE CULTURE

Abstract

The aim of this paper is to highlight the importance of organizational storytelling as a modern instrument for the construction of information-security corporate culture. The paper defines the term “storytelling”, formulates the basic tasks of using it, as well as the storytelling application areas in the organization. As a special emphasis on corporate culture of information security, the paper discusses the technology for creating information-security corporate culture, as well as transmission, dissemination and preservation of knowledge and information in an organization, with the use of storytelling. The paper, based on analysis of literature and practice, emphasizes the advantages of storytelling in the formation of learning and information-security organization culture.

Keywords: storytelling, management, organizational culture, knowledge management, information security.

JEL classification: M140.

СТОРИТЕЛИНГ КАО САВРЕМЕНИ ИНСТРУМЕНТ ИЗГРАДЊЕ ИНФОРМАЦИОНО-БЕЗБЕДНОСНЕ КОРПОРАТИВНЕ КУЛТУРЕ

Апстракт

Циљ рада је да укаже на значај организационог сторителинга као савременог инструмента за изградњу информационо-безбедносне корпоративне културе. У раду се дефинише појам “сторителинг”, формулишу се основни задаци коришћења, као и области примене сторителинга у организацији. Како је посебан нагласак на корпоративној култури информационе безбедности, у раду се разматра технологија креирања информационо-безбедносне корпоративне културе, те преношења, ширења и чувања знања и информација у организацији уз коришћење сторителинга. У раду се, на основу анализе литературе и

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праксе, наглашавају предности примене сторителинга у формирању учеће и информационо-безбедносне организационе културе.

Кључне речи: *сторителинг, управљање, организациона култура, управљање знањем, информациона безбедност.*

Introduction

Each organization in the process of its life cycle builds its narrative, meets with problems and solve them more or less successfully, entering new situations, and, in cooperation with the external environment, transforms its internal environment. The narrative can be realistic, to some extent exaggerated, or else - completely fabricated. Whatever, it may influence the organization, its members and cooperation with business partners, positively or negatively. It may also affect the fulfillment of their goals or be an obstacle. Sharing experiences through a narrative appears in various professions as a great way for knowledge exchange and determination. Researches suggest that sharing experiences through narrative mode builds trust and promotes norms, transfers tacit knowledge, enables learning, and creates emotional connections. Narratives can be a powerful way of presenting and conveying the complex and multidimensional ideas. Well-designed and well-told stories can transmit the information and emotions, explicit and tacit, as well as core and context.

Skill of narrative management, maintaining and developing a positive one, correct and timely transposition to those who need it, neutralizing the negative elements, and occasionally creating a new one - these are the tasks of modern managers who aspire to raise the effectiveness of social relations in the organization, by using the storytelling method.

Storytelling - concept and essence

Storytelling is the use of narrative skills that is the art of narration, in areas that were not originally considered as a narrow field of application, at least not until now. Pointing to the universal of the narrative and its seductiveness, and the need for its wider application in areas such as marketing, management, politics, military, Salmon in “Storytelling” reveals that the possibilities of storytelling in modern times do not retain only to their aesthetic plan, but it can be interpreted as utilitarian category. (Salmon, 2010) This, then, arises from the growing need to actually transform the whole current propaganda operation. Salmon in his paper asks: “Has a narrative skill, which explains the experience of mankind since its inception, in the storytelling era, became a national instrument of lies and control of thoughts? Behind the brands and television series, but also in the shadow of winning the election campaigns from Bush to Sarkozy, and military operations in Iraq or elsewhere, worthy storytelling technicians are hidden. Empire seized narrative.” (Salmon, 2010) The basic thesis of storytelling says: at all times tell a story! Why? Our mindset is accustomed to the narrative organization, conceptual operation with the help of images that is trying to line up in a certain experiential model, or pattern. We, therefore, live in and with graphics and images, with notions that we process narratively by giving them a meaning, shaping them so that they can fit into the horizon of expectations, creating our own world (make impossible possible), but also our

own life. Such feedback, narrative disposition of man on the one hand, and the subsequent processing of the seen, experienced but returned (now as a final content), placed in a story that has its own exposition, plot, development, outcome, protagonists, antagonists, punch line ...) on the other hand requires that our relationship to the surrounding world is formed precisely on the basis of material derived from the given possibilities and resources.

Salmon in his work about the predominance of the former storytelling forms of communication practices moves the focus into the sphere of management, asking himself again and again what actually causes the advantage of one over another paradigm, and where the roots of the evolutionary, historic, progressive changes are. Historically, the origins of this phenomenon were found in England, the industry leading power in the mid-nineteenth century, with the advent of the manufacturing method of production. Rearranging different forms of labor force in the same space and the subjugation to a hierarchical organization, strict supervision and the deafening noise of the original industrial machinery, necessarily lead to proper etiquette at the level of interpersonal communication among members of the workforce. Workers' speech was perceived as “chatter” or “gossip” at best, and at worst it was interpreted as a silent resistance or subversion. No surprise then that the strike was initially meant as a valve for such suspension. However, how long this situation could give desirable results? With changing the mode of production, sophisticated technologies and overall social change at all levels, “organizational” or “systematic silence” relationship form stopped functioning. Moreover, it has become counterproductive. A series of financial failures, breakdowns caused by poor internal staff coordination, forced top managers to completely re-examine the reasons and the causes of this phenomenon. After a long and detailed analysis, a complete turnaround was made. For management gurus only one solution became possible: silence should not be imposed to the employees. (Salmon, 2010) On the contrary, it should be expelled by an opposite order – to talk and confess. In the corps of newly permitted “sins”, almost imperatively, gossip takes its place, as a form of narrative that inevitably carries information. Benefits of liberated tabooed behavior in the workplace were immediately registered by the apparent “contribution to the maintenance of the notification system of rules and values, transferring the tradition and history of the company. (Fog et al. 2010) New knowledge about the benefits of this approach says about the power of narrative, which “lies in the complex experiences as a combination of senses, mind, emotions and imagination.” (Armstrong, 1992)

Consequently, the new company becomes a creative workshop, a kind of narrative organization, where the narrative is heard, cultivated, regulated and, of course, controlled. If you take a closer look, a lot of things around us are the narrative, the activities of a company as well. One would not say at first glance, but isn't the reports about the visit to the client, business interviews and curriculum vitae (autobiographical narration) actually forms of storytelling? “In this way, storytelling management is nothing more than an attempt to control the streaming of the story.” (Salmon, 2010; Gerasimenko, 2006; Prusak et al. 2004)

With the rise of storytelling and its all the more sensational successes, you can see the reciprocal decrease in dull, boring, rational argumentation, almost obligatorily presented in an even more boring power-point medium, with tiring and discouraging effect on employees. What is that telling us, and at this level of analyses, what conclusion we can get? The mesmerizing power of the story targets the irrational layer of personality, dependent of archetypal sediment and performance, by native mythic patterns inherent to the human race as a whole set of structural features which make the narrative or story so effective. Of course, in storytelling management semiotics is not the only goal and purpose - it always has utilitarian properties, but in a more serious approach to the

storytelling phenomenon, it is hard to bypass it, at least as a direct and indirect assistant in the aim to enrich and improve one area. Therefore, we can rightfully claim that the success of storytelling here, in fact, was enabled by a sort of “regression of the company’s world (consciousness) to the universe of stories and fiction.” Narrative won ineffectiveness. (Salmon, 2010; Hovichkova, 2012, Fog et al. 2010; Aaker & Joachimsthaler, 2009.)

Storytelling is a way of transmitting information and knowledge, as well as inducing desired behaviors and actions by using the instructive story. Also, storytelling can be defined as the art of fascinating and suggestive narration. (Simmons, 2006.)

Organizational storytelling is a management tool used for understanding, interpretation, and dissemination of values, norms, rules and principles of organizational culture through the use of corporate stories, myths and legends. These can be stories about the work of management in the past, on cooperation in the organization or on certain events. Storytelling enables targeted impact on employees, both those who are already working in the organization, and those new employees, through corporate stories, myths and legends. (Reami, 2002.)

Leader as a teacher helps people in organization to develop system understanding expand their capacities in order to understand complexity, make vision clear and improve mutual mental models. (Micić, 2015)

Storytelling is also the informal method of personnel training. The first attempts of creating and using stories in business were different in form. Employees were encouraged to write down the things they learned, make catalogs of knowledge, as well as today’s “yellow pages”, but with a list of employees and the knowledge that they have, maps of informal networks of experts in the organization were created.

While the actions were different, their base was the same - increasing the effectiveness of the creation, interpretation and acceptance of ideas. (Hovichkova, 2012.)

The narrative contains four required elements without which there is no effect on the audience: the message, the conflict, the heroes, the story.

Organizational myths and legends play a very important role in the organizational culture. (Janićijević, 2013) Myths are narratives that are partly based on real facts, a partly fictional. They are directed to the desired future and have to indicate the employee’s perspective. Corporate legends do not have to basically rely on organizational events, on the contrary, and if completely fabricated, they are intended to manipulate public opinion, or the opinion of a certain collective. Using corporate myths and legends for managing organizational culture is considered to be a part of internal PR.

Heroes of corporate narrative can be: founders, who led the company to success with their enthusiasm, managers of the company, who have made successes with individual projects, employees who are able to deal with unusual problems, and the like.

Storytelling method was first used in the international company Armstrong International, by David Armstrong, general manager of the company. The idea of managing the personnel with the help of narratives was used also at Birmingham University. Professor Kevin Thompson, when creating concepts for attracting staff, concluded that the narrative is one of the best methods of motivation.

Storytelling as an element of corporate memory

Storytelling uses the oral method of transmitting information and knowledge, as the most effective. This method allows direct communication, with all its advantages. Increasingly, it is

also used in written form on paper or electronic media. The basis for the preservation and use of knowledge at various holders in the company is the structure of corporate memory model.

Corporate memory is the ability of the organization to keep, collect and produce informal and formal organizational skills, which are composed of experience and tradition necessary for the development of competencies of the organization.

Using knowledge of corporate memory provides affirmation of cooperation among organizational units, effective personnel management and work with clients (Novichkova, 2012). If the knowledge exist in two forms - invisible (human experience and practice) and formalized (documents and records), corporate memory determines cultural and technological process of collection, storage, use, evaluation and application of knowledge.

The functioning of the corporate memory presupposes the existence of a structural entity that collects and processes the knowledge in the organization, facilitating their spread through administrative barriers and integrates them into operational business processes (Novichkova, 2012.) In addition, it facilitates the exchange of knowledge, so knowledge becomes available to all organizational units, and the like.

The goals of formation of corporate memory are: preclusion of loss of knowledge with the departure of certain professionals, using experience gained while working on projects, drawing lessons from the past, the preclusion of future errors (this is especially important for corporate security of organizations); the use of knowledge maps of the organization to build corporate strategy, accelerating the circulation of information and knowledge and increasing the effectiveness of communication, which is also one of the preconditions for the construction of corporate security; improving of personnel training system, and analysis and application of the experience of other companies in operation.

The main advantage that a company acquires, by using the model of corporate memory, is the ability to concentrate knowledge in a unique complex corpus, fast access to knowledge, reducing the time to acquire some knowledge, reducing the risk of the human factor, which is one of the most common causes of compromising corporate security.

Information-security corporate culture

Culture can be defined as the characteristic beliefs and behaviors that exist in an organization. It is a collection of formal and informal behaviors that the organization has adopted as its way of doing business (Guptara, 1994). Corporate culture determines the behavior of its employees and affects the formation of acceptable behavior within the organization (Beach, 1993).

Information-security culture is an integral part of the corporate culture and it also has to do with the behavior of employees (Schlienger & Teufel, 2003). The ways in which employees perform their duties are based on collective values, norms and knowledge and have a decisive influence on the success of the entire organization. Information-security culture occupies a very small part of the research and there is not a single definition, or attitude on what should be a corporate culture that will lead to the appropriate method of management of information security culture...

Corporate culture has a very strong impact on data security (Chang & Lin, 2007). It is important to note that corporate culture should reflect a positive attitude towards

information security throughout the organization and to be consistent with good practice of information security culture.

Information-security culture is based on improving employee awareness of the importance of data and how to deal with it, as well as the adoption of desirable behavior models in the context of corporate culture (Da Veiga & Eloff, 2010:198).

Some authors have found that only paying attention to the corporate culture of security is not enough to understand all the factors that affect the security of information and culture (Helokunnas & Kuusisto, 2003).

Dhillon stresses that the organizations in which the culture of information security is not prevailing, will be in a serious problem with maintaining the integrity and protection of technical systems organizations (Dhillon, 1997). He also believes that information-security culture should be an integral part of the corporate culture, which, after all, was confirmed by the conclusions reached by other authors – information security culture is a set of beliefs and respect for certain values that are manifested in actions and behavior of employees in data protection organization (Andress & Fonseca, 2000; Breidenbach, 2000; Von Solms, 2000, Ramachandran, Srinivasan, Tim, 2008.).

Literature defines three types of mutual relations of corporate culture and information security culture:

1. Information security culture is separated from the corporate culture (members do not participate or take a very little part in the implementation of security in organizations, and their awareness of the importance of security is very low; activities that are related to information security employees is performed only by IT department) (Albrechtsen, 2007);
2. Information security culture is a subculture of corporate culture (members of the organization take care of information security only within their organizational units, occasionally trained for mandatory training, each subculture associates its needs with responsibilities and work tasks of certain professional groups, such as accounting, etc.) (an Ramachandran, Srinivasan, Tim, 2008)
3. Information-security culture is integrated into the corporate culture (corporate security is a concern of all employees and is implemented in a holistic manner; in this type of culture, data protection is a part of the business routine). (Thomson, von Solms, Louw, 2006)

Storytelling as an instrument of construction of information security culture

In order for the information-security culture to become an integral part of corporate culture, all employees must become aware of its importance. With specific focus, organizations can quickly move to the highest level of information security.

The human factor is the cause of more than 75% of security incidents. The vast majority of these incidents occurred accidentally because employees were not aware of the consequences of their (usually harmless) actions. Therefore, it is important that everyone understands what are the likely threats to the property and the entire enterprise business and how to properly behave to reduce the risks inherent in these threats. In addition,

each employee must be fully aware of its role in protecting the system when managing people, information and assets. Other organizations, electronically communicated, as well as our external service providers should also be fully aware of their role in terms of security, information and funds. Most important of all is that the senior management of the enterprise must understand threats and risks, implement security measures and fulfill its obligations under the adopted corporate safety programs. Explicit actions of the management in this area will demonstrate to all staff, partners and service providers that the company is committed to protecting its people, information and resources.

One of the instruments to build a corporate culture, in which information and safety culture will be an integral part, is storytelling.

The main tasks of storytelling in the construction of this type of corporate culture are related to:

1. The movement of established tradition in the organization and consolidating previously accepted corporate ideology. Storytelling enables building links between the past, present and future. Use of narrative helps to learn more about corporate values and principles by which it works, so these can be followed. Employee loyalty increases with a sense of belonging to the collective and complete identification with the mission, vision and goals of the organization. It also reduces the need for financial motivation.

We have already mentioned that the availability of invisible property, which accounts for about 80% of organizational knowledge, is only possible in the process of interpersonal relationships. The basic mechanism for building the most valuable knowledge and their application is personal communication among employees in the sphere of influence of the community through which a corporate narrative circulates.

2. Introduction of a new corporate ideology. Use of narrative enables new employees to quickly understand the corporate ideology, norms of behavior and work. To learn more about the organization are often used codes of conduct, corporate regulations etc., but storytelling helps new employees to enter more deeply into the system and find the right role for himself in the corporate environment.
3. Training of employees by administering examples of safe behavior and work. Thanks to the narratives of successful or unsuccessful experience, there is an exchange of skills and experience among employees, reducing the amount of repetitive mistakes, leveling of the stress of newly employed in case of mistake. Invisible knowledge, which is found in every segment of the professional activity and is not recorded in any instruction or knowledge base of organizations, is best transferred through informal channels.
4. Employee motivation by personal narrative. Every organization today can share narratives about its wise founders, decisive leaders and loyal employees, protection of business secrets, data, intellectual capital, know-how... It would be useful to keep all information about security managers who have successfully counteract the loss of data, dealing with information-security risks, etc. These narratives allow employees to experience the corporate culture focused on the promotion of new ideas, initiative, self-education, raising the level of competence and information security, as well as the intellectual potential of employees, which raises the level of accountability

- of employees and reduces the fluctuation.
5. Storytelling expands the arsenal of resources of personnel motivation and reinforces the reputation of leaders, resulting in creating of the form of imitation.
 6. Control of employees' attitudes toward managers' omissions and problematic situations with which the organization meets periodically. Corporate narratives are particularly effective in moments of crisis.
 7. Improving the effectiveness of communications at all levels. In order to raise awareness of information security throughout the organization it is necessary to implement a communication program that will ensure that employees understand the need for implementation of best practices for information security, and to inform them about their roles and responsibilities in the development of an efficient system of information security.

Companies that use storytelling and support corporate myths, manage to form an effective information-security culture and substantially increase the level of employee motivation (Smirnova & Voskresenskaja, 2009).

Conclusion

For the information security in organizations, the attention is paid mostly to the physical and technical measures, and very little on the social and cultural factors that influence it.

We believe that neglecting of this segment is largely the cause of the problems in modern organizations.

The application of storytelling enables:

- creating a corporate culture of information security, knowledge, including corporate traditions, norms, values, ideology, rules, leadership, interaction in achieving the strategic objectives of the organization;
- management of motivation and training of employees;
- raising of the level of effectiveness of business processes, creation, storage and use of information and knowledge;
- raising the level of effectiveness of communication in the organization and reducing of the level of formalization;
- building a positive image of the organization in the outer and inner environment - storytelling is the most important instrument in relations with the public;
- controlling the problematic, crisis periods in the functioning of the organization, lowering resistance to change, raising the level of effectiveness of organizational changes.

Keeping knowledge in corporate memory enables pooling of resources into a single point for all employees, structures knowledge in accordance with its importance, customizes knowledge, enables analyzing and forecasts risk. In addition, the preservation of knowledge provides avoiding past mistakes. At the same time, the experience of mutual relations with clients, employees and stakeholders can be helpful in the future. It can be played both in the form of formalized, as well as unformalized knowledge of employees, in part or in full, in corporate narratives, myths and legends.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604115G

Received: August 17, 2016

Accepted: November 25, 2016

ADAPTABILITY OF COMPANIES IN THE REPUBLIC OF SERBIA – EMPIRICAL RESEARCH

Abstract

In an era of constant change in all spheres of business, an essential factor in the survival of a company is monitoring developments in the region, rapid response to current trends and anticipating future market developments. In this way, companies become more successful and have more proactive control of their future.

The aim of paper was that through empirical research, did on the model of Denison, shows the degree of adaptability of enterprises in the Republic of Serbia, to identify the factors that influence its development and check the premise that innovation is an essential factor of adaptability. Difference in adapting to changes in domestic and foreign companies is also analyzed. The results showed that companies in the Republic of Serbia still need to work on improving the adaptability, that the certain aspects of adaptability are more present in foreign than in domestic companies and that innovation is the main factor of adaptability. The significance of the results is in determining the way of improving the functioning of companies in the Republic of Serbia, especially of domestic companies, which after a period of transition, trying to integrate successfully into the European and world economy.

Keywords: *adaptability, companies, Serbia, Denison model*

JEL Classification: L20

АДАПТИБИЛНОСТ ПРИВРЕДНИХ ДРУШТАВА У РЕПУБЛИЦИ СРБИЈИ-ЕМПИРИЈСКО ИСТРАЖИВАЊЕ

Apstrakt

У ери сталних промена у свим сферама пословања, битан фактор опстанка привредног друштва је праћење дешавања у окружењу, брза реакција

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на актуелне трендове и антиципирање будућих дешавања на тржишту. На тај начин компаније постају успешније и имају проактивнију контролу над својом будућношћу.

Циљ рада је био да кроз емпиријско истраживање, урађено по моделу Денисона, прикаже степен адаптивности привредних друштава у Републици Србији, да се идентификују фактори који на њу утичу и провери предпоставка по којој је иновативност битан фактор адаптивности. Анализирана је и разлика у адаптирању променама у домаћим и страним компанијама. Резултати су показали да привредна друштва у Републици Србији још треба да раде на унапређењу адаптивности, да су одређени аспекти адаптивности више присутни у страним него у домаћим компанијама и да иновативност јесте главни фактор адаптивности. Значај добијених резултата је у одређивању праваца унапређења деловања привредних друштава у Републици Србији, посебно домаћих привредних друштава која након периода транзиције покушавају да се успешно уклопе у европске и светске привредне токове.

Кључне речи: адаптивност, привредна друштва, Србија, Денисонов модел

Introduction

“The 1990s may witness the beginning of the end of the traditional organization” (Nadler, Gerstein, Shaw et al, 1992, p. 263) and the beginning of the time in which changes are the key for the survival and growth. New business conditions require a new organizational behavior. “The relevant criterion is not the size, but the strength and, above all, the power to adjust” (Frank, 2015, p. 217).

Adaptability has become the most desirable characteristic and the primary activity of companies that think responsibly about their future. “History has repeatedly shown that individuals and institutions who are able to quickly adapt and to change, have the best results in terms of social change and difficult circumstances” (Jašarević, 2012, p. 179). Adaptability, therefore, is not the trait of a new era, but the need for it is more intense than ever. “Conditions, in which organizations operate demand a response without which organizational demise is a frequent result” (Cameron, Quinn, 2006, p. 7). In the years to come, when is, according to the words of Hamel and Brin “competitive anarchy is on the rise” (p. 22), the degree of organizational adaptability, as well as people and society as a whole, will be seriously tested.

The aim of this paper is to show the degree of adaptability of enterprises in the Republic of Serbia, to identify factors that affect adaptability and to analyze adaptability differences in local and in foreign companies through empirical research. As specified by Denison model, according to which the research was conducted and results presented in this work, adaptability is a flexibility factor of companies’ organizational culture. By adaptability improving the organizational culture is being developed and modernized. Adaptability is a phenomenon that in time when almost all resources are relatively equally accessible, provide companies with a truly unique competitive advantage (Arikan, Enginoglu, 2016).

The phenomenon of adaptability

The presence of constant competition and an organization's need of to survive and exist on the world market require it to have the ability and willingness to constantly change and adapt in order to successfully overcome uncertainty and competition. Attitude of an organization towards changes, as well as towards occasional disturbances that briefly disrupt balance in an otherwise peaceful and stable business world, will expose every organization to a high risk. Stephen P. Robbins and Timothy A. Judge (2009) in their book *Organizational Behaviour*, call such organizations arrogant organizations because they quickly lose their competitive advantage due to their attitude, emphasizing that corporate highway is filled with wrecks of companies which have allowed arrogance to undermine their earlier successes. It is likely that some of these companies will eventually recover and stand up on their feet again, but millions of dollars and customers might have been lost forever, which is the high price they paid for their lack of adaptability.

Peter Drucker (2005) also points out that a “modern organization has to become a generator of changes and to organize abandonment of things that have proven to be surpassed, as well as to continually work to improve all products, services and processes within itself” (p. 213).

“Successful organizations use more ideal forms of organizational structures and processes that enable them to become more organizationally flexible and adaptable, and to generate amazing products and services. It gives them more proactive control over their future instead of waiting to react to change in their marketplace” (Ackoff, Magidson, Addison, 2006, p. 139).

In order to increase their ability to adapt, and become competitive or to gain advantage over others (Coulter, 2010), organizations must encourage their employees to use their own intellectual and creative potential more fully, to change, and to take risks; it has to support employees' initiative, and to motivate collaboration among employees... For example, a research conducted in 1994, among business people from different industries, showed that employees spend only 5 to 15 percent of their time thinking, learning and innovating in their organizations (Goldman, Nagel, Preiss, 1995). Today, it is not enough. Thinking, learning and innovation are not only an obligation of top management, but the task of all employees. Waking of creativity in people can literally change direction of an organization and bring stunning results. “It is the first step of innovation, and innovation is the driving force of the creation of wealth” (Veselinović, Rosić, Stojanović, 2014, p. 72). Investment in human capital is the most effective one a modern organization can make. “An average 10% increase in education among employees will increase overall productivity by around 8.6%, while the increase in capital equipment by 10% increases productivity by 3.4%” (Stefanović, Vojnović, Urošević, 2012, p. 71). In order to improve productivity and work and to take a better position in the market, organizations are nowadays ready to make some trade-offs. In 2012, approximately three-quarters (77%) of employers in the United States allowed some employees to change the time of starting/ending their work and 63% allow them to carry some tasks out and to work from home (Matos K, E. Galinsky, 2012). If we consider famous words of Bill Gates that “each morning, ninety percent of a company's value walks in, and walks out in the afternoon” (Jovičić, Jovičić, 2015, p. 196), it is clear that any adaptability to modern circumstances in terms of improving human resource management activities beneficial to the organization.

Adaptable organizations place their business focus on customers. Unless a company is not owned by the state, a relationship that employees have towards consumers is an important success factor nowadays. The Amazon company can serve as an example of those whose work is marked by a relentless striving to achieve a greater benefit to its customers. That way was born one of the leading e-commerce platform, Amazon.com, that offers book fans from all over the globe an opportunity to look for and buy books from the comfort of their armchairs, choosing in peace among more than million titles. On the other hand, Nokia, once the strongest brand in the field of mobile telephony, fell from the throne due to the fact that it failed to devote enough attention to the specific needs of its customers. Dell has become the world's largest PC vendor, thanks to the fact that it “constantly re-conceived and outwitted its competitors” (Robbins, Judge, 2009, p. 23), offering the best to its consumers.

Thus, we can conclude that “in the modern environment, which is subject to frequent changes, an organization, if it wants to remain equal to the competition, must develop a system of organizational response to all relevant changes in real time” (Stefanović, Jaško, Damjanović, 2010, p. 4). Kodak Company has held on its competitiveness thanks to the fact that their “leadership equipped themselves with the adequate flexibility needed to respond quickly to business environmental changes” (Jovanović, 2015, p. 147). There is a trend that “it is believed that organizations will be given a new name in the future – mutable organizations” (Ristić et al, 2007, p. 95). Therefore, for an organization that in the twenty-first century praise its constancy in business, sameness of its products or the status quo, we can freely say that it is in a period of stagnation, rather than it is stable and prosperous.

Research methodology and basic hypothesis

Adaptability of companies in Republic of Serbia which, according to Denison model means creating change, organizational learning and focus on consumers, was tested through research conducted by technique of written interviewing. A questionnaire in the form of Likert scale for measuring attitudes (1 – completely disagree, 2 – partly disagree, 3 – neither agree nor disagree, 4 – partly agree, 5 – completely agree), constructed according to Denison's model (Denison, Neale, 1999) with slight modification of attitudes, was used for data collection. The questionnaire was distributed in direct contact with respondents and via social network Facebook. Data were analyzed and interpreted using the program IBM SPSS Statistics 21. Given study is a part of the research about organizational cultures in companies in Serbia, conducted for the purpose of the doctoral thesis.

In order to elucidate factors of adaptability in Serbian companies, we have conducted a research on a sample of 1,000 respondents employed in domestic and foreign companies in 29 cities in Serbia. The survey was conducted in the period from November 2014 to November 2015.

Examined attitudes:

- The way things are done is very flexible and easy to change
- We respond well to competitors and other changes in the business environment

- New and improved ways to do work are continually adopted
- Attempts to create change seldom meet with resistance
- Different parts of the organization often cooperate to create change
- Customer wants and needs are being mentioned and have directly influence on decisions and business
- We encourage direct contact with customers by our people
- We view failure as an opportunity for learning and improvement
- Innovation and risk taking are encouraged and rewarded
- Learning is an important objective in our day-to-day work
- We are familiar with the work of other sectors at all times

Basic research hypotheses are:

1. Companies in Serbia support adaptability.
2. There are some differences of opinion about the degree of adaptability in domestic and foreign companies.
3. Innovation is the essential factor of adaptability.

To test the hypothesis 1, which aims to analyze the adaptability of companies, a descriptive analysis was used. To test the hypothesis 2, which aims to analyze the similarities and differences in the degree of adaptability in the organization of domestic and foreign companies, we applied the t-test for independent samples and to determine the important factors of adaptability we used factor analysis, Extraction Method: Principal Component Analysis with Rotation Method: Varimax with Kaiser Normalization.

Research sample

The study included 1000 respondents employed in micro (20% respondents), small (17,1% respondents), medium (33,8% respondents) and large companies (29,1% respondents) in the Republic of Serbia.

Regarding to activity of the company, most of the employees work in the company which is engaged in other service activities 20,4%, in field of public administration and compulsory social security work 17,8% of respondents, in production 14%, in field of education 11,6%, 8,4% work in financial area and are of insurance activities, 6,6% respondents work in field of transport and storage, 4,7% respondents work in companies which is engaged in field of accommodation and food services, from field of health and social work are 4,3% respondents, in field of information and communication work 3,9% respondents, from companies engaged in administrative and support service activities are 3,6% respondents, in field of professional, scientific, innovative an technique activities are 2,6% respondents, in field of arts, entertainment and recreation work 1,9% of employees and in companies engaged in real estate work 0,2% respondents. Classification of activities are arranged according to the Government Regulation of Classification of Activities from 2010.

Most of the employees, who took part in research, work in domestic companies, 86%, and the rest of examinees work in foreign companies, 14%.

According to owned company, more than a half of employees (52%) are from private companies, 44% respondents are from state companies and 4% work in social companies.

According to their work position, there were the most workers, 64%, then low-level managers, 19%, middle-level managers were 9% and top managers 8%.

Empirical research

Table 1 presents data of the central tendency (mean) and standard deviation relating to attitudes that describe the adaptability, for a sample size of N = 1,000 respondents and Likert scale for measuring attitudes.

Table 1. Reviews of the attitudes of the factor 'adaptability'

	Mean	Std. Deviation
Way flexible and easy	3,27	1,233
Respond well	3,63	1,153
New, improved ways	3,54	1,173
Attempts resistance	3,29	1,154
Parts cooperate	3,42	1,147
Customer wants and needs	3,55	1,229
Encourage contact	3,82	1,173
Failure	3,53	1,197
Innovation and risk	3,25	1,269
Learning	3,72	1,277
Familiar with work	3,51	1,263
Average	3,5	

According to the results, we can see that the average score of all examined attitudes related to adaptability, in companies in Serbia is approximately 3.5, which is a value between 3- neither agree nor disagree and 4- partly agree Likert scale and somewhat higher than the mean value.

To test the difference between the mean values in terms of attitudes that describe adaptability in domestic and foreign companies, we applied again t-test for independent samples whose group statistics given in Table 2. Number of respondents which work in domestic companies is Nd=859, while the number of respondents employed in foreign companies is Ns=141.

Table. 2. Description of attitudes on adaptability in domestic and foreign companies

Group Statistics					
CompanyDomesticForeign		N	Mean	Std. Deviation	Std. Error Mean
Way flexible and easy	domestic	859	3,27	1,234	,042
	foreign	141	3,26	1,233	,104
Respond well	domestic	859	3,61	1,160	,040
	foreign	141	3,77	1,104	,093
New, improved ways	domestic	859	3,51	1,173	,040
	foreign	141	3,73	1,158	,098
Attempts resistance	domestic	859	3,28	1,168	,040
	foreign	141	3,38	1,067	,090
Parts cooperate	domestic	859	3,40	1,154	,039
	foreign	141	3,57	1,091	,092
Customer wants and needs	domestic	859	3,51	1,239	,042
	foreign	141	3,79	1,145	,096
Encourage contact	domestic	859	3,78	1,163	,040
	foreign	141	4,02	1,216	,102
Failure	domestic	859	3,53	1,211	,041
	foreign	141	3,50	1,112	,094
Innovation and risk	domestic	859	3,26	1,269	,043
	foreign	141	3,19	1,276	,107
Learning	domestic	859	3,73	1,275	,044
	foreign	141	3,61	1,286	,108
Familiar with work	domestic	859	3,49	1,261	,043
	foreign	141	3,62	1,274	,107

In the third column in the table 2 is mean value of adaptability, for all attitudes, in domestic and foreign companies. The obtained values are between 3 (neither agree nor disagree) and 4 (partly agree). The fourth column shows standard deviation from mean value and fifth column shows standard error of mean value.

Average values of all tested attitudes about adaptability are 3.49 for domestic companies, and little more, 3.59, for foreign companies.

Table 3. Adaptability: t-тест

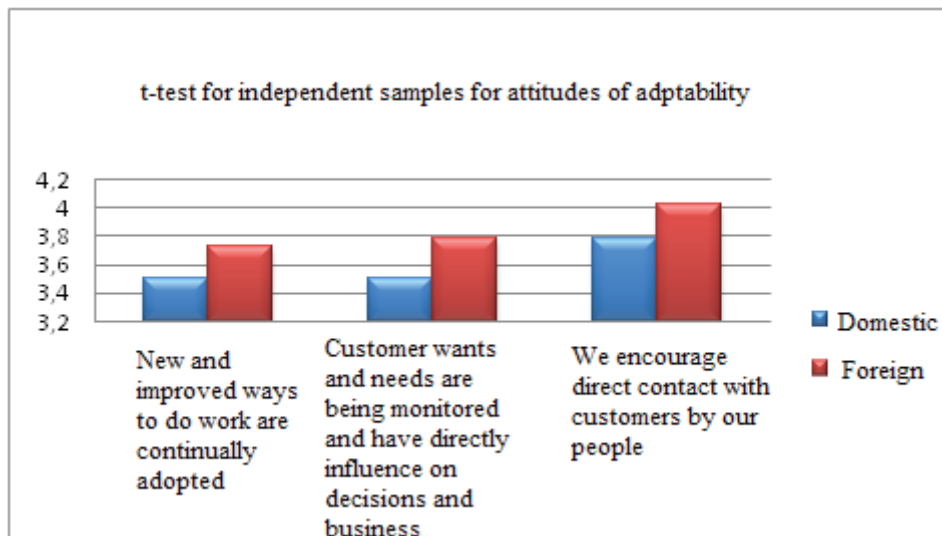
Independent Samples Test										
		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
New, improved ways	Equal variances assumed	1,41	0,24	-2,12	998,00	0,04	-0,23	0,11	-0,43	-0,02
Customer wants and needs	Equal variances assumed	4,60	0,03	-2,59	197,75	0,01	-0,27	0,11	-0,48	-0,07
Encourage contact	Equal variances assumed	0,96	0,33	-2,25	998,00	0,03	-0,24	0,11	-0,45	-0,03

Table 3 shows the results of t-test for independent samples. The first part of the table shows the results of Leven's test of variances equality. The outcome of this test determines whether the t-value is used when it implies the equality of variance ($\text{Sig} > 0.05$) or t-value, when it does not imply the equality of variance ($\text{Sig} < 0.05$).

The test results show that there is a statistically significant difference in the attitudes “New and improved ways to do work are continually adopted”; “Customer wants and needs are being mentioned and have directly influence on decisions and business”; and “We encourage direct contact with customers by our people”, in favor of foreign companies (Figure 1), while there are no statistically significant differences when it comes to other attitudes related to adaptability.

On the basis of the survey results we can conclude that foreign companies pay more attention to consumers than domestic companies.

Figure 1. Statistically significant results of the t-test—adaptability



Determining the major factors of employees' involvement

In order to determine the main factors influencing the adaptability of company, we applied the factor analysis on a set of variables shown in the first column of Table 5. The extraction method of the main factors was used (Extraction Method: Principal Component Analysis, (PCA)).

Table 4. KMO and Bartlett's Test – adaptability

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,879
Bartlett's Test of Sphericity	Approx. Chi-Square	8527,131
	df	210
	Sig.	,000

Since $KMO = 0,879 > 0,6$ and the level of significance $Sig < = 0,000 < 0,05$, table 4, the condition for applying the method is justified.

After extraction, we took 6 factors into consideration that explain 64,3% of the variance whereby individual factors explain about 31,59%, 9, 63%, 7,2%, 6%, 5% and 4,8 % of variance, respectively.

After applying Varimax rotation with Kaiser Normalization (Rotation method: Varimax with Kaiser Normalization), we got the results shown in Table 5.

Table 5. Rotated Component Matrix – adaptability

Rotated Component Matrix ^a						
	Component					
	1	2	3	4	5	6
New, improved ways	,794	-,084	,016	,068	-,002	-,060
Innovation and risk	,786	-,010	-,094	-,062	,002	,052
Failure	,782	-,013	-,110	-,053	-,105	,049
Learning	,768	,013	-,092	-,093	,024	,127
Respond well	,766	-,147	,117	,042	-,008	-,136
Familiar with work	,758	-,074	-,104	,001	,067	-,045
Parts cooperate	,757	-,093	-,006	,070	,101	-,007
Customer wants and needs	,737	-,045	-,066	,142	,017	-,003
Encourage contact	,724	-,025	-,114	,163	,025	,020
Attempts resistance	,719	-,082	,033	-,007	,089	,094
Way flexible and easy	,680	-,004	-,105	-,002	,098	-,141
Years of service	-,132	,922	,015	-,046	,035	,002
Age	-,129	,920	-,071	-,106	,006	,046
Company size	-,185	,191	,739	,166	,080	,075
Work position	-,125	-,353	,624	-,087	,092	,140
Level of education	-,095	,133	-,481	-,039	,256	,219
Company ownership	,015	-,056	,151	,918	,004	,027
Ownership structure	-,212	,228	,560	-,604	-,006	-,076
City	-,127	-,026	,098	,039	-,710	,324
Company activity	,060	-,005	,075	,041	,681	,229
Gender	,033	,022	,002	,048	,009	,881

By the analysis of the results we have selected 6 main factors which affecting adaptability and that are shown on Figure 2:

Factor 1: Innovation

Factor 2: Experience

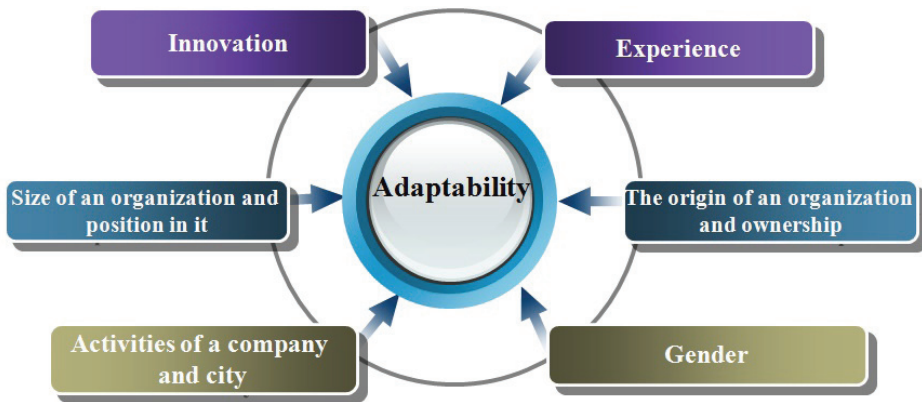
Factor 3: Size of an organization and position in it

Factor 4: The origin of an organization and ownership

Factor 5: Activities of a company and city

Factor 6: Gender

The largest contribution to the explanation of variance gives us the first factor, presented as Innovation, about 31.6%.

Figure 2. Factors affecting adaptability

Results of research

The first hypothesis, that companies in Serbia support adaptability, is partially confirmed because obtained score 3.50 represents a value that is slightly larger than “yes or no” and less than “I partly agree”. This shows that companies in Serbia need to work on adaptability in all areas of business in a manner that is more responsive to changes.

The second hypothesis, which refers to difference in attitudes about a degree of adaptability in domestic and foreign companies is partly confirmed, because the result of research shows that new and improved ways of working are constantly acquired in foreign companies that better meet the needs and desires of consumers, and therefore directly affect decisions and operations. Foreign companies more often encourage direct contact with customers. Noted differences can serve as a way to improve the functioning of domestic companies.

The third hypothesis, which argues that innovation is an essential factor of adaptability, is fully confirmed, because innovation is obtained as the main factor in a company’s adaptability as ability to continually create and adopt new ways of work.

Conclusion

The challenges that came along with the process of globalization, primarily related to global competition, put a tremendous pressure on organizations. In their work, enterprises face significant risks and instability of occupied positions. It becomes increasingly difficult to be competitive. Changes that were once sporadic and rare, are now constant, rapid, sudden and unexpected. Success is on the side of those who are able to look at business opportunities that provide quick and adequate response to all challenges, solve problems in innovative ways, constantly offering new products and services, to adequate and timely respond to the challenges of competition and thus more quickly reach their consumers. In a word, an advantage is on the side of those who have a high capacity for adaptability.

The presented research enabled to examine the adaptability of companies in the Republic of Serbia, and on that basis determine the direction of improving their functioning. Also, in the country where until a few decades ago, foreign companies were not present in the country, and comparing business models used in them is special useful in order to improve effectiveness and efficiency of domestic companies.

The significance of research and obtained results is in fact that Republic of Serbia as the country that recently came out of transition and experienced deindustrialization now tries to join successfully in the European and world economy.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604129E
Received: November 08, 2016
Accepted: November 29, 2016

MEASUREMENT THE EFFICIENCY OF BUILDING PROJECT MANAGEMENT

Abstract

Construction industry has complexity in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders, regulators and others. Construction projects in Libya suffer from many problems and complex issues in performance such as cost, time and safety. The aim of this work is to identify and evaluate the main factors affecting the performance of construction projects in Libya.

Literature review about performance was reviewed to identify the factors affecting the Performance of construction projects. In addition, other local factors have been added as recommended by local experts. Pilot study of the questionnaire was achieved by a scouting sample, which consisted of 30 questionnaires. A questionnaire survey was conducted and 63 factors were identified, categorized into 10 groups, evaluated and ranked from owners, consultants and constructors perspectives. 120 questionnaires were distributed as follows: 25 to owners, 35 to consultants and 60 to contractors. 88 questionnaires were received (73%) as follows: 17 (70%) from owners, 25 (72%) from consultants and 46 (77%) from contractors as respondents. The most important factors agreed by the owners, consultants and contractors were: average delay because of closures and materials shortage; availability of resources as planned through project duration; leadership skills for project manager; escalation of material prices; availability of personals with high experience and qualification; and quality of equipments and raw materials in project.

Key words: Construction projects, performance of construction projects, performance indicators.

JEL Classification: L25

МЕРЕЊЕ ЕФИКАСНОСТИ УПРАВЉАЊА ГРАЂЕВИНСКИМ ПРОЈЕКТИМА

Апстракт

Грађевинска индустрија је по својој природи сложена, јер инкорпорира велики број учесника како клијената, извођача, консултаната, акционара,

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регулаторних органа тако и других заинтересованих страна. Грађевински пројекти у Либији оптерећени су бројним и сложеним проблемима у извршењу као што су трошкови, време и несигурност. Циљ овог рада је да идентификује и процени главне факторе који утичу на перформансе грађевинских пројеката у Либији.

Преглед литературе о перформансама разматран је у светлу препознавања фактора који утичу на перформансе грађевинских објеката. Поред тога, указано је на кључне локалне факторе што је идентификовано увидом од стране локалних стручњака. Пилот студија је реализована на узорку који се састојао од 30 питања. Истраживање је спроведено упитником којим су обухваћена 63 фактора, категорисаних у 10 група, оцењених и ранжираних из перспективе власника, консултаната и извођача. 120 упитника је дистрибуирано на следећи начин: 25 власницима, 35 консултанатима и 60 извођачима. Од испитаника је примљено 88 упитника односно 73% и то: 17 (70%) од стране власника, 25 (72%) од консултаната и 46 (77%) од извођача. И власници и консултанати и извођачи сагласни су да су најважнији следећи фактори: просечна кашњења због несташице материјала, доступност ресурса на начин који је планом предвиђен уз поштовање рокова, лидерске способности пројектних менаџера, скок цена материјала, доступност високо квалификоване радне снаге са озбиљним радним искуством, као и квалитет опреме и сировина потребних за реализацију пројекта.

Кључне речи: грађевински пројекти, извршавање грађевинских пројеката, индикатори учинка.

Introduction

Construction industry plays a major role in development and achievement the goals of society. Construction is one of the largest industries and contributes to about 10% of the gross national product (GNP) in industrialized countries (Navon, 2005, p. 476).

Construction industry has complexity in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders and regulators.

The performance of the construction industry is affected by national economies (Navon, 2005, p. 476).

In Libya, efficient construction projects can provide a solid platform for reviving the Libyan economy and for building a more balance and independent economy during stable political conditions.

Performance is related to many topics and factors such as time, cost, quality, client satisfaction; productivity and safety. Construction industry in Libya suffers from many problems and complex issues in performance. For example, construction of 15 dwelling units at Alzawijah Area suffered from poor performance because of delay for about 130 days. There are many realistic reasons such as closures, amendment of drawings and amendment of the design. In addition, there are other different reasons affecting construction projects performance in Libya such as poor management and leadership;

inappropriate participants; poor relations and coordination; absence of motivation, control, monitor or decision making systems; inadequate infrastructure, political problems; cultural problems and economic conditions (UNRWA, 2000).

In this study, factors affecting the performance of construction projects in Libya will be analyzed. Performance indicators are used to measure performance in construction projects. These indicators can then be used for benchmarking purposes, and will be a key component of any organization's move towards achieving best practice in order to overcome performance problem. However, this study aims at identify the factors and attributes affecting the performance of construction projects in Libya.

Problem of Performance in Construction Industry

The failure of any construction project is mainly related to the problems and failure in performance. Moreover, there are many reasons and factors which attribute to such problem. (Ogunlana et al, 1996, p. 37-45) stated that the construction industry performance problems in developing economies can be classified in three layers: problems of shortages or inadequacies in industry infrastructure (mainly supply of resources), problems caused by clients and consultants and problems caused by contractor incompetence/inadequacies. (Okuwoga, 1998, p. 389) identified that the performance problem is related to poor budgetary and time control. (Long et al, 2014, p. 553) remarked that performance problems arise in large construction projects due to many reasons such as: incompetent designers/contractors, poor estimation and change management, social and technological issues, site related issues and improper techniques and tools. (Navon, 2005, p. 467) stated that the main performance problem can be divided into two groups:

(a) Unrealistic target setting (i.e., planning) or

(b) Causes originating from the actual construction (in many cases the causes for deviation originate from both sources). Samson and Lem (2012) found that the traditional performance measurement systems have problems because of large and complex amount of information with absence of approaches to assist decision maker understand, organize and use such information to manage organizational performance. Navon (2005, p. 476) remarked that traditional project performance control is usually generic (e.g., cost control techniques). It relies on manual data collection, which means that it is done at low frequency (normally once a month) and quite some time after the controlled event occurred (i.e., not in real-time). Moreover, manual data collection normally gives low quality data.

Ling et al (2007) remarked that architectural, engineering and construction (AEC) firms may face difficulties managing construction projects performance in China because they are unfamiliar with this new operating environment. Kim et al (2008) stated that international construction projects performance is affected by more complex and dynamic factors than domestic projects; frequently being exposed to serious external uncertainties such as political, economical, social, and cultural risks, as well as internal risks from within the project.

Construction Management and Performance

There is a strong relation between project management and project performance. Management in construction industry is considered as one of the most important factors affecting performance of works. (Brown and Adams, 2000, p. 327-335) studied a new approach to the measurement of the effect of Building Project Management (BPM) on time, cost and quality outputs using 15 `cases` derived from UK data. The evaluation undertaken demonstrates that BPM as it is presently implemented in the UK fails to perform as expected in relation to the three predominant performance evaluation criteria; time, cost and quality.

Lehtonen (2001, p. 107-116) obtained a model for performance measurement which assist both firms' top management and operational managers for continuous feedback on operational activities. Thomas (2002, p. 339) stated that documenting and archiving performance data could be useful for future reference, such as for settling disputes on claims, and in maintenance and repair works. (Kuprenas, 2013, p. 25-32) remarked that quantification of the impacts of the project management processes are identified through three steps of analysis: comparison of summary statistics of design performance, proof of statistical significance of any differences and calculation of a least squares regression line of a plot of design performance measurement versus amount/application of project management as a means to quantify management influence to design phase cost performance.

Construction Projects and Performance

Success of construction projects depends mainly on success of performance. Many previous researches had been studied performance of construction projects.

Dissanayaka and Kumaraswamy (1999, p. 31-42) remarked that one of the principle reasons for the construction industry's poor performance has been attributed to the inappropriateness of the chosen procurement system. Reichelt and Lyneis (1999, p.135-150) remarked three important structures underlying the dynamic of a project performance which are: the work accomplishment structure, feedback effects on productivity and work quality and effects from upstream phases to downstream phases. (Thomas, 2002, p. 339.349) identified the main performance criteria of construction projects as financial stability, progress of work, standard of quality, health and safety, resources, relationship with clients, relationship with consultants, management capabilities, claim and contractual disputes, relationship with subcontractors, reputation and amount of subcontracting.

Chan and Kumaraswamy (2012, p. 23) stated that construction time is increasingly important because it often serves as a crucial benchmarking for assessing the performance of a project and the efficiency of the project organization.

Cheung et al (2014, p. 361) identified project performance categories such as people, cost, time, quality, safety and health, environment, client satisfaction, and communication.

It is obtained by (Navon, 2005, p. 467) that a control system is an important element to identify factors affecting construction project effort. For each of the project

goals, one or more Project Performance Indicators (PPI) is needed. Pheng and Chuan (2006, p. 24) obtained that human factors played an important role in determining the performance of a project. Ugwu and Haupt (2007, p. 665-680) remarked that both early contractor involvement (ECI) and early supplier involvement (ESI) would minimize constructability-related performance problems including costs associated with delays, claims, wastages and rework, etc. Ling et al (2007) obtained that the most important of practices relating to scope management are controlling the quality of the contract document, quality of response to perceived variations and extent of changes to the contract. It was recommended for foreign firms to adopt some of the project management practices highlighted to help them to achieve better project performance in China.

Information Technology and Construction Projects Performance

Information technology technique is very important in the entire world. Information technology (IT) opens new visions in the businesses and industries performance of the world. The construction industry is considered as one of the industries using IT technique such as software management systems, database and communications. For many years, many processes, functions, operations were done difficulty because of absence of IT field. In addition, most of the work was done manually which lead to more cost, time and poor performance. Furthermore, IT usage in the construction industry leads to many changes, innovations and developing in many aspects which lead finally to good and strong performance. There are many benefits and relations of using IT in the construction projects such as: greater use of IT correlates with better project performance, owners and contractors realize meaningful benefits, IT affects schedule compression beneficially, and overall project cost savings which lead to a success performance of project (Schwegler et al, 2001).

Nitithamyong et al (2014, p. 491) remarked that information Technology (IT) is now routinely used in the construction industry as a tool to reduce some of the problems generated by fragmentation. The use of IT improves coordination and collaboration between firms participating in a construction project, leading to better communication practices and so good performance. Its benefits include an increase in the quality of documents and the speed of the work, better financial control and communications, and simpler and faster access to common data as well as a decrease in documentation errors.

Thomas (2002, p. 339) proposed contractor Performance Appraisal and Reporting (PAR) system for reviewing contractor performance at an organizational level.

Advancements in World Wide Web techniques provide enhanced capacities to collect compile and disseminate performance-related information to various construction stakeholders in a timely and cost-effective manner. Becerik (2004) stated that the rapid advances of web-based project management and collaboration technology offer new opportunities to improve existing construction project performance. Cheung et al (2014, p. 361) obtained framework software to measure project performance based on project performance measurement system (PPMS). The system contains four stages which are data entry, database, reporting and action. This system has eight categories to measure performance which are people, cost, time, quality, safety and health, environment, client satisfaction, and communication. Goh (2005, p. 13) remarked that information technology

management leads to performance improvement in the construction industries. For instance, in Singapore 2003, general administration, design, project management, site management were enhanced by using of IT. In addition, there were more advantages as quick working, good quality of work and fast access of information.

Factors Affecting Performance of Managers

Ogunlana et al, (1996, p. 45-50) recommended the need for focused effort by economy managers and construction industry associations to provide the infrastructure needed for efficient project management and performance. Dissanayaka and Kumaraswamy (1999, p. 42-45) stated that the knowledge that would influence potential performance enables project managers to pay special attention to control performance more effectively.

Chan and Kumaraswamy (2012, p. 35-40) remarked that effective communication and fast information transfer between managers and participants help to accelerate the building construction process and performance. Kuprenas (2013, p. 32-39) studied the impact of the use of a project management based organizational structure, project manager training, frequency of design meetings, and frequency of design reports on design phase cost performance. The process of a design team meeting frequency and the process of written reporting of design phase progress were found to be statistically significant in reducing design phase costs.

Navon (2005, p. 481) stated that data are collected and used for construction managers as a basis to evaluate the project performance indicators (PPI) actual value to compare it with the planned value and forecast its future value based on past performance. Pheng and Chuan (2006, p. 42) identified the importance of the working environment variables for the performance of a project manager in the private and public sectors according to three main groups which are job condition, project characteristic and organizational related categories. The result revealed that working hours, physical condition of project site, complexity of project, material and supplies, project size, duration of project and time availability were viewed differently in terms of importance by the contractors and consultants groups. Team relationship was ranked as the most important variable affecting the performance of a project manager. It is obtained that project manager's experiences do not have much effect on how they perceive their working environment.

Factors Affecting Cost and Time Performance

Chan and Kumaraswamy (2012, p. 35-40) remarked that studies in various countries appear to have contributed significantly to the body of knowledge relating to time performance in construction projects over the past three decades, while Iyer and Jha (2005, p. 283) remarked that project performance in term of cost is studied since 1960s. These studies range from theoretical work based on experience of researcher on one end to structured research work on the other end. Moreover, Pheng and Chuan (2006, p. 42) stated that there have been many past studies on project performance according to cost and time factors.

Chan and Kumaraswamy (1996, p. 569- 578) stated that a number of unexpected problems and changes from original design arise during the construction phase, leading to problems in cost and time performance. It is found that poor site management, unforeseen ground conditions and low speed of decision making involving all project teams are the three most significant factors causing delays and problems of time performance in local building works. Okuwoga (1998, p. 395) stated that cost and time performance has been identified as general problems in the construction industry worldwide. Dissanayaka and Kumaraswamy (1999, p. 42-45) remarked that project complexity, client type, experience of team and communication are highly correlated with the time performance; whilst project complexity, client characteristics and contractor characteristics are highly correlated with the cost performance. (Reichelt and Lyneis, 1999, p. 135-150) obtained that project schedule and budget performance are controlled by the dynamic feedback process.

Those processes include the rework cycle, feedback loops creating changes in productivity and quality, and effects between work phases.

Chan (2001, p. 223-229) identified that the best predictor of average construction time performance of public sector projects in Malaysia is $T = 269 C^{0.32}$. This relationship can serve as a convenient tool for both project managers and clients to predict the average time required for delivery of a construction project. (Kuprenas, 2013, p. 25-32) stated that process of a design team meeting frequency and the process of written reporting of design phase progress were found to be statistically significant in reducing design phase costs. Otherwise, the use of project manager training and a project management based organizational structure were found to be processes that do not create a statistically significant in reducing design phase costs.

Iyer and Jha (2005, p. 283.295) remarked that the factors affecting cost performance are: project manager's competence; top management support; project manager's coordinating and leadership skill; monitoring and feedback by the participants; decision making; coordination among project participants; owners' competence; social condition, economical condition and climatic condition. Coordination among project participants was as the most significant of all the factors having maximum influence on cost performance of projects. Love et al (2005, p. 187-194) examined project time-cost performance relationships by using project scope factors for 161 construction projects that were completed in various Australian States. It is noticed that gross floor area and the number of floors in a building are key determinants of time performance in projects.

Furthermore, the results indicate that cost is a poor predictor of time performance. Chan and Kumaraswamy (2012, p. 35-40) proposed specific technological and managerial strategies to increase speed of construction and so to upgrade the construction time performance. It is remarked that effective communication, fast information transfer between project participants, the better selection and training of managers, and detailed construction programs with advanced available software can help to accelerate the performance. Jouini et al (2004, p. 367) stated that managing speed in engineering, procurement and construction projects is a key factor in the competition between innovative firms. It is found that customers can consider time as a resource and, in that case, they will encourage the contractor to improve the time performance.

Measurement of Project Performance

Karim and Marosszeky (1999) stated that performance measurement systems have been one of the primary tools used by the manufacturing sector for business process re-engineering in order to monitor the outcomes and effectiveness of implementation.

Brown and Adams (2000, p. 327-335) obtained an evaluation framework to measure the efficiency of building project management (BPM) by using conventional economic analysis tools such as time, cost and quality. Lehtonen (2001, p. 107-116) stated that performance measurement systems are imminent in the construction firms. Samson and Lema (2002) stated that effective and efficient management of contractors' organizational performance requires commitment to effective performance measurement in order to evaluate, control, and improve performance today and in the future.

Tangen (2004, p. 726-737) obtained that performance measurement is a complex issue that normally incorporates at least three different disciplines: economics, management and accounting. Measurement of performance has garnered significant interest recently among both academics and practitioners. Tangen (2004, p. 726-737) remarked that the choice of a suitable measurement technique depends on a number of factors, including the purpose of the measurement; the level of detail required; the time available for the measurement; the existence of available predetermined data; and the cost of measurement.

Navon (2005, p. 481) defined performance measurement as a comparison between the desired and the actual performances. For example, when a deviation is detected, the construction management analyzes the reasons for it. The reasons for deviation can be schematically divided into two groups:

(a) Unrealistic target setting (i.e., planning) or

(b) Causes originating from the actual construction (in many cases the causes for deviation originate from both sources).

Cheung et al (2014) stated that New South Wales Public Works Department in Australia launched a Project Performance Evaluation (PPE) framework, which covers a wide range of performance parameters. PPE parameters are communication, time, cost, quality, safety, claims and issues resolution, environment, contract relations. The main purpose of PPE is to extend project performance measures to cover soft parameters also, such as communication and dispute resolution. In the UK, a project performance measurement tool referred to as the Key Performance Indicators (KPIs) was developed by the KPI working group under the UK Construction Industry Best Practice Program to include time, cost, quality, client satisfaction, change orders, business performance, health and safety. The three major steps in implementing KPIs are as follows: Decide what to measure, Collect data and calculate the KPIs.

However, both the PPE and KPIs are valuable tools for measuring project performance over a period of time. Anyway, it is obtained from previous study that both methods PPE and KPIs can be used for measuring of performance as the indicators are similar in two methods. In this study KPIs method will be used to measure performance.

Iyer and Jha (2005, p. 295) stated that measuring the performance of any construction project is a very complex process because modern construction projects are generally multidisciplinary in nature and they involve participation of designers, contractors, subcontractors, specialists, construction managers, and consultants. With the

increasing size of the project, number of participants in the project also increases. The objectives or goals of all participants need not be same even in a given project. Hence to measure performance of a project without specifying the participant and without specifying the criteria for judging the performance holds no meaning. Past researchers have employed different criteria such as compliance to schedule, cost and quality to judge the project performance.

Lehtonen (2001, p. 107-116) proposed new framework for measuring construction logistics by using two-dimensions in order to improve productivity. The first dimension (use of measures) contains two kinds of measures. One of these kinds is called improvement measures which help construction industry to find out the problems with current practices. These measures are mainly used during development projects. Another kind is called monitoring measures which are used for continuous monitoring of operations. The second dimension of the framework is the focus of measures. It clarifies at which organizational level measures can be used. There should be information available at the company and project level, as well as at the specific supplier or subcontractor level.

Samson and Lema (2012) proposed performance measurement system. The system comprises of construction business perspective including innovation and learning, processes, project, stakeholders, and financial perspective. The indicators developed from perspectives are categorized into three main groups which are drivers' indicators, process indicators and results indicators. The key to the success or failure of the measurement system are leadership commitment; employees' involvement and empowerment; and information coordination and management. Shen et al (2005, p. 309) presented a method for measuring the environmental performance of construction activities committed by a contractor through calculating the contractor's environmental performance score (EPS). The level of EPS serves as a simple indicator for measuring and communicating the level of a contractor's environmental performance.

Cost performance can be measured through a cost performance index (CPI) computed as (Kuprenas, 2003):

$$CPI = BCWP/ACWP$$

Where:

- BCWP = budgeted cost of the work performed
- CWP = actual cost of the work performed.

From previous equation:

- If CPI value of one means, the cost was as planned (at the budget Value)
- If CPI value above one means, the project was below its budget
- If CPI of less than one means, the project exceeded its budget.

Based on previous equation, time performance is measured through a schedule performance index (SPI) computed as:

$$SPI = BCWP/BCWS$$

Where:

- BCWP = budgeted cost of the work performed
- BCWS = budgeted cost of the work scheduled.

From previous equation:

- If SPI value of one means, the time was as planned (at the time Value)
- If SPI value above one means, the project was ahead of schedule
- If SPI of less than one means, the project was behind schedule

Conclusion

To determine owners, consultants and contractors perceptions towards the relative importance of the key performance indicators in Libyan construction projects

A structured questionnaire survey approach was considered to study the impact of various attributes and factors affecting construction projects performance. The questionnaire assists to study the attitude of owners, consultants and contractors towards key performance indicators in the construction industry.

The respondents are classified as projects managers, site engineers/office engineers and organizations managers, as they have a practical experience in construction industries field. Their sufficient experiences were a suitable indication to find out the perceptive of the relative importance of project performance indicators of the owner, consultant and contractor parties. Their experiences included many construction fields such as buildings, roads and transportations, and water and sewage projects.

The results were analyzed, discussed to obtain the most performance indicators. The relative importance index method (RII) was used here to determine owners, consultants and contractors perceptions of the relative importance of the key performance indicators in Libyan construction projects.

To identify the most significant key performance indicators of construction projects in Libya.

According to owners, consultants and contractors the average delay because of closures and materials shortage was the most important performance factor as it has the first rank among all factors with RII = 0.941 for owners, 0.896 for consultants and 0.943 for contractors. Construction projects in Libya are suffering from complex problems because of closures and materials shortage. These problems can be considered as an obstacle for performance of projects.

Availability of resources as planned through project duration has been ranked by the owners respondents in the third position with RII equal 0.871, has been ranked by the consultant's respondents in the second position with RII equal 0.858 and has been ranked by the contractor's respondents in the third position with RII equal 0.904. This factor can be considered as an important for three parties and has a similar rank for all parties as it affects directly on project performance such as time. If resources are not available as planned through project duration, the project will suffer from problem of time and cost performance.

The most important factors agreed by the owners, consultants and contractors as the main factors affecting the performance of construction projects in Libya were: escalation of material prices; availability of resources as planned through project duration; average delay because of closures and materials shortage; availability of personals with high experience and qualification; quality of equipments and raw materials in project; and leadership skills for project manager. However, there are some factors which can be considered as more important for one party than for others. This is because contractors are interested with operational and managerial factors. However, the owners and consultants considered the client and technical factors to be more important than operational ones.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604141B
Received: November 02, 2016
Accepted: December 12, 2016

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A COMPARATIVE ANALYSIS OF THE MOST POPULAR MODELS OF LOCAL GOVERNMENT

Abstract

The authors point to the fact that the local government in Europe has a long tradition, so that in each of the European countries meet certain specifics regarding the structure, functioning and other characteristics, by which these countries differ from each other. It is quite natural, because such differences are a result of numerous factors that are, more or less, exerted influence on the formation of local self-government (its organization, jurisdiction code, position in society, the relationship between the state and the like). The authors pay special attention and give an analysis of the four major (the best known) model of local self-government - Britain, France, Germany and the United States. England and the United States can be considered the cradle of direct and independent forms of local government, while France was a prime example of the dependent (child) and indirect local government. In modern constitutional systems of much greater application has a two-stage local government, and its chief representative of the Federal Republic of Germany. Finally, there are some systems that do not distinguish between the state and local government, ie. between their bodies, because in such systems the organization of state power is unique and that, from the top all the way to the to the bottom (for example, the former Soviet Union, today's People's Republic of China and others).

Key words: local government, England, the French Republic, the Federal Republic of Germany, United States, comparative analysis

JEL Classification: H70, K4

УПОРЕДНА АНАЛИЗА НАЈПОЗНАТИЈИХ МОДЕЛА ЛОКАЛНЕ САМОУПРАВЕ

Абстракт

Аутори у раду указују на чињеницу да локална самоуправа у Европи има веома дугу традицију, тако да у свакој од европских земаља срећемо

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одређене специфичности у погледу структуре, функционисања и других карактеристика, по којима се ове земље међусобно разликују. То је сасвим природно, јер су такве разлике последица бројних околности, које су, мање или више, извршиле утицај на формирање локалне самоуправе (њену организацију, број надлежности, положај у друштву, однос према држави и слично). Аутори посвећују посебну пажњу и дају анализу четири најзначајнија (најпознатија) модела локалне самоуправе – Енглеска, Француска, Немачка и САД. Енглеска и САД се могу сматрати колевком непосредног и независног облика локалне самоуправе, док је Француска главни пример зависне (подређене) и посредне локалне самоуправе. У савременим уставним системима много већу примену има двостепена локална самоуправа, а њен главни представник је Савезна Република Немачка. Коначно, постоје и такви системи, који уопште не праве разлику између државе и локалне самоуправе, тј. између њихових органа, јер је у таквим системима организација државне власти јединствена и то, од врха, па све до самог до дна (на пример, бивши СССР, данашња НР Кина и друге).

Кључне речи: локална самоуправа, Енглеска, Република Француска, Савезна Република Немачка, Сједињене Америчке Државе, упоредна анализа

Introduction

Local government is a specific and very significant form of organization of power, which, as such, is accepted in almost all countries of the world. However, it should be noted that each of these forms in different parts of the world has its own characteristics, so that they differ among themselves, and these differences are due to many factors, such as, for example, tradition, customs, historical circumstances, the level of economic development, functioning, organizational structure, type and number of service delivery, scope of responsibilities, activities, normative and financial independence, the size of territory, population, and the like. Therefore, in order to have a true picture of local government in the world, try to point out the most important similarities and differences between local self-government accepted in some countries of the world, which, through a historical period shown (and today show) as a very stable and successful. The main indicator of stability is several decades (and centuries of somewhere) the application, the most important indicator of the success of certain forms of local self-government is fast and efficient to satisfy the basic needs of many residents in the local community. Despite the different treatment of local government, as before, so today, we must admit the fact that this form of organization of power in a growing number of countries experiencing their rehabilitation and return to the “big door”, because it is beyond doubt that he is one of the basic pillars of democracy. As such, this form of organization and structuring of the authorities, a significant civilizational heritage and important feature of the democratic order.

England

Before going into the details of English local government, we will point to the fact that England is one of four countries, in addition to Scotland, Wales and Northern Ireland, which forms an integral part of the United Kingdom of Great Britain and Northern Ireland (English United Kingdom of Great Britain and Northern Ireland). It should be noted that all these countries have a long tradition, but also the special characteristics and specific, concerning local government of each of the said Party of the United Kingdom, which has a government, based in London. At this point, we will not dwell analyzing all the local government, but we part of this chapter taking stock of local government in England, which has great importance for the emergence and development of this form of organization, both in Europe and in the United States. Namely, the local government in England is an indigenous institutions and it is very long developed independently and in relation to the central government, so this form is among the most developed in the world.

England local government, which has a centuries-old tradition, has received its structure and shape, not only parliamentary acts, but also a variety of charters, which have an established corpus jurisdiction of the central (central government) and the local level (local government). These two systems are separate systems, which delegated its jurisdiction is completely autonomous, so that no central authorities can not interfere in the work of local governments. Hence, local authorities have a number of responsibilities and the same work independently, without any interference of central and transferring their operations to the local level so that they do not possess the powers of supervision of local authorities. These are two separate and independent systems. All of this is influenced by numerous authors eighteenth and nineteenth centuries, considered England homeland of local government and local self-government itself, which in the twentieth century had its peak of development, on the basis of constitutional democracy. Hence England is represented an example for many other countries for the organization of local government in them, except that in this island country, local government has experienced at the end of the twentieth century significant changes, in the sense that the state is received by the designated authority to local authorities, as well as the possibility of directing their work. And despite the fact that these reforms, local self-government given some financial support from the government, mentioned changes is a former independent position of local government, to some extent, reduced.

However, what is characteristic of English local government, is the fact that it is three-stage. These are: 1) districts (counties); 2) counties (districts), and 3) parishes (parishes), provided that London, as the capital, has a specific position and organization. Characteristically specify that the local governments have three types of actors, namely: 1) a representative body (local council), which is in charge deciding on major issues related to policy making, financial liabilities, elections and the like; 2) executive bodies (committees or committees), which consists of members of the local council and the citizens that this representative body (not voters), co-opted by its decision, ie. elects and supplemented with the new members; 3) the service of citizens (civil service), which is composed of professional staff, trained to perform the tasks of local government and are independent in relation to politics and parties (they are outside of the current policy and are not members of political parties).

In Britain, between 1960 and 1985, carried out certain reforms, which are of great importance for the functioning of this form of organization, which resulted in the adoption of certain laws. Thus, in 1972, passed the Law on Local Self-Government, which stipulates that the local authority in this island country is carried out in much larger units, which have a much larger population than other European countries. Thus, for example, we have a local government unit with an average population of 23,000, while in France it is much smaller (only 1,300), 18,000 in Denmark and in Sweden nearly 30,000 inhabitants. (Davitkovski, 1997: 19-26) Here's characteristics indicate that a significant reform of local government in England and carried out in 1985, the Law on Local Self-Government, when they established the so-called. joint government and so-called. universal power - first established for each metropolitan district, while others were basic to the capital London and metropolitan districts. Partial reform was carried out in 1994, when it passed the law on the police and the magistrate courts, which was provided to police authorities no longer be part of the so-called. joint government, but to become independent units.

Local authorities in England have a number of very significant responsibilities, with respect to this island country has a well-developed local self-government, there is very little supervision of the central organs of local self-government. As the largest local governments, according to districts (there are a total of 53), among which we distinguish between two types: metropolitan and ordinary. Districts are divided into districts, ie. districts (there are 369), in which also distinguishes two types: metropolitan and ordinary. Finally, the parish as the basic unit of local government, representing the traditional medieval institutions and in England there are about 10,000.

In the final analysis the local government in England and creating the general picture of its functioning, it is necessary to specify the Local Government Act of 2000, which stipulated that each local unit performs division of local government in a way that will make the introduction of a the local authority, which is directly elected, and it can be: 1) the mayor - is directly elected mayor and cabinet - indirectly cabinet is assembled from at least two or more members of the panel; 2) Cabinet with the leader - here are a leader elected by the Council; 3) the mayor - is directly elected and manage higher - sets it up as a high-ranking official, in whose hands is all power. However, what is important to stress, which is due to reforms carried out in the last decades of the twentieth century, as well as the newest Law from 2000, is that it can be easily seen that effort, as we mentioned previously, the local government in England to become called. "The service of citizens", and that local authorities are, in large degree, the so-called. "Service features". This means that in this country there is a clear desire that these organs operate primarily in line with market demand, which will lead to greater accountability and efficiency of the service, and consequently, to deliver high-quality services. What definitely contributes to networking, development of information technology, fast communication and adapting to local service requirements and user needs.

Also, what is very important to emphasize on the issue in the Law on Local Self-Government in 2000, is the fact that it allows more frequent elections of members of local councils, which provides an opportunity for citizens to give their vote of confidence in these panels. Because of these changes, as a result of the democratization of the electoral process and control of local councils, improved local democracy, as well as providing services to residents of local communities. All this, of course, affects the open work of

local authorities and increase their interest in meeting the needs of its citizens. When it comes to the election of members (councilors) of local councils in England, it should be noted that the said Local Government Act provides for three ways of filling of seats: 1) general elections, which exist in the event the mandate of the council members is four years, so that all Councillors are elected every four years; 2) elections half, which allow you to select (change) half of the council members every two years and 3) a third of elections, which mark the selection for three consecutive years by one-third of the members, within each mandate period of four years. (Dimitrijevic et al., 2011: 151-152)

At the end of this analysis, it should be pointed out that in England we distinguish between mandatory and optional local government affairs. This division is made according to the criteria for statutory conduct certain tasks so that, in the first case, we have jobs that local governments must carry out, while in the second case, the jobs they can perform, but you do not have to (have the right to do so). Also, it is important to emphasize that the tasks are carried out exclusively in local communities include education, local planning, road construction, transport, housing and construction, sanitary services, social services, waste collection and disposal and the like, while the jobs held by central Authorities includes such activities, which other countries consider local affairs (in such jobs include, for example, health care, social security, finance, agriculture, etc.). However, despite the fact that there is such a division of labor, in England there is a policy less government interference in the affairs of local government, ie. enabling local authorities that they, as far as possible, provide local services to their populations. (Byrne, 2000: 82-83)

The French Republic

Given that the state system of the Republic of France for a long time it was centralized and based on a strict hierarchy, at the beginning of this analysis, it should be noted that the local government in the mentioned European country almost did not exist until 1982, when the program started decentralization and enabling autonomy of local government. The degree of self-management of local authorities was extremely small, because the local government is exercised quite narrow scope of work in its own jurisdiction, which were of minor importance in relation to the tasks that fell into the Trust (transfer) scope of work. However, the advent of the presidency of the French Republic François Mitterrand in 1981, things in this respect are starting to change for the better, so that, from next year, in 1982 there was a significant independence of local governments and the process lasted until 2003 . year. This has affected the position of the French local government keep its trend to the present day, so that this form of organization of power in France is no longer an example of complete subordination to the central government. This situation shows that the local government, as well as many other institutions, is not static and unchangeable, but rather a very dynamic phenomenon, which is subject to constant changes. This was particularly contributed to the adoption of the Law on decentralization of 1982, when as part of the reforms implemented, established regions, which were given the status of self-governing units, which the local government has become a three-stage.

For the French Republic, which is one of the pillars of European democracy, it should be noted that, according to the surface, and according to population, one of the

largest countries in Europe. Hence, in this country, a member of the European Union and one of its founders, has an important place both in terms of organization of local self-government, which has traditionally been a two-stage, given that in its grounds contained two local units - the municipality (commune) and department (département). The introduction region (s) the eighties, as territorial units of general jurisdiction, the French local government has become a three-stage. It should be noted that in France there is the so-called. monotype municipalities, which means that all municipalities (both in cities and those in villages) have equal status. These municipalities (communes) are very numerous and there are more than 36,000, given that they fall into the category of very small units, but it should be noted that (although, admittedly, there is very little) in the municipality includes the towns numbering more than 50,000 inhabitants. Of course, it is important to note that three of the city, although they are in the commune, have a special status, which is quite understandable, given their importance, size, number of inhabitants and the like. These cities include Paris, as the capital, and next to him Lyons and Marseille, which unlike the other cities, can form within its area of urban districts (arrondissements). These districts within the three listed city, represent specific units of local government, and they were introduced by the Law of 1982, which was adopted by the French Parliament.

In this paper, we will not dwell on the historical development of local government in France, but it is certainly necessary to point out that the municipalities of the community, whose origin and development encountered in the Middle Ages, while the emergence of second level of local government responsible Napoleon Bonaparte, who formed departments, as some kind of connection, ie. “Links” between higher and lower levels of government (between the center and municipalities). Hence the departments represented the central government level, and their introduction to Napoleon’s system of organization of government, was, in fact, the deconcentration of power, because it is a strict hierarchy between the lower and higher authorities, represented the basic principle of establishing their relationship. This led to the fact that one of the most developed model of local government (the French self-governing communes) was repealed and replaced by a rigid centralism, so that this system was awarded a small degree of self-management, and the very term “local government (administration locale) hinted at the true state things “. (Jovicic, 1984: 171) However, it should be noted that you did not stop and that this devolution of something later replaced by a special form of self-government, which is called administrative decentralization, while during the existence of the Third Republic any attempt to find solutions that would constitute some sort of compromise between the local government and centralism. Further progress in achieving independence and the abandonment of the centralist state organization made in 1946, when the Constitution was adopted, which is the local government (the first time) received the constitutional and legal character. This is done in a way that was done declaring self-management of local collectives in which fall municipality and department, the most important event in this area was the adoption of the law made in 1982.

Wrapping up this part of our work is dedicated to the analysis of the French local government, we must be emphasized that local governments in France and England, who used to be diametrically opposed, gradually approaching, because the French model comes to light but secure decentralization, while in English the model comes to mild centralization. This means that increasingly abandoning strict hierarchical relationships between central

and local authorities and embrace a different model of organizing the relationship between the central government and local governments. In fact, in recent decades applied a number of ways to overcome the existing situation in the field of French local governments, which include: 1) numerous proposals for enlarging municipalities voluntary merging small municipalities; 2) Association of Municipalities union of municipalities and 3) introduction of the region. However, it should be noted that this process is going quite slowly because there is a fear of the central government to make some significant steps to reform the municipalities, ie. their merger (fusion) in the broader territorial units. This fear exists with reasons such as enlarging the (incorporating) Municipality requires greater self-government and the wider decentralization, and this could lead to a weakening of the power of the central government. (Popovic, 1984: 18-23)

The second stage of organization represent the department (there are 100), and the French departments Handicraft has its roots in the French Revolution of 1789, led by the prefect of (PREF). The prefect is the representative of the central government and the executive organ of the general higher, but for this position, the person who enjoys great prestige and authority and has significant political prestige gained professional experience in their work. As already noted, the connection (link) between the department and the municipality represent districts, with what municipalities are subordinate departments, and through them the central authorities (ie, indirectly). On the other hand, the departments are directly responsible for their work to the central authorities and they are subordinate. Also, it is important at this point to mention that the representatives, and municipalities and departments (primarily, their presidents), important factors work of local authorities.

Analyzing the Local Governments in France, we pointed to the fact that the second stage of self-government is composed of 100 departments, but four of which are located far away from France, given that she was one of the greatest colonial countries. These are the overseas departments, which are also the regions, so that they have a dual status, while the remaining 96 departments located in France itself. All of these include the department, approximately the same number of municipalities (about 380), regardless of what they each are very different in terms of population, so that the smallest has about 75,000 inhabitants, most about 2,500,000 inhabitants (the average is around 450,000 inhabitants).

The third level of local government in France, or the third level of the system of self-government make the regions, which were created at mid-century, for smoother economic development departments and municipalities. However, it should be stressed that the regions are given self-governing status in 1982, when certain reforms have decentralized, so one can say that the regions in its present form, emerged only in the early eighties. Specifically, as part of three-tier local governments (in addition to municipalities and departments), regions have become the only in 2003, when the constitutional changes were made and when they were provided for by the Constitution. Here we should point out the fact that in the last months of 2008 announced new local government reform (the reform announced by then President of France, Nicolas Sarkozy), but in this area of further reforming of the French local government and the rest, because nothing has been done to today, because of the very strong opposition of local political power.

What is characteristic for the region, is the fact that the population in them is very different, and that is in the range of 1,000,000 to 5,000,000 (actually, less than one

million to over 5,000,000), while their average area of around 25,000 square kilometers. Also, as a significant feature of local government in France is the fact that certain areas are special, that is. special status and this is not in accordance with the principle of regional organization of the state. The special status of certain areas is the result of certain events in the history of this major European states. This includes, first of all, decolonization, then the existence of cultural differences, as well as the characteristics of a large city (metropolis). However, it should be pointed out the fact that the French local self-government performs specific cooperation of local communities, which may be political cooperation (may take the form of political cooperation), and that there are other forms of cooperation. With the political cooperation of the municipality (which belong to the same political orientation) assist each other and form trade unions, districts, communities, municipalities and the like, and like other forms of cooperation may indicate conventions, groups of public interest, joint ventures, associations and the like.

It should be noted that a special role in the realization of political cooperation between the municipalities of trade unions, which is a term that refers to a group of municipalities, which shall be established precisely in order to resolve common problems of infrastructure (electric networks, water supply, sanitation, etc.). For the community of municipalities is significant that this is a relatively new form of inter-municipal cooperation, and in this form has allowed a greater degree of integration of the municipalities which form the community. The main objective of this association of municipalities, is the realization of inter-municipal solidarity (as a subset of the community of municipalities, can form communities and cities so far has established five such communities). Also, since 1959 there are districts, which include a lower degree of integration and municipalities may be established at the proposal of several municipalities, with what could be established for rural areas (hence abandoned the original proposal that called “alliance of cities “).

The Federal Republic of Germany

Strong loyalty to tradition and traditional values is one of the fundamental characteristics of the German administrative system, which is characterized by the following features: 1) the existence of the federation, ie. Federal Planning; 2) territoriality administrative system (not its functionality); 3) the specific value the rule of law; and 4) an extremely high value attributed to local self-government. (Laux, 1995: 229) Also, what is very important to emphasize at this point, is the fact that the organization of the Federal Republic of Germany has experienced a number of reforms (some authors from the early nineteenth century to the twentieth century, there were 11 major reforms, for which it was more than 40 important reform undertakings), which, of course, had its impact on the position, competencies and attributes of local government. Specifically, these changes have affected that substantially reduced the number of municipalities, and this decrease was the highest percentages, result of a great acceptance of the so-called. “New management model” and a significant increase in costs for social welfare state.

Every reform is undertaken in order to achieve certain goals and correct shortcomings observed in the functioning of a particular system, and such change in Germany organized by the authorities had basic orientation to increase cost-effectiveness,

the implementation of market economy and laws of the market in all segments of the society, where this is possible, as well as the precise separation of politics from administration, i.e. delineation of the functions of decision making and execution functions. It is obvious that the creators of these reforms have had in mind the application of methods of economic management and planning towards the objectives set.

Germany local government is an institution that guarantees the highest general legal act, i.e. Basic Law of the Federal Republic of Germany (Article 28, paragraph 1 and 2). On the Name, the provisions of this Article, the activities of the local community, within the law governing cities and municipalities. For this developed European country, it is characteristic that in it there is the territorial decentralization and that can be classified as major countries, both in terms of population, and by the area it covers. The above mentioned Constitution (Basic Law) of 1949, Germany is organized as a federal state with a governmental structure on two levels, namely: federal and provincial (terrestrial) level. As part (constituent) parts of these countries, which make up the Federal Republic of Germany, municipalities and counties have a vital role in the functioning of local government, given that competence rather clearly and precisely divided between the federal and earthly levels. This is especially true for local governments, because at the highest level creating legislation and policies, while at the lower level to implement them in practice. Local governments in Germany enjoys a large degree of autonomy, so that in this country has not implemented decentralization like other European countries.

What is characteristic for the organization of government in Germany, is the fact that even after reintegration of the 5 provinces (states) of the former GDR, remained in force Constitution of the Federal Republic of Germany from 1949 to the current 16 federal units (the Länder) are almost complete freedom (autonomy) in the organization and regulation of local government. This allows the provinces to independently regulate the functioning of local self-government and set basic (most importantly) the institutional parameters for its functioning. However, it is important to point out one important feature of the German local government, which consists in the fact that even though there are big differences in the surface of the territory covered and the population in some federal units, there are no essential differences in the territorial organization of the German local government. On the contrary, there are great similarities in the organization of the local population of these countries, so that many authors find that for local governments of all 16 countries that make up the German federation, the characteristic uniformity and in quite a high level.

The Federal Republic of Germany is today, its local self-government organized as a two-step. The first level of local government consists of municipalities (Gemeinden), as the basic unit, while the second stage consists of terrestrial districts (Landkreise) and district towns (Kreisfreie Cities). After the fall of the Berlin Wall and the unification of the two Germanys, the area of this major European states, there are 13,400 municipalities, which are located in the system 343 Land district, at Com should be noted that, on average, a district in its composition has about 30 municipalities and has between 150,000 and 200,000 inhabitants. (Wallmann et al., 2006: 11-39) A significant feature of the German local government, is the existence of 117 major cities, carrying out tasks under the responsibility of municipalities and districts, so that they are much closer to the provinces (countries) and are under the direct supervision of its authorities. Due to limited space in the paper, especially due to the major themes to which he devoted, in

this paper we will not longer dwell analyzing certain deviations from the German two-tier structure of local government, referring to the three city-states (Berlin, Hamburg and Bremen) in which the local government is organized as a single stage. Also, a very important feature of these governments is the fact that the German federal units, which are composed of more than 20 districts and district towns, formed their own regional administrative units (Regierungsbezirk). Through these regional units earthly authority supervising the implementation of local government, although there is a tendency that this kind of supervision revoked and that these units are converted into units that would serve local self-government.

In addition, Article 28 of the Basic Law of the Federal Republic of Germany, it is anticipated that the scope of self-management activities, performed by municipalities and counties, to be arranged by the method of general clause, according to the constitutional tradition of the nineteenth century, although local governments have the right to independently determine the internal organization. Excluding the possibility of influencing the federal and provincial authorities to the activities of local government, the result is exactly above the rights of local units, which represents a fundamental feature of local government. Also, a significant feature of the German local government, in which it stands out from the other (together with the Austrian local government), are called. duality of functions, whereby municipalities and districts, in addition to their own affairs, conduct and duties transferred from the state level. In fact, about the importance of local government and the role it has today in the Federal Republic of Germany, there is a data that around $\frac{3}{4}$ of federal and terrestrial legislation achieved at the local level. Such a high percentage achieving tasks at higher levels to the lowest level, resulting in the fact that the German local government the most developed and that plays a more important role in relation to local governments of other European countries. Also, for the Federal Republic of Germany can be said that it is located at the top of European countries that conducted direct local democracy, so there was no need for public sector reform, which was conducted eighties. However, the nineties of the last century, under the influence of New Public Management, accepted the new doctrine of public management, which has spurred the creation of the German version of this management, ie. Tilburg new management model. (Banner, 2006: 126-127)

Based on the above it can be concluded that the state structure of the Federal Republic of Germany has three levels, and the third (most important) level is, indeed, local government authorities, which are, at the same time, the foundation stone on which is based the state itself. This is because, as we have mentioned previously, most of the laws implemented by local authorities, and to facilitate the realization of the most direct contact with citizens. Considering that the achievement of these direct contacts “fraught” with the emergence of numerous conflicts, the Basic Law of the Federal Republic of Germany in 1949, its provisions guaranteeing institution of local government. This institution is important, first of all, because while editing the affairs of local communities need to enable municipalities to, as far as possible, meet the local needs and requirements of citizens.

It is obvious that the local government in the Federal Republic of Germany has many positive features, but also certain disadvantages and limitations. However, the principle of local self-government in this country is, as before, and today, remained in the application and is extremely important for building self-management system, whose

implementation regularly look after administrative and constitutional courts. So, first of all, municipalities is guaranteed to them, in any event, can not take away jobs that belong to the “local jobs”, so in the event of interference with the exercise of certain tasks, the legislator has an obligation to justify it and to present adequate reasons, which can prove that such action is necessary. This has certainly contributed to the well-known territorial reform of municipalities, which was carried out in West Germany in the middle of the second half of the twentieth century. The aim of this reform was to edit the municipalities and districts, but so that the minimum administrative authorities provide both small municipalities, which resulted in a substantial reduction in independent municipality, by almost 2/3, ie. from 24,000 to 8,500. Also, there was a reduction in the number of free cities 135 to 91, then the number of districts from 425 to 236 and the number of municipalities that belong to a district with 24,300 in 8400. Local government reform is carried out, after the unification of the two Germanys (1990) and in the provinces of the former German Democratic Republic - GDR (German, Deutsche Demokratische Republik - DDR), considering that it was necessary harmonization, that is. the convergence of these two, very different, system. Namely, in East Germany (GDR) is, when unification was more than 7,500 cities and municipalities, while in western Germany the number was much smaller. After the reforms carried out after unification in the new Länder in the former East Germany (there were 5), the number of these municipalities was reduced, but not to such an extent as is the case with the districts. The number of municipalities is now about \$ 6,000 in the provinces, while the number of districts was reduced from 191 to 92 and the number of free cities in 24. (Damjanovic, 2002: 20-22)

United States of America

Keeping in mind the theme of this work, which we posvâtiti its biggest part, in a new place we want only to point out the most important local government system, which had the greatest impact on the formation, development and dissemination of the importance of local governments in other countries. There, above all, think in English and French system (as two antipodes), as well as the German and the American system of local governments - Germany, due to the reforms made, which could serve as a model for reforming local governments in other countries and the US, due to its characteristics and distinctive specificity in relation to other countries. Therefore, we will further in the attention paid to the analysis of local government in the United States, which the local government is the most complex in the world, considering that in this country there are COD and simultaneously operate different types of local government.

In fact, as we saw in the previous section, in English, French and German local governments are unique types throughout the territory of the State in which they are applied, while the situation in the US is completely different, given that in this extremely large, country very organization of local self-government entrusted to the Member States (federal units) and not the federal (federal) state. The result of such an organization and the adopted constitutional principles, is the existence of large differences in local government and, as between Member States themselves, and within the same federal units. The existence of such a significant difference has been brought about not only indicated the possibility of regulations of the Member States, but also the great influence

of English local government, whose institutions, customs and traditions brought from England's first settlers. Finally, the reasons given diversity we must also mention the very great diversity of individual cities, a complex social life, a sudden and very rapid urbanization and the like. However, despite this diversity and the existence of different types of local government, we can say that in the United States are two main types, namely: 1) the urban form of government (characteristic of cities); 2) rural form of government (typical for rural areas).

What is important to note for local governments in the US, is the fact that the similarity, rather, there is a coincidence in degree. In fact, with the exception of only one country, which is the smallest by area (Roy Island), there's a two-stage local government and so that municipalities (municipality), basic units, while the counties (county) unit of the second degree. Districts are traditional agricultural, territorial and administrative units, so that each member state has from 3 to 254 districts. It is important to point out the fact that, precisely, cities (in most federal units) the most important units of local government and to them there are three models of local self-government. Separate great influence on the development of local government in the United States had England (which can be said for the development of local government in the world), so it's accepted the basic principle of self-organization of local government units, which further indicates that the local government in the United States does not constitute a category of the federal Constitution and federal law. These three main models (systems) local governments are: "1) model mer-council - the first and oldest model in which local voters directly elected mer and advice, and in this way to elect judges and administrative officials; 2) a commission model - sparsely body (Commission), which is directly elected by local voters, simultaneously legislative and executive authorities, so that every member of this commission is managed by an administrative department, 3) management model - experts prefer this third as the most appropriate model, which contains elements of a presidential system authorities ". (Bataveljic, 2013: 193) For this latest model is characterized by through open competition Assembly appoints managers for an indefinite period, which must meet numerous: first of all, it must be qualified and knowledgeable to perform these tasks, then that is not a member of a particular political party (non-partisan) and that As such, completely free and independent in the choice of the closest associates, as well as his engagement provided an appropriate contract, that guarantees an adequate payment for his work.

Analyzing the above models (systems), we will point to the fact that the oldest of them first, which draws its origins back to the English system of local self-government. In fact, this is a model that in the United States being applied and that in more than half of US cities, and it is a characteristic that is based on the existence of the president, ie. measures and advice. However, there is a real difference between the two versions where it is applied and the system operates as follows: 1) variant with a strong measure and 2) variant with a weak measure. Regardless of which option (variant) word, President, ie. mer is the most important organ, since it has very strong democratic legitimacy, because it directly elected by the citizens. Hence he (like the presidential system in the USA) the holder of numerous functions in the city, so that manages the city administration, represents the city, and his officers, the process as the executive organ of the Senate and head of administration. Hence, the president has a very important role, because preparing the most important decisions for adoption by the Senate, has a decisive role (not just

representative) in solving a number of issues, so, therefore, safe to say that the President, that is. Custom has in the same status, responsibilities and functions, which has the President of the United States in the federation or the Governor in individual federal states. (Djordjevic, 1957: 35-38)

Much less applicable model is called. commission, whose application is linked to the beginning of the twentieth century, with the primary objective of its introduction consisted in the fact that the Commission monitor the efficiency of local authorities, as well as reducing the impact of party organizations in their work. There is no doubt that the Commission is one collegial body, whose members are directly elected by the citizens and which, therefore, can not recall them. As one of the most positive features of this system, we can mention its ease of organized bodies. In addition, he is very rational in the exercise of their activities, whose concentration is also a positive feature of a commission model. However, as it usually happens in all other spheres of social life, this system has numerous weaknesses, which consist primarily the inability to eliminate the influence of party organizations in local government, as well as in its lack of efficiency.

Consequently, the application of a third system that appeared later and which is used in a little over 20% of US cities. For this system (model) is characterized in that in it there are the two most important organs, namely: 1) Manager (city manager) and 2) higher (to be advised). The very name of the system speaks volumes about the manager (administrator) expert and the head of the administration in the city, which at that position comes not along political lines, but he Council elected as officials with the higher degree of efficiency and skills in order to implement the most important decisions and policy making. The characteristic of its position is in the fact that he was elected for an indefinite period, but advice has the right to revoke it if it does not carry out his duties, as provided. (Djordjevic, 2003: 46-48)

Finally, when talking about local government in the United States, we can not, not to mention self-government in small towns of New England, which is a specific model of local self-government in the United States, where the local government is realized in the so-called. town choirs. Namely, at such gatherings is, once in a year, brings together the entire population of the town and in that occasion, makes decisions on the budget, taxes, choice of certain borough officials, as well as on other important issues. Also, in the New England area, the districts are the judicial institutions of the organization, which is not the case with Western countries, where districts as territorial self-governing units have significantly more numerous functions (not only in the judiciary but also in health care, social protection, the construction of public roads and the like).

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604155S

Received: March, 2016
Accepted: November 18, 2016

ELECTRONIC MONITORING DEVICES AND DATA PROCESSING

Abstract

Criminal justice authorities may wish to monitor or to control the location of particular person without resorting to imprisonment. An electronic monitoring device provides pretrial services, probation, or parole the chance to closely supervise convicted person by keeping track of where person are at or in some cases, determine if convicted person is consuming prohibited substances like alcohol or narcotics. Some systems provide tracing within predefined restricted areas. Systems like this are in use for different situations, for example before a criminal trial or after conviction. Authors described different ankle monitor systems that are in use, their advantages, disadvantages and data that collects. For each convicted person data from electronic monitor device is very important. Authors described machine learning method, which based on data could predict whether the convicted person will repeat the criminal offense or not. Methods like this works with hypothesis and gradient descent. At the end authors explored the role of these devices by the law of enforcement sanctions and measures outside the prison.

Key words: Ankle monitor, House arrest, Machine learning, Prediction, GPS monitoring.

JEL classification: O31,C89,C60

УРЕЂАЈИ ЗА ЕЛЕКТРОНСКО ПРАЋЕЊЕ И ОБРАДА ПРИКУПЉЕНИХ ПОДАТАКА

Апстракт

Установе за извршење кривичних санкција имају потребу да врше мониторинг и контролу кретања појединих осуђеника који казну служе ван затвора. Уређаји

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за електронско праћење пружају особљу задуженом за праћење оваквих осуђеника податке о томе где се осуђеник налази, његовој путањи кретања, или у појединим случајевима информације о томе да ли осуђеник конзумира забрањене супстанце као што су алкохол или наркотици. Неки системи обезбеђују праћење у оквиру унапред дефинисаних и ограничених подручја, и могу се користити у ситуацијама праћења особе пре суђења или током извршења казне. Аутори у раду описују различите системе електронских уређаја за праћење (наногица), њихове предности и мане, као и податке који се са њих могу прикупљати. За свако осуђено лице подаци са оваквих уређаја су веома битни. У раду је описан и метод заснован на машинском учењу који на основу података може вршити предикцију да ли ће осуђено лице поновити исто кривично дело. Овакви методи раде на принципу хипотеза и градиент десцент-а. На крају аутори су истражили примену оваквих уређаја у пракси према Закону о извршењу ванзатворских санкција и мера.

Кључне речи: Наногица, Кућни притвор, Машинско учење, Предикција, ГПС праћење.

Introduction

Every year a large number of criminals are being sent to prison. Prisons are expensive to build and run, and often involve cruel treatment of fellow citizens, possibly contributing to the conversion of inmates into hardened criminals. That is why alternatives to imprisonment are one of important development area. One of the most intriguing experiments in this area is the substitution of incarceration for electronic monitoring (Rafael & Ernesto, 2013). In an increasingly mobile world, house arrest ankle bracelets have many practical purposes. They're most commonly used to monitor the movements and behaviors of repeat drug and impaired-driving offenders serving active sentences of probation. Another problem that is particularly solved with usage of ankle bracelets are overcrowded prisons. Most states offer convicts the option to wear an ankle bracelet during a period of supervised probation in lieu of spending time in prison. Electronic monitoring is one possible solution for prevention of convicted person to repeat criminal acts (Matt & Russell). In order to address problem, twenty-four hours monitoring must be provided. Electronic monitoring systems are collecting an enormous number of data for each convicted person. These data can be used for various observation and assessment of risk. Only authorized personnel can manage and use this data.

One probation officer has many convicted citizen in his jurisdiction, and his obligation is to track them and analyze data collected from the field. Some of convicted persons will repeat the criminal offense, that's for sure. The job of employees in control centers is to predict which of electronic monitored convicted persons could be in situation to repeat the same offense. In order to prevent that, and based on all collected data from electronic monitoring system, they must predict the future behavior for each convicted person. As a result from research, authors had proposed a machine learning algorithm. This algorithm is based on learning set of data, and purpose is to predict whether the monitored offenders will repeat criminal offence or not, based only on the current set of data for monitoring offenders. Learning set of data (data from the past), are in use for prediction model creation. Based on those data, machine learning algorithm will be trained for future predictions. Data from the

current moment are in use for comparison with data from the past and based on that fact prediction will be made. Adequate prediction can prevent re-commit a criminal offense.

Types of Electronic Monitoring Systems

Electronic ankle bracelets are often used for community corrections efforts. They are often used in conjunction with a radio frequency base unit which is connected to a traditional telephone line. The reports sent by the base unit over the phone are usually monitored by a third-party contractor, although in some jurisdictions law enforcement agencies take care of this function. There are several types of electronic monitoring devices that are commonly used (Hilf & Hilf, 2015).

GPS (Global Positioning System) tether - allows a defendant's movements to be tracked and reported to the suitable supervising agency. Hot zones are preset into a computer program that runs in combination with the GPS tether that alert authorities whenever the defendant goes someplace that is forbidden. GPS tethers are common for persons charged or convicted of criminal sexual assault, domestic violence, stalking, or other crimes that involve a victim. In order to be eligible for a GPS tether, the defendant must have a stable address and electricity at the address. Usually if this is ordered the defendant is not released from custody until the GPS tether is set up and functioning, and the alleged victim is notified as to the defendant being released on tether. Example of GPS tether is ExacuTrack One. The ankle-mounted unit uses GPS and similar location monitoring technologies to precisely track a person's movement within local communities. It uses a combination of location technologies for improved trustworthiness in more challenging environments such as indoors, moving vehicles or among very tall buildings. The lightweight unit is rugged, tamper-resistant, and has an extensive battery life. An optional beacon system can be used in order to reduce operational expenses. The beacon is installed in designated locations, like the client's home, place of work, school or other. When the individual enters an area where a beacon is located, the system switches mode from GPS tracking to traditional radio-frequency monitoring. When the person exits the beacon range, the system immediately shifts back to GPS tracking. Unlike other GPS tracking systems, this system enables officers to select specific zones, which can be in any shape through Microsoft MapPoint and Bing Maps for Enterprise. These are industry-leading mapping technologies. The maps offer detail extraction, making specific features on properties or neighborhoods clearly visible. When alerts are spawned, officers can receive them via pager, e-mail, PDA or a combination of these methods. Controlling officers are also allowed to send pre-recorded voice messages to offenders through the tracking unit, which are beneficial for appointment reminders or for forbidden zone warnings. As a result of big number of limitations, there has been growing initiative for application of advanced GPS technologies as an alternative tool to enhance the supervision of community offenders (Lilly, 2006).

Transdermal alcohol tether - monitors the defendant's skin to determine his or her blood alcohol level. It is usually attached to his or her ankle by a bracelet. It also monitors whether attempts to bypass the system are made, based upon tampering with the equipment or a change in the defendant's body temperature. It is in use for alcohol defendant on probation, or home arrest. One example is SCRAMx ankle bracelet. The patented SCRAMx ankle bracelet is attached to the user with a robust and tamper-proof strap. It is worn 24/7 by the user for the

duration of his or her court-ordered abstinence period. Every half hour, the bracelet captures transdermal alcohol readings by sampling the insensible perspiration collected from the air above the skin. The bracelet stores the data and, at pre-determined intervals, transmits it via a wireless radio-frequency (RF) signal to the base station. During installation, a base station is plugged into an analog telephone line – usually in the user’s home or place of work. At a pre-scheduled time(s) each day, bracelet communicates with the base station, which transmits alcohol readings, tamper alerts, and diagnostic data to SCRAMNET for detailed analysis and reporting. The base station also has an LCD screen that provides operation messages to the user (Barton, 2015). The range of a house arrest ankle bracelet can be between 3000 and 4000 sq. ft. At timed intervals, the ankle monitor sends a radio frequency or GPS signal to a receiver. If an offender moves outside of an allowed area, the police will be notified. The major downside of this technology is that it is not unambiguous to ethyl alcohol, the type of alcohol that is consumed by people. There are other types of alcohol that can be found in every household, which the fuel cell will read and report as a possible drinking event. Isopropyl alcohol is an alcohol commonly found in cleaning products. Methanol alcohol is the primary ingredient in the fuel burned by engines. All of these alcohols, and others, will be detected by the SCRAM. The data that is generated by the fuel cell is interpreted exclusively by alcohol monitoring systems employees. They are the only people who are trained to determine if the alcohol readings are in fact the result of a drinking event or if the readings were caused by an interferential. They make their determinations and conclusions primarily based upon the analysis of available data, and of the graph that is created from that data.

Data Processing From Electronic Monitors

Various types of electronic monitoring devices have been developed over the years, with each successive generation improving upon its predecessors, both in terms of their functionality and convenience. Some electronic monitoring devices are relatively simple and use GPS technology to alert the authorities when their wearers deviate from a pre-planned route. Others are more complex, and designed to detect traces of alcohol or illegal drugs in the blood. In both cases, ankle bracelets can be powerful deterrents for convicts who might otherwise flout the terms of their probation sentences. Modern electronic monitoring devices are collecting data and sending them to the base station in some surveillance agency. Depending on the type of crime, different parameters from electronic monitors are collected and monitored. If we have GPS monitored convicted person the key parameter for that system is distance from the boundary of restricted area, or current position. For offenders that are in probation for physical assault, distance from the victim is crucial. For alcohol offenders key parameters are alcohol measurements. For determination if the alcohol readings are from a drinking event or not, experience of the employee is essential. The question is can computer based programs do monitoring and prediction for us?

For this task, first step is classification of data parameters collected by the same or similar offence. For some offender, prediction will be based on one parameter, but for other, prediction will depend on more than one parameter. In both cases machine learning method can be used. As in all machine learning methods accuracy of prediction depends on how big learning set is (Alex & S.V.N, 2010). For this task hypothesis and cost function are defined in Eq. 1 and Eq. 2 respectively.

$$h_{\theta}(x) = \theta^T x = \theta_0 x_0 + \theta_1 x_1 + \theta_2 x_2 + \dots + \theta_n x_n \quad (1)$$

$$J(\theta_0, \theta_1, \dots, \theta_n) = \frac{1}{2m} \sum_{i=1}^m (h_{\theta}(x^{(i)}) - y^{(i)})^2 \quad (2)$$

Here $\theta_0, \theta_1, \dots, \theta_n$ are hypothesis parameters, and x_0, x_1, \dots, x_n are data from database based of which hypothesis provides an event. Parameters $\theta_0, \theta_1, \dots, \theta_n$ are not individual parameter values, but parameters are represented by $n+1$ dimensional vector θ . In Eq. 2 parameter m represents number of training examples. Based on parameters representation, cost function will be represented with $J(\theta)$. Cost function defines data linear regression. Pseudo algorithm for gradient descent is represented in Eq. 3, and gradient descent minimizes cost function.

$$\begin{aligned} &\text{Repeat}\{ \\ &\quad \theta_j := \theta_j - \alpha \frac{\partial}{\partial \theta_j} J(\theta) \\ &\} \end{aligned} \quad (3)$$

Here is most important that parameters $\theta_0, \theta_1, \dots, \theta_n$ must be simultaneously updated. Second part of Eq. 3, can be represented differently Eq. 4. In the previous equation, α represents learning rate (Spalevic, Ilic, & Spalevic, 2015). Depend of that parameter, gradient descent will figure as larger or smaller step in the minimization process.

$$\frac{\partial}{\partial \theta_j} J(\theta) = \frac{1}{m} \sum_{i=1}^m (h_{\theta}(x^{(i)}) - y^{(i)}) x_j^{(i)} \quad (4)$$

When we replace Eq. 4 in Eq. 3 we will get final algorithm for gradient descent Eq. 5. For this algorithm also valid that θ_j must be updated simultaneously for every j . Each step of gradient descent uses all the training examples.

$$\begin{aligned} &\text{Repeat}\{ \\ &\quad \theta_j := \theta_j - \alpha \frac{1}{m} \sum_{i=1}^m (h_{\theta}(x^{(i)}) - y^{(i)}) x_j^{(i)} \\ &\} \end{aligned} \quad (5)$$

If implementation does not simultaneously provide update, values for parameters at the end of algorithm will not be correct. Here is important that character i in the superscript for x do not represents power, but index. With this index and index in the subscript the concrete data value from the database table will be used. Each θ_j parameter will be used in cost function calculation. After the cost function calculation, we must find minimal value for cost function, for given θ_j and for given hypothesis. Minimal cost function will provide best linear regression. In implementation, if we want to apply some hypotheses, that can be implemented like matrix and vector multiplication, in the case of just one hypothesis, or matrix and matrix multiplication if we have multiple hypotheses. In some cases if we have parameters of different sizes, some kind of scaling must be done. For example, we have two types of parameters, one in the range from zero to three hundred, and second in the range from one to seven. If we apply parameters like this we will get gradient descent that will provide

a long time for calculation of minimal gradient descent value that can provide minimal cost function (Stephen, 2009). To prevent this all values in training samples for first parameters must be divided by the maximum value of the range, in our case with three hundred, and the second parameters must be divided with seven. This provides short time for gradient descent calculation. After calculation of the minimal value for gradient descent and minimization of cost function, cost function parameters and hypothesis representation can be compared. In the case of just one parameter there would be linear representation for hypothesis.

Cost function will be represented with some kind of. For more than two parameters cost function is much complicated - it will be represented in 3D. However, 2D presentation in the form of concentric circles can be used instead of 3D display type. In both cases minimization of cost function must be applied. Cost function minimization process provides a more accurate prediction and graphical representation.

The Law of Enforcement Sanctions and Measures Outside The Prison

In the case of outside the prison electronic monitoring sanctions, they are regulated and published in official Gazette RS, number 55/2014. This law regulates the procedure for sanctions execution outside prison and measures imposed in criminal, misdemeanor or other court proceedings, which are executed in the community. These sanctions are implemented in order to protect society from crime. This is provided by execution sanctions out of prison and measures in the community with the aim of re-socialization and reintegration of prisoners. The execution is carried out based on decision of the public prosecutor, the court or at the request of the Institute for criminal sanctions execution. Based on fifth article and depending on the criminal act, execution can be provided in different ways. By this act electronic monitoring can be used in different circumstances.

First, it can be used for home detention, and measures of prohibition approaching, meeting or communicating with a particular person. Second situation is home arrest. In this case electronic monitoring provides organization, implementation and monitoring execution of a sentence of imprisonment in premises where the convicted person resides. In the same time electronic monitoring can provide supervision of conditionally released person and support that respects the constraints that face a court. In this case electronic surveillance may not last longer than one year, nor more than probation.

If convicted person is in for home detention, the Court in its decision will indicate whether the measure of home detention is executed with or without the use of electronic supervision. The same decision must be indicated in the case of house arrest. Before making a decision on the execution of the sentence of house arrest with electronic surveillance application, the court shall determine whether there are technical and other possibilities for the execution of the sentence. If the court decides that the measure of house arrest is executed with the use of electronic surveillance, electronic surveillance equipment is activated immediately after delivery of the decision. A device for locating the defendant, that is safe for health, is set by expert, who is giving necessary instructions to the defendant on the method of operation of the device. Supervision agency manages the device that remotely monitors the movement of the defendant and his position in space. By this law convicted shall have the right to stay out of room in that house for a maximum of two hours a day over a period of

thirteen to seventeen hours. By special decision convicted person may leave the premises in which resides in the some cases. For example, for providing necessary medical assistance, to go on work, exams, classes in the school, due to the death of a close relative, and etc. In the case of that the convicted abandons the premises in which resides a lasting over six hours or twice for up to six hours, trust service notifies the court that brought the verdict.

Based on this court, shall render a decision that convicted the rest of the prison sentence withstand in the Institute for the execution of imprisonment and ordered the issuance of arrest warrants. After this the command for issuing the arrest warrants is delivered to the police authorities for execution. By this law, time spent on the run will not be counted in the time of execution of the sentence. Law of enforcement sanctions and measures outside the prison in this form provides full use of electronic monitoring and data processing from electronic monitoring devices.

Examples of electronic monitoring in use abroad

The system of electronic monitoring in the Province of Buenos Aires started in December of 1997. Since its inception, and up until April 2007, more than 910 men had been at some point under electronic surveillance. The electronic monitoring system in the province of Buenos Aires consists of a bracelet worn in the ankle or wrist of the offender. The surveillance program is relatively small, with a capacity of handling a maximum of 300 detainees simultaneously (Tella & Schargrodsky, 2009).

Electronic monitoring is currently available as a primary sentence in the United States and is generally considered to be somewhat more lenient than prison, but harsher than probation. Figures from the Bureau of Justice Statistics show that in 1998 there were 19,677 people on electronically monitored probation in the United States (Bonczar & Glaze 1999). Restriction and surveillance can also be used to reduce the likelihood of the individual re-offending, particularly against the original victim. Today the number of convicted persons electronically surveiland is much bigger According to the Bureau of Justice Statistics more then five million offenders in the United States are under some form of community supervision. We can show court practice on one example from the superior court in North Carolina. In May 2013, this court ordered to the offender to submit to an involuntary GPS monitoring program. The hearing occurred four years after he was released from prison, where he had served time for a 2006 conviction for “indecent liberties with a child.”(Brief, 2015) Though he was not in custody or on probation at the time of the hearing, the Department of Correction had determined that he was recidivist based partly on a 1997 conviction for second-degree sexual offense. Because he was found to be a “sexual offender” and a “recidivist,” he was involuntarily placed in the state’s Satellite-Based Monitoring Program (Bodi, 2015).

GPS ankle monitors are becoming standard equipment for immigration officials along the border, too. In July 2015, Immigration and Customs Enforcement, used about 9,300 ankle monitors at a time — 40% more than about six months ago. They are run by a government contractor, BI Inc., a subsidiary of the country’s second-largest prison company, which also operates immigration detention centers. Officials say the monitors are a cheap and effective way to ensure that immigrants released from detention attend court hearings. The monitors cost an average of \$5 a day per person, and are part of

the agency's Alternatives to Detention program, which also may require immigrants to report by phone or in person. In contrast, detention costs an average of \$130 per day per person, and can cost over \$330 at some detention centers (Hennessy-Fiske, 2015). In this way the funds in the state budget can be significantly saved and increased. This provides benefits for both sides, the convicts and the state.

Government services in Florida evaluated the electronic monitoring system, which was approved for use by the Florida Department of Corrections in 1987. In their evaluation of the electronic monitoring system in Florida they found that, compared with the control group on other forms of community supervision, electronic monitoring reduced the risk of failure to comply by 31 %. GPS was slightly more effective in reducing rates of failure to comply than radio frequency systems; more specifically, for GPS monitoring there was a 6 % improvement in the hazard rate for reducing supervision failure compared with radio frequency monitoring. Electronic monitoring made deeper impacts on sex, property, drug, and other types of offenders than on violent offenders, though the effects remained significant for this kind of supervision of violent offenders compared with other forms of community supervision. There were no significant differences in the effects of electronic monitoring across different age groups or for the effect of electronic monitoring for different types of supervision. However, notably, although juveniles were included in the study, the majority of participants were adults (Bales et al. 2010).

In Sweden, intensive supervision with electronic monitoring is not absent within the correctional system. As a form of serving prison terms at home, the measure replaces the enforcement of imprisonment up to three months. The main target group consists of severely drunken drivers who have been traditionally sentenced to short prison sentences (Haverkamp, 2002). The crucial point lies in the caring work of the probation service. This method should guarantee a more human way of the serving at home according to the intention of the legislator. Intensive supervision helps to remove capacity problems in open prisons and to save money by closing down prisons. In Sweden, approximately 3000 convicted persons serve their prison term at home every year.

Electronic monitoring bail scheme was introduced in New Zealand at September 2006, and it was initially managed entirely by New Zealand Police. From the February 2014 the Department of Corrections and police are jointly managing electronic monitoring bail under a shared service model. Electronic monitoring on bail is available for suitable defendants and young people (12- 17 years of age) who would otherwise continue to be held in custody, in prison, or in the instance of a young person in a youth residence, while they wait for a court hearing. A significant change sees police no longer having electronic monitoring bail assessors in the field after 1 February 2014. Instead, for all new applications, a probation officer will take the role of bail assessor and complete assessments electronic monitoring bail applicants, attend electronic monitoring bail connections and complete inductions with the bailees. The central team at corrections manages the 0800 electronic monitoring bail line, liaises with the monitoring company and is the central point of contact for electronic monitoring bailees. In all circumstances bailees must contact the EM Bail Team at Corrections if they want to plan some time away from their approved address. The electronic monitoring bail team will tell them what they need to do and what happens next. Bailees must contact this team at least three working days before any planned short-term absence. Approval is not automatic and will be at the discretion of the electronic monitoring bail team. Today two Australian

jurisdictions have specific legislative authority for home detention with electronic monitoring as a primary sentencing option.

The Northern Territory's Sentencing Act 1995 provides that a court which sentences an offender to a term of imprisonment may make an order suspending the sentence on the offender entering into a home detention order. Offenders on a home detention order may be required to wear or have attached a monitoring device (Black & Smith, 2003). In Western Australia, the Sentencing Act 1995 provides that a court may impose an intensive supervision order with a curfew requirement. This requires the offender to submit to surveillance or monitoring as ordered and to wear a device or have a device installed in his or her home. Electronic monitoring may only be imposed for a term of six months or less.

South Australian Department for Correctional Services chose EM technology provider named G4S since the inception of the electronic monitoring system in South Australia (EMSSA) nearly 15 years ago. G4S was recently awarded a new contract that will run into 2017 and the service also includes monitoring of juveniles for the South Australian Department for families and social inclusion. The program, which covers both adult and juvenile offenders placed on court-ordered restrictions, utilises G4S's propriety GPS monitoring equipment to support monitoring and response tasks undertaken by the department for correctional services for around 450 offenders statewide, making it Australia's largest electronic monitoring program. G4S continues to develop Electronic Monitoring and to explore wider opportunities to expand, not only its traditional forms of EM, but also in the areas of alcohol monitoring and domestic violence. G4S is justifiably proud of its South Australian achievements to date, including the sustained maintenance of ISO certification for Electronic Monitoring Services (G4S, 2016).

Electronic monitoring can save tax-payers, detention facilities, and adjudicated juveniles' money. For instance, EM programs help reduce the number of juvenile offenders who are placed in residential facilities. Financially, this makes a considerable difference as EM programs can range anywhere from \$5.50 to \$10 per day whereas detention centers can range from \$100 to \$160 per day. Taxpayers also reap the benefits, as juveniles on home confinement with or without electronic monitoring can work and essentially pay for their monitoring device. Finally, home confinement with or without electronic monitoring can also save the juvenile money, as his or her bond may be reduced if the youth agrees to home confinement and/or electronic monitoring (Sklaver 2010). After adopting an EM program in one county, the number of juveniles in detention centers decreased from 94 per day in 2003 to 45 per day – a 53% decrease. Moreover, the public's tax burden is reduced as offenders are allowed to work and subsequently pay for the EM costs. EM programs can save the juvenile money as well, upon adjudication, a bond may be reduced if the juvenile agrees to submit to electronic monitoring.

Another advantage in that EM programs improve the chances of a successful rehabilitation for youths by allowing them to remain at home and continue attending school. One study yielded a 3% recidivism rate for electronically monitored home detention cases, and in Tarrant County, Texas, 242 juveniles utilized the EM program with an 85% success rate in 2002. A report from 2004 shows that 75% of juveniles who were released from the EM program were considered successful in North Carolina.

Conclusion

Number of people in the world rises every day. By statistics, number of convicted persons rises every day too. Many of them have job, families, social life, but they are convicted for some offence, and must be in prison for some time. Some of them have been sentenced for serious offence, and some of them for minor offenses. All of them share the same prisons. For the people that are returnees to the offenses, that is logical sentence, but for the people that are convicted for the first time, prison can be horrible experience, especially for ones that are sentenced for minor offence. Financially, prisons are expensive, and many countries do not have money for the proper maintenance of the prison buildings, guards and food for a large number of prisoners. Another approach mentioned above is electronic monitoring of convicted persons, persons on parole or monitoring in the pre-trial period. Use of electronic monitoring device is new term in criminal justice system, especially in our country. Systems like these are in use for a long time in many countries all over the world. Like we said above, those systems provide serving sentences in home environment, with family and without interrupting daily activities. From the social side this is very important, because people who serve sentence like this have chance for better life during the term of the sentence. These people can go the school, to the work and can behave like they are not convicted. Their normal activities will not be compromised. This is important because many of these people are convicted for small offence as well as for failure to pay penalties or taxes.

From another side we must not forget that some of those people have committed a criminal offense. With electronic monitoring they are out of prison, and they can repeat the same or similar criminal offence. To prevent that, they must be monitored all the time. For that job officer must supervise the movement of convicted person, and, based on all parameters try to predict if he/her would repeat offence. This is complex job for which appropriate experience is needed. Authors presented their idea how the use of electronic monitoring devices, and processing of data collected from electronic monitoring devices. With those data, that are movement path, distance from the base station, distance from the restricted person, alcohol level, and possible drugs use, machine learning system which will predict future acts of convicted person could be created (Spalevic et al, 2015). System like this must be based on different kind of hypothesis and heuristic. In that way system will predict critical situation, and inform officer about it. For systems like these training samples must be used. That is not limitation because government services already have sufficiently available data, and data from each new convicted person how is electronically monitored can be used. In this way new data can be added to the training set, and could be used for future training of the prediction model.

For future research authors plan to implement system in the way that they've described here. For job like this database with data collected from electronic monitoring devices must be created. That means that real data from some surveillance agency or government service will be used. For heuristic, cost function, gradient descent and prediction Mat Lab software will be used. For data preprocessing, which means classification and clustering organization of collected data GUI framework will be created. Like we said above data processing and machine learning could provide much more from simple offenders monitoring, and that possibility need to be used.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604167A
Received: November 08, 2016
Accepted: December 12, 2016

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APPLYING FAIR VALUE ACCOUNTING IN MAKING FINANCIAL REPORTS IN SERBIA

Abstract

Applying of fair value accounting is primarily put into operation to satisfy investor's needs for information. The basic idea here is that balance sheet represents the economic reality, which means that assets, obligations and capital are expressed at fair value, which in terms of active and liquid market best reflects market prices. The effects of applying fair value are reflected through the income statement and thus measurement results become a consequence of capital measurement.

In conditions of stable prices and an active market, applying fair value is not accompanied by bigger problems. The reason behind this is that valuation of assets and liabilities are carried out at current market prices. The problem occurs in conditions of inactive and illiquid markets. In this circumstances, estimating according to fair value requires the use of different assessment techniques, which represent a potential source of inaccuracy.

Furthermore, by applying fair value in times of financial crisis the problem of procyclical effects can occur. The growth of financial markets and prices encourages the purchase of securities at higher prices. This can contribute to the creation of speculative bubbles, and in times of crisis and fall in prices may encourage sale at lower prices, deepening the crisis.

Key words: *fair value, historical costs, financial reporting*

JEL Classification: M21, M41 i 031, 032

ПРИМЕНА РАЧУНОВОДСТВА ФЕР ВРЕДНОСТИ У ИЗРАДИ ФИНАНСИЈСКИХ ИЗВЕШТАЈА У СРБИЈИ

Апстракт

Примена рачуноводства фер вредности је приоритетно стављена у

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функцију информационих потреба инвеститора. Основна идеја при томе је да биланс изрази економску стварност, што значи да имовину, обавезе и капитал изрази по фер вредностима, које у условима активног и ликвидног тржишта најбоље одражавају тржишне цене. Ефекти примене фер вредности се рефлектују преко биланса успеха и на тај начин мерење резултата постаје последица мерења капитала.

Примена фер вредности није праћена већим проблемима у условима постојања стабилних цена и активног тржишта јер се вредновање имовине и обавеза одвија по актуелним тржишним ценама. Проблем се јавља у условима неактивних и неликвидних тржишта јер тада процењивање по фер вредности захтева примену различитих техника процењивања што представља потенцијални извор непрецизности.

Осим тога, у условима финансијске кризе примену фер вредности прати проблем процикличног дејства јер у условима раста финансијских тржишта и растућих цена подстиче куповину хартија од вредности по вишим ценама, доприносећи стварању спекулативних балона, а у условима кризе и пада цена може подстицати продају по нижим ценама, продубљујући постојећу кризу.

Кључне речи: *фер вредност, историјски трошкови, финансијско извештавање*

Introduction

The imperfection of financial markets, complexity of business situations, variety of business and financial statements user's needs affect the constant improvement of financial reporting model, but it is quite clear that in such circumstances there is no perfect, theoretically consistent and universally applicable model to successfully solve all the problems of measurement, expressing and presenting the achievements of business entities.

There are many questions related to this issue that are put upon accounting practices. The biggest one being whether to provide information relevant to deciding, which can often contain unreliable values, or to provide accurate and reliable information, but because of its untimeliness could lose its importance for decision-making.

Business entities in our country are also faced with a similar dilemma: is it better for them to perform assessment, or not, whether is the assessment required, what is the comparative practice in the European Union, opinions and actions of the auditing professionals about these issues and the like.

The European accounting doctrine supports the historical cost principle and the recognition of gains that have been achieved in the market and International Financial Reporting Standards (IFRS) are in favor of applying accounting based on fair value.

Basic requirements of IFRS regarding the assessment at fair value

IFRS accounting standards are created and introduced to achieve uniformity and transparency of financial statements on any economic entity, regardless of the activity and

the country of origins.

The general rule is that the greater importance is given to accounting and financial reporting in developed economies. The reason for this is that the investors are opting for the markets which are familiar and which they believe in. This is the main reason why they have more confidence in those countries that have adopted and consistently accepted accounting standards for financial reporting.

The importance and usefulness of financial statements should not be valued only in relation to individual users (eg, investors and creditors), but also from a wider economic perspective, ie. from a social point of view. This is because financial reporting, in addition to a number of other relevant factors, must include in its primary goals the provision of the highest possible level of social welfare, which is the supreme strategic goal of every society. In other words, the quality of financial reporting of the state, is directly proportional and corresponded (in the long run) to the general economic situation in the country.

The goal of IFRS is versatile, easier and better understanding of the financial statements with the mission to provide data and information for comparative analysis and successful business communication for faster flow of goods and capital. IAS/IFRS are instruments for the harmonization of the various accounting regulations relating to the preparation and presentation of financial statements that serve as the basis for economic decision-making.

The adoption of optimal business decisions contributes to optimal location of limited economic resources and thus the over all economic growth of the national economy. Also, the efficiency of the capital market is directly dependent on the quality of available information, their usefulness and relevance for decision-making. A direct consequence of efficient capital markets are sufficient capital resources that enable economic entities to define and implement the optimal policy of financing their business transactions. All this leads to a healthy national economy and overall, sustainable economic growth and development. So, if there is quality and reliable accounting and financial reporting that is characterized by the usefulness of information, quality business decisions, efficiency of capital markets, the sufficiency of funding sources and a healthy economy – it can create the very realistic assumption for increasing the level of social welfare which is the target functions in every society.

Questions about estimates are defined by IAS 16 - Property, Plant and Equipment and IAS 40 - Investment property. Legal enteties, on the basis of IAS 16, have a right to assessment or subsequent measurement after initial recognition of fixed assets, could be carried at cost or fair value. In this case the chosen method is determined by the rules on accounting and accounting policies and applied are consistently in a longer period of time.

Applying of fair value accounting in the European Union

Representation of fair value accounting in the Member States of the European Union is through ICAEW's (Institute of Chartered Accountants in England and Wales) research for the European Commission. The study was published in 2007 entitled "EU Implementation of IFRS and the fair value directive – A report for the European Commision."

Research topic of this study is the use of IFRS in the financial statements of companies in the EU. Quoted companies in the EU, whose securities are traded on the stock exchange in its consolidated statements, have to apply IFRS since 2005. Part of this study that dealt with

the application of fair value is about the 200 largest companies in the EU countries, whose securities are traded on the stock market, and whose financial reporting is in accordance with IFRS.

The general conclusion of this study is that “the use of fair value accounting in accordance with IFRS is less wide spread than previously assumed, especially if the companies are given the opportunity to use the cost model or the fair value model, they will use the cost model”.

Table.1. Esessment of Property, Plant and Equipment in EU

<i>The cost model of fair value</i>	<i>Number of companies</i>	<i>Percent</i>
<i>The cost model for all property, plant and equipment</i>	191	95,5 %
<i>Revaluation model for all property, plant and equipment</i>	-	-
<i>Revaluation model for all property, the cost model for all plant and equipment</i>	5	2,5 %
<i>Revaluation model for some properties, cost model for the rest properties and all plant and equipment</i>	3	1,5 %
<i>Without any property, plant and equipment</i>	1	0,5 %
<i>Sum</i>	200	100

The results of this research show that about 96% of companies, which use IFRS in their financial statements, estimate its fixed assets by cost model, by buying value or by cost and not by fair value. About 4% of European companies fair value assessment use only in case of properties, but not for plants and equipment.

Also, the Chamber of Chartered Tax Advisors in most countries of the European Union refuse the extension of application of IFRS with companies whose securities are listed on the capital markets on all other companies.

Effects of applying fair value accounting

Business entities independently decide on the applying of fair value to present their fixed assets. They use a general act which must be in accordance with international and domestic accounting regulations. It is important to look at the positive and negative effects and assess the financial statements.

The most significant positive effects of valuation at fair value for the companies are:

- improving the property and financial position of the company in the financial statements as the assessment leads to an increase in the value of fixed assets and total assets and liabilities increase in revaluation reserves and capital of the company;
- reduction of taxable profits in sales of fixed assets, as the assessment at fair

value increases value of fixed assets, thus reducing the gain on sale of fixed assets. This gain is determined as the difference between the realized selling price and the current carrying value;

- reduction of debt of the company due to an increase in the value of fixed assets compared to liabilities;
- ability to use the revaluation reserves, which occurs at the moment of disposal of fixed asset (sale, debiting etc.), so that they are transferred to retained earnings from previous years. They can be used to cover losses from previous years and other purposes in accordance with applicable legislation.

In assessing the fixed assets at fair value IAS 16 does not permit selective enforcement, in the sense that it is not possible to assess a single fixed asset but for the other asset, to use the cost model. The decision to perform assessments of fixed assets refers to all assets belonging to the appropriate group (equivalent assets of a similar nature and usage in business entity).

Reasons against applying of fair value

The largest negative effects for businesses resulting from the application of fixed assets at fair value are:

- reduction of the gain in the income statement due to the increasing cost of accounting depreciation whis is arising directly from the increase in fixed assets.
- company can incze in size. This can reslut in the transformation for small to legal medium entity, which in turn causes the loss of benefits that are designed for small businesses;
- there is no improvement in basic financial indicators of the company - the liquidity and solvency;
- there is no impact on the amount of tax depreciation;
- there is no impact on the amount of taxable capital gain
- collision with the accounting principles of prudence, which is required by the Fourth Directive of the EU, and by which the assets in the balance sheet are valued at the lower value and liabilities at a higher value. This is opposed to fair value, and the principle of realization, because the assessment of investment properties at fair values recordes revenues that have not yet been confirmed in the market (investment property is not sold);
- financial statements become a conglomerate of different values and, consequently, lose their practical value because the fixed assets and securities (other than those held to maturity) are stated at fair value and other items at bying cost, cost or selling price, etc.

When opting for fair value accounting it should be taken into considiration the costs of the assessment, particularly with the involvement of external assessors. In our country there is no professional title of certified appraiser, so the risk of inaccurate assessment and the possibility of its denial by the auditors is very large. Assessments in our country are done by auditing companies, forensic experts, rating agencies and others.

Companies in EU that apply IFRS do not use assessment of fixed assets at fair value. Because our country is in the process of harmonizing its legislation with EU standards and regulations, many use this fact as the main argument in (not) applying fair value accounting in financial statements

When determining which accounting policy to apply, our economic operators need to bear in mind the impact of inflation on the value of their fixed assets, particularly on real estate.

Inflation in our country in previous years is far greater than inflation in the EU countries and there is a real opportunity for presentation of financial statements that do not reflect economic reality, namely, that the carrying value of property is greatly underestimated. This especially applies to property, constructed or acquired in the 90s in conditions of major inflationary rate.

Our economic operators must bear in mind that the financial reporting system is one of the key elements of corporate governance, which significantly affects the performance of companies, financial markets and thus the entire national economy. Without good corporate governance there is no long-term competitiveness of companies, their market position and results are weak and, consequently, companies are becoming ideal ground for corruption.

Applying of fair value in accounting policy of the economic entities opens many important questions. How does applying of fair value accounting reflects the quality of financial statements? What are the implications of applying fair value to investors, companies, management and key stakeholders? Does the applying of fair value is favorable regulatory bodies? Does the applying of fair value increases management responsibilities for maintaining adequate business policy? Is the problem of applying of fair value only in measuring the value or is it also the problem of distribution of profit?

Conclusions

The basic idea of applying fair value in the financial reporting process is the need that the balance sheet reflects current economic reality, which includes presentation of assets, liabilities and equity at current market values that reflect the expected cash flows at the balance sheet date.

Applying of fair value in the foreground puts information interests of investors in analyzing the current financial position of the entity. In this context, the creators of accounting standards promote applying of the concept of fair value in order to come up with the concept of evaluation that will meet two requirements: “a good theoretical concept which can be successfully applied in practice.” Since the market is not perfect, it often becomes inactive and illiquid, especially in times of economic crisis, there is a legitimate question to what extent the previous two can successfully be met.

Business entities in the Republic of Serbia, bearing in mind the necessary harmonization of accounting regulations with the EU, independently decide on the applying of fair value accounting in the financial reporting process. Applying of fair value accounting brings the number of positive, but also negative effects.

Business entites should evaluate each effect separately and bring the accounting policies that are most favorable to them, looking at the impact of positive and negative effects over a period of several years.

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SCIENTIFIC REVIEW ARTICLE
doi:10.5937/ekonomika1604175P
Received: November 10, 2016
Accepted: December 12, 2016

MUNICIPAL BONDS BY LOCAL GOVERNMENT

Abstract

Municipal bonds are used as a source of funding for local economic development and are debt securities that are issued by the city government. In recent years, interest in this type of bond in Serbia is growing, due to the low-risk investments, the realization of liquidity investors of revenue for these bonds usually are not subject to taxation, and a yield that is achieved on these bonds is generally higher than the state yield, which is achieved by investing in state bonds. Broadcast municipal bonds of the municipality is cheaper than conventional loans from banks, which is the reason of attracting a large number of investors in order to implement concrete projects.

Key words: *municipal bonds, investors, income, liquidity*

JEL Classification: M21, M41 i 031, 032

МУНИЦИПАЛНЕ ОБВЕЗНИЦЕ ЛОКАЛНЕ САМОУПРАВЕ

Апстракт

Муниципалне обвезнице користе се као извор финансирања локалног економског развоја и представљају дужничке ХоВ које се издају од стране градске власти. Последњих година интересовање за ову врсту обвезница у Србији расте због ниског ризика улагања, остваривања ликвидности инвеститора, прихода који код ових обвезница најчешће не подлежу опорезивању, а и принос који се остварује на ове обвезнице је углавном већи од приноса који се остварује улагањем у државне обвезнице. Емитовање муниципалних обвезница од стране локалне самоуправе је јефтиније од класичног задуживања код банака, што је и разлог привлачења великог броја инвеститора у циљу реализације конкретних пројеката.

Кључне речи: *муниципалне обвезнице, инвеститори, приход, ликвидност*

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Introduction

Bonds are debt securities that obligate the issuer to pay the investor an amount that is listed on the bond, with a particular interest on the maturity date of its billing. They can be issued by government, banks, enterprises and other financial organizations. Bonds that are issued by cities, municipalities and local authorities are called municipal bonds. When the bonds are issued by public offering, as buyers of bonds occur all domestic and foreign legal and natural persons, i.e. banks, insurance companies, pension and investment funds, as well as citizens. Before the local government announces a public call for the sale of municipal bonds, it defines with investors the purpose and use of funds that will be raised by issuing municipal bonds. It is necessary for the issuance of municipal bonds to train staff in local government. This way local government debt represents a transition from simple credit debt, to sophisticated methods of finding free capital.

The term and characteristics of municipal

Municipal bonds are debt securities issued by the city authorities, municipalities and other local communities. They are used to collect the funds necessary to cover the budget deficit, as well as for the realization of certain projects. Buyers of municipal bonds lend money to local governments, which promises them a return of principal and accrued interest at the specified time. Interest is usually paid semi-annually, while the principal may be paid at maturity and periodic. The yield on municipal bonds was achieved in most cases higher than the yield that would be achieved by investing in government bonds. In addition to achieving satisfactory interest, the investor is, in a number of cases, exempted from paying taxes.

There are three ways of selling municipal bonds in the market:

- Tender - where there are bids on a particular day by customers;
- Placement of municipal bonds through negotiations, with the use of the services of investment banks or broker-dealer company and
- Private placement model.

Municipal bonds are attractive for investors and because, after the business of government bonds, they carry the lowest investment risk. After the initial issue, they are most often at an appropriate list at the market on which secondary trading is carried out. Secondary trading is the instrument by which the market can show how much it values the finances of the local government. If it happens that investors no longer want to own bonds, they can sell them to investors who want to. Income from investments in municipal bonds usually are not subject to taxation and achieve relatively high wages, because the yields on these bonds usually yield higher than that achieved by investing in government bonds.

Issuance of municipal bonds of the municipality is a cheaper source of financing than a conventional bank loans. This allows reaching a large number of investors in order to implement appropriate projects. A broader investor base means and cheaper sources of financing. Issuance of municipal bonds may be made to:

- Financing of projects that do not generate revenue;
- Financing of projects that bring income;
- Cover the deficit of the budget of local government.

In addition to covering the budget deficit, the funds may be used for:

- Building the capacity of water supply;
- Building schools;
- Construction of sports and recreational centers;
- Construction of roads and
- Regulation of the environment.

Emission of municipal bonds, according to national legislation, starts with the decision of the competent organs of local self-government on borrowing by issuing municipal bonds. After that it is necessary to have the approval of the Ministry of Finance. Otherwise, local governments can have a level of indebtedness higher than 50% of budget revenues from the previous year. If a local government approved, opens issue account with the Central Registry of Securities. Then it is necessary to Securities Commission approved the prospectus for the distribution, followed by a public invitation for subscription and payment.

Municipal bonds are divided into two groups, namely:

- General obligation bonds and
- Revenue bonds.

General obligation bonds are used for general purposes and are fully covered by collateral municipalities that they will be paid. *Revenue bonds* are intended for a specific project (or purpose) and are paid out of the profits of the actual project. One is because of this considered more risky than general obligation bonds.

Municipal bonds or credit

For municipal bonds it should specified when the interest is linked to them, lower than the interest on long-term loan, which the cities and municipalities have taken with a commercial bank. These bonds have a longer repayment period than is the case with the use of long-term loans, reducing the financial strain of cities and municipalities. When conducting of municipal bonds, the period of repayment of principal debt and interest is not determined by the bank, but the local government to borrow funds.

These bonds may be traded on the stock exchange, where the sale or purchase of debt can easily be transferred from one to another creditor. There is a relatively high yield on these securities and they have the security of investment, which attracts banks, investment funds and insurance companies. Payment of the budget guarantee trot and local government property.

In addition to insurance companies and pension funds, households are also engaged in buying municipal bonds, as evidenced by examples of European countries. Citizens invest in the improvement of their living standards and monitor the progress of their investments and thus achieve a secure income. More extensive use of municipal bonds is possible only when the state returns the property to local governments, when they will

be able to guarantee asset for the issuance of bonds. The existence of a developed capital markets is a major prerequisite for trade municipal bonds.

In the case of issuing bonds, local problems should be solved individually, i.e. municipality would not have any time to wait for the decision of the Government when it is necessary: make some time to build a school or edit environment. Then he could set the problem of increasing the total debt of the country, because the government would not be able to control the level of indebtedness, various investment and construction. But broadcasting local government bonds to solve the problem of lack of funds for capital investments.

By buying bonds, the investor agrees to share the risk of economic policy with the local government. In fact, those who take part of this risk, and takes part of the award, in addition to the principal periodically realize the anticipated interest.

Emission of municipal bonds increases the efficiency of state institutions, binding them to the public represent its economic policy, which is the basis for the decision concerned the purchase or sale of bonds. So, confidence in economic policy publisher bonds is crucial for investors. A good prerequisite for this is a developed democracy and decentralization, which implies the existence of a large number of independent national and local institutions, which is a prerequisite for successful organization of public affairs financed funds generated by issuing bonds.

The issue of local government financing through classic loans or issuing bonds requires real answer because of the benefits depends on the sources of funding of projects and their implementation. Therefore it is necessary to point out the advantages and disadvantages of conventional financing loans, and issuing bonds.

Advantages of the issuance of municipal bonds:

- Cheap borrowing,
- Debt that can be traded on a regulated market; and
- Larger investor base.

Shortcomings in issuing municipal bonds:

- Relatively undeveloped instrument;
- A complex procedure of issuance; and
- The risk of failure.

The advantages in financing through loans:

- A simple procedure;
- Faster borrowing; and
- Greater certainty of success borrowing.

Deficiencies in financing through loans:

- Fails to provide the additional positive effects;
- Smaller investor base; and
- Possible changes in the business policy of the bank.

In practice, the local government decides to issue bonds only if the bids received for the issuance of bonds are more favorable than conditions for the loan. It is not difficult to determine how funding is more favorable, because the cash flows of loans and bonds largely identically structured.

Issuance of municipal bonds consist of the following phases:

- Preparatory phase of the project;
- Market analysis and documentation;
- Roadshow and regulatory issues;
- Registration and payment, the listing of bonds.

The preparatory phase of the project

At this stage of the project, for its faster and more efficient implementation, it is necessary to create good conditions. First, it is necessary to obtain the opinion of the Ministry of Finance about the possibility of borrowing, without which he cannot move to the next stage. Also, it is necessary to choose the capital market advisors with experience. Otherwise, the public procurement procedure is time-demanding loans from the bond issuance process and should be (for bonds) to launch even at this stage. However, even at this preliminary stage, it is important to determine the structure of bonds (currency, period, type of voucher), although it is subject to change to a decision on their show.

Market Analysis and documentation

Identifying the credit level of demand for municipal bonds is an important activity of this phase. Local governments may, in the event that this demand is small, to terminate the process and the financing is completed by the classic loan. Otherwise, the process continues and it is necessary to choose an agent to manage and lead the process with no financial obligations to the issuer. At this stage it is necessary to collect: the tender documents for public procurement, information memorandum for obtaining bids for underwriter, as well as presentations and promotional materials required in the process of issuing municipal bonds.

Roadshow and regulatory questions

Activities carried out in this phase are: communication with potential investors, banks and non-banking financial institutions, bringing the end of the procurement activity for the loan and accepting bids for conducting underwriter of the issue. In it, the local government realizes the conditions in which they will be charged and, if it correspond to these conditions, we proceed to the next phase. It is necessary to decide on the method of debt, as well as the decision on the issuance of municipal bonds.

Entrance, payments and listing of bonds at the stock market

In this (final) stage of the local government gets the money in your account. In the case of the private placement, it is necessary with each individual investor to sign the contract on purchase of bonds, while in the case of public offer, customers filled

entry form and pay the stated amount of the asset to the account in the bank, which is responsible for this. Upon completion of payment, with proof of funds raised, the request shall be submitted to the Securities Commission for approval on the issuance of municipal bonds. After obtaining consent, the money is available to local governments. After registration of municipal bonds in the Central Registry of Securities, the issuer may decide to include them in the regulated market.

Risks for the issuance of municipal bonds

During the issuance of municipal bonds there may occur different types of risks on which local government must take into account. Risks can be market, operational and regulatory.

Market risk

Market risk may affect the ability to raise funds on the financial markets, especially in times of crisis. The flexibility of local governments, in terms of the period of fundraising, can be the best protection against this risk. However, if the market situation is unfavorable, the ability to issue bonds on the postponement of several months would be of great importance. Since the same group of potential investors, and purchases of state and municipal bonds, it is necessary to take account of the periods when the state issues its own securities, as and when due, otherwise it can happen that you do not collect the planned funds. When you want to borrow at a fixed interest rate, it is important for local governments to monitor the relationship between variable and fixed interest rates.

Operational risk

The risk that due to ignorance of the procedure of issuing bonds users opt for borrowing through loans or issuing bonds, belongs to this category of risk. In this regard, it is important to provide good professional presentation of the whole process of local government leaders. For the successful implementation of the procedure of registration in the Central Registry of Securities require a clear structure of the bond (the amount of the coupon, maturity, currency, guarantees, options...). The best mechanism for managing this risk is the whole process of communication with regulators prior to the commencement of the formal procedure of issuing bonds. Among other things, it is necessary to take into account that the issuance of municipal bonds are not implemented at the time of the election, but that is not implemented in an election year.

Regulatory risk

Capacity utilization for local government borrowing, or reaching the upper limit of cumulative public debt of state and local government, can be a reason for giving

a negative opinion of the Ministry of Finance of the respective local government borrowing. The only mechanism to protect against this risk the timely planning and timeliness required for the opinion of the Ministry of Finance. Legislation on this issue, as well as their application in our country is also set to slow down the whole process, after you finished the legal framework is still improving. If they are not complied with all the formal requirements for the issuance of municipal bonds, Securities Commission does not issue a permit. We believe that this risk can be reduced by using the services advisor and underwriter.

Conclusion

As mentioned, the municipal bond refers to securities issued by local governments, in order to collect funds for a settlement infrastructure, utilities and other needs of the local community. This type of bond is often called bonds free from income tax. In Serbia, the issuance of municipal bonds local government's today popular themes, and their broadcast so far was performed by Novi Sad, Sabac, Stara Pazova, Pancevo, which is an indicator of serious tendency for these projects.

Novi Sad is the first local government that has successfully organized the issuance of municipal bonds. Offer service underwriter gave 6 banks and one broker-dealer company, and wish to participate in this project expressed and pension funds, as well as several insurance companies. As for investors, and the International Finance Corporation (IFC) has expressed the desire to purchase part of the bond issue. The city of Novi Sad, by issuing municipal bonds, enlisted under much more favorable conditions than that of their projects financed through loans.

Although in our government skepticism among citizens, caused by bad events and experiences of the nineties, when they invested the funds offered high interest rates and when most of them remained without the invested principal, their responsiveness to buy bonds of Novi Sad was the height - invest in the public good, indicating the economic local patriotism.

All in all, the success of the project, about the issuance of rated bonds, it is the interest of local leaders in recognizing this phenomenon of vital importance for the development of their community. These projects, which in addition to being able to attract the owners of surplus money, also attract people from the premises: future customers, creditors, the newly created value.

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1. Списиак литературе

Veličina strane 170mm x 240mm
Margine: Top 30mm Bottom 20mm
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CIP – Каталогизација у публикацији
Народна библиотека Србије, Београд

338 (497,1)

ЕКОНОМИКА : Часопис за економску теорију
и праксу и друштвена питања / главни уредник
Драгољуб Симоновић. – Год. LXII. бр. 4 (2016) -
Ниш (Максима Горког 5/36) : Друштво
економиста ЕКОНОМИКА, 2016 – (Ниш :
Графика Галеб). – 194 стр. : 24 см.

Часопис излази четири пута годишње
ISSN 0350–137X = Економика
COBISS.SR-ID 26903

