

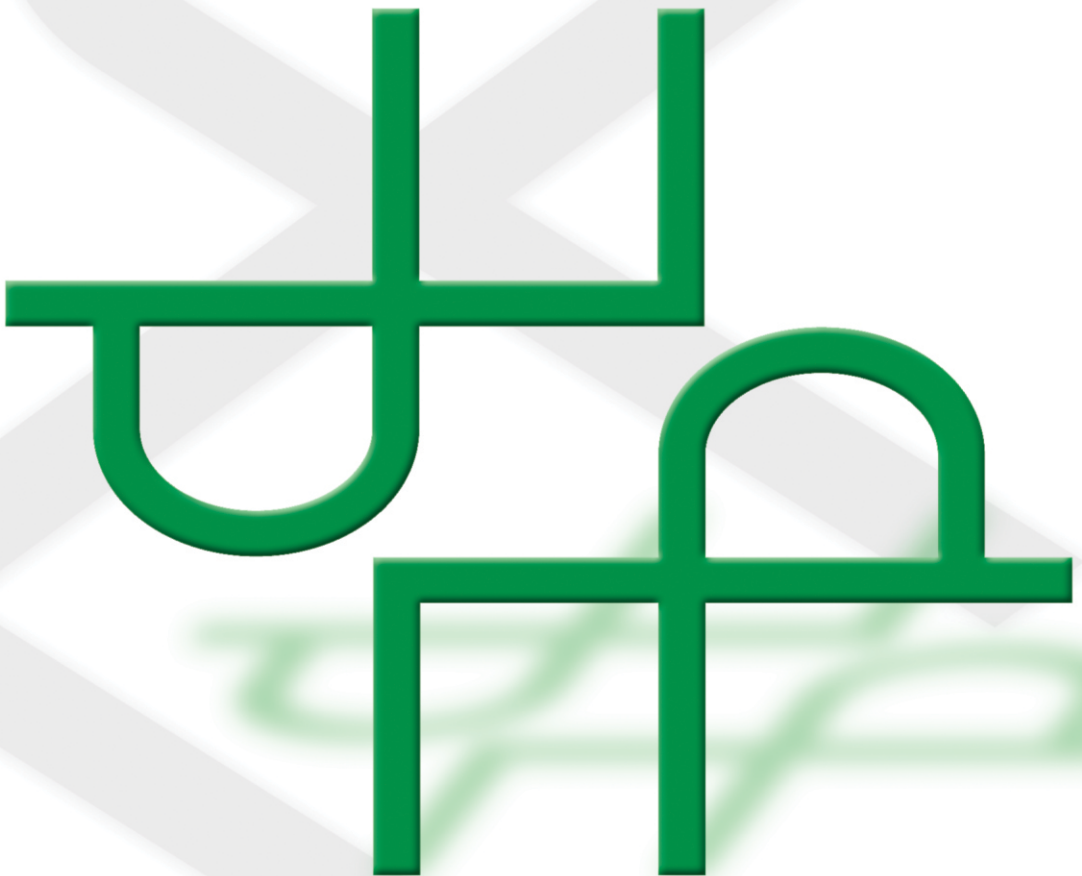
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# ЕКОНОМИКА

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2



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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.

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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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## TESTING FOR PROFIT PERSISTENCE OF LISTED MANUFACTURING COMPANIES IN ISTANBUL STOCK EXCHANGE

### Abstract

*In this paper, using the return on assets (ROA) and return on equity (ROE) ratios of the manufacturing companies listed on ISE (Istanbul Stock Exchange), it has been analysed whether the profits of those companies are persistent or not, with the usage of Hadri-Kurozumi (2012) panel unit root test. In the paper focusing on the period between 2007-Q1 and 2013-Q4, the fact that the panels have a heterogeneous structure is determined by Pesaran and Yamagata (2008) Slope Homogeneity Test. The existence of cross-sectional dependency is tested with CDLM<sub>adj</sub> test developed by Pesaran et al. (2008). As a result of the paper, it is determined that the profit is persistent in sectors that operate in manufacturing areas such as paper, packaging, printing, and rock, soil, cement. On the other hand, it has been found that the profit is not persistent for the chemistry, petroleum, plastic, metal machines, main metal and textile sectors.*

**Key words:** Persistence of Profits, Hadri-Kurozumi Panel Unit Root Test, Cross-Section Dependency, Manufacturing Companies, Istanbul Stock Exchange.

**JEL classification:** L25, C23

## ТЕСТИРАЊЕ ПОСТОЈАНОСТИ ПРОФИТА ПРОИЗВОДНИХ ПРЕДУЗЕЋА КОЈА СЕ КОТИРАЈУ НА ИСТАМБУЛСКОЈ БЕРЗИ

### Апстракт

*У раду је применом рачица приноса на активу (енгл. return on assets) и рачица приноса на капитал (енгл. return on equity) производних предузећа која се котирају на Истамбулској берзи (енгл. Istanbul Stock Exchange - ISE) анализирано да ли је профит ових компанија постојан или не употребом Хадри-Курозуми (2012) тест јединичног корена за панел серије. Рад се фокусира на период између 2007-Q1 и 2013-Q4, а чињеница је да панели имају хетерогену структуру која је детерминисана Пирсон-овим и Јамагат-овим тестом хомогености.*

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*Постојање међусекторске међузависности је тестирано  $CDLM_{adj}$  тестом који су утемељили Пирсон и сарадници (2008). Као резултат истраживања детерминисано је да је профит постојан у међусекторским односима у производњи, као што су: папир, паковање, штампа и кречњак, земљиште и цемент. С друге стране, утврђено је да профит није постојан у хемијској индустрији, индустрији нафте, пластике, металних машина, основних метала и текстилном сектору.*

**Кључне речи:** *постојаност профита, Хадри-Курузум-ов тест јединичног корена за панел серије, међусекторска међузависност, производна предузећа, Истанбулска берза.*

## Introduction

Size and operation areas of the business have changed with the industrialization period that affected a lot of places in the world, mainly Europe since the 18<sup>th</sup> century. As a result of this change, the competition among companies has turned out to be much more difficult.

According to the Schumpeterian economy approach (1939), the companies aiming to gain a sustainable competitive advantage by making innovations are able to get a monopoly power with this way. Thus, they can keep their profits above the norm for a long time (Cable and Mueller, 2008). In the process named as “creative destruction” by Schumpeter, innovations will lead to monopoly power and the power will lead to excessive profit and excessive profit will lead to copyists (Roberts, 2001). Under these conditions, the competitive uncertainties faced cannot be suppressed with the strategic management techniques. Because of the fact that the competitor companies will respond to abnormal profits by copying, these abnormal profits will never be permanent and soon will decrease to the average level. With every innovation presented in the long run, the cycle will repeat itself.

In order to test the profit sustainability of a company within Schumpeterian framework, Mueller (1977) formulated an autoregressive model. Inference of the model is based on specific assumptions. According to this, profit is consists of three main components. These are return of competition, permanent profits provided in the long run and short-term revenues that are assumed to be zero in the long run (Mueller, 1990). These elements are estimated with the model below;

$$\pi_{it} = \hat{\alpha}_1 + \hat{\lambda}_1 \pi_{it-1} + u_{it} \quad (1)$$

According to Geroski (1990), the model also includes unobservable factors that may affect profitability in the long run such as barriers to entry to the market. With this advantage of the model, the effects of unobservable variables related to competitiveness in the long-run profitability can be evaluated.

With the usage of the parameters attained by the equation 1, the indicator of long run profitability can be achieved as in the equation 2.

$$\hat{\pi}_{ip} = \frac{\hat{\alpha}_1}{1-\hat{\lambda}_1} \quad (2)$$

While the attained  $\hat{\pi}_{ip}$  shows the long-run sustainability of profitability depending on competition intensity, the estimated  $\lambda_i$  parameter<sup>1</sup> measures convergence of profits in short-run (Cuaresma and Gschwandtner, 2008). It is expected to have  $|\lambda_i| < 1$  where the magnitude of  $|\lambda_i|$  provides information about the convergence of profits in short-run. A value close to 1 indicates a slow convergence which implies persistence of profits. However, a value close to zero means that abnormal profits disappear in time. On the other hand, when  $\hat{\pi}_{ip}$  calculated for many companies are determined to be statistically differentiating from others, it is concluded that some companies obtain permanent profitability in the long run (Mueller, 1986).

If the  $\hat{\pi}_{ip}$  values computed for the companies in a market are very close to each other, no company can have a competitive superiority to others. In this case, long-run competitive superiority cannot be achieved. Thus, long-run sustainable profit potential of the company cannot be accrued. In a situation where there is no long-run sustainable profit, the greatness of  $\lambda_i$  that shows short-term profit does not have a meaning on its own (Mueller, 1986).

## Previous Empirical Studies

Reference works which have formed the main structure of the methodology on the long-run sustainability of profits have been developed by Mueller (1977, 1986) together with Geroski and Jacquemin (1988). During the following years, in the studies of Cubbin and Geroski (1987), Schwalbach et. al. (1989), Odagiri and Yamawaki (1990), Mueller (1990), Cubbin and Geroski (1990), Waring (1996), Goddard and Wilson (1997), McGahan and Porter (1999), Glen et. al. (2001), Maruyama and Odagiri (2002), the profitability of companies from different countries and sectors have been evaluated; however, it has been concluded that the obtained findings can show differences depending on the country, sector and the evaluation period.

Providing great contributions to the subject with his recent research, Yurtoglu (2004) have used stationarity tests, as an addition to Mueller's model, in order to analyse the presence of a unit root. According to Yurtoglu, if the  $\lambda_i$  values computed for all companies are close to each other, the unit root study gives better result than Mueller's model (Yurtoglu, 2004). Almost all other studies after this one have been studied depending on the methods of time series and panel data stationarity analysis.

In the study conducted by Bentzen et. al. (2005), the data of 1310 companies operating in Denmark between 1990 and 2001 were used. As a result of panel stationarity analysis, it has been seen that the total industry profit is sustainable, the company profit is not.

Eklund and Wiberg (2007) examined the 21 annual data of 293 big European companies between 1984 and 2004; and they put forward that despite of converging, the profits of the companies achieving abnormal profits above the norm do not decrease to the average levels; and that the companies working on R&D can sustain their high profit in the long run.

Cuaresma and Gschwandtner (2008), studied the annual profit data of 156 American companies between 1950 and 1999, with the usage of time series analysis. As a result of this paper, they stated that industry intensity and size have a positive effect on the sustainability of industrial profit levels; however, market share and risks have negative effect on the sustainability of company profit level. Gschwandtner and

Cuaresma conducted their study again in 2013, and they have determined that the profits are more sustainable respectively in small and intense industries.

Kaplan and Celik (2008) analysed the profit data of 24 banks operating in Turkey between 1980 and 1998, with the usage of unit root analysis. As a result of the research, it is determined that there is sustainable profitability in the short term for the Turkish banking sector; however, because of the intense competition, excessive profits disappear in the long-run. In their study, in which they examine 25 banks working in Turkey between 1998 and 2009, Arslan and Iskenderoglu (2012) found out that the profit is not sustainable. Similarly, in the research, in which the profit data of 114 companies among the first 500 companies in Turkey, made by Arslan et. al. (2010), however, it has been seen that the long run profits do not converge. On the other hand, in the researches on insurance business, while Pervan et. al. (2013) find that the profit is sustainable, Konuk et. al. (2013) do not obtain these findings.

Bartoloni and Baussola (2009) analysed 5445 Italian companies' profit data between 1989 and 1997, and they worked on profit's high or low sustainability, which they call 'twin peaks phenomena'. As a result of this research, it has been seen that in both situations when the profitability is high or low, sustainability can still be achieved.

Goddard et. al. (2011) analysed profit sustainability of banks operating in 65 different countries between 1997 and 2007 in two-stages. In the first stage of this research, they studied to determine the convergence process of the short term profits with autoregressive model. It has been observed that the convergence process differs in each country. In the second stage of this research, long-run sustainable profitability was evaluated and the factors determining the competitiveness was modelled. According to the obtained results, it has been seen that while the profit sustainability has a negative relationship with per capita income, it has a positive relationship with the size of market access determinants.

In most of these studies, persistence of profits in the long run is explained by natural barriers of entry to the market and industry concentration. However, evidence about persistence of profits derived from the characteristics of the companies in only limited studies. In this study, it is aimed to investigate whether the profits of companies in the manufacturing industry are persistent or not, by separated sectorial basis.

## Data and the Methodology

In this paper, 11 companies from paper, packing and printing sector, 16 companies from chemicals, petroleum, rubber and plastic sector, 17 companies from metal products and machinery sector, 12 companies from main metal sector, 18 companies from stone, soil and cement sector, and 18 companies from textile sector listed in the ISE manufacturing index, have been analysed. The dataset consists of 28 quarterly profit values between 2007-Q1 and 2013-Q4 of these companies, whose shares are listed on the stock exchange. In the paper, profit is measured by return on assets (ROA) and return on equity (ROE) values that have been obtained from financial reports of companies. Because of the fact that the financial reports before and after 2007 are not compatible, the start date of the database is determined as 2007.<sup>2</sup>

In this study, panel unit root test developed by Hadri-Kurozumi (2012) that considers both cross-section dependency and serial correlation was used. Along with these features,

Hadri-Kurozumi test can also consider unit root arising from the mutual factors forming the series, and allows the presence of mutual factors. This test, which can be described as the developed version of cross-section augmented dickey fuller (CADF) test, fills the deficiency of CADF test by testing the stationarity for all panels (Akbaş et. al., 2013). While the zero hypothesis of the test shows the panel's being stationary, the alternative hypothesis of the test shows the presence of a unit root in the panel.

Hadri-Kurozumi test carries out the process with the usage of Sul-Phillips-Choi (SPC) and Lag-Augmented (LA) methods. Autocorrelation can be corrected in SPC method by AR (p) process depending on seemingly unrelated regression (SUR) technique; on the other hand, in the LA method by adding one to the lag length in AR (p+1) process depending on Choi (1993) and Toda and Yamamoto (1995) (Göçer, 2013).

According to this test, model number 3 should be estimated first.

$$y = z_t \delta_i + f_t \gamma_i + \varepsilon_{it} \quad (3)$$

The  $z_t$  in the formula is a deterministic term, and  $\varepsilon_{it}$  is represented as below.

$$\varepsilon_{it} = \phi_{i1} \varepsilon_{i,t-1} + \dots + \phi_{ip} \varepsilon_{i,t-p} + v_{it} \quad (4)$$

At that point,  $Z^{SPC}$  and  $Z^{LA}$  statistics are computed by equation number 5 and 6 respectively.

$$Z^{SPC} = \frac{1}{\hat{\sigma}_{ISPC}^2 T^2} \sum_{t=1}^T (S_{it}^W)^2 \quad (5)$$

$$Z^{LA} = \frac{1}{\hat{\sigma}_{iLA}^2 T^2} \sum_{t=1}^T (S_{it}^W)^2 \quad (6)$$

In the evaluation of Hadri-Kurozumi (2012) test results, the findings from the cross-section dependency test have importance. The reason is that the unit root should be determined by considering  $Z^{SPC}$  that is calculated with the bootstrap method if there is a cross-section dependency in the panel, and by  $Z^{LA}$  that is calculated by using t statistics if there is no cross-section dependency in the panel.

The hypotheses of the study are as follows:

$H_0$ : At least one series in the panel is stationary. (Profit is not permanent for any company)

$H_1$ : All series in the panel have unit root. (Profit is permanent for at least one company)

According to these hypotheses; in the case of series have unit root, profit is persistent. In terms of Hadri-Kurozumi test, if the alternative hypothesis is accepted, it is possible to series have unit root. Therefore; it should be interpreted as in case of  $H_1$  hypothesis is accepted, the profit is permanent; while in case of  $H_0$  hypothesis is accepted, the profit is not permanent.

## Empirical Findings

Company profits' being appropriate to the random walk theory shows unpredictable of profits (Canarella et. al., 2012). In this context, the series having unit root shows the being permanent of profits and the series' being stationary shows that there is a competitive structure in the sector and there is no sustainable profit (Arslan and Iskenderoglu, 2012).



Obtaining profit above normal levels in the long run is not seen as probable for markets with intense competition. Furthermore, if profit above the norm can be obtained in the long run, profit persistence can be mentioned (Arslan and Iskenderoglu, 2012).

In spite of all the firms mentioned in the manufacturing area in our study and it is assumed that there is a strong dependency between these sectors, every sector has its own dynamics within itself. Thus, whether the panels are homogenous or heterogeneous should be evaluated by experiential analysis and the unit root tests should be decided accordingly (Rufael, 2014). Slope Homogeneity Test results of our paper can be seen in Table 1.

Table 1: Pesaran and Yamagata (2008) Slope Homogeneity Test Results

Sector	ROA		ROE	
	Stat.	Prob.	Stat.	Prob.
Paper, Packaging, Printing	8.95	0.00*	25.24	0.00*
Chemistry, Petroleum, Plastic	2.32	0.01*	11.02	0.00*
Metal Products, Machines	9.55	0.00*	19.82	0.00*
Main Metal	12.59	0.00*	20.56	0.00*
Stone, Soil, Cement	6.82	0.00*	13.12	0.00*
Textile	17.07	0.00*	19.73	0.00*

\* sign presents heterogeneity according to the significance level of 1%

According to the test results, it is determined that both ROA and ROE values belonging to all sectors are in heterogeneous structure and the panel unit root tests to be used when analysing profit's sustainability should be appropriate to this heterogeneous structure.

Another subject to be considered before going into the unit root tests is whether there is a cross-section dependency in the panel. Thus, the appropriate panel unit root method will be chosen according to this result.

Cross-section dependency was first analysed by CDLM test developed by Breusch and Pagan (1980). However, the deficiency of this test is that it presents deviant results when the group average is zero, but the individual averages are different from zero. Pesaran et al. (2008) could correct this deviance by adding variance and mean to the test statistics (Göçer, 2013). For this reason,  $CDLM_{adj}$  test is used in this paper.

Table 2:  $CDLM_{adj}$  Cross Section Dependency Test Results

Sector	ROA		ROE	
	Stat.	Prob.	Stat.	Prob.
Paper, Packaging, Printing	1.35	0.08***	1.36	0.08***
Chemistry, Petroleum, Plastic	0.75	0.22	1.72	0.04**
Metal Products, Machines	1.17	0.09***	0.69	0.75
Main Metal	3.89	0.00*	3.28	0.00*
Stone, Soil, Cement	0.43	0.33	0.72	0.23
Textile	1.19	0.09***	0.70	0.24

\*, \*\*, \*\*\* signs describe the presence of cross-section dependency in 1%, 5% and 10% respectively.

When the test results in the Table 2 are considered, according to both ROA and ROE values for the two sectors (paper, packaging, printing and main metal), there has been observed to be the presence of cross-section dependency. For three of this sectors (chemicals, petroleum, plastic; metal products and machine; and textile), there is a cross-section dependency according to either ROA or ROE. On the other hand, there is no cross-section dependency for stone, soil, cement sector.

Because of Hadri-Kurozumi (2012) panel unit root test presents the results for both situations where there is a cross-section dependency and there is not. According to this test results,  $Z^{SPC}$  values should be taken into consideration if there is cross-section dependency in panel, and  $Z^{LA}$  values should be taken into consideration if there is not. In order not to raise confusion, instead of giving both statistics in all panels, only one of  $Z^{SPC}$  or  $Z^{LA}$  values presented which should be evaluated for each panel in Table 3.

Table 3: Hadri-Kurozumi Panel Unit Root Test Results

Sector	ROA			ROE		
	Test	Stat.	Prob.	Test	Stat.	Prob.
<b>Paper, Packaging, Printing</b>	$Z^{SPC}$	2.25	0.02*	$Z^{SPC}$	1.77	0.03*
<b>Chemistry, Petroleum, Plastic</b>	$Z^{LA}$	1.17	0.11	$Z^{SPC}$	0.71	0.23
<b>Metal Products, Machines</b>	$Z^{SPC}$	0.62	0.26	$Z^{LA}$	- 0.69	0.75
<b>Main Metal</b>	$Z^{SPC}$	0.25	0.39	$Z^{SPC}$	0.37	0.35
<b>Stone, Soil, Cement</b>	$Z^{LA}$	2.18	0.02*	$Z^{LA}$	1.50	0.07**
<b>Textile</b>	$Z^{SPC}$	1.22	0.11	$Z^{LA}$	1.10	0.12

\*, \*\* signs present stationarity according to the significance level of 5% and 10% respectively.

When the results of Hadri-Kurozumi panel unit root test in Table 3 are considered, it is found that the companies in paper, packaging, printing and stone, soil, cement sectors have sustained profits in the long run. Because the attained probability values for these companies are less than 10% and it is recognized the existence of unit root as null hypothesis. It is thought that long-run persistence of profits in this sector showing oligopolistic characteristics and natural barriers of entry to the industry, is caused by industry features. On the other hand, because of the intense competition in chemistry, petroleum, rubber, plastic, main metal and textile sectors, it has been seen that the profit is not persistent and company profitability indicators converge each other in the long run.

## Concluding Remarks

With this study, regarding 92 companies from 6 different sectors chosen from Turkey, the persistence of profits is evaluated considering competition intensity. In the study, Hadri Kurozumi (2012) panel unit root test, that is appropriate for both cross-section dependency and heterogeneous panel structure, was used.

During the evaluation, it has been observed that the analysed companies in different sectors get affected by the competition intensity in different levels. It is determined that within the six sectors evaluated, some companies in paper, packaging, printing and stone, soil, cement sectors can maintain their profits in the long run. However, it is observed that

companies in other four sectors cannot maintain their profits in the long run due to intense competition.

Being the first research study evaluating the permanence of profits in the Turkish manufacturing industry presents the work's original side. However, should the data from before 2007 be amended according to IFRS, there may be other studies that has a wider observation period in the future with regulated data according for IFRS.

The analysis method used in the research measures the competition density in the evaluated sectors; yet, the attained test statistics cannot provide any information about the factors that affect the competition density. For this reason, the strongest power behind sustainable profitability cannot be determined. Thus, the future studies to be done in order to suppress this limitation will present a supplementary fact and extensive information.

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#### Endnotes:

1. Although there were some differences between the application style of the method, database, and research estimates, the  $\lambda_i$  values computed in these studies are estimated to be between 0,2 and 0,66 (Bentzen et. al., 2005).
2. Since 2007, the companies listed in the ISE started to prepare their consolidated financial reports according to International Financial Reporting Standards (IFRS) in order to adapt to European Union norms, instead of Generally Accepted Accounting Principles (GAAP) in Turkey.

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## MEASURING CUSTOMERS' INTIMACY: EVIDENCE FROM INDONESIAN SERVICE-BASED COMPANIES

### Abstract

*Leadership is often regarded as the fuel to jump-start changes and improvement in organizations. At the same time, innovation is widely discussed as an important element in organizational development. In numerous theoretical discussions and stories of companies across the globe, successful organizational innovation depends on leadership. As the leadership pushes for innovation, the company's internal branding is expected to improve. This is particularly true for transformation leadership, perhaps. Such an internal branding is expected to shape much stronger employee-based brand equity (EBBE). Likewise, the company's innovation should enhance the customer intimacy by means of word of mouth. The relationships may not have been widely researched though the presence of technology has allowed increasing popularity in electronic communication and information sharing. Electronic word of mouth (eWOM), like testimonies, spreads insights and experiences for others. This affects customers' reactions to products and services. Service-based companies may have relied on eWOM to keep the traffic-inflows while maintaining intimacy with customers. This study attempts to analyze the relationships among transformational leadership, product/service innovation, internal branding, eWOM, EBBE, and customer intimacy in Indonesian service-based companies, such as; hotels and restaurants. A structural equation modeling is incorporated to note the simultaneous relationships.*

**Key words:** *leadership, product innovation, internal branding, electronic word of mouth, employee-based brand equity, customer intimacy*

**JEL classification:** M31

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## МЕРЕЊЕ ИНТИМНОСТИ СА КОРИСНИЦИМА: ПРИМЕР УСЛУЖНИХ КОМПАНИЈА У ИНДОНЕЗИЈИ

### Апстракт

*На лидерство се често гледа као на гориво за промене и напредак у организацијама. Истовремено, иновација се третира важним елементом у развоју организације. У бројним теоријским расправама и случајевима компанијама широм света, успешна иновација зависи од лидерства. Како руководство инсистира на иновацијама, тако се очекује да се унутрашње брендирање компаније побољша. Ово се, вероватно, посебно односи на трансформационо лидерство. Од таквог интерног брендирања се очекује да обликују много већу вредност бренда засновану за запосленима (employee-based brand equity - EBBE). Исто тако, иновација компаније требало би да унапреди интимност са корисником услуга путем уста до уста. Ови односи нису широко истражени иако је присуство технологије омогућило повећање популарности у електронској комуникацији и размени информација. Тзв. електронска уста (Electronic word of mouth - eWOM) шире увид и искуства других. То утиче на реакције корисника у вези са производима и услугама. Компаније које базирају на услугама могу да се ослоне на eWOM и да задрже одржавајућу интимност са корисником. Ово истраживање покушава да анализира односе између трансформационог лидерства, иновације производа/ услуге, интерног брендирања, eWOM, EBBE и интимност са корисницима у услужним предузећима у Индонезији, као што су хотели и ресторани. Једно моделирање структурне релације је искористићено да би се фокусирала пажња на истовремене односе.*

**Кључне речи:** лидерство, иновације производа, интерно брендирање, електронска уста до уста, имовина у бренду заснована на запосленом, интимност са корисником

### 1. Introduction

There are numerous studies on external branding (Keller, 2013), whose focus is on delivering the organization's brand promise to customers to achieve brand equity-based customers (Keller, 2013). However, internal branding may not have been studied extensively (McKee, 2009). External and internal branding are equally necessary in delivering an organization's brand promise (Keller, 2013). In fact, fewer marketers are aware of the importance of internal branding and subsequently, a smaller number of employees believe in a company's brand promise and are endowed to delivery it (Marshall, 2013). This means that internal branding must be adopted to ensure employees recognize the fundamental branding concept to extend it to customers.

The stronger the internal branding, the faster it fosters the creation on employee-based brand equity (EBBE) (King & Grace, 2010; King & Grace, 2009). King and Grace (2009) introduced EBBE as “the third perspective”. According to King and Grace (2009), a measurement for maintaining internal brand management is desirable, following 2

initial perspectives in building and measuring brand equity, which are customer-based and financial-based.

From the technological perspective, it has become a public knowledge that the popularity of electronic communication is increasing along with the rapid development in the digital era. This creates an opportunity of eWOM (Cheung & Lee, 2008). The eWOM has become an important source of information, which now can be easily obtained from any websites, and also from any social media (Chen & Lurie, 2013; Vimaladevi & Dhanabhakaym, 2012; Alrasheed, 2011).

In order to achieve all that, the role of human resources is extremely essential for organizations. Referring to the service-based industry, the role of human resources is even more vital to ensure the proper service delivery toward customer intimacy. Hence, suitable leadership style may be crucial to manage the pool of human resources, or otherwise known also as “human capital” (Nghah, et al., 2013). The use of a traditional leadership style that is rooted in accepting and following regulations, or the use of a transformational leadership style, which tend to motivate and inspire employees (ehotelier, 2013). Hotel industry management applies different types of leadership style and major researchers consider the transformational leadership style has a significant influence in achieving successful internal branding (Kashmiri, 2010; Kaewsurin, 2012).

## 2. Literature review

### 2.1. Transformational leadership

*“I am more afraid of an army of 100 sheep led by a lion than an army of 100 lions led by a sheep” – Talleyrand (Robbins & Judge, 2013)*

The quote above represents how vital the role of a leader is in managing human resources and Burmann et al. (2009) claim that leadership is also an important aspect in the internal branding process. The most important resource in every hospitality and tourism organization is the employees themselves. The success or failure of the organization is directly influenced by how their tasks are managed and led (Hayes & Ninemeier, 2009). Some employees genuinely love their work, whereas others just as extremely dislike them. The majority of people are somewhere in between the spectrum (Ebert & Griffin, 2011). It is essential to identify employee behaviours, individual differences and motivation effectively before determining the most suitable leadership style applied by the managers (Robbins & Coulter, 2009).

Previous researchers (Yukl, 2010; Ebert & Griffin, 2011) explained different perspective approaches to studying leadership. The first perspective is from the nature of the leaders (trait approach, behavioural approach, path-goal theory, and situational approach), and the second perspective is from the followers (charismatic leadership and transformational leadership). Bernard Bass imported Burn’s transforming leadership concepts from the political and social movement arena in the context of organizations (Hickman, 2010). According to Hickman (2010), Bass split Burn’s link to social change from the theory of transforming leadership and adopted Burn’s definition of transactional leadership to form what he characterized as transformational leadership. According to



Bass's theory, the measurement scales of transformational leadership are (Bass, 2013):

Idealized influence to represent behaviours that stimulate strong follower emotions and identification with the leader, for instance establishing courage and dedication, and creating self-sacrifices for the followers (Yukl, 2010).

Inspirational motivation as a way to communicate an appealing vision and using symbols to focus subordinates effort and express important objectives in simple ways (Yukl, 2010; Hamilton, 2009; Bass, 2013).

Intellectual stimulation to represent behaviours that improve subordinates understanding of problem and influences them to observe problems from a new perspective (Yukl, 2010).

Individualized consideration to show sets of characteristics that provide support, encouragement, and instruction to subordinates (Yukl, 2010).

## 2.2. Product innovation<sup>1</sup>

Competition in the market has always been intense and it has become harder to control over the market (Barrows & Powers, 2009). The combination of an interrelated and an interdependent variety of activities in marketing, to cover both the tangibility and intangibility, are crucial. Hence, the application of an extended marketing mix, which consists of: Product, Price, Place, Promotion, Process, Physical Environment, and People (Wirtz, Chew, & Lovelock, 2012) are necessary to boost uniqueness and continuous innovation.

According to Omachu & Einspruch (2010) there are 4 types of innovation: product innovation, process innovation, marketing innovation, and organizational innovation. Successful innovation requires an integrated design process, such as; integration in the design of the enterprise, the design of the product, as well as the design and implementation of new technologies (Preez & Louw, 2008). According to Erdil, Erdil and Keskin (2004) there are 2 dimensions that trigger product innovation, which are:

Technological Drive/Challenges have infiltrated the way companies grow and innovate have been changed in the past decades and is still in a continual phase. Innovation process allows technology to be applied in a marketable or otherwise valuable way (White & Bruton, 2007). The impact of technology has gone beyond its role starting from a tool to improve efficiency and effectiveness to the substitute of man power (Kandampully, 2007).

Focus on Short Time to Market pushes companies to keep-up with competitors in the wild competitive market sometimes require sooner rather than realistic sometimes made innovation only focus on short term market. It might be because of lack of time, lack of resources or staff, lack of systematic process, fear and lack of confidence about innovation since it is believed to be risky (Huseyin & Ferit, 2007). By focusing on short term market there is an opportunity to offer valuable features which may lead to more established technologies and chances to dominate market (Chen & Taylor, 2009).

Therefore, considering the needs on product innovation, technological drive/challenges, and the need to time appropriately to market, the presence of transformational leadership is vital. Hence, it can be hypothesized as follows:

H1: Transformational leadership influences product innovation

### 2.3. Internal branding

Internal branding or otherwise referred to as “internal marketing” is part of a holistic marketing concept. Internal marketing undertakes hiring, training and motivating employees to serve customers properly and it can be as vital or even more than directly marketing products or services outside the company (Kotler & Keller, Marketing Management, 2012).

According to Kotler and Keller (2012), there are 10 types of products that marketers market, such as; goods, services, events, experiences, people, places, properties, organizations, information, and ideas. One strategy to differentiate services is to establish a brand. In contrast with a product, a brand is an extra value to a product because a brand can have different dimensions from products designed to meet the same need (Keller, 2013). Keller also explained that the differences may be rational and tangible (associated with product performance of the brand) or more emotional, symbolic and intangible (associated with what the brand represents) (Keller, 2013). Along with Keller, King and Grace (2009) agreed that branding plays a particularly significant role in the services arena. However, strong service brands are only attained when the communication of brand promise is consistent to the brand experience delivered.

The importance of internal branding in the service industries is increasing (Kaewsurin, 2012). The concept of internal branding has been defined in several ways now as a result of the growing literature on internal branding (Punjaisri & Wilson, 2011; Kaewsurin, 2012). Punjaisri and Wilson (2011) state that internal branding is about “*ensuring that the brand promise is transformed by employees into reality, reflecting the espoused brand values that set customers’ expectations*”. Kaewsurin (2012) stated that there are 2 perspectives of internal branding;

Internal communication represents the use of internal communication tools, such as; internal publications, e-mail messages, memos, group meetings, daily briefings, direct contract, newsletters, brand books and intranet (Punjaisri & Wilson, 2011; Kaewsurin, 2012) to influence its brand targets, who are not only customers but employees as well (Kaewsurin, 2012).

Brand training is also important in delivering brand values to employees (Almgren, Ek, & Goransson, 2012). Brand training is a good opportunity to build understanding about brand values and to align employees to its principles and brand training should focus on creating such programs as are defined by brand values (Kaewsurin, 2012).

Therefore, the successful internal brand building requires the role of leader. The better quality of the leaders the better the internal communication and brand training. This pushes up the quality of internal branding. Hence, it can be hypothesized as follows:

H2: Transformational leadership influences internal branding

### 2.4. Electronic word of mouth

WOM communication is “*oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, regarding a brand, a product, a service or a provider*” (Park, Wang, Yao, & Kang, 2011). WOM communication plays an important role in shaping the target-customers’ attitudes and behaviours towards products and firms because WOM is regarded as providing more reliable, trustworthy advice, and personal contacts are generally able to offer social

support and encouragement (Roy, Butaney, & Bhutaney, 2009). The emergence of the internet has transformed WOM into online WOM (Lee & Kim, 2010), or commonly known as electronic WOM, or simply eWOM (Park, Wang, Yao, & Kang, 2011). According to Filieri and McLeay (2013), the parameters for eWOM are;

Quality of information of eWOM has become an important influence on product evaluation since it is more believable rather than any marketers or advertisers (Lee & Kim, 2010).

Information usefulness of eWOM has increased due to interpersonal influence across individuals. Customers with highly susceptibility to interpersonal influence are more likely to be affected by eWOM (Park, Wang, Yao, & Kang, 2011). eWOM has shown a significant influence because of its advantages in regency, abundance and objectivity (Lee, Lee, & Tan, 2013).

Trustworthiness refers to a set of specific beliefs dealing primarily with the benevolence, competence, and integrity of another party. Trust is important to help overcome perception of uncertainty and risk and engage “*trust-related behaviour*”. eWOM credibility is defined as the extent to which one perceives the recommendation as believable, true, or factual. Credibility of information from social network will make customer more confidence to adopt eWOM (Park, Wang, Yao, & Kang, 2011).

Therefore, to ensure the quality of information, information usefulness, and trustworthiness in organizations, the role of leaders is undoubtedly vital. It is expected that the transformational leadership can drive the initiatives on eWOM. Hence, it can be hypothesized as follows:

H3: Transformational leadership influences electronic words of mouth.

## 2.5. Employee-based brand equity

Supported by King and Grace (2009; 2010)EBBEconcept, this research focuses on the foundation of EBBE, whichbehaviourand knowledge, role clarity, brand citizenship behavior, and brand commitment.

Brand knowledge is the key to create brand equity, because it creates the differential effect that drives brand equity (Keller, 2013).

Role clarity plays a vital role in organizational behaviour due to its being considered a predictor of organizational outcomes such as organizational performance, satisfaction, commitment, and turnover (Kwon, 2013). If important information about brand knowledge to achieve their performance expectations is not widely distributed, the employees’ role ambiguity will increase (King & Grace, 2009).

Brand citizenship behaviors are considered as the behavioral perspectives that measure a brand’s strength (Burmam, Zeplin, & Riley, 2009; Xiong & King, 2013), which refer to how employees “*live the brand*” through their voluntary behaviors and the focus of these behaviors is the extra-role behaviors that extended beyond formal role requirement (Xiong & King, 2013).

Brand commitment is considered as the attitudinal perspective that measures a brand’s strength (Burmam, Zeplin, & Riley, 2009; Xiong & King, 2013), which tends to show employee’s psychological attachment towards a certain brand/organization (Xiong & King, 2013).

Therefore, it may be apparent that the creation of EBBE inside organizations may be relatively impossible without the preliminary presence of product innovation, internal

branding, and electronic words of mouth. Hence, it can be hypothesized as follows:

H4: Product innovation influences employee-based brand equity,

H5: Internal branding influences employee-based brand equity,

H6: Electronic word of mouth influences employee-based brand equity.

## 2.6. Customer intimacy

Relationship marketing covers the entire spectrum of marketing starting from channels, business to business marketing, services marketing, marketing research, customer behaviour, marketing communications, marketing strategy, international marketing and direct marketing. Embraced by industries in the late 90's and the early 2000's, the customer relationship management (CRM) was a managerial initiative that has become the integral part of the marketing world today (Shannahan & Shannahan, 2010). CRM is considered an important way to enhance customer loyalty and firm performance. Customer intimacy, as a part of CRM<sup>2</sup>, has a higher impact to loyalty. In the face of competitive market conditions, businesses need to deliver consumer value by having intimate relationships with customers in order to increase their loyalty. According to Simonson (2003) customer intimacy has two indicators;

Mass customization<sup>3</sup> is about customer-centric marketing (Sheth, Sisodia, & Sharma, 2000). Mass customization is characterized by the involvement of customers in the process before the transaction (Teerling & Huizingh, 2006). Mass customization is generally considered as a tool to build loyalty when mass market quality is no longer a sufficient differentiator (Bhattacharya & Bolton, 2000). A strong customer relationship is expected as the result from the combination of mass customization and the internet (Teerling & Huizingh, 2006). The core of customization is to provide customers with personalized product based on acceptable delivery time and price not only to win customers, but also to effectively achieve the goal of sales and production in market competition.

Perceived one-to-one interaction denotes the interpersonal process which results from intimate behaviours and intimate experiences that create intimate interaction (Li, 2009). **In the efforts to build customer intimacy with customers, companies must learn as much as possible about each customer's behaviour, attitudes and expressed needs and use that to understand where and what pain points are in order to** meet customers' expectations and retain loyalty and trust which have become more important (Williams, Hernandez, Petrosky, & Page, 2010). With the growth of the internet, it is common these days to engage with customers in the social media. The goal of this trend is to have a constant interaction to gain greater favour for brand and enhance brand equity (Jakste & Kuvykaite, 2012). A close relationship can be built by creating emphatic responses that can be done by appear social, personalized interface and personalized recommendation (Li, 2009).

Therefore, when the EBBE is created, employees/staff become aware and understand better about the company's brand. This is followed by a higher tendency in sharing with customers. Hence, it can be hypothesized as follows:

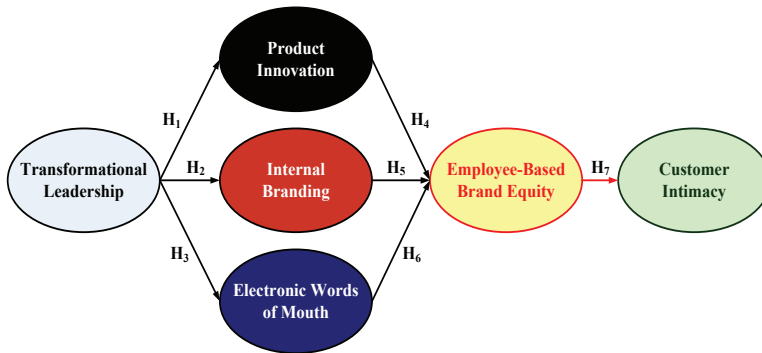
H7: Employee-based brand equity influences customer intimacy.

## 2.7. Research model

The major difference between the current study and many previous studies concerning the chosen variables and indicators is simply the used of those variables

and indicators. If the previous studies tend to separate the variables and indicators, this current study attempts to combine the selected variables and indicators altogether into hotels and restaurants. Therefore, the following research model is used in this study.

Figure 2: Research Model



### 3. Research method

This study follows the descriptive-causal research method to provide information on certain relationships, variables and indicators (Budiman, Anantadjaya, & Prasetyawati, 2014), and to reveal the causal effect from one variable to another as a way to measure the influence among variables (Sekaran & Bourgie, 2013; Cooper & Schindler, 2010).

The population is employees and customers of at least mid-scale hotels and cafes/restaurants in the city of Jakarta and Bandung in Indonesia<sup>4</sup>. Since the nature of the selected variables used in this study is relatively leads into “internalities”, the sampling method to choose hotels and restaurants follows the non-probability purposive sampling. Prior acquaintances with the hotel or restaurant management teams are certainly advantageous. A stratified sampling method is incorporated to select the supervisory level and up of all divisions of the hotels and restaurants. Despite the non-probability purposive sampling method in choosing the hotels and restaurants, the sample size calculation is performed to ensure the potential generalizability of the results. With the use of PHStat<sup>4</sup>, the minimum sample size required is 97.

Because of the questionnaire distributions, this data will have to undergo the pre-test and post-test for validity and reliability. The validity boundaries follow the SPSS’ KMO & Bartlett’s Test with a minimum of 0.5 to be considered valid (Sarwono, 2012). The reliability follows the SPSS’ reliability statistics, which are based on Cronbach Alpha of Standard with a minimum of 0.7 to be considered reliable (Sarwono, 2012). The hypothesis tests rely on the use of structural equation modelling with the applicable parameters on the goodness of fit (Ghozali, 2004; Santoso, 2009; Schumacker & Lomax, 2004; Wijaya, 2009).

## 4. Data analysis

The data is appeared to be within the acceptable boundaries of being normally distributed. With the total of 125 distributed questionnaires, only 104 questionnaires are usable due to incomplete responses, and minimal variations in responses. This represents 83.20% response rate. The descriptive statistics show that the data are generally within the acceptable parameters of normality. This indicates that the data set can be further analysed. The summary of the respondents' characteristics are as follows; approximately 58% of respondents are female, 69% of respondents are at least 35 years old or younger, 40% of respondents are residing in the suburban areas of Jakarta, 52% of respondents are holding at least an undergraduate degrees, 57% of respondents are at least holding the supervisory level positions, 81% of respondents are earning less than Rp. 10 million per annum.

In terms of the validity of the data, the following table shows 0.750 on the measure of sampling adequacy. This means that the data in this study is considered 75% valid. The reliability of the data is 0.884. This means that the data in this study is considered 88.4% reliable for all 38 statements used in the questionnaire.

With the combination of 75% validity and 88.4% reliability, further process on data analysis can be performed. From the AMOS results, as shown in Figure 19: AMOS Output, the summaries can be drawn as follows;

1. Transformational leadership negatively influences product innovation as much as 16%. Among the indicators used to approximate the transformational leadership, the inspirational motivation shows the strongest explanatory power of about 89%. This result means that to create a successful transformational leadership inside organizations, inspirational motivation may have to be learnt, formulated, and implemented.

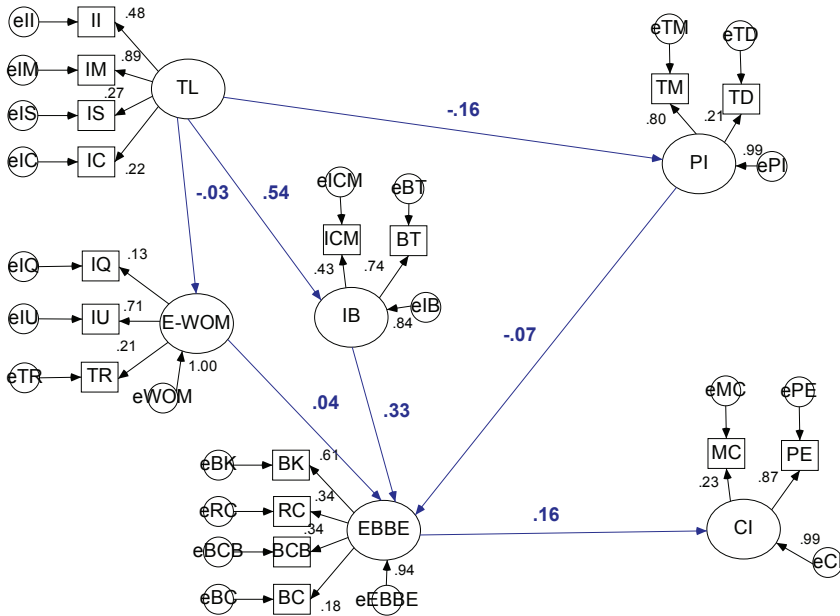
2. Transformational leadership positively influences internal branding as much as 54%.

3. Transformational leadership negatively influences eWOM as much as 3%.

4. Product innovation negatively influences EBBE as much as 7%. Among the indicators used to approximate product innovation, the focus to short-time to market has the strongest explanatory power of about 80%. This result means that successful product innovation relies on time to market. This simply means when organizations disregard the importance of time to market, the results of product innovation may not matter. Ironically, the average-quality product innovation may excel as long as organizations introduce the product immediately. This result means that the highest quality of product innovation may actually be wasted when organizations delay the introduction of products.

5. Internal branding positively influences EBBE as much as 33%. Among the indicators used to approximate internal branding, brand training has the strongest explanatory power of about 74%. This result means that organizations must ensure the proper and regularly-scheduled brand training to have the satisfactory internal branding. At the very least, brand training may boost employees' awareness toward the company's brand. The awareness may eventually lead to internal brand building.

Figure 2: AMOS Output



eWOM positively influences EBBE as much as 4%. Among the indicators used to approximate eWOM, informational usefulness has the strongest explanatory power of about 71%. This result means that to create a successful eWOM, the management may have to focus on the informational usefulness. Undoubtedly, the informational usefulness should be carefully approximated from the public perception, and not from the management perspective alone. This may be easier said than done. At least, this conforms to the studies on the effectiveness and efficiency on the corporate portal and search engine (Kosasih & Anantadjaya, 2008; Perera, Anantadjaya, & Nawangwulan, 2013).

EBBE positively influences customer intimacy as much as 16%. Among the indicators used to approximate EBBE, brand knowledge has the strongest explanatory power of about 61%. This result means that the management needs to focus on improving the employees' brand knowledge. With the higher employees' brand knowledge, this result shows that EBBE may improve accordingly. Concerning the customer intimacy, in the same fashion, among the indicators used, perceived one-to-one interaction has the strongest explanatory power of about 87%. This result means that one-to-one interaction is vital to boost the level of customer intimacy. Hence, though personal interactions may push the organizational cost upward, it appears that the management may have to ensure such existence.

From the AMOS results, it is obvious that internal branding requires the presence of transformational leadership, and the creation of employee-based brand equity requires the presence of internal branding. Though the levels of influence are expected to be much higher, at least this provides a clear path for the management on what to do when they need to create internal branding and employee-based brand equity. It should be noted though since the level of influence of the transformational leadership toward internal

branding is a mere 54%, the formation of internal branding may be influenced by both transformational and transactional leaderships. Also, since the level of influence of internal branding toward EBBE is only 33%, the management may have to investigate further other influential factors on the formation of EBBE.

## 5. Conclusions and recommendations

With the data analysis above, the following conclusions and recommendations can be formulated:

1. *Transformational leadership negatively influences the processes and/or activities toward product innovation*

Recommendations:

Based on this result, and concerning the intention toward product innovation, companies may need to focus on other leadership styles. As a direct opposite of the transformational leadership, perhaps, the transactional leadership serves as a better style in ensuring the proper systematic steps onto the whole processes and/or activities pushing-forth for product innovation initiatives.

Nonetheless, other leadership styles can certainly be considered. Future studies can incorporate different leadership styles, such as; authoritarian leadership, visionary leadership, situational leadership, charismatic leadership, transactional leadership, or other prominent leadership styles, to note the level of influence and/or explanatory power toward product innovation.

2. *Transformational leadership positively influences the level of internal branding*

Recommendations:

Concerning the intention to boost the level of internal branding, companies may want to ensure the proper practice of the transformational leadership. Based on AMOS' explanatory power, the use of transformational leadership inside companies may likely increase the level of internal branding by as much as 54%.

Hence, it is recommended that companies may want to initiate the soft skill-based managerial training on leaderships.

3. *Transformational leadership negatively influences the formation of electronic word-of-mouth*

Recommendations:

Concerning the electronic word-of-mouth, and just like the intention toward product innovation, as explained above, perhaps, transformational leadership may not be the proper style to be incorporated inside companies.

Leaders with actual skills and knowledge on electronic/technology may be required to lead the team in accomplishing the success of the electronic gadgetries.

Hence, other leadership styles can certainly be considered in future studies. It is expected that other leadership styles may have higher explanatory power toward the formation of the electronic word-of-mouth, and the success stories that follows.



*4. The processes and activities of the company's product innovation negatively influence the formation of employee-based brand equity*

Recommendations:

Concerning the relatively minimal value of only 7%, though the result indicates that product innovation may only be indirectly influence the formation of employee-based brand equity, however, the minimal value suggests that companies may still have to focus on any intentions and initiatives on product innovation.

Hence, it is suggested that companies may pledge product innovation and encourage employees to keep working on it. The managerial pledge and encouragement may likely influence the employee-based brand equity, otherwise, in due time. With a focus on particular tangible products, the managerial commitment and encouragements could be considered as the variables on future studies.

*5. The level of internal branding positively influences the formation of employee-based brand equity*

Recommendations:

Companies must understand the importance of internal branding toward the formation of employee-based brand equity. To do so, companies may want to focus on continuous brand training to all employees while strengthening the quality of internal communication among staff members.

Hence, for future studies, details on brand training, including other indicators of approximate internal branding may be considered.

*6. The formation of electronic word-of-mouth positively influences the formation of employee-based brand equity*

Recommendations:

Concerning the electronic word-of-mouth, companies may choose to disregard if the companies are striving for more solid employee-based brand equity. Aside from a mere 4% explanatory power toward the formation of employee-based brand equity, it appears that word-of-mouth, particularly the electronic-based, may influence public/consumers a lot more than employees of certain organizations.

Hence, on one hand, future studies may exclude the presence of electronic word-of-mouth in the model to see the variation of influential level. On the other hand, future studies may include consumer behaviour, particularly the level of intention to buy companies' products/services.

*7. The formation of employee-based brand equity positively influences the level of customer intimacy toward the company's products/services*

Recommendations:

With this result, it is apparent that companies need to ensure the presence of employee-based brand equity as leverage toward increasing customer intimacy. Focusing on the perceived one-to-one interaction is deemed more crucial than stressing on mass customization. It is a clear indication that personalized approaches are more advantageous.

Hence, future studies may want to focus on personalized efforts to note the impact toward the level of customer intimacy.

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#### Endnotes:

1. Innovation concerns with change (Enzing, Pascucci, Janszen, & Omta, 2011). There are different types of innovations such as newness of products or process, newness of usage or a combination of both and the level of difficulty in managing each type of innovation will vary (White & Bruton, 2007).
2. CRM is a whole process where customer relations are built and maintained by delivering superior customer value and satisfaction (Wirtz, Chew, & Lovelock, 2012)
3. Mass customization as an attempt to reach customer intimacy cannot be ended in one point because if it is ended is also means that the intimacy level which has been trying to build will be gone too. Knowledge loop of mass customization shown that how important it is to the contribution of total value which can be divided into 5 main categories (Freund & Piotrowski, 2005): financial, innovation, processes, client/customers, and human/employees.
4. The city of Jakarta is selected due to its status as the capital city of the Republic of Indonesia. The city of Bandung is selected as the “get-away” city for the residents of Jakarta.
5. Only 50% is considered as the true potential proportion to be taken as samples. Of those 50% true proportion, the allowable sampling error is limited to be at 10% maximum, while maintaining the 95% confidence level.

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## IMPROVING THE TOURIST DESTINATION IMAGE WITH INTANGIBLE CULTURAL HERITAGE: MONTENEGRO AS A CASE STUDY

### Abstract

*As contemporary tourism moves increasingly towards adopting an experience economy, tourist experience based on intangible cultural heritage is becoming the important element of destination image, as a set of consumer perceptions about the destination. Sustainable tourist valorization of intangible cultural heritage may be particularly important for image of countries like Montenegro, with limited resources, including natural resources, capital and population of 620029 inhabitants (Monstat, 2011). Another reason is related to the country's tendency to diversify its tourism offer and attract new market segments who are motivated by cultural heritage, manifestations, ethnographic values, etc. In this paper, the authors evaluate current issues in Montenegrin tourism and the need for improving a tourist destination image based on safeguarding and promotion of intangible cultural heritage. Marketing respond on those issues may increase Montenegro's contribution to a common European identity and strengthen a sense of belonging the destination within a common European cultural space. The research in this paper is focused on desk research, induction, deduction, statistics, and analyzing the case studies.*

**Keywords:** *tourist destination, image, intangible cultural heritage*

**JEL classification:** M31

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## УНАПРЕЂЕЊЕ ИМИЦА ТУРИСТИЧКЕ ДЕСТИНАЦИЈЕ НЕМАТЕРИЈАЛНОМ КУЛТУРНОМ БАШТИНОМ: ПРИМЕР ЦРНЕ ГОРЕ

### Апстракт

*С обзиром да савремени туризам у растућој ери усваја концепт економије искуства, туристичко искуство базирано на нематеријалној културној баштини постаје важан елемент имица туристичке дестинације, као скупа перцепција потрошача – туриста о дестинацији. Туристичка валоризација нематеријалне културне баштине на одрживим основама може бити посебно важна за имици земаља попут Црне Горе са ограниченим ресурсима, укључујући природне ресурсе, капитал и популацију од свега 620.029 становника (Monstat, 2011). Други разлог је повезан с тенденцијом земље да диверзификације своју туристичку понуду и привуче нове тржишне сегменте који су мотивисани културном баштином, манифестацијама, етнографским вредностима, итд. У овом раду, аутори евалуирају текуће изазове у туризму Црне Горе и потребу за унапређењем имица туристичке дестинације који се темељи на очувању и промоцији нематеријалне културне баштине. Маркетинг одговор на дате изазове може дати допринос Црне Горе заједничком европском идентитету и јачати осећај припадности дестинације заједничком европском културном простору. Истраживање у овом раду засновано је на анализи постојеће литературе, индукцији, дедукцији, статистичким методама и анализи студија случаја.*

**Кључне речи:** туристичка дестинација, имици, нематеријална културна баштина

### Introduction

The image is a kind of net result of the interaction of all the experiences, beliefs, feelings, and impressions which each stakeholder has in connection with an organization. The primary objective of image management is creating the intended or targeted image, as well as creating a favorable reputation in the minds of key stakeholders (Krstić, Krstić and Ivanović, 2013). A good image in public, over a longer period of time, creates a reputation which contribute to improving the financial performance and long-term competitive advantage (Krstić, 2014; Krstić, 2014a).

Destination image represents the sum of all beliefs, ideas and impressions that people associate with a destination (Crompton, 1979; Kotler, Haider and Rein, 1993). Nowadays, with its global presence, tourism has a vital role in safeguarding culture. On the other side, tourism is becoming an increasingly important factor in promoting national identity, especially in small countries in transition that are most often affected by the negative aspects of globalization. Almost everywhere, identity is partly created out of the images constructed or reproduced by tourists (Urry, 1994; according to Palmer, 1998). “Intangible cultural heritage is transmitted from generation to generation and is

constantly recreated by groups in response to their environment, their interactions with nature and their history, providing them with a sense of identity and continuity.” (<http://pub.unwto.org/>). Intangible cultural heritage consists of specific knowledge, skills, traditional crafts, traditional instruments, folk art, customs etc. It represents a real and symbolic part of the national and destination’s identity. Safeguarding the living heritage may also be a part of the tourism destination image as a sum of beliefs and impressions that people hold about a place.

The concept of intangible cultural heritage was recognized relatively late in terms of its protection: the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage recognized it in 2003 and it came into force in 2008. South Eastern European Countries (SEE) made the ratification of the Convention, but intangible heritage of Montenegro is neither sufficiently investigated nor protected.

The concept of economy of experience is recent, while experience is a phenomenon which is linked to culture, tourism, entertainment, marketing, etc. Proponents of economy of experience (Pine, Gilmore, 1999) viewed it as a key element of the value of a tourist destination, considering that modern tourists seek not only a product or service, but the experience that they will remember, in relation to a given product or service.

## **Current facts about Montenegrin tourism development**

Tourism has played an important role in the Montenegrin economy since 1950s. However, up till 1990s Montenegrin tourism image was identified as an overall Yugoslav image of cheap and mass tourist destination. In spite of different tourist attractions that are scattered all over the country, tourism in Montenegro has always been mainly centered in the coastal region. After the 1990s crisis Montenegro is trying to create a new image based on the model of tourism development that is more sustainable and more diversified in terms of an offer, which includes sustainable cultural tourism. Currently, tourism represents the main industry in Montenegro.

World Travel & Tourism Councils (WTTC) ranks Montenegro, among the 184 countries where tourism is one of the priorities in the development, at the following positions: 135th place of the absolute size in 2013, ranked 36th by the amount of contributions to GDP in 201, the first place according to the forecast growth rate in 2014 and the first place to the long-term growth forecast (period 2014-2024) ([www.cdm.me/turizam/](http://www.cdm.me/turizam/)).

According to the Report from 2014, Montenegrin total (direct and indirect) contribution to GDP from travel and tourism was 714.2 million (20 percent of GDP) in the 2013. It is expected to increase of 8.8 percent on average per year in the next ten years (1877.3 million, or 37.2 percent of GDP in 2024th) ([www.cdm.me/turizam/](http://www.cdm.me/turizam/)). Furthermore, 1,492,006 tourist arrivals were recorded in Montenegro in 2013 which is 3.6% more than in 2012, while the number of overnight stays of 9,411,943 is higher by 2.8 %. Of these, 89.4% were foreign tourists and 10.6 % domestic tourists. Most overnight stays in 2013 were realized by tourists from Russia (28.1%), Serbia (25.1%), Bosnia and Herzegovina (7.5%), Ukraine (5.6%), Poland (2.7%), Germany (2.3%) and France (2.2%). Tourists from other countries realized 23.2%. As regards the density of overnight stays in tourist areas in 2013, the highest rates were recorded in coastal

areas (97.0%), capital (1.2%), mountain areas (1.1%) etc.(<http://aktuelno.me/ekonomija/monstat-crnu-goru-posjetilo-15-miliona-gostiju>).

The primary document that was supposed to establish a new competitive position of Montenegro after the conflict in former Yugoslavia in 1990s was the Master Plan - Tourism Development Strategy of Montenegro by 2020, which was adopted in 2001. In this strategic document, Montenegro was described as a competitive tourist destination: in the first half of the year a high quality Mediterranean destination and in the second half of the year a destination for an active vacation. Meanwhile, Montenegro has made some improvements regarding infrastructure, promotion, structure and hotel accommodation, etc., but the basic problem was the lack of the Master plan's implementation. The revised version of the Master Plan was adopted in 2008 and its focus is on the diversification of tourism offer based on unique and high-quality tourist experience. Accordingly, orientation towards new market segments, including more responsible tourists who do not prefer mass tourism experience, was emphasized.

The fact is that there are many challenges associated with new, sustainable tourism directions in Montenegro. Particular effort must be made in trying to attract new segments of tourists. The candidate status for the EU membership is one of the things that affect the need for creating further approaches for development of the tourist destination image, including strategies for valorisation of intangible culture through tourism.

## **Intangible cultural heritage of Montenegro and in the context of tourist destination image**

“Cultural tourism-that is, tourism with the objective (among others) of experiencing cultural heritage, whether tangible or intangible - is an expanding segment, and it seems likely that growth will continue in the long term” (<http://unesdoc.unesco.org/images/0017/001787/178732e.pdf>). Tourists are seeking more and more to fully interact with local cultures and experience the global variety of arts, handicrafts, rituals, cuisines etc. Accordingly, there are 6 typical areas that connect tourism and intangible cultural heritage: handicrafts and the visual arts; gastronomy; social practices, rituals and festive events; music and the performing arts; oral traditions and expressions and knowledge and practices concerning nature and the universe” (<http://ethics.unwto.org/en/content/tourism-and-intangible-cultural-heritage>).

Intangible cultural heritage may be a powerful force in creation and maintenance of a tourist destination image because it relies upon specific historic symbols as a means of attracting tourists. In the Southeast Europe, in Turkey a joint declaration on the intangible cultural heritage and its safeguarding was adopted on December 17, 2009. The emphasis was also placed on multinational nominations for the UNESCO list. Actually, intangible goods which are located in several countries usually run for multinational nominations. Montenegro has recently created the conditions for protection of its living tradition, by enforcement of the Law on Ratification of the Convention on Intangible Heritage in 2009 and the Law on Protection of Cultural Property in 2010.

Intangible cultural heritage is a type of living heritage that is being constantly renewed and that evolves in accordance with the environment. It has to be traditional, but still alive, that unifies past, present and future. It constitutes an important part of the

cultural heritage because it provides a sense of identity and belonging to a particular community (Jovanović, Vitić-Četković, 2013). Local communities are the main actors in the creation and transmission of intangible cultural heritage: they are its creators, guardians and transmitters (Harris, Griffin, Williams, 2002).

From the standpoint of a tourist destination image, local communities need to spread the “spirit of the place”, where the “spirit” refers to the thoughts, the man and the immaterial, while “place” evokes the geographic location, the physical world, in short the material elements. Therefore, “spirit of the place” is one dynamic relationship between material (sites, landscapes, buildings) and spiritual elements (rituals, legends, customs, festivals, arts) that breeds a sense, meaning and emotion (Turgeon, 2010).

At the end of 2012, Montenegro drew up an initial list of 178 customs, skills, arts, crafts - living tradition that were proposed and some of them may be placed on the list of world intangible cultural heritage. In comparison with the region, Croatia has already placed 12 living traditions on the UNESCO list; Serbia sent 27 proposals, while Montenegro has just started the list (<http://www.vijesti.me/kultura/crnogorska-nematerijalna-kulturna-dobra-od-gusala-gadanja-kokota-clanak-107418>).

The cult of St. Vladimir, religious ceremony dedicated to St. Tryphon, Dobrotska lace, Durmitor’s legends, Boka Navy, Fašinada are some of the proposals listed by Montenegro for nomination to the UNESCO list of the Intangible Cultural Heritage. In this paper, 3 intangible cultural goods from coastal, mainly mass tourism region of Montenegro were selected for evaluation.

The cult of St. Vladimir and traditional procession of bringing the cross on the mountain Rumija, near the town Bar on St. Trinity day, represents a thousand year old tradition. It is a unique heritage of the people of all three religions (Orthodox, Catholics and Muslims) that live in this area. This cult is one of the oldest cults in southeastern Adriatic and one of the oldest Christian cults in Europe. The cross is connected to Doclean Prince Vladimir (980-1016) who was according to some historical data, the first ruler of the first nominally independent Montenegro - Doclea. Prince Vladimir was proclaimed a saint, while the cult of St. Vladimir is honored not only in Montenegro, but also in Macedonia, Bulgaria and northern Greece, and therefore belongs to living traditions of Montenegrin, Balkans’ and European culture.

Figure 1: St. Tryphon’s dance circle



Source: <https://www.google.me/search?q=izno%C5%A1enje+krsta+na+rumiju&tbm=isch&imgil>

The religious ceremony dedicated to St. Tryphon, the patron saint of the town of Kotor, whose relics are kept in Kotor's cathedral, represents a 12 century old tradition. According to the tradition, in 809, sailors from town of Kotor who were present at the arrival of the ship which brought the relics of St. Tryphon, performed the typical St. Tryphon's dance, which today characterizes the religious ceremonies of St. Tryphon. That year, the Fraternity of seafarers was formed, and nowadays it is one of the oldest in the world - Boka Navy. From 1979, the Natural and Culture - Historical Region of Kotor is a World Heritage Site.

Figure 2: St. Tryphon's dance circle



Source: <https://www.google.me/search?q=kolo+boka%C5%A1ke+mornarice&tbm=isch&tbo=u&source=univ&sa=X&ei=b0vKU4KACuHnywOv6YGAaw&ved=0CDIQ7Ak&biw=1024&bih=610>

Figure 3: St. Tryphon's dance circle



Source: <https://www.google.me/search?q=kolo+boka%C5%A1ke+mornarice&tbm=isch&tbo=u&source=univ&sa=X&ei=b0vKU4KACuHnywOv6YGAaw&ved=0CDIQ7Ak&biw=1024&bih=610>

Making Dobrotska lace is a traditional craft which dates from the 12th century, whereas the first records originate from the 15th century. In the Middle Ages and later,

on the east Adriatic coast there were manufactories for making Gothic and Renaissance handiwork of high artistic value. One of them was located in Dobrota, whose residents were engaged in shipping and trade, and were exposed to different cultural influences. Local sailors were bringing home the various items from their travels, including the lace. It had inspired the women from Dobrota to commit to specific skills of making lace, which they partly sold and partly gave away to churches. Nowadays, the local community organizes workshops for making Dobrotska lace, in order to preserve and promote this unique embroidery.

Figure 4: Dobrotska lace



Source: <http://nebeskiprsten9.blogspot.com/2013/02/od-legende-o-prutasu-do-svadbe-u-grblju.html>

Figure 5: Dobrotska lace



Source: <http://www.vesti.rs/Vesti/Dusa-dobrotske-cipke-2.html>

These examples show the need for Montenegro to be strategically placed as intangible cultural heritage.

An interesting approach for the valorization of intangible cultural heritage may be «Scheherazade strategy» (Salmon, 2011) which is based on the following activities:

1. Presentation of heritage through a story that represents the destination's identity – *Storyline*
2. Placement of stories in the desired time – *Timing*
3. Emphasis of messages or to highlight destination's attractions – *Framing*

4. Networking via Internet, etc. in order to attract the appropriate tourist niches  
- *Networking*

Anyhow, orientation towards the safeguard and promotion of its intangible cultural heritage can be one of the approaches to raise the tourist destination image, extend the season, encourage extension of tourists staying at the destination, stimulate consumption during their stay, etc. Challenges to overcome in Montenegro include the need for redirect the tourist destination image to better reflect the region's history and better shift towards new and demanding market segments. Anyway, the local community has to be involved in promoting the “spirit of place”, thus providing authentic visitors' experience and expanding the tourist destination image.

## Conclusion

Competition in the global tourism market requires innovative approaches in tourism development. Montenegro, a country where tourism is the main developmental strategy tends to redirect its image and attract new market segments, including ones motivated by cultural heritage, events, education, ethnographic values, etc.

Montenegro's step towards the European Union imposes an obligation to safeguard the tangible and intangible culture with the aim of contributing to its diversity. That can also involve regional cooperation in the Southeastern Europe due to the common intangible cultural heritage that has to be properly protected and jointly promoted in terms of region's tourism positioning. On the other hand, responsible tourists may become our partners that support conservation of heritage, contribute to the spread of “spirit of place” as a unique destination experience in an increasingly globalized world. Anyhow, the intangible cultural heritage in Montenegro must be thoughtfully managed and used in a sustainable manner if it is to survive and contribute to recognizable tourist destination image.

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## MANAGEMENT INSTRUMENTS USED FOR THE IMPROVEMENT OF THE ENTERPRISE VALUE CHAIN IN ORDER TO INCREASE ITS COMPETITIVENESS

### Abstract

*The aim of the article is to present stages realized in the process of improvement of the enterprise value chain and the characteristics of basic instruments used for searching directions to improve the efficiency of the enterprise value chain in order to increase its competitiveness in the market. The conducted analysis of the literature has allowed to explain the concept of the value chain. Furthermore, in the elaboration the scope of actions undertaken in the methodology to improve value chain was indicated and the classification of concepts and methods used for the improvement of the enterprise value chain was presented. The synthetic characteristics of selected management tools which can be used to improve the enterprise value chain, such as QFD method, value analysis, value stream mapping, ABC method, benchmarking, outsourcing, Lean Management, BSC, has a special position in the article.*

**Key words:** value chain, QFD, value analysis, value stream mapping, ABC, benchmarking, outsourcing, Lean Management, TQM, BSC

**JEL classification:** D2, L1, L6, M2

## КОРИШЋЕЊЕ ИНСТРУМЕНАТА МЕНАЏМЕНТА ЗА УНАПРЕЂЕЊЕ ЛАНЦА ВРЕДНОСТИ ПРЕДУЗЕЋА У ЦИЉУ ПОВЕЋАЊА ЊИХОВЕ КОНКУРЕНТНОСТИ

### Апстракт

*Циљ рада је да представи фазе реализоване у процесу унапређења ланца вредности предузећа и карактеристике основних инструмената који се користе за претраживање путева за побољшање ефикасности ланца вредности предузећа у циљу повећања конкурентности на тржишту. Спроведена анализа литературе омогућила је објашњење концепта ланца вредности. Осим тога, наведен је обим радњи предузетих у методологији побољшања ланца вредности и представљена је класификација концепата и метода за побољшање ланца вредности предузећа. Синтетичке карактеристике одабраних менаџмент алата који се могу користити за побољшање ланца вредности предузећа, као што су QFD метода, анализа вредности, stream мапирање вредности, ABC метода, бенчмаркинг, аутсорсинг, Lean Management, BSC, имају посебно место у раду.*

**Кључне речи:** ланац вредности, QFD, анализа вредности, stream мапирање вредности, ABC, бенчмаркинг, аутсорсинг, Lean Management, TQM, BSC.

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## Introduction

Value based management that creates an enterprise organizational system consists in assessing the efficiency of their operation from the customers' perspective and executive possibilities appointed by the potential that the firm has.

Enterprises' openness to changes and the possibility of continuous adaptation of their activities to the environmental conditions requires perceiving and responding to customers' needs by creating new values for them. The value chain as one of the models showing the system of creating value in an enterprise allows to identify processes realized in the organization and to assess the effectiveness of achieving them due to determining and developing specific measures and methods of measuring the results of these processes.

The value chain is a tool for identifying the way how to create more value for the customer, and thus for the enterprise. It is an essential tool for identifying and assessing each link (process) that influences on the creating value process.

### The concept of enterprise value chain

The value chain is one of the important concepts showing the process of “adding” value to the product. In the literature, it is defined variously, but it can be seen that a key issue in each of interpretation is the emphasis on creating value added (for the customer), which is the consequence of the implementation of ordered processes with one another. Table 1 presents the chosen definitions of the value chain.

*Table 1: Interpretation of the concept of “value chain”*

Author	Definition of the value chain
P. Drucker	It is an ordered sequence of different types of functions (activities), generating value of the product, which is determined by market relations between the enterprise and the buyer.
M.E. Porter	This is strictly defined stream of different types of activities that are undertaken by enterprises forming in different way a common system of values.
J. Rokita	This is a sequence of interrelated activities carried out within the manufacturing process of the final product or service, giving the possibility to achieve value added.
A. Stabryła	It is a sequence of interrelated (serial or parallel) phases of the management process and executive process referred to the particular sector of the enterprise's activity.
P.B. Schary, T. Skjøtt-Larsen	It consists of one integral system, in which processes leading to the formation of the product are realized, and each process is assessed from the point of view of its contribution to the total value added generated by the chain.

Source: own elaboration based on: (Drucker, 1976, p. 120; Rokita, 2005, p. 196; Porter, 2006, p. 58; Stabryła, 2007, p. 165; Schary, Skjøtt-Larsen, 2002, p. 14).

The value chain is a concept constructed on the basis of system approach to management. It consists of two parts: structural and methodical one. The first one contains a model of the enterprise as a system of activities, describes its components and the relationship between them. The second one provides indications for analysis – costs of activities and sources of differentiation (Czakon, 2003, p. 33). The aim of the entire value chain is to create in an effective and flexible manner the highest value added, which will be accepted by the final customer.

The value chain might be considered in broader context, which takes into account its three levels: the level of the economic path of the sector, the level of the enterprise value chain in cross-section of processes, and the level of activities (Nita, 2008, p. 78).

In the enterprise value chain a number of important changes caused by both external factors, and internal ones have occurred. To the factors that have a significant impact on the structure of the value chain are included: decomposition, specialization, delocalisation, configuration, integration, externalization, globalization, cooperation, virtualization, recombination, coordination (Aurik, Jonk, Willen, 2003, p. 12). Widely used IT systems, new ways of communicating and managing borderless activities of the corporation have a particular importance for the transformation of chains of enterprise value added.

### **Stages of improvement of the enterprise value chain**

Nowadays, the improvement of the process of creating enterprise value chain in variable operating conditions is becoming an important challenge to the entire organization. It is based on a constant searching possibilities to improve daily operations of realized processes as well as the relationship between the processes. This need is caused by constant cost competition, and also pressure to increase widely understood quality. Improvement of processes is emphasized in various management concepts and methods including, inter alia, the Kaizen philosophy, quality management, logistics or knowledge management.

The method of improving the enterprise value chain in diagnostic terms includes the following phases of conduct:

1. Determination of aim to improve system of the enterprise value chain.
2. Identification of criteria used to assess the value chain model.
3. Determination of type of enterprise value chain model and its assessment.
4. Development of options to improve the existing enterprise value chain according to the adopted model of the value chain.
5. Selection of the final variant of the value chain (using the evaluation criteria) and the development of detailed project of the improved value chain model.
6. Implementation and assessment of effectiveness of improved model of value chain.

An important task in the process of improving the enterprise value chain is to determine the structure of the value chain for the entire sector, that is recognition of activity of creating an economic path connected with producing a particular product (Gierszewska, Romanowska, 2003, p. 184). The basis for achieving a competitive advantage is to understand the entire sector, in which the enterprise competes, not just that part of the value system in which it participates. The possibility to deliver greater value added to the value chain depends on skills of understanding its determinants by each link and considering them in global value chain strategy (Kasiewicz, 2005, p. 24).

Apart from the subjective structure of the entire value chain, a substantial research issue is an analysis of processes of integrating all links, i.e. determination of objective structure, whereby the transfer takes place: material, financial, information, and knowledge one.

The designed value chain must respond to market demand in a manner compatible with the strategy of the enterprise. The enterprise strategy which is adopted by it must go out from customers' needs, which provide services or will provide services to them. Depending on customers' needs, the value chain in the enterprise must provide an appropriate compro-

mise between speed of reaction and efficiency. The enterprise, which value chain enables to meet customers' needs effectively, gains higher market share compared to the competitors, and its activity becomes more profitable.

## Classification of concepts and methods used to improve the enterprise value chain

Depending on adopted aim to improve the enterprise value chain, there can be distinguished two approaches: a) Approach in which used methods lead to radical (revolutionary) changes in the value chain: e.g. Process Innovation, Business Process Reengineering, Business Process Redesign, Simultaneous Engineering, Time Compression Management, Fast Cycle Response, Big Picture Improvement, etc.; b) Approach in which used methods allow gradual changes in improvement of the value chain: e.g. Process Value Analysis, Overhead Value Analysis, Activity Value Analysis, Business Process Improvement, Total Quality Management, Activity-based-costing, Lean Management, Outsourcing, Benchmarking, Just-in-time, Balance Scorecard, etc.

Different concepts and methods are used in the improvement of the value chain that can be classified using the selected groups of methods presented in Table 2.

*Table 2: Classification of selected methods used to improve the value chain*

Economic and financial methods
Ratio analysis, cost analysis, budgeting, analysis of results, data analysis, comparison method, value stream maps, ABC method, reporting system, controlling, analysis of financial statements
Management methods
Lean management, management by objectives, management by results, BSC, outsourcing, risk management, TQM, controlling, time management, JIT, team management, TBM
Behavioral methods
Observations, analysis of documentation, interviews, face-to-face conversations, training, communication methods, opinion poll, surveys, questionnaires, tests
Methods of strategic analysis
Analysis of key success factors, resource analysis, stakeholder analysis, benchmarking, Porter five forces analysis, BSC, SWOT analysis, strategic balance
IT methods
Database, monitoring, MRP, ERP, CRM, simulation methods, modelling methods
Heuristic methods
Delphi method, brainstorming, method of analogy, morphological method, expert method
Operational research methods
Decision tree, programming (linear, dynamic), fault tree analysis, decision matrix, forecasts
Qualitative methods
QFD, FMEA, TQM, statistical quality control, Ishikawa diagram
Organizational methods
Value analysis, schedules, network techniques, diagrams, procedures, plans, charts, description methods of the organizational structure, methods of analysis and improvement of processes, checklists
Marketing methods
Market research, customer needs analysis, competitive analysis
Statistical methods
Trend extrapolation, multivariate analysis, analysis of preferences, scaling

Source: Walas-Trębacz, 2015, p. 448

Further development of methods used to improve the value chain will require use of IT systems, which largely accelerate the analysis of previously collected data, comparing them over a period of time, allows to create different models and simulations, which save the resources and time for their traditional constructing.

### **The characteristics of selected concepts and methods used to improve the enterprise value chain**

In synthetic manner, there are presented possibilities of using the selected concepts and methods to improve the value chain, such as: QFD, value analysis, value stream mapping, activity based costing, benchmarking, outsourcing, Lean Management, TQM, BSC.

A very useful method in the analysis and improvement of value chain serving customers' needs and preferences, and designing a new product is Quality Function Deployment. The method came into existence in Japan in the 1960s of the Twentieth Century. Yoji Akao is generally believed as its creator, who introduced it in Mitsubishi Kobe shipyard in 1972 (Akao, 1972, p. 7-14). Then, the method was used in the 80s by American companies like Ford and Xerox, and later by companies, such as: Digital Equipment, Hewlett-Packard, AT&T, IIT (Hauser, Clausing, 1988, p. 67-68). This method is used to transform customer's requirements into conditions, which the enterprise must meet during the consecutive stages of manufacturing and delivering products, starting with design, through procurement, production and distribution, through to sales and service (Hamrol, Mantura 2004, p. 229). The purpose is to reposition customer's needs (internal and external) to the characteristics of the product, processes and resources in the value chain. It is used in the process of transferring values into strategic and operational decisions of implemented operations in the value chain (Lowe, Ridgway, 2000, p. 13). The QFD method is applicable both for products and services (Obora 2000, p. 112).

By using the QFD method the enterprise can achieve the benefits of various kinds, inter alia:

- Organization (inter alia: shortening the stage of product design; reducing the number of changes in product and process design; reducing changes in a project; identifying weaknesses of process and product, etc.);
- Economic (inter alia: reduces the cost of design changes; reduces the cost of inspections and product quality control; reduces the cost of presence of manufacturing defects, etc.);
- Sociopsychological: for the enterprise (inter alia: improves communication within the enterprise, enables integration of employees, breaks the divisions between various organizational units, identifies areas of competitive advantage), and for the customer (inter alia: focuses product on customer's needs, simplifies the identification of customer's needs, improves communication between customer and the enterprise, increases customer satisfaction of obtaining product).

The QFD method becomes a popular tool in various industries because it has a high use and cognitive value, but requires high knowledge, experience and ingenuity in creating process as well as links to casual analysis.

An important method used in the research and assessment of creating value of the product is Value Analysis. L. D. Miles is considered to be the founder of value analysis who

developed and implemented it in 1947 (Miles, 1972). The task of value analysis defined by L. D. Miles is to establish such a multifunctional relationship between product and customer which will meet satisfactorily all the functions required by the customer at the relatively lowest cost (Martyniak, 1997, p. 105). This method can be used to test produced or designed product, manufacturing processes, administrative and office works. The basis of value analysis is to identify the function of the product (referred as the ability to achieve the target result), and then examine possible options for obtaining these functions, and select such a way of manufacturing and delivering a product which causes the highest value of the effect/cost index. The purposes of analysis and shaping values are achieved through: improving customer satisfaction resulting from the product quality; raising the level of customer service and benefits derived from the product; influencing by various methods on reduction of products costs in the value chain; increasing efficiency of activities; improving efficiency of material flow; using resources efficiently; increasing the profitability of particular products and groups of products, customers, markets and distribution channels (Śliwczyński, 2011, p. 196). The value analysis in the value chain might be applied to product value analysis and process value analysis. The analysis allows to assess the extent to which product or process meets customer needs.

Nowadays, the VA method is still used. In recent years, can be seen more frequent reaching for it in the metal, chemical, computer, IT, transport and other industries (Morgan, 2003, p. 41). The usefulness of VA method largely depend on the results of casual analysis, staff experience, appropriateness of chosen, analyzed factors affecting the value chain and operations in it. Value analysis despite its high usefulness is a labour-intensive and costly method requiring many objective measurements and analysis as well as creative thinking in shaping solutions (Wawak, 2012).

Another method helpful in improving the value chain is Value Stream Mapping. The creators of value stream mapping are Taiichi Ohno and Shigeo Shingo who worked for Toyota plants in 1980. At the beginning, a method used to eliminate losses in the production process in order to achieve competitive advantage was called Material and Information Flow Mapping. To popularization of value stream mapping method contributed M. Rother and J. Shook (1999). The VSM method helps to see and understand the property, financial and information flows properly in the value chain (Czerska, 2009, p. 18). This is an instrument used to analyze all stages of property flow. It is useful in correlating process and assessing the impact of processes on the value of the final product during its manufacturing and delivery. Value stream mapping helps to identify critical processes whose realization has a significant impact on the results of activities of the entire enterprise. Value stream mapping also allows to identify actions not adding any value (inter alia waste and overproduction, correcting errors, irrational transport, surplus of stocks, queue and waiting period) and directs managers to take action “slimming” and correcting processes (Rother, Shook, 1999, p. 23-25).

The VSM method stacks up both in manufacturing enterprises where product's path is followed (from raw material to finished product), and in service enterprises (from the beginning to the end of execution of the contract), what means that it can be used in all organizations. It is a method that neither requires to increase the costs of computer software used to analysis, special equipment nor specific staff qualifications. At the same time, this method is effective (Rother, Shook, 1999, p. 28). However, capturing all necessary information in more complex cases is difficult by using the VSM method. Therefore, elaboration of value stream mapping is labour-intensive, requires a lot of experience but it is a functional and effective

tool to assist management in making decisions concerning changes in the value chain. It is believed that the mapping will develop based on the use of IT systems that will support their creation and analysis.

The basic tool from the groups of methods used to analyze costs in the value chain is Activity-Based-Costing. This method is used to identify and settle costs in the enterprise during the implementation of the processes in the value chain. The concept of activity based costing was established in response to criticism of traditional methods of cost accounting which in changing conditions of functioning of the organization are no longer sufficient for making management decisions. It was developed in the late 1980s of the Twentieth Century in the United States, and its creators were R. Cooper and R. Kaplan (Cooper, 1988; Kaplan, Cooper, 2002). The basic assumptions of the concept say that the organization's resources are consumed by activities (processes) rather than products or organizational units, and the fundamental part of overheads and indirect costs does not depend on the volume of products, but varies according to the intensity of their activities (processes). Activity based costing requires perspective looking at organization, requires the identification of processes at the various levels of specificity, it is possible for practical use if business processes are known. The most important steps in cost management activities include: identification of specific actions constituting a specific process; construction of measures referred to the distinguished actions; determination of the costs of each undertaken action and “valuation” of the entire sequence on the basis of costs of single actions constituting its composition (Błoński, Kondracki, 2004, p. 15).

In the majority of value chains every action has a distinct cost structure that is determined by various cost drivers. Cost analysis therefore requires breaking down the enterprise value chain in order to identify: the relative importance of each action in relation to the total cost of the product, cost drivers for each activity, and the relative efficiency with which the enterprise carries out each process, the impact of the cost of one process to the costs of the another (the links between processes), and activities which should be carried out on enterprise own and those which should be outsourced to get opportunities to reduce costs (Grant, 2011, p. 303-304). The primary task of ABC method is to identify diversified levels of cost absorption resulting from portfolio of a number of products with different supply operations, production and distribution adapted to different requirements of customers (Kaplan, Atkinson 1998, p. 20). Operating costs are assigned to products on the basis of level of activity absorption by the product. The total cost of the product is obtained by summing direct and indirect costs. Thus, the ABC method allows to change the ratio between direct and indirect costs, capture and eventually resign or improve those activities that are inefficient. In cost accounting process approach, in which activities charge the product in direct proportion to their size and resource consumption for the benefit of products, is used.

Although, the ABC method is an effective and valuable method for the enterprise (allows to determine real costs of product, particular processes, analyze the profitability of activities, eliminate activities not constituting a value, optimize and rebuild processes, determine a reasonable level of resource utilization, identify cost drivers of processes and their influence on activities), it is not widely used because of its high labor-intensity, cost-absorption, difficulty in making accurate measurements and conducting detailed record of costs incurred in the enterprise without taking into account the process approach. Tools used to support the ABC method include: using IT solutions, budgeting, controlling, ratio analysis, process analysis.

Another helpful method, which is used in many stages of the value chain improvement, inter alia: in the assessment of resources capability and enterprises competencies, in the



assessment and improvement of processes and products, in the assessment of costs incurred for the realization of specific processes or products is benchmarking. Benchmarking inspires to seek new solutions and learn from the best.

The undisputed contribution to the development of benchmarking has Rank Xerox Corporation, which in 1979 took action considered to be the first comparative analysis in the United States. The one option of benchmarking, which is applied in practice, is product benchmarking or process benchmarking. The application of this method with respect to products and processes might significantly affect enhancement of the efficiency of the organization, but it requires many visits in other enterprises, it is time-consuming, it is associated with incurring high costs, and requires obtaining difficult to access information from many sources (Karlof, Ostblom, 1995, p. 60-61). In comparison to benchmarks which consist only of outcome parameters, process benchmarking allows to know the effects of activities of various factors on the organization whose processes are considered to be standard (Zabawa, Krawczyk, 2006, p. 30-34; Bogan, English, 2006, p. 128). This is due to the fact that processes are a universal category and when they are the subject of benchmarking the individual conditions may affect to a lesser extent the results of the comparative analysis and the effectiveness of conducted benchmarking (Tolosi, Lajtha, 2000, p. 347). Improving organization's processes can also be achieved by a constant, continuous implementation of ideas from other organizations. If there is a constant exchange of ideas between the benchmarking partners, it is possible to obtain continuous improvement for all participants in the process of benchmarking (Mustafa Pulat, 1994, p. 40). Benchmarking is very useful for effective process management in the process-oriented enterprises, which is created by “transformation of functional organization structure into the process model of organizational structure” (Krstić, Jovanović, Kahrović, 2012, p. 370).

The use of benchmarking in practice is not an easy task because for example, the selection of processes as the object of benchmarking analysis requires knowledge of their progress and assessment of their impact on the performance of the organization. Benchmarking is a tool used regardless of the industry or a type of business, but it is necessary to select various operational measures used to comparisons between different business processes. However, R. Mc Adam believes that benchmarking substantially contributed to the development of the organization being a factor causing change of the approach: from a simplified process approach (referred as “function-process” to “process”) to more comprehensive network process approach (referred as “network-process”) (Mc Adam, 2001, p. 332). This approach also has changed with the beginning of perception of the value chain as a continuous indivisible process, which converts faults into required products by using resources (Hewitt, Robinson, Bennett, 1996, p. 8-14).

The next management concept used to reduce costs and increase the flexibility of the enterprise value chain is *outsourcing*. While the history of outsourcing as a phenomenon is long, increasing use of it in current economies and enterprises has been observed since the last three decades. For the first time, outsourcing became popular in the early 1980s of the Twentieth Century when started to pay attention to the growing importance of outsourcing of manufacturing processes, and enterprises decided to fragment these processes and outsource intermediaries, subgroups and components to sub-suppliers more and more often. The result of that was a growing fragmentation of the value chain and closer links between cooperating manufacturing enterprises located in different parts of the world.

The real revolution in outsourcing was in the 1990s of the Twentieth Century (Ciesielska, Radło (red.), 2011, p. 13-14). Over time, outsourcing has begun to include not only production processes, but also logistics, storage, IT services, accounting services, customer service, R&D and the others. Searching for economic efficiency means transformation for the enterprise, whereupon it performs only this what is able to perform better than others and coordinates the activities carried out by external entities with own value chain (Czakon, 2005, p. 57). Thus, considering outsourcing of components of the enterprise value chain in the context of the value system, it is a strategic decision, the choice of the scope of enterprise activity against a background of the manufacturing process of a complex product, or creating the product value chain (Trocki, 2001, p. 7-9). This decision allows to build core competencies, strategic assets, and constitutes an important element in shaping the enterprise opportunities or creating its competitive advantage in the market. Outsourcing as a management concept has a situational character because it takes into account most of the determinants of a particular enterprise and the value system in which it operates. At the beginning, the main motive of outsourcing were costs. Over time, there has been the evolution of this approach, and enterprises, which were applying it, have tried to gain a competitive advantage by combining elements of low costs, differentiation, concentration, and low price as well as using the opportunities arising from access to new resources and skills occurring in other enterprises, increasing flexibility and rapidity of activities, improving enterprise activities or reducing risk (Ciesielska, Radło (red.), 2011, p. 24). Outsourcing in comparison to fee-for-task agreement, allows to create a special kind of relationship between enterprises, or such a partnership which affects the functioning of the whole enterprise, in pursuance of long-term cooperation under which the third party takes over the task to rationalize the level of costs incurred by the enterprises commissioning the service, and at the same time aims to secure the proper level of service quality (Nogalski, 2010, p. 283). Outsourcing is also a strategy that allows to increase effects of synergy associated with the implementation of mergers and acquisitions of enterprises. In its extreme form, outsourcing can lead to create virtual enterprises, where most of value chain processes are commissioned to.

It also should be mentioned that the use of outsourcing in the enterprise is not always easy, because wrong: planning, implementation and enforcement of outsourcing projects and the terms of the agreement with external partners can lead to negative consequences for the enterprise which decrease the flexibility and efficiency, and increase its operating costs. The most frequently mentioned risks arising from the improper use of the concept of outsourcing in enterprises are: strategic risks (e.g. getting rid of competencies, increasing dependence on suppliers, possibilities of losing sources of competitive advantage, accepting cultural differences); financial risks (e.g. increasing variable costs, not reaching the intended savings); personal and legal risks (e.g. possibilities of transferring skills of workers from other forms and lack of having own staff, difficulties in transferring licenses, possibilities of losing know-how, weakening of its own employees motivation); organizational and operational risks (e.g. reducing the flexibility of outsourced management functions and control over an outsourced activity, possibilities of losing confidential information, reducing speed of completing services and changing the characteristics of external services) (Niemczyk, 2006, p. 142).

Helpful management concept used in improving the value chain and at the same time raising the competitiveness of the enterprise is *lean management*. This term is translated as “slimming” management and replaced by a broader formulation - Lean Thinking or nar-

rower term – Lean Production (Zimmiewicz, 1999, p. 61). The lineage of this concept dates back to 1978, or the history of the formation of the management system in the Japanese car company Toyota. E. Toyota and T. Ohno are considered for its precursors (Nogalski, 2010, p. 300). In contrast, a breakthrough in the development of this concept falls on the year 1991, when the results of the analysis and assessment of the situation in the global automotive industry (Japan, the United States and Western Europe) were published (Bartusik, 2000, p. 95). Lean Management consists in reducing significantly the cost of value added production for the customer by reducing employment, production space, finances involved in the production, capital expenditures, time, etc. The LM method comes down to reducing the scope of internal functions of the enterprise to strictly necessary activities (Błoński, Kondracki (ed.), 2004, p. 63). This concept emphasizes the need to eliminate waste in all aspects of functioning of the enterprise and uses such form of organization to continually increase the effectiveness and efficiency of the enterprise. Lean Management allows for the implementation of interconnected goals of the enterprise which are significant from the point of view of the effectiveness of value chain management, namely: focusing on customers' needs and values supplied to them, short production cycle, high integration of production process, timeliness of delivery, partnership with suppliers, continual improvement of quality, permanent improvement of processes and organizations, identification of employees with the objectives of the enterprise, maintaining minimum stocks, maximum utilization of production capacity, accelerating development of new products and introducing them in the market (Stadelmann, Lux, 1995, p. 33). The enterprise should engage in activities that bring value to it (Błoński, Kondracki (ed.), 2004, p. 63). The LM method defines value stream as a sequence of all necessary activities to design, lead to the order and delivery of a specific product to the customer. The value stream corresponds to the value chain and its analysis aims at extracting activities: creating value, supporting the creation of value, and not creating value (Czakon, 2005, p. 54). Lean Management provides transition criteria from the enterprise in a given form to the enterprise identical to the value chain (Womack, Jones, 1994, p. 93; Levy, 1997, p. 94-102). The implementation of this concept in the enterprise leads to a higher level of economic efficiency, quality and flexibility by finding and applying innovative solutions. However, to achieve the above results the enterprise is required to create a modern, participatory, pro-quality and pro-effective organizational culture (Nogalski, 2010, p. 304) and fulfil certain conditions, inter alia: the need to understand the essence of the concept of lean management by all employees, develop and implement strategies, tactics, and many management tools, upgrade skills of workers and managers, ensure employee participation in management, ensure proper working conditions, access to information, ability to avoid conflicts and remove their sources, and provide creativity and readiness for creative work on every worksite (Lichtarski (red.), 1997, p. 229). An important feature of the LM method is primarily a long-term and consistent implementation of selected management tools and techniques.

An important management concept used in the value chain is *Total Quality Management*. It means complete and continuous serving needs of the recipient who receives the highest value of the purchased good for a specified price. This is achieved at the lowest cost due to the best liberation of the potential possibilities of the enterprise (Błoński, Kondracki (red.), 2004, p. 78). TQM is a system of activities aimed at achieving customer satisfaction, commitment among employees, revenue growth and cost reductions (Strumiłło, 2010, p. 148). W.E. Deming is considered to be the classic of TQM concept.

Comprehensive quality requires delegating responsibility to the lowest level of the organization, or involving all employees of the enterprise. The enterprise, which implements TQM, shows that the canon of TQM is to follow some set of rules that relate to, inter alia: enterprise orientation on results, customer orientation, leadership, process management, development and commitment of human resources, continuous learning, innovation and improvement to maximize the performance of an organization, development of partnership, system approach to management, decision-making based on facts, mutually beneficial relationships with suppliers, bearing social responsibility, etc. (Czaron, 2005, p. 50-51).

TQM as a constantly evolving management system consists of three components: values, tools and techniques, which aims to increase satisfaction of internal and external customers, connected with decreasing resource consumption (Hellsten, Klefsjo, 2000, p. 241). The application of TQM, as a matter of fact, is a special way to involve all employees in the functioning of the organization, getting active cooperation to implement enterprise strategy, and creating such an organization, where everyone works together harmoniously and does not compete with each other. TQM is defined as a universal method for improving the efficiency of teams, changing the way of thinking. TQM is gradually becoming a standard. The new edition of ISO 9000 contains many elements of TQM. The implementation of TQM takes several years and leaders of enterprise are required to adopt an attitude of teachers in relation to their employees. TQM is broadening knowledge constantly about what we do, how we do it and how can we improve it (Strumiłło, 2010, p. 150-151).

The impact of TQM on the functioning of the value chain is evinced in its various dimensions, and the most important four components include: architecture and integration (e.g. designing value chain, developing relationships in the environment, process management), maneuvering (e.g. using decision support systems, service provider management, constantly improving processes and outcomes), information and communication (e.g. using integrated IT management systems, using common databases, using automatic identification in the form of a barcode), resource sharing (e.g. transport, storage, information and knowledge, IT systems, etc.) (Szymonik (red.), 2013, p. 145-146).

Enterprises (and especially management) that want to implement this concept need to “mature” to the philosophy of TQM. Too early and unprepared introduction of the concept may encounter many barriers stuck in the system as well as among people, inter alia stuck in: the budgetary conditions set by the quality, political conditions, arrogance, lack of knowledge, research, education, belief in its powers and competencies, autocratic behaviors) (Dew, 2003, p. 59-65).

A common method of measuring in the value chain management is *Balanced Scorecard*. It was constructed by R.S. Kaplan and D.P. Norton in 1992 (Kaplan, Norton, 1992, p.71-79). In their approach, the authors have taken into account four perspectives: financial, customer, internal processes, and innovation and growth opportunities. This method is often used to evaluate the activities of the entire enterprise at a strategic level, but due to its universal formula, it is used very easily in the management of the enterprise value chain. There can be offered many individual measures and indicators for each process in each area, not only within the enterprise, but also connected with external processes of the enterprise. It is a tool that should be seen as an integrated assessing system of value chain management from the strategic perspective and with the elements of operational

management. It allows to answer to four basic questions: how customers see the enterprise, how efficient are internal processes in the value chain, whether the developed solutions are innovative and enable further growth and create value in the future, as well as how owners perceive the enterprise (Tarasiewicz, 2014, p. 97-98). It is important to link the designated measures and indicators with specific goals and tasks in different areas and at different levels of the enterprise, what allows to organize cause-effect relations between strategic objectives. Application of this method gives the possibility to look at the value chain from a broad perspective taking into account financial and non-financial aspects as well as from strategic and operational level. However, the use of BSC in the value chain management requires moving beyond traditional frames of cards (with four prospects) and taking into account the perspective of partnership which reflects the effects of interorganizational cooperation in the chain where the company participates. Measurement of effectiveness of the processes realized in the value chain through this method gives information about the level of implementation of the strategy of the whole chain and enables the identification of so-called “bottlenecks”, or areas where might occur decrease of efficiency of processes which are carried out in the chain (Brzóška and others, 2012, p. 147-148).

There also should be indicated the limitations of this method compared to the value chain management, namely: during its implementation may occur problems associated with selecting adequate measures and indicators, and adapting them to the changes taking place in the enterprise; used and selected measures and indicators do not always allow to measure effectively integrated value chains including all of its partners, its application does not allow to measure and compare with competitors (the lack of this perspective) (Hazell, Morrow, 1992, p. 44-45), does not allow to assess the level of risk management in the value chain.

## Conclusion

Nowadays, there is seen trend of shaping the organization where an analysis of key processes is conducted, the effects of the implementation of the basic processes are assessed, what undoubtedly fosters the implementation of the different methods and management concepts preferring a process approach, such as: TQM, lean management, outsourcing, JiT, kaizen, benchmarking, ABC, ABM or BSC. It should be expected more and more interest in implementing these instruments due to the numerous researches confirming achieving the great advantages by these enterprises that have wished to use them. These activities are undertaken mostly by large enterprises but they can be founded also in the SME sector. Cooperation or competition with corporations will enforce these enterprises to use an approach aimed at continuously improving its value chain. Searching for new sources of competitive advantage in the value chain is not only important for the enterprises that use competitive strategy but also for these ones which want to use them as a bargaining card in creating alliances or making mergers and acquisitions.

The purpose of the proper selection of structures and methods of process management and resource management in the value chain is their focus on value. Development and improvement of the value chain management model allow to better link the adopted assumptions of enterprise strategy with various processes occurring in the enterprise and give the possibility of more effective management, reducing costs and improving the efficiency of particular participants of the value chain and also of the entire value chain.

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## ANALYSIS OF THE ASPECTS OF CHANGING THE ECONOMIC PARADIGMS IN THE WORLD ECONOMY (XX – XXI CENTURIES)<sup>3</sup>

### Abstract

*The article examines the process of changing the economic paradigms in economic science. It is shown that all known theories became coexisting in parallel with each other; the modern image of economic theory changed completely, knowledge became limited and fragmented. It was investigated the nature of historical changes in economics, based on the theories of different economists of the world economy. The main achievements of economic science of the XX century, and the problems of changing paradigm in the economic theory are also analyzed in this paper. The article demonstrates the issue that modern economy is the knowledge-based economy. The main driven forces of modern economy changed completely. For better managing knowledge economists should overestimate the principles of the world economy.*

**Keywords:** *economic paradigm, economic theory, world economy, knowledge-based economy, Russian economy*

**JEL classification:** A100

## АНАЛИЗА АСПЕКТА ПРОМЕНЕ ЕКОНОМСКЕ ПАРАДИГМЕ У СВЕТСКОЈ ЕКОНОМИЈИ (XX – XXI ВЕК)

### Абстракт

*У раду се истражује процес мењања економске парадигме у економској науци. Показано је да све познате теорије настају у коегзистенцији паралелно једна са другом, да се модерна слика економске теорије потпуно променила, да знање постаје ограничено и фрагментисано. Истражена је природа историјских промена у економији, а на основу теорија различитих економиста светске*

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*економије. Главна достигнућа економске науке XX века, као и проблеми мењања парадигме у економској теорији такође су анализирани у овом раду. Рад истиче чињеницу да је модерна економија економија заснована на знању. Главни извор снаге модерне економије се потпуно променио. За боље управљање знањем економисти треба да прецењују принципе светске економије.*

**Кључне речи:** *економска парадигма, економска теорија, светска економија, економија заснована на знању, руска економија*

## Introduction

The modern development of world economy entered the new century with a clear understanding that the fundamental changes were happened in the economic reality. However, we should take into consideration the important point that the contemporary instrumental and theoretical basis for a new reality has not been created yet.

All present economic theories exist in parallel process of development. Moreover, the different techniques and different terminology are used by different scholars for describing the existing processes in the modern global economy.

The specificity of the structural transformation of the economy, which any country is facing during the creation of a new lifestyle, is determined by the special multi-structural issue. Every country has its own combination of previous unique technological way, which is reflected in the methods of controlling the technological development of the country.

The reinforcing process of globalization, the interdependence of regions and the formation of knowledge-based economy led to the creation of a new form of economic systems and determine its relationship. Therefore, the analysis of characteristics and trends of substitution of the technological ways is under a great interest for the understanding the structural changes, technological development and new technological structure, as well as the modern economic paradigm in the world economy.

The economic reforms that began in Russia at the beginning of XXI century led to the transformation of the whole economy and society. For estimation the mainstream of reforms and opening the new domestic sources of economic and social development of Russian society, is possible on the basis of economic knowledge, so the Russian economic science is in the stage of comprehension and re-evaluation of scientific and social ideals, which is closely related to the notion of ontology and methodology of economics.

Methodological debates which happened in the economic sphere are crucial when the established approaches are in conflict with the new challenges posed by the practice of the modern scientific community. The relevance of the historical development research of economic science is determined by the necessity for the development of new methodological approaches in the sphere of economic knowledge.

A particular problem is the determination of the place of Russian economic science in the world heritage. Concerning this issue, there are some polar points of view, and we need to overcome the extremes of approaches. On the one hand, we should not overstate the great value of Russian economic science, but from another side, we cannot deny its own original features.

## Methodology

The methodological framework consists of traditional methods, which are characteristic for the research of the objects of world economy. Thus, for example:

- Method of historical analogies, which approximates the theoretical arguments to the current situation and is used to reveal the dynamics of the economy;
- Method of comparative analysis, which allows on the basis of specific data, observing the general features of the objects;
- Forecasting method that allows to identify the main trends and prospects of relations.

## Results

Last century the dominant paradigm of economic theory can be determined as the concept of general equilibrium of markets. The contribution of general equilibrium theory is to apply in research of a closed economy (without international trade), as well as an open economy with international trade development.

Recently, a great number of the Nobel Prize in Economics has been awarded for the researches connecting with relationships of the markets: analysis of correlated markets (J. Hicks and Paul A. Samuelson), the existence of a link (K.J. Arrow and J. Debreu), its linear representation (L.V. Kantorovich), its increase (S. Kuznets). The Nobel Prize in Economics in 1977 was awarded to B. Olin and J.E. Meade for innovative research of the international trade. Later, in 1999, the Nobel Prize was awarded to R.A. Mundell for the research of the effect of monetary and fiscal policy in the conditions of alternative exchange systems and the research of the optimum of currency areas.

One more important fundamental achievement of the last century can be determined as the research on the development of economic dynamics methods, which investigated the transition from the stage of disequilibrium to equilibrium.

It should also be noticed that one of the possible approach of the historical analysis of the development of any sphere of knowledge appears the concept of “scientific revolutions” of Thomas Kuhn (1922-1996), according to which the existence of theoretical thinking and the scientific community is characterized by a changing scientific paradigm - “a qualitative leap” of thinking way of the most scientists. Such changes which defined in the theory of T. Kuhn as “a shift of paradigm” were preceded by a stage of so-called “accumulation of anomalies”, it’s the awareness of the scientific community the boundaries of existing scientific conceptual approach of solving the facing challenges, and actually the understanding problems.

A number of recent researches of the history of economic theory use the concept of “scientific revolutions” of T. Kuhn. This historical analysis provides an opportunity of estimation the current position of the theory in order to identify the potential areas for its development concerning the information needs of the market.

At the moment the role and place of information in economic systems are considered with great interest. In classical economic science this issue was not deserved a sufficient attention, because it was assumed that all agents of economic relations should be well informed, and there was no need to take into consideration the information issues.

Nowadays, the situation has changed completely. The basis of the forming society is information resources. Therefore, the information economy should be viewed as part of a post-industrial economy, which is determined by the progress of science and technology, which made the basis of technical and economic development of high technology.

The important achievement of the last century is the awareness of the necessity of macroeconomic problems' analysis. Whereas, in the papers of Alfred Marshall "Principles of Economics", which was firstly published in 1890, the main focus was on microeconomics, however, macroeconomics were mentioned in connection with the summation of industry demand and demand curves.

D. Bell identified the most important features of the post-industrial society: in the first place it was put the intelligent consumption of services; creation of new intelligent technology; for replacing the lack of wealth comes a lack of information and time; the economy can be characterized as the information economy (Bell, 1976).

It allows us to conclude that the core of this type of economy is the transformation of information products and services into production and consumption.

The formation of information society created extremely unevenly in geographical issues. In most countries, it is in a very beginning stage of development. However, following the dynamics of development of the information society can be by investigating the example of the highly developed countries.

The understanding of the information economy's realities, as a new category of the economy is still very blurred and contradictory.

In this theory, it is changing the value of the human resource as a fundamental economic issue. It is completely connected with the changes of the role of human in the production process. In the industrial economy, the traditional technology is aimed at minimizing the human intervention in the production processes. In the transition to the information society, it is increasing the value of the personal characteristics of the individual. The human capital is formed dynamically, which is expressed in the constantly updated knowledge and skills. The lifelong learning and professional training are the requirements of the modern economy.

The information economy requires a qualitatively new scientific approach, as in the current situation the existing classical and neo-classical paradigms of economic theory are not able to describe the main economic phenomena.

It is necessary to investigate the socioeconomic aspects of the information revolution, which is now forming a fundamentally new paradigm which based on information flows.

The absence of a holistic concept of economic information and forming information paradigm of economic theory creates a discrepancy between economic realities and attempts to describe it by common instruments of the economic science.

Among the first concept of information as the economic category was investigated by A. Hart. The researchers of classical information theory are considered - K. Shannon, who developed a mathematical theory with a basis on mathematical approach and H. Winner "The information is not material or energy, it is something unknown". Lately, R. Coase used widely the concept of information in the theory of information costs.

There are a number of Russian scientists who laid the foundation for the formation of ideas about economic information – E.S. Yasin, S.T. Melyuhin, R.T. Zyablyuk, R.P. Malakhinov and others.

Russian economist E.Z. Maiminas (1987) highlighted the informational aspect of the economy as a new information paradigm. The particular interest is the researchers of S.A.

Dyatlov (2007) connecting with the concept of information, called “Information paradigm of socioeconomic development”.

P. Ekins (1986) wrote: “... Economics deadlocked, its tools were blunted... it is required a new start, the development of the economic approach, which would be consistent with science, technology, values and attitudes of the late twentieth century”.

These researchers have a great theoretical and practical importance. However, in most of it there is no systematic analysis of the information economy, and the information society is considered as a social category in isolation from the formulating information paradigm of the economic theory.

A great number of scientists agree that a fundamental factor in the development of the modern economy is innovation. We identified it during the analysis of the main industrial directions of the innovation cluster economy in different countries (Table 1).

*Table 1: The industrial directions of innovation cluster economy in different countries worldwide (2014)*

<b>Industries</b>	<b>Countries</b>
Electronic and communication technologies	Japan, Switzerland, Finland, USA
Construction and development	Finland, Belgium, Netherlands, Denmark, Germany, China
Agro-industry and food manufacture	Finland, Belgium, France, Italy, Netherlands, Germany, Bulgaria, Hungary
Oil & gas industries and chemical industries	Switzerland, Germany, Belgium, USA
Timber industry and paper industry	Finland, Norway
Textile Industry	Switzerland, Austria, Italy, Sweden, Finland, China
Healthcare	Sweden, Denmark, Switzerland, Netherlands, Israel
Transport	Netherlands, Norway, Ireland, Belgium, Finland, Germany, Japan
Power Industry	Norway, Finland, Sweden
Machine engineering	Italy, Germany, Norway, Ireland, Switzerland
Pharmaceutical industries	Denmark, India, Sweden, France, Italy, Germany
Biotechnologies and bio-resource industries	Netherlands, Austria, Great Britain, Norway

I.T. Balabanov (2003) considered “the process of formatting the innovations is constantly evolving, thus forming a kind of innovative spiral”.

Expanding the concept of “innovation spiral” we can say about the model of economic development, in which there is a transition from an agricultural to an industrial, and as a result of a further development, to the information society. The transition from one stage to another formed by innovation, and in the case of industrial society, it was the scientific and technological revolution.

Nowadays, it is a new stage of civilization development, the basis of it concludes in development and widespread usage of information as well as the transition to a new stage of the knowledge-based economy. Theoretical and practical aspects of the formation and development of the knowledge-based economy has been the object of researching interest rather recently - a few decades ago. The founders of this research are considered P. Drucker (1985), S. Kuznets (1953), F. Machlup, F. Hayek, D. Tees.

The concept of the knowledge-based economy is actively supported and promoted by many international organizations such as the OECD, World Bank, European Commission, UNESCO, APEC and others.

Considering about the knowledge-based economy it can be noted that “the spiral turns” irregular in the period of time, if the industrial society replaced the agrarian society in 10 000 years, the information era is coming after 200-300 years. This is due to the fact that the existence of any society is associated with the several types of exchange - energy, material and information.

For example, in the U.S. economy, as one of the brightest representatives of the information economy, we can see all the features of the information society. During the process of economic development of the USA, from an agrarian society and moving to the innovative spiral of industrial innovation and the information society, information plays a fundamental role in the formation of the factors of production.

The founder of the theory of “long waves” N.D. Kondratiev (2003) pointed out that the various elements of the economic system, viewed separately, and, in general, can be suffered from both qualitative and quantitative changes. However, for some elements of the qualitative changes it will be just as important as the quantitative changes, for other elements the primary importance has the quantitative changes. N.D. Kondratiev concluded that the national economic process as a whole is an irreversible process of transition from one stage to another, but the change of certain elements of the economic system, such as the population, the scale of production, the level of technology, can detect a reversible process. Based on this reason, N.D. Kondratiev asserted that the change of these elements consists of two components: the overall growth, development, speed and the pace of this growth and development. Therefore, there is a wave nature of the development of economic systems.

Each cycle is characterized by a certain level of development of productive forces, the so-called “technological way”. The cycles ended by crises, which result is a transition of the productive forces to a higher level of development. The main reason for the big cycles N.D. Kondratiev deemed the necessity to renewal of fixed capital, the emergence of new technologies and industries, in other words, the restructuring of the economy.

According to J. Schumpeter (1942), who continued the ideas of N.D. Kondratyev, researching of the problems of economic dynamics, he considered that innovation is the main engine of economic progress. The motive force in this system is an entrepreneur, who seeking to increase his profits by offering the market “new combinations”. Every innovation is accompanied by creative destruction of the economic system, causing its transition from one stage to another.

The significant contribution to the development of the idea of long waves of economic development (Kondratiev-Schumpeter) introduced by the English economist C. Freeman (he was also one of the authors of the concept of national innovation systems). The main feature of his approach is to analyze the concrete historical content of each wavelength. C. Freeman considers the long-wave rise not only as a result of the introduction of radical innovations in one or more industries and their subsequent growth, but also as a process of diffusion of technological paradigm from a few leading sectors to the entire economic system.

C. Freeman argued that the potential of the new technological paradigm is best realized through the mass participation of people in the creation and implementation of new technologies, that is a prerequisite for the success of innovation is the interaction within and between organizations.

Another Russian economist S.Y. Glazyev (2007), after analyzing the historical experience of the technical and economic development of a number of countries, he introduced the scientific concept of “life-cycle turnover of technological structure”, which covers a period of about a hundred years with three peaks in its development.

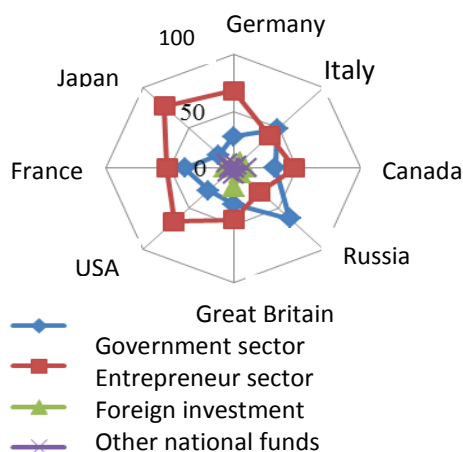
The first peak is related to the investment, which based on industries formed in the current wave, but is devoted to creating a reserve in advanced technologies and products, in fact - with attachments, leading to the emergence of a new long wave. The second peak is determined by the capabilities of the development of technologies and products reached the maturity phase of waves, which opened in the R&D stage of the next wave of technology. The third peak is associated with the development of the latest technological complex (cluster of the basic innovations of the new wave), mainly on its own basis.

With the development of the next technological way it is created a new type of infrastructure, overcoming the limitations of the previous ways, as well as it is happened a transition to the new forms of energy that form the basis for the development of the next technological way.

Thus, S.Y. Glazyev proves that the theory of technological ways and its changes is the development of the theory of “long waves” of N.D. Kondratiev, because in the condition of a post-industrial society it persists a long wavelength fluctuations of the economic activity which generated by a combination of technological, institutional and socioeconomic factors.

It should be noted that nowadays it is enhanced the interaction of science and technology, it was happened in so much way that the science became a direct productive force. Technologically complex production based on the latest achievements of science, and R&D research has become the main initial stage of the production process. High-tech industries are developing quickly than others. The development of science and technology was integrated into a single process - scientific and technical progress (Figure 1).

*Figure 1: The structure of internal funds on research and development (R&D) by the sources of findings, % (2014)*





In general, we can conclude that the development of economic science was on the uplink to the 1970-1980s years. Then it began appearing the crises that were found in the inability of the existing scientific schools to explain a number of economic phenomena: the market pricing in the monopoly, the variety of entrepreneurship's forms, the strengthening factors of macroeconomic instability.

The continued until the 1980s years the stage of the economic and theoretical science development differs to the fundamentally new level of complexity, it involves the emergence of new paradigms. It has been a radical change in understanding of the subject of scientific knowledge as they are now is not the nature or reality in the direct form and its defined scope, defined on the basis of theoretical concepts and operating funds disbursed subject of cognition. Changing of scientific ideals led to the enhancement of cognitive resources, the destruction of the universality of the classical picture of the world.

The next stage in the development of economic science was characterized by the development of methods and models in the form of “logical short chains”, the functional method, mathematical models, the formation of economic knowledge as a complex system consisting of a variety of special economic sciences. As a result, in economics, it appeared a number of schools and theories with a very different scientific methods of cognition. The main events of the second stage were two scientific revolutions - “marginal revolution” and “Keynesian revolution.”

The period of economic theory development from the 1980s to the beginning of XXI century associated with the development of a paradigm of self-organization and “synergistic movement”, characterized by non-linear thinking, the increasing of economic knowledge complexity, with a strong practical orientation of economic knowledge.

Nowadays, the most important factors of contemporary globalization are the transnational corporations. Its business activity has no limits, and they do not recognize national boundaries. However, it should be noted that small and medium-sized enterprises are also actively involved in the international trade, in the international investment overflow. Maintain industrial and commercial activity is the most important driving force for innovation, as for transnational corporations and for traditional firms. The market competition at the international level objectively requires from companies the making efforts in innovation sphere.

Global market competition may change the demand in the markets, and promote the accelerated development of firms producing of new products or new technology. As a result, there are changes in the entire background of commodity production and its distinctive features are the globalization of activities on the basis of innovation. It was formed a new production at the stock exchange, the new players appeared at the market. The industrial production structure changes significantly.

During the historical development in the economic theories the knowledge was not considered as a competitive resource for a long time, then there was the dividing of knowledge on the fundamental, accessible to everyone for free of charge (for example, mathematical theorems), at the same time there was knowledge which available for a special fee. However, some researchers who believe that after the launch of the innovation the invested in innovative knowledge alienated from their developers, increasing public knowledge resource. It is a source of knowledge for everyone, including the competitors.

The practice has shown that firms focused only on the acquisition of knowledge in any form within the national borders behind the companies acquiring knowledge abroad, possibly due to the fact that in the international market competition between firms is stronger and there is a higher knowledge quality and higher consumer properties ensure success, both in the domestic and global markets.

We should notice that the creation of the innovation economy in the administrative-command system is theoretically possible, but has its own specificity in the absence of market-based mechanisms for inclusion of innovation.

Management in the administrative-command economy made by policymakers, market mechanisms do not act, it cannot be guided by the market as a criterion for determining whether the invention becomes an innovation. Nevertheless, we cannot say that in a command economy and the emergence of innovation, as a consequence, innovative way of development is generally impossible.

The function of any economic system cannot be isolated from the cooperation with other countries and global economic processes. On the world market the innovation passes through the market mechanism, and then we may receive a global scale of innovation. In addition, in cooperation with other countries it is identified the efficiency and competitiveness of the economy as a whole, which at this stage is directly related to susceptibility to innovative development.

The phenomenon of the Russian economic science is not possible to identify if we don't include it in the context of Russian civilization. In other words, we can say about Russian economic science only in connection with the development of Russian civilization. The systematic research of Russian economic science as a specific structural generality shows the uniqueness of its subject and object. The historical trends of Russian public consciousness influenced the formation of spatial-temporal features and object-subject features of science.

The process of changing economic paradigm in Russia at the early 1990s of the XX century has led to a change in the ideology of the organizational management. In place of a centralized government plans came the formulated by its business owners the objectives of achieving ways, the management has come to play a key role in the companies. The companies, with the exception of natural monopolies, began to function in the conditions of strong competitive markets.

The socioeconomic, political, legal, natural and geographical conditions formed the institutional environment of the Russian economy, promotes the preferential recovery of rental income from the exploitation of natural resources, and not getting added value from the usage of knowledge and technologies. The consequence of this situation becomes slowdown in the majority of industries and sectors of Russian economy in terms of R&D intensity, technological advancement, and resource, economic, social and environmental performance in comparison with the countries which leading in the development of knowledge-based economy. Among the reasons it can be noted the lack of effectiveness of the current institutional infrastructure development of intellectual capital, some isolation of most economic actors from the sphere of production and use of knowledge, the low interest of the government and society in the innovation development.

The necessity of moving the Russian economy to a new stage of development with a focus on the intellectualization of socioeconomic processes in society, active innovation activity of economic entities of all levels and spheres of activity, intensive

development of intellectual capital is strongly brings to the fore the problem of theoretical research of the mechanisms of formation the institutional prerequisites and conditions of development the knowledge-based economy.

Some researchers (I. Nonaka and H. Takeuchi 1995), proved a special importance of knowledge as a strategic resource for socioeconomic development. Thus, the share of new knowledge embodied in technology, equipment, professional education, modernization and innovation, ensuring production in developed countries accounts for 70-85% of GDP growth.

The share of innovative component in the growth of GDP of developed countries is 30-50% and shows a steady growth trend. In the USA the growth of an innovative component in the growth of GDP during the period of 1980-2010 was 4.6 percentage points (from 30% to 34.6%), Japan was 12.3 percentage points (from 30.6% to 42.3%) in Europe was 4.5 percentage points (from 45.5% to 50.0%), which also confirms the economic viability and efficiency of investments in the production and usage of knowledge.

A new form of GDP calculation was determined to the following circumstances. The current system does not take into consideration for counting a number of the changes that exist and will exist in the future. Nowadays, the world system requires to considerate the new parameters for estimating of GDP, which connecting with the intellectualization of activities, depending on the future economic growth in the world from the development of intellectual activities. The most important changes will be connecting with registration of investment the companies' spending on research and development (R&D).

The orientation of the economy is largely determined by the interests of the authorities. Thus, high-tech manufacturing and innovative technologies are the object of interest of distributive coalitions (the government, the management of corporations, etc.), with the right to the distribution of the performance of the object of interest (the government budget, companies' budget, etc.) in countries where economies are focused on the usage of knowledge as a main source of income (Japan, Singapore, Finland, Sweden, the Netherlands - the country-ranking leaders of knowledge-based economy).

With small amounts of natural resources these countries are profit-making issue on the added value resulting from usage of new knowledge in the production of goods and services, innovative added income, developing and implementing sparing of “knowledge-intensive” technologies, etc.

Russia, along with Mexico, Turkey, Kazakhstan, belongs to the group of countries where the foundation of economy is based on rent-extraction of natural resources. In this regard, the establishment of the new knowledge-based economy in the Russian reality becomes more complex phenomenon.

The necessity of researching the development of innovations emphasizes the importance of determining the prospects of its account for solving the economic problems of the country, resulting from the global financial and economic crisis and the effects of the destruction of the major industries in the country in 1990s.

The government has announced about the policy choice in favor of sustainable development based on innovation and modern technology. The serious steps were made in the formation of the national innovation system. The country joined the World Trade Organization, which will allow maximum usage of the benefits of the acquisition of advanced foreign experience.

The adoption of the paradigm of the economic development model based on innovation, the formation of the national innovation system, the growth of imports of innovative products and advanced industrial and consumer goods, as well as foreign experience as a technology – all these aspects of modern economy have attracted more and more attention every year. The competitiveness of individual companies and some countries as a whole is largely determined by its ability to not only its own development, but also to acquire abroad and efficient usage of modern scientific achievements in terms of expanded reproduction innovative marketable products.

For sustained innovative development in industrialized countries, it was formed the national innovation systems that appear the basis of economic development based on innovative achievements.

One of the main elements of these systems act by qualified personnel who are engaged in research and development. Unfortunately, in Russia, the number of such personnel is constantly decreasing. The second element - is the companies that perform research and development. It should be noted the unfavorable trend of reducing the number of enterprises involved in research and development in the Russia.

The results of researches show that the existing national innovation system in Russia is not working at full capacity, the transfer of scientific achievements of research and development organizations in the industrial production is carried out very slowly. The whole system operates inefficiently. The level of innovation in the country lags far behind the same period in the industrialized countries. It is also a low level of the intensity indicator expenditure of technological innovation, in Russia it is about two times lower than in European countries. The share in global exports of high technology products and services in Russia is based on data for 2008 is less than 0.25%, which is significantly less than the proportion of China (16.3%), the USA (13.5%), and Germany (7.6%). It should be emphasized that in addition to the quantitative differences in the levels of innovation activity of the country, it may be noted the structural weaknesses in the management of the development process of innovation in the national economy.

For overcoming the negative trend to the attenuation of innovative activity is an urgent necessity of adopting a number of measures. First of all, it is essential to be improved the innovation system of Russia.

The lack of developed and recognized methodological foundation of the national innovation system in Russia, the problem of creating the effective institutions of national innovation sphere give reason for some researchers to consider about the controversial question of the existence of a Russian innovation system, because the nationally significant improvements in this area are not marked. One of the main challenges in the establishment and development of the Russian innovation system is the imperfection of the legislative and regulatory framework of the country.

In Russia it has not still completed the creation of innovation infrastructure. The innovation infrastructure of the country now includes more than 200 objects functioning using a variety of governmental supporting methods. However, the size of the activity of many objects which already functioning network of innovative objects is not quite sufficient to generate a significant systemic effect for the success of innovation.

The formation of the institutional framework of the Russian innovative system is extreme complexity process, because in Russia the market institutions have not been formed completely.

## Conclusion

The trends of the end of XX century have demonstrated the problem of choosing the vector of further development in all countries. The balance of the global economic system has been destroyed, which was not happened since the 1980s years.

It became obvious for the economists that the prediction and explanation of changes in the economic processes in terms of existing theoretical context is impossible, in the late XX century, it has been declared about the obsolescence of theoretical approaches and models of existing practices and the developing of a new methodology is extremely important.

In conditions of intense globalization of the world economy and increasing international competition is formed the new areas of economic growth on the basis of knowledge and innovation as the most important resources of society. A characteristic feature of this process is the reorientation of interests of social and economic relations with the utility maximization of the use of natural resources and the extraction of rental income to the area of intellectual entrepreneurship, high-tech industries, and the use of knowledge in many areas.

The activation of innovation, creation and development of innovative capacity of the country and, as a consequence, the formation of the innovative economy is the most important factor in the competitiveness of the economy.

During this research it was formulated some fundamental changes in the basic terminology: neo-economy based on the global financial capital, which forms the special economic relationship, in which the relations of production are converted into economic relations; the information revolution, the knowledge-based economy, etc.

The necessity of rethinking the theoretical foundations of economic theory has become obvious to everyone.

The problem of changing economic paradigm defined by the necessity to explain the nature of processes in economic development: cycles, crises, etc.

At the expense of human capital and knowledge it has been a huge increase in the capitalization of high-tech corporations and Internet companies - the market value of their shares has become a hundred times more than the annual income.

Improving the product competitiveness of Russian industries are possible if technological re-equipment and high-tech recovery of the real sector of the economy and the orientation not on the economic growth, and on its quality. In other words, the movement of Russia toward the knowledge-based economy is a prerequisite for exit of the national economic system of raw materials development model and the transition to post-crisis innovation growth.

It was founded that the government support of individual projects is not effective either in terms of strengthening the economy in crisis, from the point of no prospects of forming an innovative economy. The systematic process of support is essential for the formation of the national innovation system of the country, which should be carried out in a scientifically based theoretical and methodological foundation, the creation of which is not possible without research entities are the relations of ownership and intellectual property rights.

Nowadays, we can speak not only of the national political economy with the existing of problem issues, but we have to talk about the international political economy and geo-economics with the basis of knowledge-based economy.

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## MARKETING APPROACH TO E-DISTRIBUTION OF MODERN BANKING PRODUCTS

### Abstract

*Modern technological progress changes the way of business and have great impact on business effectiveness and efficiency. Influence of Internet on banking is huge and a lot of banks are motivated to change business strategy in order to keep the competitiveness in the modern market. Besides, internet banking brought in new clients and requests in terms of having more flexible and less expensive business. The main goal of this study is to show clients satisfaction with services which are the result of modern marketing in banking as well as customer loyalty and the end result is the realization of profits in the banking sector. During this research it was used combined questionnaire - Likert's scale as well as other statistical methods. Research results show, also, the next step needed for successful implementation of modern business methods. It would be a financial indicator of service quality (before use of marketing strategies and distribution channels) as well as those indicators which would be received after distribution of banking services and products. Modern banking should find its own base with new technologies which are moving point of distribution from supplier towards the customer / client.*

**Key words:** marketing, banking, customer satisfaction, internet

**JEL classification:** M3, O33

## НОВИ МАРКЕТИНГ ПРИСТУП ДИСТРИБУЦИЈЕ САВРЕМЕНИХ БАНКАРСКИХ ПРОИЗВОДА

### Анстракт

*Убрзан развој интернета мења начин пословања савремених банака и на тај начин омогућава различите погодности и предности уз повећање ефикасности и ефективности пословања. Утицај интернета на банкарство*

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*је огроман, па је велики број банака мотивисан да измени своје стратегије пословања како би остале конкурентне на савременом тржишту. Поред тога, савремено интернет банкарство донело је банкама и читав низ нових захтева корисника услуга у смислу повољнијег и флексибилнијег пословања које традиционално банкарство није могло да им понуди. Циљ истраживања овога рада јесте да се прикаже задовољство клијената услугама које доноси савремени маркетинг у банкама као и лојалност клијената, а крајњи резултат је остваривање профита у банкарском сектору. Приликом истраживања коришћен је комбиновани упитник - Ликертова скала, као и друге савремене статистичке методе. Истраживањем су добијени резултати који указују на даље кораке којих би се требали придржавати како би имплементација савремених метода пословања била што успешнија. Даља истраживања која би се могла извести из наведеног су финансијски показатељи квалитета услуге пре коришћења маркетинг стратегије и савремених метода дистрибуције банкарских производа као и они које би добили након примене модерне дистрибуције. Савремено банкарство своју упоришну тачку треба управо да пронађе у новим технологијама које ће тежиште дистрибуције померити са тачке понуђача на тачку клијента/корисника банкарских услуга.*

**Кључне речи:** маркетинг, банкарство, сатисфакција клијената, интернет

## Introduction

In condition of globalization and competition, the imperative of each bank is to reach customers' needs and their requests; it is the main condition for bank existence, development and growth. Source of competitive advantage banks have in well-designed and well applied marketing concept. It means that banks must go ahead with technology and modern marketing in banking. The bank is mediating company. (Šljivančanin, 2000.) Beside profit, bank's goal is to provide continual market growth as well as development. Competition makes it difficult. During past years, we all are witnesses of globalization and technological modernization as well as IT literacy. Modern business world with a high level of competition and cruel fight for customers causes necessity for rational and innovative politics in the area of banking offers and it is the main condition for long-lasting growth, high market share, high profit and client satisfaction. (Djordjević, 2009.) Financial institutions need to change business behavior because of modern banking trends. Basic marketing technologies in banking are: Internet marketing and Internet banking, mobile banking, social networking sites, QR codes, socially responsible business, etc. Market-developed countries have strategic and operative bank planning based on marketing practice.

This study, also, shows modern marketing trends, measurement of client satisfaction as well as modern technologies. The second part of the study analyzes modern marketing in particular banks in Novi Sad. The Likert's scale has been used in a research as a combined questionnaire with respondents' suggestions. The study explores the problems of clients' satisfaction with modern marketing tools – their disadvantages and advantages – in order to show the connection between results and customer loyalty.

## Challenges of use new technologies in banking

The internet and its mass use, as well as effective software solutions, made internet the most common communication channel among business banks and clients. Traditional way of communicating has been overcome and very slow - regardless of whether we are talking about promotion activities, credit approval or any kind of banking products. Possibilities of internet implementation into credit procedures and processes are numerous. This way of communicating must be available to clients, economical, protected from abuse and coordinated with regulation - all this in function of becoming an internet crucial and a multimedia resource, incorporated into business banks. (Ranisavljević, 2014.) However, it is important to mention that internet cannot replace a personal relationship with clients - they must be brought to the bank; that is the only way for achieving customer satisfaction and their loyalty. Launching new communication technologies like automatization in business banking give numerous possibilities in developing and offering new products and services but, also, it allows lower costs. Advantages can be summed up in the following ways:

- Numerous empirical research showed that multiple cost reduction in banking is/was done by new technological innovations in the product/service industry;
- Innovations in services and banks that are accepting them achieve a bigger market share by applying these innovations;
- Mass communication became possible with both loyal and potential clients, all this with lower charges;
- Communication with clients is not limited by place and time; using web pages with possibility of marketing promotion;
- Innovations are related to wider product assortment and to new products/services (for example, new can be (re) opened via the internet any time, without going to the bank);
- It has stimulated development of new banking activities which are not typical (insurance, leasing, securities trading etc.).

If banks intend to be successful they must improve service even at the cost of enlargement costs. (Ljubojević, 2000.) Customer as the most important resource is the greatest factor in banking. (Hoffman & Bateson, 2011.) Modern marketing philosophy can be expressed as achieving goals through customer satisfaction. (Jobber & Fany, 2006.) Creating satisfaction and loyalty is the hardest task of marketing oriented banks. All bank activities must be oriented toward customers. (Vunjak & Kovačević, 2006.) Bank's ability to achieve a high level of constant clients depends on business goals and its redefinition. Client's satisfaction is one of the most significant goals and concepts of modern banking. (Zelenović, 2012.) Satisfaction, especially the satisfaction with service quality affects the clients' choice of bank. Higher satisfaction is bound to the unbreakable relation among bank and client and it is a way how competition can be neutralized. One of the keys of keeping customers is their satisfaction and it is resource for attaching new clients and this is the main obligation in banking. Banks must work harder on it. Loyalty and satisfaction are tightly connected. According to Ljubojević (2000, p. 69) "Satisfaction is the key element in the process of creating and improving loyalty. Beside this, feedback with customers is the key element in measuring and managing customer satisfaction." So, according to this definition, satisfaction

is a function of perception and expectations. (Vunjak, 2001.) Expectations are built through previous experience about service and they can be considered as the probability of an event; perception is considered as event estimation in the process of service delivering. What is characteristic in banking is the fact that service perception is based on perception of assembly services as well as on the way of service offering by a bank staff. Without satisfaction, bank cannot achieve profit and because of this, banks must make best effort to educate clients. However, new technologies increase and less clients come to the bank, which makes relation client-bank more difficult. Long-lasting relationships are necessary and loyalty is a part of it. Key factors for these relationships are: focus on clients needs, personal relationship, exceeding clients' expectations, successful contracts, positive attitude and interest for clients needs and problems. (Michaud, 2000.) However, satisfied client is not always guarantee for business success. What makes the difference between banks is loyalty. Loyalty is crucial beside high service quality which is based on employees in banking. (Dašić, Mihić&Supić, 2014.) If clients are satisfied with banking service, with employees and with all service aspects, it is assumed that clients will be loyal and they will not for sure - carry loyalty over other people/clients of the same financial institution. If clients are not satisfied with any aspects of service, loyalty cannot be achieved. Satisfied clients can always change the bank if they estimate that other banks (competitors) can satisfy them better and to a greater extent. With time, client satisfaction decreases whether due to higher expectations or due to weaker brand performances. Because of that, there is the belief that only thrilled customer is the one who is the base of loyalty and fidelity.

Not only that, those clients use products/service but they, also, spread up positiveness and bring new clients. Satisfaction is a condition for loyalty as well as the main component of loyalty during the first meeting between client and financial institutions. (Veljković, 2009.) The function of customer research is to find out new solutions for keeping current clients and bringing new ones; satisfaction is the way for it (service quality and employees) but if banks want to make long-term profit satisfaction must lead to the loyalty. It is important for companies to create marketing strategies which will not only satisfy but exceed client needs and expectations. (Maričić, 2005.) Marketing makes a contribution to this, directly. (Lamb, Hair & McDaniel, 2013.) Only with a base of loyal clients' bank can count on profit growth and long-lasting profit. (Butler, 2004.) Trust and closeness with clients are more important than loyalty. The successful marketing relationship is based on commitment, trust and communication. (Mihić, Andrejević & Mihajlović, 2012.) In the modern business world, client satisfaction is one of the main goals of marketing, but it is, also, tool for achieving other business goals such as profit, market share, degree of loyalty (Maričić, Veljković & Djordjević, 2012.) Experiences of developed countries say about the importance of client education (Mihić, Andrejević & Mihajlović, 2012.) To keep pace with technology, bank had to accept and apply new ways of business as well as a new way of marketing.

## **Internet banking**

Huge technological and communication progress had great effect on the banking sector. Banking is the area supported by information technology and IT allows banks to make a difference in services. Constant innovation and improvement in service depend

on it. Because of that, a lot of banks have been motivated to change business strategies in order to keep the competitiveness in the market. Technology is the key factor for changes in banking in the future. (Mols, 2000.) New technological advances are (beside others): smart cards, cash machines, phone banking, internet banking, mobile banking, etc. Internet is cheap and accessible and this is the reason why users are determined to use this kind of banking. Internet banking allows clients to do their transactions any time at any place which absolutely decreases transaction costs. (Carlston, Furst & Nole, 2000.) Also, internet and its influence on the economy - in general – has been seen as a technology that dramatically affects banking marketing. (Kotler & Keller, 2006.) For bank, the internet is additional channel for service distribution, promotion and marketing improvement. Direct marketing and marketing of customer relationship are based on the databases which are built thanks to the internet. Internet banking is the fastest, most economical and most effective way of banking business. Thanks to this, the banking business is available 24 hours per each day during the whole year. Business tempo is dictated by clients, of course. Advantages of internet banking are following: (Zelenović, 2012.): working hours, unlimited place dimension, speed of transactions and estimation of transactions.

## Mobile banking

Mobile banking is a part and the newest trend in electronic banking. This kind of banking allows transactions through a mobile phone with internet connection (smart phones). About 97% citizens in Serbia at the age of 15 or older are active users of mobile phones. (Petković, 2014.) Mobile marketing is relatively new part of digital marketing and it means use of mobile devices as the main communication channel from brand to the customer (from bank to client and vice versa). Advantages are following: availability, customer loyalty, possibility of personalization, possibility of geographical location and coordinates, functionality of mobile devices as well as video calls, calendar, cameras, internet, etc. Speaking of banking, MMS and SMS marketing are included as well as m-banking, websites, mobile applications and QR codes. (Explanation of QR codes will be a bit later.) Appearance of new platform like “android” and “IOS” changes bank business. Beside mentioned kinds of mobile marketing, there are banks in the world which brought in new application called “take a photo and pay”- application that is only used by the Erste Bank in Serbia. This application is revolutionizing the way clients pay their bills and it also decreases queues in banks. The same by using this application, unnecessary paper and archival space are saved. (Dašić, 2013.) Mobile banking is a service that allows clients to do online payment without their presence at the bank and without papers. Taking photo of bill and transmitting it into a mobile application “android”, *iPhone* or *iPad* by which photo is automatically read, you can pay by pressing one button. Mobile banking is revolution of modern technology and having in mind technological trend and speed of it, bank must follow marketing changes, all in order to satisfy customer needs and wishes.

## Qr codes

By following new technological and communication advances, the banks brought into system of using QR codes which allow clients to communicate simply and faster with the bank. Thanks to these codes customers are able to arrange meeting with bank staff when they want and the main tool for that is the smart phone. During registration of code, phone converts QR code into the appropriate URL address and by doing that, the customer is redirected to a web site he/she wants. To explain this precisely, customer does not have to enter URL address in order to access to the a web page; it is enough to scan (by own mobile phone) QR code and it redirects customers to connect internet page where she/he can find all needed information related to the bank. Clients and other people interested in this are now able to arrange meeting with a bank worker (of course, you have to fill in some basic information about yourself, such as first name, first letter of surname, phone contact, date and time, town or municipality). QR code - which is originally two-dimensional square bar code read by optical scanners is a significant technological invention on the Serbian market. By using this innovative communication channel banks show commitment and high devotion to own clients. Of course, the fact that most people already use or intend to use smart phones is absolutely plus for QR technology. These bank codes can be found on ad posters, billboards, flyers; at bus stations and on traffic vehicles as well as on websites.

## Social networking sites

Today's time of globalization and fast life without enough free time contribute to relation between banks and social networking sites. Introducing of banking through these sites allows a different approach to clients depending on how the client wants to be visible on these sites. If the bank allows for clients to communicate through site - no matter whether it is via camera or in writing - that kind of communication will affect the number of visitors such as the number of satisfied potential clients. Market share and bank profit can be significantly increased by the way of bank promotion on social networking sites. (Dašić, 2014.) It is important to get the most out of sites and that will be possible way of making profit through communication and customer satisfaction. Speaking of which, there are not any parts of business and life where social networking sites cannot be applied – communication, public relations, branding, promotion, etc. Regarding banking, we will address only Facebook, Myspace, Foursquare, Google Plus, LinkedIn and Twitter which is, by the way, micro blog, but Twitter is, after Facebook, the most widespread social network and we cannot avoid it as well as YouTube which is the site for content sharing but it is often used in banking. (Lamb, Hair& McDaniel, 2013.) Some studies show that 60% of banks looks at social networking sites as a useful way in establishing and maintaining contacts with clients while 30% of banks has an attitude that social networks, as less expensive and useful marketing tool, allow communication with clients and find out what clients need and want. Of course, these banks use social networks as a great way to come to clients and make an offer to them in order to satisfy them and make clients loyal. (Rađenović, Mihić, Mihajlović, 2014.) About 10% of

banks- those ones with business loss - does not look at sites with gratitude so they do not use it in business. Research also, shows that Facebook is one of the most useful social networking sites and a lot of banks use this network. (Mayfield, 2008.) Social sites are an unavoidable part in banking. There is the belief that social sites will eliminate virtually bank networks. Others believe that sites will destroy banks due to inadequate communication. Although, it is certain that social sites will make revolutionary change in banking, especially in the field of customer relationship. The best example of social site benefits in banking is America and China where interaction with clients is dramatically changed with the following benefits (Hoffman & Marek, 2010): active client developing and understanding, fast answers, following trends in world and decreasing customers' charges. Marketing of social sites has more than 800 million potential users on sites like Facebook, Twitter, YouTube, Foursquare, etc. These users share their opinion about products and service and in that way they increase the brand popularity and the number of bank fans. One of the main advantages of these social networking sites is ability of sharing information very fast through clients' networks.

## **Development and determinants of Serbian banking**

In Serbia, there are 29 banks. Banks with bigger profit, according to the balance sheet since 2013 are following: Intesa Bank-6.6; Raiffeisen Bank-5.3; Unicredit Bank-4.3; Komercijalnabanka-4.0; ProCredit Bank-1.9. (all expressed in billion dinars). Banks with the biggest loss are the following: KBC Bank-5.6; NLB Bank -2.0; Alpha Bank-1.0; OTP Bank- 0.8; Piraeus Bank- 0.8. (All expressed in billion dinars.) According to the research, there is the list of banks with the best offer, working hours, relationship with customers, network of cash machines, best promotion and those results are shown below:

- The best offer: Bank Intesa, Komercijalna banka, AIK bank, UniCredit bank, Societe Generale bank, Raiffeisen bank, OTP bank, Sberbank, Erste bank, Alpha bank;
- The best customer relationship: Erste bank, Komercijalna banka, Sberbank, Raiffeisen bank, UniCredit bank;
- The best network of cash machines and offices: Bank Intesa, Erste bank, OTP bank, Komercijalna banka, Raiffeisen bank, AIK bank, Societe Generale bank, Uniredit bank;
- The best working hours: Bank Intesa, Komercijalna banka, Raiffeisen bank, AIK bank, UniCredit bank, OTP bank;
- Banks with the best presented offer: Raiffeisen bank, Bank Intesa, Komercijalna banka, Erste bank, AIK bank.

In Serbia, each bank has its own internet page, electronic payment, phone use in banking, net-banking services, e-banking, m-banking. Each bank promotes itself in different ways and each one is recognized differently. Some of the banks did step forward by following modern technology and by using e-commerce service, QRcodes, PayPass-non contact payment system with payment cards; also banks brought in service “take a photo and pay” as well as use social networking sites-all these in order to satisfy customers' needs. “Today, the internet is the global multimedia distributional

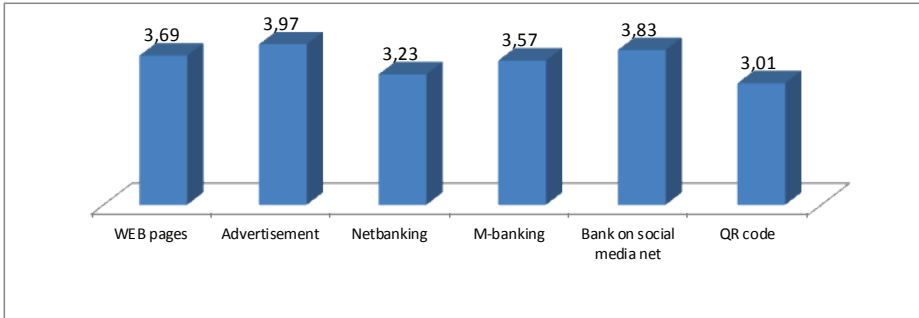
information system that include, practically, all worlds and allow, not only access to multimedia contents, but also it generates specific multimedia contents according to particular requests in interactive mode.” (Radjenović, Mihić & Mihajlović, 2014.) This is the way for banks being different from competitors and occupy a leading position in the modern banking world. In Serbia, the biggest growth of visitors to social networking sites has following banks: Erstebank, Aikbank, Intesabank, Komerčijalna banka, OTP bank. On YouTube channel, the most common is Erste bank, which presents (on rented space) its own video clips, advertisements, campaigns, news as well as mini clips from the human resource department. Among all social sites, banks use LinkedIn the least, with a small number of visitors. This social site is at the beginning of development in Serbia while the Google Plus is even less in use; only Komerčijalna bank with about 40% of followers has an account on this social network. The Erste bank uses SlideShare, Blog and Foursquare. These are five newest types of social networking sites in which banks can plan its showing until the end of 2015. As a conclusion to this topic, we can say that big and profitable bank with significant market share in Serbia understand very well the importance of social networks and by respecting it, modern technologies are an important part of their marketing strategy.

## **Methodology and research results**

For the research purpose a survey has been done in the most famous banks in Novi Sad with the aim to show customer satisfaction with a bank service brought in by modern banking marketing. The main goal of this study is to show clients satisfaction with services which are the result of modern marketing in banking as well as customer loyalty and the final result is the realization of profits in the banking sector. At the same time, we will see potential (dis)advantages of bank services. The subject of research was service of the following banks in Novi Sad: Intesabank, Komerčijalna bank, Raiffeisenbank, OTP bank and Erstebank. Research has been done, including 3500 respondents (only private persons); 700 respondents were asked in each bank in a period of 6 months, from march to august 2014. It is important to point out that the survey includes people at each level of education, wages and ages. Also, the study was done by using a combined questionnaire (anonymous and short) in function of getting most sincere answers without taking too much time. Questionnaires were personally done in business units of mentioned banks with the help of employees and after one done transaction. Results will be shown by the graph and per categories.

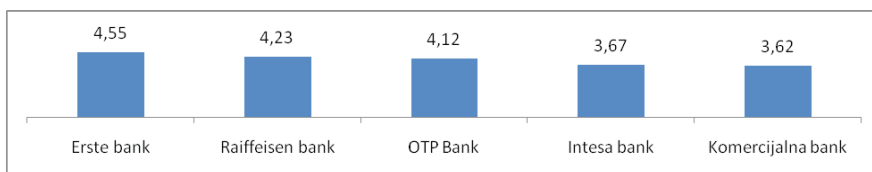
## **Research results**

Research was applied in five banks. Results are shown for each bank individually; graph 1 shows a cumulative score of all five banks and satisfaction of respondents with each service individually.



Graph 1. Cumulative score of respondents' satisfaction with modern bank services in Novi Sad  
Source: author's results

According to these results, banks should pay more attention to service of net-banking systems and QR codes. Reasons for customer dissatisfaction in these fields are: insecurity, tough registration, bad design, complicated use, bad application solutions, expensive service, problems with transactions, technology. Generally speaking, banks should improve electronic banking because it decreases crowd in offices and gives space to employees to be dedicated to other assignments in order to achieve bank's goals. By improving electronic banking, banks would be able not only to keep customers, but also to make long-lasting loyalty with them. If we are talking about QR codes in banking, this service is only at the beginning, but it has a lot of advantages. Customers are not satisfied with this service, mainly, because they do not know about these codes and they do not recognize the advantages of connecting bank and themselves by using QR codes. One of the ways for building consciousness and awareness of these codes is through special companies and promotion activities. As a result, banks would have less phone calls from clients and it would make calculation of credit worthiness easier because clients would come to bank with preparing documents. Research also shows that banks are not fully aware of QR codes advantages and for now, banks use this technology only for connection codes with bank internet site. Even is this full filled, there are problems with clients who are not able to find exactly what they need on site. Research shows customer satisfaction with services in mentioned banks by following order presented in graph 2.

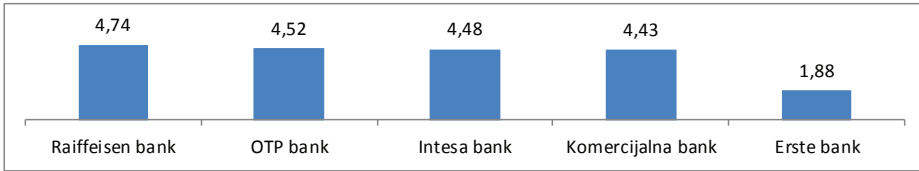


Graph 2. Customer satisfaction with web page of targeted banks  
Source: author's results

It can be seen that clients are the most satisfied with the appearance and content of Erste bank web page; almost the same results can be seen at Raiffeisen bank and OTP

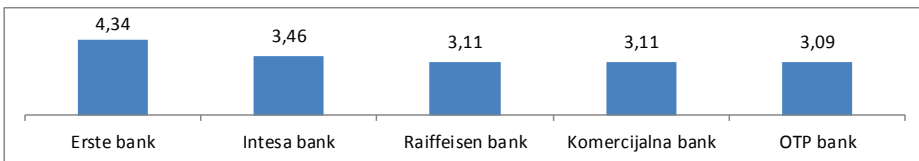


bank. It is said that pages of these banks have nice design and each of the pages has key elements fully implemented for clients. Clients are the least satisfied with the internet page of Komercijalna bank.



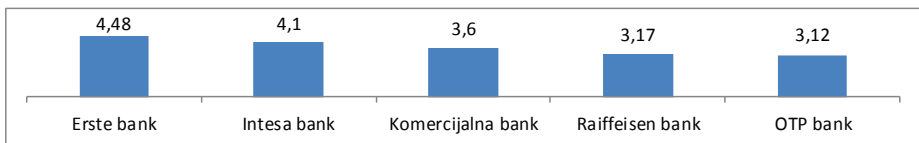
Graph 3. Customer satisfaction with content of advertisement  
Source: author's results

When it comes to the bank advertisement and its content, clients express the biggest satisfaction toward Reiffeisen bank commercial as well as OTP bank commercial. The main reasons are recognisability, connection with clients wishes and needs, ad sound and transmitted messages. In the Erste bank commercial, clients say that it is invisible, without appropriate content and users do not see the connection between commercial and bank service.



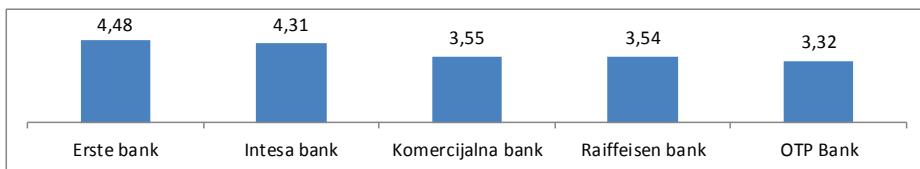
Graph 4. Customer satisfaction with Net Banking  
Source: author's results

Regarding Net-Banking, satisfaction is the most expressed toward Erste bank because of design, functionality, easy registration, favorable prices. On the contrary, the least satisfaction is expressed toward OTP bank because of expensive service, old technology and problems during transactions.



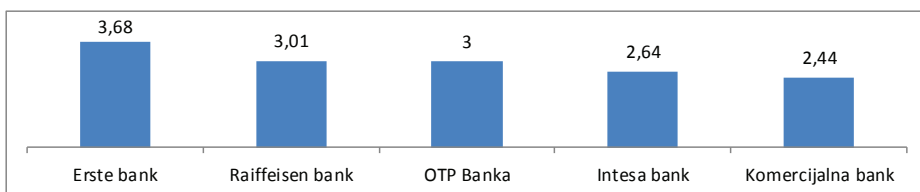
Graph 5. Customer satisfaction with M-banking  
Source: author's results

Service of M-banking is the most appreciated by Erste bank and clients of this bank point out functionality, easy registration and especially service called “take a photo and pay”. The OTP bank clients are the least satisfied, pointing out unavailability of service as well as price and complicated use.



Graph 6. Customer satisfaction with contents and appearance of targeted banks on social networking sites  
Source: author's results

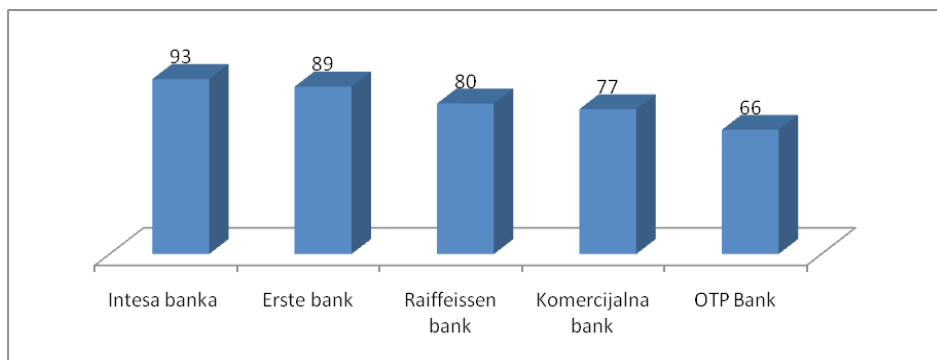
Detailed research confirmed these results because Erste bank was the first with introduction on social networking sites and, for sure Erste bank has one of the largest visitor base. This bank is active on all social networks while other banks are available and active on one or two social networking sites. Once more, clients of OTP bank are the least satisfied, mainly because OTP bank was included itself relatively late into the social networking world and this is the reason why respondents could not be able to exactly express and measure their level of satisfaction.



Graph 7. Customer satisfaction with QR codes of mentioned banks  
Source: author's results

Regarding the QR codes, the best result has Erstebank. The reason is a good and functional connection between codes and bank and great possibilities and information given by code scanning. Other banks have more modest results because QR codes are not used in an appropriate way and clients are not fully aware of the advantages and possibilities of mentioned codes.

Generally, clients are satisfied with their business banks. However, market research and different ways of services are absolutely desirable for banks to make clients fully satisfied. The last question in the questionnaire was: “Would You change Your business bank?” and it was close-type question. The majority of respondents has a negative answer which means general satisfaction with a modern banking system which, on the other side, points out the high level of loyalty built by business banks.



Graph 8. Level of customer loyalty

Source: author's results

Research shows that the biggest degree of loyalty have clients of the Intesa bank (93% of them gave negative answer to the questions mentioned above). Other results are: Erste bank-89%, Raiffeissen bank-80%, Komercijalna banka-77%. OTP bank-only 66% of respondents gave a negative answer so this bank should pay attention to this fact, having in mind that disloyalty means lower profit and client walk out. Although OTP bank clients are satisfied with a particular service, they are still not still attached to this bank. In addition to this, if results from the beginning are being compared, it can be seen that Intesa bank belongs to banks with the biggest profit in Serbia while OTP bank is the bank with loss in business.

## Conclusion

Maintenance of high level customer satisfaction and long-lasting relationship with them are the most significant parts of the modern banking business. Constant communication and following customers' needs and suggestions should make it easier. Pull strategy as well as keeping customers through satisfaction model is the crucial task of each bank. The banking business is oriented toward customers with the main goal of making profit and reaching competitors advantage. To reach these goals banks need to use different marketing approaches in order to gain all available information about current and potential customers and about their needs, wishes and necessities. There are few methods for continuous monitoring and measurement of customer satisfaction, starting from book of impression and special questionnaires where customers can estimate bank work; through service which is given by employees in contact center and reclamation offices. The main aim of these activities is commitment to suggestions, questions and complaints in function of understanding customers' wishes and needs. The most reliable method to estimate satisfaction is studying for measurement of customer satisfaction. This is the practice used in most common banks in world recommended by most respected authorities in the marketing field. Regular annual implementation study of customer satisfaction is the part of business politics of each bank in Serbia; results of all studies are compared in function of exchanging experiences and taking best business practice. Results are also good base for understanding which is the base for planning the way of improving service quality and offers. One thing is certain - social networking sites and new technologies such as implementation QR

codes basically change the terms and rules in banking world which should be advantage related to customer satisfaction. The research shows that customers want complete communication with banks through social network as well as online banking. Social network development shows few models of business bank that will change banking forever. Social networking sites will cancel and they already minimize the need for classical marketing and its tools (billboard, TV commercial, etc.). Practice in developing social networking sites will allow banks to have a unique approach and unique package for each client. Attitude called “one offer for all” will disappear from banking, and service will match profile of each individual client. In addition to this, phone calls will be canceled and replaced by proactive banks on the Internet. Today's banks monitor social networking sites like Twitter, Facebook, and according to information found there, banks prepare business. Banks will be able to identify much more complaints and to solve it much faster than earlier in order to improve customer satisfaction. Today's banking business will last some time. Social sites will absolutely change it all. Bank units will take over complicated transactions such as housing loan. Parts of research presented above (shown with examples of five banks in Novi Sad) show how important is this matter. The main focus in banking is moving to quality of service and consequently, customer satisfaction becomes the key and main source of competitive advantage. This is a reason why banks constantly follow competitors' activities and changes - in order to adapt business to customer needs. Those banks, which businesses rely on satisfaction strategy have customer wishes and needs in the first place and satisfy them effectively and efficiently, better than competitors. Future in banking is in QR codes and in social networking sites which will replace commercial and electronic banking-partially. The function of QR codes will be connected to social networking sites. In this way, limits of customer satisfaction will be moved higher and banking will have to deal with great challenges. Customer satisfaction is the most current in the banking sector, but in order to show real results of satisfaction, some of future research could show financial effects on bank business as well as marketing in banking.

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## THE EFFECTS OF THE DEVELOPMENT OF RURAL TOURISM ON STARA PLANINA

### Abstract

*Rural tourism is a combination of different forms of tourism, which introduces visitors to life, art, culture and heritage of a region and is very suitable for the development of rural economy. The aim of this study is to detect the effects of rural tourism development on Stara Planina as well as the economic development of local communities with the possibility of sustainability of rural settlements and tourism development. One of the most important effects of rural tourism development on Stara Planina is the realization of economic profit. The development of rural tourism can stop the migration of young people through the creation of basic conditions for general, much higher comfort of rural settlements, and increase local jobs as well. With the development of rural tourism in the Stara Planina local people will be motivated to stay in the countryside. In such circumstances, young people can find not only economic, but also social and cultural reasons to continue living in rural areas.*

**Key words:** Rural tourism, Stara Planina, economic development, employment, the local community

**JEL classification:** R10, Q26

## ЕФЕКТИ РАЗВОЈА РУРАЛНОГ ТУРИЗМА НА СТАРОЈ ПЛАНИНИ

### Апстракт

*Рурални туризам је комбинација различитог облика туризма, који посетиоце упознаје са животом, уметношћу, културом и баштином одређеног краја и изузетно је погодан за развој руралне економије. Циљ овог рада је детектовати*

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*ефекте развоја руралног туризма на Старој планини као и економски развој локалне заједнице уз могућност одрживости руралних насеља и развоја туризма. Један од најважнијих ефеката развоја руралног туризма на Старој планини је остваривање економских профита. Развој руралног туризма може да заустави одлазак младих, кроз стварање елементарних услова за општи, знатно виши, комфор сеоских насеља, али и повечати запошљавање локалног становништва. Развојем руралног туризма на подручју Старе планине локално становништво ће бити мотивисано да остане на селу. У таквим околностима млади људи могу наћи не само економске, него и социо-културне мотиве да наставе живот у руралној средини.*

**Кључне речи:** Рурални туризам, Стара планина, економски развој, запошљавање, локална заједница

## Introduction

Protected nature and the environment in rural areas have always been attractive, and more recently they have attracted a large number of urban population, which has resulted in the increased interest in travelling to the countryside, so that villages and rural areas are now included in the circle of interest of an increasing number of tourists. According to the data, rural tourism accounts for 10-25% in all forms of tourism activities, so it can be concluded that the “story of rural tourism has begun in the rural area and in the future it will achieve a continuous rise” (Ruzić, 2012).

Rural tourism today is not the only means of revitalization of the abandoned rural areas, but it certainly is one of the major factors of the development of rural areas, which ensures their future sustainability through preservation, and opening of new job opportunities, increasing the diversity of occupations, preservation of landscape and nature as well as support to the rural crafts and tourist attractions.

In most European countries, rural population is increasingly accepting tourism development as a strategy of sustainable local development (Petrić, 2006). The development of rural tourism in many areas appears gradually, whether as a result of local entrepreneurs or growing businesses whose main task is to attract tourists, or the very tourists who discover that the area attracts the attention of visitors due to the activity to which the local entrepreneurs respond. The development of tourism in rural areas, according to Petrić (2006), is not just a matter of coincidence of tourist demands with local offers, but also the issue of the valuation of the local amenities. Rural areas are unique because of their spatial and socio-cultural identity. What is important is that the adequate practice of rural development calls for the understanding of the relationship people share with the natural features and phenomena around them (Chigbu, 2014).

Detecting the economic effects of rural tourism development on Stara Planina and economic community development are the main objectives of this research, with the possibility of sustainability of rural settlements and tourism development. If special attention is paid to the education of the local population in order to improve the quality of services with a tendency to increase the number of tourists, there will be conditions for higher quality

comfort of rural settlements, where locals, especially the younger population, have economic and other motives to continue living in the countryside.

## **The economic significance of rural tourism**

The number of tourists now involved in this kind of tourism, according to Kalač (2013), is growing and developing in all types of rural areas. This kind of tourism includes a wide range of activities, services and amusement provided by farmers and peasants in order to attract tourists to their areas and thus obtain additional income.

Such a concept of tourism is not just about rural tourism or agro-tourism, but it also includes certain holidays, trips to rural areas and residential tourism (Kalač, 2013). According to Gašić et al. (2015) the development of tourism in rural areas aims to solve many economic issues related to the depopulation of areas caused by migration of rural population to urban areas. By striving to improve living conditions and environmental protection, the stability of the working age population increases, which allows the migration in the opposite direction, from urban to rural. Such activities contribute to the economic development of rural areas and have an impact on the future economic development of the entire region (Gašić et al. 2015).

The basic economic importance of this kind of tourism lies in tourist spending in the areas they visit, because in addition to the accommodation services, there are events, festivals, recreation, manufacture and sale of handicrafts as well as craft and agricultural products. This implies that tourist demand increasingly strives for avoiding the usual tourist destinations and there is a return to the traditional and typical values and authenticity, where new tourist products with new environmental, ecological and social parameters appear (Sanagustin and others, 2011). Therefore, the money earned by the tourists in their places of permanent residence is spent in the tourist areas. In this way, as the result of their consumption there are certain effects on the economy, both in the areas from which the tourists come and in the areas that tourists visit (Unković, Zečević, 2006). The positive economic impact of rural tourism can contribute and even provide much needed funds of the historical, cultural and natural heritage in local communities, (Vehbi, 2012).

The economic effects of tourist spending in specific areas of economy have direct or indirect effects.

The most important direct influences of rural tourism on economy are:

The impact on the social product and national income;

The impact on the development of economic activities that constitute the tourism industry;

The impact on the balance of payments of the country;

The impact on the employment of the population and standard of living;

The impact on investment activity and investment structure;

Impact on faster development of underdeveloped countries and regions.

In addition to the direct influence, the indirect influence of rural tourism on the economy deserves significant attention. The tourist spending that is directly implemented through activities of the tourism industry more or less affects all economic and non-economic activities. In this way, new jobs open and unemployment is automatically



reduced, which has been identified as one of the foremost benefits of rural tourism (Inskip, 1991). In order to achieve economic goals, there should be quality tourism services obtained, because it provides optimal satisfaction of the needs of domestic and foreign tourists on one hand, and the achievement of favorable economic results of operations of participants in satisfying of tourist needs on the other. In such circumstances, young people can find not only economic, but also social and cultural reasons to continue living in rural areas. Therefore, in countries with developed tourism offer more attention is paid to the development of rural tourism, which today constitutes one of the important components of the development of not only tourism, but also the integrated and sustainable development of the region as a whole (Muhi, 2013).

Considering that in the modern tourism the target of every tourist destination is to create a unique identity, or to differ from the competition, which is the basis for growth and development in a competitive market, (Gašić, 2013). That is the reason why special stress has been lately put on a “package” of tourist services. It offers tourists a unique and high-quality tourist service, which contains all aforementioned services offered to tourists in the places of their residence, during the transportation and on the spot of their temporary stay. For this unique service, travel agencies and other organizations that appear as bidders of the package of services form a unique sales price. (Bošković, 2009)

The controlled participation in rural tourism on Stara Planina can make a substantial income, both economic and social, to the majority of the population (Štetić, 2007). The lack of finance is often a stumbling block for many who live in this region, (Maksimović et al., 2015). The very tourist power that should be reflected in the economic and socio-cultural impact on the tourism in this area, which is lacking, can be found in the role of women in tourism in this region as well as the joint overcoming of the obstacles as threatening elements of rural tourism development, (Ghaderi and Henderson, 2012). Since the focus of this paper is economic effects, we will keep our focus on economic management tools for tourists on Stara Planina because, according to Petrić (2014), it is desirable to introduce management tools for tourists, which may be divided into four groups: institutional, economic tools, management tools and information technology. The basic economic tools can be: the difference in prices compared to other destinations, the collection of environmental tourist taxes taking into account that Stara Planina has been declared a national park, but they could also include the encouragement of both the public and private sectors that aims to increase the volume of visitors and the rational use of energy and other resources (Petrić, 2014).

The main tasks of economic development of rural tourism on Stara Planina according to Đekić and Vučić (2007) are as follows:

Curbing the migration from rural areas and the creation of new jobs;

Converting the production activities into a typical production according to the environmental strategies of rural development;

Develop new interests, new approaches and new farming methods;

Utilization of environmental resources through synergies and reduction of conflicting relations between agriculture and the environment;

The economic development of local communities and the general improvement of the quality of life.

In order to achieve the economic effect of rural tourism development on Stara Planina, the quality of offer and service should be seriously improved. Significant stress

should be put on the trainings of managers and all employees in order to improve their course of communication and management of tourist behavior and thus attract the attention of domestic and foreign visitors to Stara Planina. For this purpose, the training of local people to be included in the tourism sector should not be omitted, as well as the participation of local government into their implementation of sustainable rural tourism development on Stara Planina, as well as the participation of small and medium-sized enterprises in the sector of the tourism industry, especially by local entrepreneurs employing local population in all aspects of business operations. The offer of suitable accommodation and tourist facilities could significantly affect the attraction of foreign capital with the aim to develop all resources of Stara Planina. Good organization and coordination of all stakeholders of tourism policy will contribute to the growth and development of tourism on Stara Planina, all in order to achieve positive economic results and the prosperity of the local population.

### **The research methods**

The study sample consists of 116 respondents from municipalities of Zajecar and Knjazevac, local government employees, tourism and catering sector, as the target group, but the survey also includes respondents employed in other sectors (culture, transport, agriculture, etc.) There are unemployed respondents randomly selected as well.

The study included 46% of women and 54% men. Of those surveyed 47% are residents of Knjazevac, and 53% are inhabitants of Zajecar. The percentage of the employees in local government is 29%, in the sector of tourism and catering 23% in other sectors (culture, transport, agriculture, etc.), 26% of respondents, as well as 22% of unemployed respondents.

As a research tool we used questionnaires. The survey consisted of closed questions, which indicate the economic effects of rural tourism development, and offered the answers of the respondents on a scale from 1 to 5, where 1 means “strongly disagree”, and 5 “strongly agree”.

The effects of rural tourism development on Stara Planina, covered by the questionnaire are:

- Improving the quality of life and standards of all development resources,
- The realization of economic profit,
- Preserving the integrity of the social community,
- Preserving the cultural integrity affirmation of the destination of Stara Planina,
- Preserving the rural environment and cultural heritage,
- Motivating the local population to remain in the countryside,
- The employment of local people in all aspects of business operation.

### **Results and discussion of the results**

The following tables show the results of the conducted research on the effects of rural tourism development on Stara Planina.

**Table 1. Improving the quality of the environment and of all development resources**

	<i>Local self-government</i>	<i>Tourism and hospitality</i>	<i>Other economic subjects</i>	<i>Unemployed</i>	<i>Total</i>
<i>Completely inconsistent</i>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>
<i>Partially inconsistent</i>	<b>17,65%</b>	<b>15,38%</b>	<b>13,33%</b>	<b>23,08%</b>	<b>17,24%</b>
<i>Neutral</i>	<b>11,76%</b>	<b>0,00%</b>	<b>6,67%</b>	<b>15,38%</b>	<b>8,62%</b>
<i>Partly agree</i>	<b>23,53%</b>	<b>23,08%</b>	<b>33,33%</b>	<b>23,08%</b>	<b>25,86%</b>
<i>Strongly Agree</i>	<b>47,06%</b>	<b>61,54%</b>	<b>46,67%</b>	<b>38,46%</b>	<b>48,28%</b>
<i>Total</i>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100%</b>

The percentage of respondents who totally agree is 48,28%, and most of them are employed in the tourism sector (61.54%), which shows that most respondents agreed that the improvement of environmental quality and the development of resources are effects of the development of rural tourism on Stara Planina. The percentage of neutral subjects is only 8.62%, while totally disagreeing respondents don't exist.

**Table 2. The realization of economic profit**

	<i>Local self-government</i>	<i>Tourism and hospitality</i>	<i>Other economic subjects</i>	<i>Unemployed</i>	<i>Total</i>
<i>Completely inconsistent</i>	<b>17,65%</b>	<b>15,38%</b>	<b>0,00%</b>	<b>23,08%</b>	<b>13,79%</b>
<i>Partially inconsistent</i>	<b>5,88%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>15,38%</b>	<b>5,17%</b>
<i>Neutral</i>	<b>5,88%</b>	<b>7,69%</b>	<b>13,33%</b>	<b>7,69%</b>	<b>8,62%</b>
<i>Partly agree</i>	<b>17,65%</b>	<b>23,08%</b>	<b>46,67%</b>	<b>15,38%</b>	<b>25,86%</b>
<i>Strongly Agree</i>	<b>52,94%</b>	<b>53,85%</b>	<b>40,00%</b>	<b>38,46%</b>	<b>46,55%</b>
<i>Total</i>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100%</b>

An important effect of rural tourism development on Stara Planina is the realization of economic profits where the highest percentage of employees in the tourism and hospitality industry (53.85%) strongly agrees because it automatically implies a chance for greater profits. But the employees of the Local Government (52.94%) and employees in the sector of other undertakings (40%) strongly agree with it as well. The largest number of the unemployed (38.46%) also strongly agrees, because they see the chance for their employment in the development of rural tourism, even though a large number of the unemployed, 23.08%, is completely inconsistent and cannot see that the development of rural tourism can lead to the economic profit.

**Table 3. Preserving the integrity of the social community**

	<i>Local self-government</i>	<i>Tourism and hospitality</i>	<i>Other economic subjects</i>	<i>Unemployed</i>	<i>Total</i>
<i>Completely inconsistent</i>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>
<i>Partially inconsistent</i>	<b>29,41%</b>	<b>15,38%</b>	<b>6,67%</b>	<b>46,15%</b>	<b>24,14%</b>
<i>Neutral</i>	<b>11,76%</b>	<b>0,00%</b>	<b>20,00%</b>	<b>23,08%</b>	<b>13,79%</b>
<i>Partly agree</i>	<b>23,53%</b>	<b>30,77%</b>	<b>26,67%</b>	<b>7,69%</b>	<b>22,41%</b>
<i>Strongly Agree</i>	<b>35,29%</b>	<b>53,85%</b>	<b>46,67%</b>	<b>23,08%</b>	<b>39,66%</b>
<i>Total</i>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100%</b>

Preserving the integrity of the social community is also an effect that occurs due to the development of rural tourism on Stara Planina as it is shown in Table 3. The highest percentage of employees in the tourism and hospitality industry (53.85%) and 46.67% of those employed in the sector of other undertakings totally agree with the statement that the preservation of the social integrity of the local community is one of the important effects of rural tourism development in Stara Planina, while there aren't any totally disagreeing respondents.

**Table 4.** Preserving the cultural integrity affirmation of the destination of Stara Planina

	Local self-government	Tourism and hospitality	Other economic subjects	Unemployed	Total
Completely inconsistent	17,65%	15,38%	0,00%	23,08%	13,79%
Partially inconsistent	11,76%	0,00%	6,67%	7,69%	6,90%
Neutral	11,76%	0,00%	13,33%	23,08%	12,07%
Partly agree	23,53%	46,15%	33,33%	23,08%	31,00%
Strongly Agree	35,29%	38,46%	46,67%	23,08%	36,21%
Total	100,0%	100,0%	100,0%	100,0%	100%

The largest number of the working population in the sector of other undertakings (46.67%) and 38.46% of the employed in tourism and hospitality completely agree that the preservation of cultural integrity affirmation of Stara Planina destinations is one of the effects of the development of rural tourism. As for the unemployed, they each pleaded differently on this matter, so that there are completely disagreeing 23.08%, neutral 7.69% , no partially inconsistent and fully consistent- 23.08%.

**Table 5.** The preservation of the rural environment and cultural heritage

	Local self-government	Tourism and hospitality	Other economic subjects	Unemployed	Total
Completely inconsistent	17,65%	15,38%	0,00%	23,08%	13,79%
Partially inconsistent	17,65%	0,00%	0,00%	0,00%	5,17%
Neutral	5,88%	0,00%	0,00%	7,69%	3,45%
Partly agree	11,76%	15,38%	33,33%	23,08%	20,69%
Strongly Agree	47,06%	69,23%	66,67%	46,15%	56,90%
Total	100,0%	100,0%	100,0%	100,0%	100%

The significant number of respondents, 56,90% fully agree that the preservation of the rural environment and cultural heritage is one of the important effects of the development of rural tourism on Stara Planina. The largest percentage is of the employees in the tourism and hospitality industry (69.23%), followed by 66.67% of the employed in the sector of other undertakings and employees in local government (47.06%) and even 46.15% of unemployed respondents, which is completely in accordance with the aforementioned statement.

**Table 6.** *Motivating the local population to remain in the countryside*

	<i>Local self-government</i>	<i>Tourism and hospitality</i>	<i>Other economic subjects</i>	<i>Unemployed</i>	<i>Total</i>
<i>Completely inconsistent</i>	<b>11,76%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>3,45%</b>
<i>Partially inconsistent</i>	<b>23,53%</b>	<b>15,38%</b>	<b>6,67%</b>	<b>30,77%</b>	<b>18,97%</b>
<i>Neutral</i>	<b>5,88%</b>	<b>7,69%</b>	<b>13,33%</b>	<b>7,69%</b>	<b>8,62%</b>
<i>Partly agree</i>	<b>11,76%</b>	<b>7,69%</b>	<b>13,33%</b>	<b>15,38%</b>	<b>12,07%</b>
<i>Strongly Agree</i>	<b>47,06%</b>	<b>69,23%</b>	<b>66,67%</b>	<b>46,15%</b>	<b>56,90%</b>
<i>Total</i>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100%</b>

With the development of rural tourism on Stara Planina local people will be motivated to stay in the country and 56.90% of the respondents completely agree upon it (69.23% of the employed in the tourism and hospitality industry, 66.67% of the employed in other economic sectors, 47.06% of local government employees and 46.15% of the unemployed respondents).

**Table 7.** *Employment of local people in all aspects of business operation.*

	<i>Local self-government</i>	<i>Tourism and hospitality</i>	<i>Other economic subjects</i>	<i>Unemployed</i>	<i>Total</i>
<i>Completely inconsistent</i>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>	<b>0,00%</b>
<i>Partially inconsistent</i>	<b>23,53%</b>	<b>15,38%</b>	<b>0,00%</b>	<b>23,08%</b>	<b>15,52%</b>
<i>Neutral</i>	<b>0,00%</b>	<b>0,00%</b>	<b>20,00%</b>	<b>7,69%</b>	<b>6,90%</b>
<i>Partly agree</i>	<b>35,29%</b>	<b>30,77%</b>	<b>26,67%</b>	<b>15,38%</b>	<b>27,59%</b>
<i>Strongly Agree</i>	<b>41,18%</b>	<b>53,85%</b>	<b>53,33%</b>	<b>53,85%</b>	<b>50,00%</b>
<i>Total</i>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

The employment of local people in all aspects of business operation is perhaps the most important effect of rural tourism development on Stara Planina, since 50% of the respondents completely agreed with this statement. Thus 53.85% of the unemployed respondents are fully in compliance with this because it is a chance for their employment, and the same number of the employees in the tourism and hospitality industry is completely in accordance with it, a little less, or 53.33% of the employed in the sector of other undertakings and 41.18% of local government employees also fully agree upon the statement that the development of rural tourism on Stara Planina improves the employment of local people in all aspects of business operations.

## Conclusion

Stara Planina has good conditions for the development of rural tourism thanks to its geographical position, the varied landscape, cuisine, folklore, multinationality, rich cultural heritage. The great cultural value lies in the products of traditional crafts and handicrafts through which a rich heritage of local people is revealed. The natural beauty of Stara Planina

in combination with the culture, traditions, food specialties and music of Eastern Serbia can become a recognizable tourism brand, which contributes to the significant economic development and could improve the image of the region. One of the most important effects of rural tourism development in Stara Planina is the realization of economic profits. The development of rural tourism on Stara Planina can stop the emigration of young people through the creation of basic conditions for general, much higher comfort of the rural settlements. With the development of rural tourism on Stara planina local people will be motivated to stay in the countryside. In such circumstances, young people can find not only economic, but also social and cultural reasons to continue living in rural areas. The development of rural tourism on Stara Planina would improve the employment of the local population.

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## CO<sub>2</sub> EMISSIONS TRADING AT THE STOCK EXCHANGE – QUALITY ENHANCEMENT OF TOURISM POTENTIAL, ECOLOGICAL AND ECONOMIC GROWTH

### Abstract

*Since climate changes have caused significant problems in the functioning of the modern world, human society and economics at the global level, it is inevitable to take appropriate protective measures. Climate change and its bad influence directly relate to the environment and indirectly to economic, i.e. tourist activities which are linked to natural potentials. For years, human or industrial activities have been emitting greenhouse gases into atmosphere, which have harmed the climate to a large extent. In order to prevent further pollution, permits for emitting greenhouse gases were introduced at various conferences on a global level. These permits are traded on the stock exchange so this paper gives an overview and description of CO<sub>2</sub> emission trading. Such an indirect environmental protection provides the possibility of reducing harmful gasses emission into atmosphere, and thus less harming climate factors. The paper puts emphasis on the Kyoto Protocol, CO<sub>2</sub> emissions market, situation and tendencies on the market and their influence on tourism.*

**Key words:** *Tourism potential, the Kyoto Protocol, ecological and economic development, CO<sub>2</sub> emissions, emissions permits*

**JEL classification:** Q00

## ТРГОВАЊЕ ЕМИСИЈАМА СО<sub>2</sub> НА БЕРЗИ - ПОБОЉШАЊЕ ТУРИСТИЧКОГ И ЕКОЛОШКО ЕКОНОМСКОГ РАЗВОЈА

### Апстракт

*С обзиром да су климатске промене проузроковале значајне проблеме у функционисању савременог света, људског друштва и економије на глобалном нивоу, неминовно је предузимање одговарајућих мера заштите. Промена климе и њен лош утицај се непосредно односе на природну средину а посредно*

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*и на привредне, односно туристичке делатности које су везане за природне потенцијале. Људска делатност, односно индустријска постројења су годинама уназад емитовала у атмосферу стакленичке гасове, који су у великој мери нарушили климу. На разним Саветовањима на глобалном нивоу, у циљу спречавање даљег загађења, уведене су дозволе за испуштање стакленичких гасова. Овим дозволама се тргује на берзи, те је у раду дат преглед и опис трговања емисијама CO<sub>2</sub>. Овако посредна заштита животне средине пружа могућност за смањење емитовања штетних гасова у атмосферу, те на тај начин и мањем нарушавању климатских фактора. У раду је стављен акценат на Куото Протокол, тржиште емисијама CO<sub>2</sub>, стање и тенденције на тржишту и њихов утицај на туризам. Рад повезује тематске области везане за берзанско трговање дозволама, заштиту природне средине и нарушавање климатских фактора, те даје ново економско-еколошко сагледавање туризма као једне од важнијих грана светске привреде.*

**Кључне речи:** Туристички потенцијал, Куото протокол, економско еколошки развој, Емисија CO<sub>2</sub>, емисионе дозволе

## Introduction

Nowadays, climate change is the biggest and most serious challenge for the planet, the environment and global economy. Climate changes influence the quality of tourist potentials of a country, as well as the economic and ecological development of the country indirectly. There are evident scientific proofs that high concentrations of gases in the atmosphere which cause GHG – greenhouse gases effect are responsible for global warming. In recent years, tourism has been a branch of economy that brings huge profit globally. But, if we want tourist destinations to keep their primary role of human relaxation and health, it is necessary to save and preserve them from pollution as much as we can. Atmospheric, or climate changes, indirectly affect the attendance of a certain tourist destination since either the surplus or shortage of rainfall during the year, or too much heat or too cold winters, can cause that the attendance of a specific place of region decreases. The economic effect of tourism decreases in this way, too. Atmospheric changes are also affected by the emission of harmful gases, so it is necessary to take urgent measures in order to reduce their harmfulness. The trading on the stock exchange with quotas or permits is based on the setting or approving the maximum allowed limit of CO<sub>2</sub> emission by relevant institutions. The bottom line is that the companies that emit CO<sub>2</sub> in larger quantities than they are allowed pay for extra pollution, while the ones that emit less are awarded by selling the unused quotas.

## The Kyoto Protocol in response to frequent ecological disasters

It is believed that global warming is mostly caused by the emission of greenhouse gases into the atmosphere as a result of human activities, especially the change in using

land by deforestation, as well as fossil fuels burning (coal, oil and gas) (European Commission, 2007). The development complies with the requirements and limitations of nature, involves correlation of economic and environmental policy at all levels of society and its integration with modern international trends (Mihajlović, Ilić, & Simonović, 2013). The mentioned problems called for a global solution (Cavoski, 2005). The first step towards reducing greenhouse gases emissions (GHG emissions) was taken on 9 May, 1992, when the United Nations Framework Convention on Climate Change (UNFCCC) was adopted. The second step was the Kyoto Protocol, adopted at the third Conference of the Parties of the United Nations Framework Convention on Climate Change, held in December 1997 in Kyoto, Japan. The Protocol was put into effect on 16 February, 2005. To be put into effect, at least 55 countries making up at least 55% of pollutants were needed to ratify the Protocol. The main difference between the Protocol and the Convention is that the Convention encourages industrialised countries to stabilise the greenhouse gases emission, and the Protocol commits them to doing so.

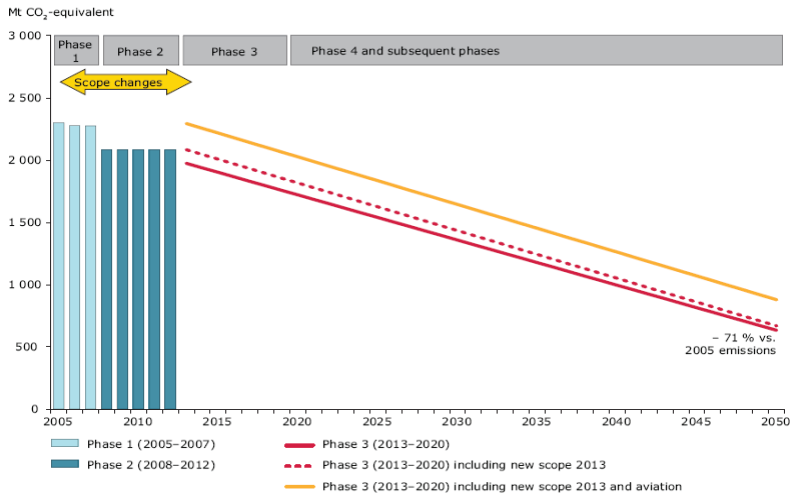
The flexible mechanisms of the Kyoto Protocol are designed to motivate further reduction of emissions of greenhouse gases, primarily by increasing the economic feasibility of introducing measures that are in line with the objectives of the Protocol. The flexible mechanisms of the Kyoto Protocol are designed to further motivate the reduction of greenhouse gases emission, primarily by increasing economic feasibility of introducing measures in compliance with the objectives of the Protocol. Namely, The developed countries (also called Annex I parties) are allowed to, instead of on their territory, if they consider that it is more cost-effective, to implement projects with the objective of fulfilling their obligations under Annex B in the territories of other countries signatory to the Kyoto Protocol, either developed or developing countries (which are also called non-Annex I parties). These mechanisms are based on the principles of openness and transparency with intensive use of the Internet and other advanced technologies (Caring for Climate, 2005). There are three such mechanisms:

1. **The Clean Development Mechanism** is one of the mechanisms for implementing the Kyoto Protocol (Clean Development mechanism – CDM). Reduced emissions of greenhouse gases created by using this mechanism is expressed as Certified Emission Reductions (Certified Emission Reductions, CERs) (Damnjanovic and Tufegdžic).
2. **The joint implementation mechanism** allows countries listed in Annex I to meet part of their commitments through the implementation of projects aimed at reducing emissions of greenhouse gases in the territories of other countries, which are also Parties to Annex I, in compliance with the aforementioned rules and principles. Reducing emissions in such projects is expressed in units of emission reductions (Emission Reduction Units, ERUs).
3. **Emissions trading** is the third mechanism which, in compliance with certain rules and restrictions, allows the countries listed in Annex I to “sell” to other countries, parties of Annex I the excess reduction (relative to the defined). This mechanism allows trade with other means, such as CERs or ERUs (Stefanović, Čojbašić, Vučković, & Stojiljković, 2007).

The ratification applies in particular to the tendencies that are associated with the negotiations on the future direction of the international community in the field of climate

change and assuming responsibilities that are (not) in accordance with the possibilities of the economy and society (Todić, Grbic, 2014). The question is how to prevent the emission of carbon dioxide? Prospects of further development of the EU ETS by 2050 are shown in Figure 1.

Figure 1. Prospects of further development of the EU ETS cap by 2050



Source: European Environment Agency, 2013 Trends and projections in Europe 2013 - Tracking progress towards Europe's climate and energy targets until 2020, Copenhagen, Denmark, p. 26.

The answer can be found in the following (Petrovic, 2013): improving the efficiency of energy production and consumption; energy conservation and saving; use of non polluting and renewable energy sources; fines and fees; market mechanism.

## CO2 emissions market

The emergence of CO2 markets is linked to the period of the early 90's, when the great attention was paid to the protection and preservation of the living and working environment. The very need for such a mechanism regulating emissions is found in the unity of political, scientific (environmental) and economic objectives. Gas emissions market differs from other commodity markets insofar as the GHG emissions or loans (gases that cause the greenhouse effect - greenhouse gases) can not be stored or transferred to the next year, but must be utilized during the current year. This solution is applied because the mechanism for reducing emissions has been designed to reduce annual emissions by a certain percentage in relation to the level of 1990. Therefore, each year annual emissions are independently compared to 1990 levels and thus there is no possibility of the disruption of business in the market on the basis of, for example, warmer winters in one country (Aziakou, 2006). Transactions of CO2 emissions, which take place in the greenhouse gases emissions market, can generally be divided into: *Spot*

transactions - delivery and payment of permits shall be made in a short period of time immediately after the conclusion of the agreement; “*Forward Settlement*” - delivery and payment of emissions permits is postponed for a future moment, which is defined at the moment of trade; “*Options*” - contracts that give buyers / sellers the option, but not the obligation of performing a transaction before or exactly on a specific date. The price of emissions permits is predetermined, as well as the date of the transaction, whereby customers bear the costs of flexibility of such contracts; *project investing* - customers can also choose to invest in projects that will result in the emissions reduction. Greenhouse gases emissions markets can be organized as: Stock Exchange (Exchange Market) and „ *over the counter markets* „ (Over the counter, OTC) - the market is composed of actors who are not members of the official stock exchange. The trading is not performed regularly as on the stock market, transactions are done through a broker by phone or computer, and the terms of the contract are bilaterally negotiated by two involved parties or standardized agreements are used. After the Great Depression, this market came to be regulated, too.

However, the successful establishment of a system of emissions trading depends on certain conditions. *First*, there needs to be a sufficient number of participants on the market both for buying and selling. Without a sufficient number of participants, the price of permits will not show the true state of supply and demand. The *second* condition is low transaction costs of permits trading. Otherwise, neither sellers nor buyers can find interest in trading. *Third*, for the trade system to work properly there must be a strong regulatory system for issuing emissions permits and, in general, from the system of emissions monitoring, verification of emission reductions and tracking emissions register (Emissions Trading) (Aziakou, 2002).

Emissions trading system in general can be organized in two ways (Hrnčević, 2008). These are “*cap & trade*” system and “*baseline & trade*” system. The main difference between these systems of emissions trading is in setting emissions restrictions and the method of allocating licenses. In the *cap & trade* system a competent body sets framework emissions restrictions for all the emitters in the trading system and based on that framework, the body sets unique restrictions for each emitter in the system. The *baseline & trade* system sets equal restrictions for all companies for the emission of greenhouse gases. Although the cap & trade emissions trading system is considered more efficient than baseline & trade system there are still some drawbacks and limitations. More precisely, these are the unstable and unpredictable prices of permits (the possible solution is the so-called “forward transactions”, high administrative and legal costs, the allocation of emissions permits and the possibility of corruption. However, as the main drawback of the cap & trade system, critics point out the assessment of actual emissions of companies and consider that environmentally better results are achieved by the introduction of the greenhouse gases emission tax. Accordingly, the main difference between the *cap & trade* system of emissions trading and taxation systems is in setting emissions restrictions (*cap*) which define the amount of emissions to be emitted, while the prices of the emission permit and fines are variable (*Carbon emissions trading*). Emissions trading system involves the purchase or sale of emission permits that can be obtained in two ways. The first method of procurement is the purchase from the relevant institution providing primary emissions, and the purchase of licenses takes auction system. Another possibility of obtaining emission permits is the use of carbon credits that were obtained by CDM projects.

In spite of the opinion that this market has good prospects, the method of risk management in purchasing is still unclear. Specifically, in these markets there are several types of risk among which are: *country risk*—refers to investments in CDM projects in politically unstable countries; *quality risk*—refers to non-compliance with the so called CDM golden standards; *delivery risk*—refers to introduction of new untested technologies which may not be able to fulfil the predicted CO<sub>2</sub> emission reduction; *market risk*—the risk of negative effects on financial results and bank capital due to changes in the value of the portfolio of financial instruments. No matter the risk in CO<sub>2</sub> emissions trading, there is the possibility of decreasing the unwanted consequences caused by trade thanks to a large number of financial instruments such as the derivatives (futures and options).

## Status and trends in the CO<sub>2</sub> market

Although the EU permits could be used in accordance with the goals of reducing greenhouse gas emissions, those who were trading looked for an opportunity to earn as much as possible on these transactions. One of the dominant financial instruments which have played an important role in the fight against the risks were options. Between 2007 and 2008, options trading volume increased by 5 times. It continued growing in the following years but, due to the economic crisis, the growth was much slower which had impact on the market price of emission permits (CER – Certified Emissions Reduction and VER). Compared to 2009, when the price of emission permits recorded a decline, in the coming period it began to grow. More specifically, in January 2010 it amounted to €12.85/t CO<sub>2</sub>, and in January 2011, €14.97/t CO<sub>2</sub>.

Figure 2. The prices of emission permits in the period 2010-2015

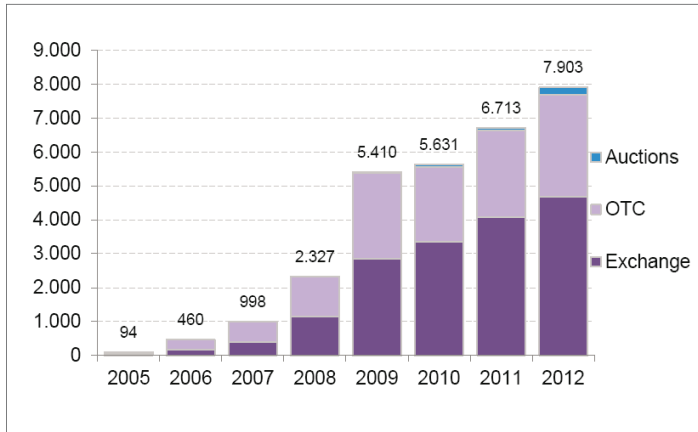


Source: Investing. Com, Carbon Emissions Streaming Chart, <http://www.investing.com/commodities/carbon-emissions-streaming-chart>

However, after October 2011, again a decline is seen in the price of emission permits so that in January 2012 it amounted to €8.06/t CO<sub>2</sub>. With smaller and larger fluctuations in the following years the price of emission permits decreases so that in December 2014 it was at €7.34/t CO<sub>2</sub> (Koch, 2014). Market prices for emission permits in the period from January 2010 to January 2015 are shown in Figure 2. Along with increased awareness of the impact of emissions on the environment, in addition to the

slow growth of the market, from the beginning of trading to date, the volume of CO<sub>2</sub> emissions trading scheme records a steady growth (Figure 3).

Figure 3. Trading by EU Emissions (Million tones)



Source: European Commission (2013) *The EU Emissions Trading Systems (EU ETS)*, Brussels, p. 6.

Bearing in mind the above mentioned facts, ICE Futures Europe can serve as a good example with CO<sub>2</sub> emissions trading having begun in 2005. Analyzing the volume of trading on the ICE Futures Europe it can be concluded that the volume of trading in 2014 increased by about 19 times compared to 2006. As for the types of contract, the most used were futures and options (Table 1).

Table 1. Monthly trad. volume of CO<sub>2</sub> emissions - contract 2006- 2014 (lot:1000t CO<sub>2</sub>)

Measure lot	2006		2007		2008		2009		2010		2011		2012		2013		2014		
	Futures	Options	Futures	Options	Futures	Options	Futures	Options	Futures	Options	Futures	Options	Futures	Options	Futures	Options	Futures	Options	
Jan	33,931	0	60,007	1,150	126,593	44,570	253,156	34,851	382,098	34,325	361,367	79,704	561,715	756,384	837,420				
Feb	26,638	0	60,786	2,050	117,493	22,380	386,064	61,071	397,371	61,571	374,374	71,110	624,442	934,316	944,117				
Mar	22,331	0	71,879	1,950	111,482	16,065	491,545	47,457	397,083	79,350	699,001	68,543	642,320	759,394	1,146,937				
April	41,146	0	57,826	1,450	159,373	31,270	444,489	71,607	624,034	114,371	380,705	30,360	549,585	876,947	729,472				
Maj	53,376	0	75,803	1,910	123,394	18,614	372,047	59,190	613,471	78,061	432,536	25,330	557,175	532,568	593,552				
Jun	22,553	0	88,866	2,515	244,010	50,811	422,050	42,700	513,168	72,128	766,526	65,490	390,066	823,609	556,853				
Jul	29,602	0	119,268	6,790	319,857	26,445	433,031	37,883	451,553	72,370	599,834	72,950	734,516	541,914	732,165				
Aug	27,270	0	94,369	8,750	196,435	11,615	253,850	29,550	340,554	54,155	731,695	67,805	616,964	328,945	431,408				
Sep	38,212	0	88,561	10,900	244,698	20,165	403,268	31,210	361,944	91,886	566,027	47,057	709,204	653,681	668,245				
Oct	51,124	410	102,008	5,735	390,617	21,735	415,611	20,544	393,722	56,057	561,522	81,050	953,207	690,302	633,325				
Nov	65,325	50	88,930	9,475	298,511	23,945	398,754	40,220	496,600	49,300	751,329	99,142	1,077,565	743,826	721,081				
Dec	40,851	100	72,592	4,751	166,592	22,951	342,057	31,414	373,092	57,499	578,982	77,922	870,282	641,106	651,379				
	<b>452,359</b>	<b>560</b>	<b>980,895</b>	<b>57,426</b>	<b>2,499,855</b>	<b>310,566</b>	<b>4,615,922</b>	<b>507,697</b>	<b>5,344,690</b>	<b>821,073</b>	<b>6,783,898</b>	<b>786,463</b>	<b>8,487,041</b>	<b>8,282,992</b>	<b>8,645,954</b>				
SUM		453		1,038,321		2,809,621		5,123,619		6,165,763		7,570,361		8,487,041		8,282,992		8,645,954	

Source: <https://beta.theice.com/marketdata/reports/ReportCenter.shtml?reportId=10&contractKey=20#report/7>

## **The influence of climate factors on tourism**

Experts of the International Energy Agency have warned and drawn attention to the fact that annual carbon dioxide emissions should not exceed 32 gigatonnes by 2020. According to recent estimates, the emissions reached 30.6 gigatons during 2010. So it can be concluded that the future looks bleak for all branches of the economy and for the normal functioning of life on the Earth, as well (<http://www.slobodnaevropa.org/archive/news/latest/500/500.html?id=24209348>). The consequence of increasing global temperatures is seen in sea level rise and changing patterns of precipitation. This leads to the expansion of subtropical deserts. The greatest warming is in the Arctic, and a constant melting of glaciers and sea ice can be expected. Other phenomena that are predicted are an increase in the intensity of extreme weather events, species extinction, as well as changes in agricultural yields. The First International Conference on Climate Changes and Tourism was held in Tunisia (Djerba) in April 2003, organised by the World Tourism Organisation. It was a great opportunity for all stakeholders in tourism, as well as scientists, to exchange views on the consequences, opportunities and risks that are placed in front of the tourism sector as a result of changes in the global climate. The result of the conference, the Djerba Declaration on Climate Change and Tourism, recognized the relationship between climate change and tourism. On one hand, tourism is affected by climate change, especially when it comes to tourist destinations in coastal, mountainous, arid and floodplain areas, and on the other, tourism also contributes to the causes of climate change, particularly through emissions through traffic and other types of energy use. Climate changes may affect tourism in several ways: the variable and unstable weather conditions complicate tourism operations and planning; natural weather disasters can harm tourism infrastructure, natural and cultural heritage and local communities; much of the tourist infrastructure is located in sensitive areas; climate changes may affect the level of tourist comfort, as well as the number of their activities; the rise of sea level and temperatures threaten coastal and island destinations, as well as the port cities; climate changes may affect natural habitats and biodiversity, which are the main attraction of eco tourists and nature lovers; change in rainfall and hydrological cycle may affect the availability of freshwater resources in the destination, which is among the basic needs of tourists; reduced snowfall directly affects the mountain and ski tourism. Many tourist activities (skiing, swimming, wildlife, tourism based on nature) require specific weather conditions. A small increase in winter temperatures, for example, will eliminate ski center on the lower slopes of the Alps. The reaction of tourists to climate change can be a negative impression about the attractiveness of the destination (for example, dead coral, scarcity of species, habitat loss).

## **Advantages of Serbian entry on issuance market in the development of tourism potentials**

The necessity of the ratification of the document and its implementation is quite obvious. The Republic of Serbia is a member of the Kyoto Protocol since 17 January 2008. This applies in particular to the tendencies that are associated with the negotiations on the future direction of the international community in the field of climate change and assuming responsibilities that are (not) in accordance with the possibilities of the economy and society (Todic, Grbic, 2014). Increasing energy efficiency by using international emissions market in one country can result in: attracting

new technologies, encouraging innovation in the economy, improving competitiveness and encouraging long-term economic growth. In this way, global GHG emissions market represents a real opportunity for Serbia to improve its energy efficiency (Avlijas, 2007). This would ensure not only the reduction of emissions that pollute the environment or cause climate changes, but also the economic incentive for the introduction of new energy-efficient technologies and the use of renewable energy resources. In accordance with the foregoing, it can be concluded that in the global emissions market, Serbia could convert its lack of energy efficiency into a comparative advantage. What is certainly more important is that the implementation of activities in this area in the way they are implemented in the EU would enable Serbia, with some reasonable and cost-effective investment, to create new jobs and new areas of work, but also the competitiveness of national companies in the EU and international market. In other words, only the fulfillment of the basic requirements of the EU package, primarily in terms of increasing the use of renewable energy and energy efficiency, together with the involvement in the emissions trading system, can provide Serbia with the placement of domestic products in the EU market and thus the survival and positive local business operations of domestic companies (Bozanic, 2012). That is certainly the way forward for Serbia towards sustainable tourism.

## Conclusion

The very essence of the idea of formation of CO<sub>2</sub> emissions market had noble intentions relating to environmental protection. Many problems in the world emerging and disappearing from year to year, have been diverting attention from the issues that are crucial to human survival (climate change caused by anthropogenic influences). The CO<sub>2</sub> market along with other mechanisms of economic and market regulation will inevitably become a decisive factor of environmental protection in a market economy. Taking into account the harmful gases emissions in Serbia, by joining the CO<sub>2</sub> market Serbia will gain comparative advantage for two different reasons. On one hand, Serbia will directly benefit from the introduction of limits in harmful gases emissions through environmental protection, and on the other hand, it will generate additional public revenues. The only problem occurs due to the additional fiscal burden that will fall on the private sector, which has not been in the best position. But the global CO<sub>2</sub> market represents a rare opportunity for Serbia to be actively involved in sustainable development, increase energy efficiency and make significant steps in further economic expansion.

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## UTILIZATION OF AN AGRICULTURAL LAND AS A BASIC CAPACITY FOR CORN AND WHEAT PRODUCTION IN SERBIA AND EX-YU COUNTRIES<sup>4</sup>

### Abstract

*Analysis of collected data from 2011, in structure of used agricultural land in Serbia shows that dominated plough land and gardens and meadows and pastures, until in smaller percentage are orchards and vineyards. Almost the same relation is noticed in other republics of former Yugoslavia (meadow and pastures are the most prevalent view of using the agricultural land in Slovenia, Macedonia, B&H and Montenegro). Share of area under wheat notice smaller oscillation in all republics in the period 2008-2010, until yield per hectare is equalized for the same observed period. Share of area under corn in correlation with sown areas, for the period 2008-2012 is almost equalized for all republics. The average yield of corn per hectare records declining trend from 2008-2012, and it shows that by production Serbia is behind Slovenia and Croatia. Also, it was stated that world production of cereals grow in 2012 and in 2013, contributed by corn and wheat production in China, North America, European countries and former Soviet Union. Analysis of used land capacities is emphasized importance of land as a limited factor in production and base on that has given recommendation for alleviating problems in agriculture and food production. Conclusions are given based on calculation of percentages and their mutual comparisons for every country included in the research.*

**Key words:** *agricultural area, average yield per an area unit, corn, wheat, Serbia, ex-Yu countries.*

**JEL classification:** Q10, Q19, P50

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# КОРИШЋЕЊЕ ПОЉОПРИВРЕДНОГ ЗЕМЉИШТА КАО ОСНОВНОГ КАПАЦИТЕТА ЗА ПРОИЗВОДЊУ КУКУРУЗА И ПШЕНИЦЕ У СРБИЈИ И ЗЕМЉАМА БИВШЕ ЈУГОСЛАВИЈЕ

## Апстракт

*Анализом прикупљених података за 2011. годину у структури коришћеног пољопривредног земљишта у Србији доминирају оранице и баште и ливаде и пашињаци, док се у мањем проценту налазе воћњаци и виногради. Готово исти однос забележен је и у осталим републикама бивше Југославије (ливаде и пашињаци су заступљенији види коришћења пољопривредног земљишта у Словенији, Македонији, БиХ и Црној Гори). Учишће површина под пшеницом бележи мање осцилације у свим републикама у периоду 2008-2012 година, док је принос по хектару за исти посматрани период готово уједначен. Учишће површина под кукурузом у односу на засејане површине за период 2008-2012. године је готово уједначена у свим републикама. Просечан принос кукуруза по хектару тренд опадања од 2008-2012 године и показује да се по производњи Србија налази иза Словеније и Хрватске. Такође је наведено да је производња житарица у свету повећана у 2012 и 2013. години, чему је допринео род кукуруза и пшенице у Кини, Северној Америци, европским земљама и земљама бившег СССР-а. Анализом коришћених земљишних капацитета наглашен је значај земљишта као лимитирајућег фактора у производњи и дате су препоруке за ублажавање проблема у пољопривреди и производњи хране. Закључци су дати базирано на калкулацију процената и њихово међусобно поређење за сваку државу која је укључена у истраживање.*

**Кључне речи:** пољопривредно земљиште, просечни принос по јединици површине, пшеница, кукуруз, Србија, земље бивше Југославије

## Introduction

Agricultural land is the greatest natural resource and the most important element of agricultural activities. From the economic point of view, it is a necessary condition for realization of production process in agriculture. While researching the capacities in agriculture, as well as the yield evaluation, the area of agricultural land represents a starting point (Subić *et al*, 2005.) Almost all indicators in agriculture analysis take into consideration the area of agricultural land, which are inevitable for perceiving the structure, relative share of some land categories in the total, as well as the analysis of sowed areas, when calculating yield etc.

Less for analytical and more for information purposes uses the comparison of total agricultural land with the total area of the state, resulting in a relative share, i.e. which percentage of land area is agricultural land. This ascertainment shows in which content the state is oriented to agricultural production.

In regard to the total area of Serbia, as well as in comparison with the other ex-Yu countries, the highest share has agricultural land. The percentage of agricultural land

share in Serbia in regard to the state area is 57.6%, in Croatia 23.4%, in Slovenia 27.8%, Macedonia 43.5%, in B&H 22.3% and in Montenegro 37.3%. Such high percentage of share in Montenegro is due to the fact that meadows and pastures, which mostly do not use, prevail in the land structure.

According to the latest census in 2012, the total area of used agricultural land in Serbia amounts 3,355.859 ha, of which family husbandries use around 84% and the rest 16% - companies and cooperatives. In relation with total agricultural area, the total number of family husbandries in Serbia uses 5.3 hectares of agricultural land. However, of utilized agricultural area (2,816.424 ha), used by 628,555 family husbandries, in average they use 4.5 ha of agricultural land. The average of arable land in Montenegro is 6.3 ha, in Croatia 5.6 ha and Slovenia 6.5 ha per a husbandry, while the average in the European Union is 17.9 hectares.

According to *Statistical Yearbook of Serbia (2012)* in accordance to the analysis of agricultural land in five regions in Serbia, in Vojvodina uses 1,747 thousand hectares or 34.6% of totally used agricultural land in Serbia. Although the largest number of agricultural husbandries is in the region of Sumadija and West Serbia 262,531, they use only 31.4%, the region of South and East Serbia uses 29.8% and the smallest area of totally utilized agricultural land uses the Belgrade region (4.2%).

The biggest area of agricultural land is used for cereals production (wheat, rye, oats, maize, millet and broomcorn), which occupy around 63% of the total sown areas. Of all particularized cereals, maize is the most represented crop with over 1.2 million sown hectares, in the second place is wheat with around half a million hectares. Due to large sown areas, cereals are among sectors with the highest value of primary production of around a milliard euro per a year, which additionally increases by further processing (Serbian National Program of Agriculture 2009-2011).

According to the report of the United Nations for Food and Agriculture, FAO (February 2013), production of cereals in 2012 in the world was increased for 20 million tons in regard to data in December, but it was still 2% lower production than in the year 2011. Good yield of maize in China, North America, European countries and ex-SSSR countries affected the most total increase.

The harvested area of all crops in the world in the past 20 years has ranged from 825 to 887 million hectares, while wheat has produced on areas which varied from 209 to 232 million hectares, which has been approximately 26% of total harvested areas. In our country, the share of areas under wheat is significantly less and ranges under 20%, which is not favorable, from the aspect of properly used land.

At the European level, Serbia represents a significant producer of cereals and also the biggest regional producer, regarding the sown areas under maize is on the sixth place in Europe and regarding wheat on the twelfth place. Regarding the maize production Serbia is in the 15<sup>th</sup> place in the world.

## Material and method of work

The research in the paper comprises the analysis of available land capacities according to a method of use, production parameters: area, total production and yields of more important crop products, in this case of wheat and maize. By the analysis of statistical data for Serbia and the ex-Yu countries, there the analysis of land resources structure will be made,

according to a method of use of agricultural land, with a special reference to the structure and the method of use of plough land. In regard to a fact that in the structure of plough land dominate cereals, there the percentage data on areas, size of production and yields of wheat and maize in Serbia were presented, which were compared with the countries of ex-Yugoslavia. The data were arranged in tables, where a five-year data series was enclosed, started from 2008 to 2012, as well as the comparison of data with those in the year 2013, for the purpose of determination of the basic economic indicators of wheat and maize production performance.

For the statistical calculation of percentages and their mutual comparisons were used data from the statistical yearbooks for all mentioned countries, as well as data from the United Nations Organization for Food and Agriculture (FAO), professional foreign and national literature.

### Structure of agricultural land in serbia and ex-yu countries

In accordance to the authors Kljajić, Arsić and Mijajlović (*Tranzicija, 2012*), by categories of use, in structure of agricultural land is evidently high share of crop acreages in Serbia (83%). Observed in average for the period 2000-2009; 65.5% is plough land, 4.8% orchards, 1.4% vineyards, 12.0% meadows and 16.3% pastures of the total area of arable land which is on average 5,086.000 ha.

In the paper was presented the structure of agricultural land in Serbia and the ex-Yugoslav republics, where is going to be perceived a difference in the structure of agricultural land use and the percentage share per categories in the total agricultural land. Considering that the structure of agricultural land changes slowly, data for just one year are sufficient to recognize the most important relations. The year 2011, shown in the table 1, was used for this purpose in processing of statistical data.

Table 1. *Land structure in the year 2011 and the percentage share of categories in the total agricultural land*  
000 ha

	Serbia	Croatia	Slovenia	Macedonia	B&H	Montenegro
Agricultural land, in total	5052	1326	4581	1120	1141	515
Plough land and gardens	3294	892	168	415	390	45
Share %	<b>65.1</b>	<b>67.3</b>	<b>36.7</b>	<b>37.1</b>	<b>34.2</b>	<b>8.7</b>
Orchards	240	32	26	14	44	12
Share %	<b>4.7</b>	<b>2.4</b>	<b>5.8</b>	<b>1.2</b>	<b>3.8</b>	<b>2.3</b>
Vineyards	56	32	16	21	5	4
Share %	<b>1.1</b>	<b>2.4</b>	<b>3.6</b>	<b>2.0</b>	<b>0.4</b>	<b>0.8</b>
Meadows and pastures	1466	346	2626	669	699	450
Share %	<b>29.1</b>	<b>26.1</b>	<b>57.3</b>	<b>59.7</b>	<b>61.5</b>	<b>87.4</b>
Other	-	<b>1.8</b>	<b>3.4</b>	-	-	0.2

Source: SORS (2012) *Statistical Yearbook of Serbia 2012*; CBS (2013): *Statistical Yearbook of Republic of Croatia 2013*; SORS (2013): *Statistical Yearbook of the Republic of Slovenia 2013*; SSO (2014): *Statistical Yearbook of Republic of Macedonia, 2014*; Institute for Statistics B&H (2012): *FB&H in figures 2012*; Montenegro Statistical Office (MONSTAT) (2012): *Statistical Yearbook 2011*.

In the table 1 we can see that more than a half of agricultural land in Serbia is plough land and gardens, which point out to a high share of areas which can be used for intensive production of different crops. Besides the areas under plough land and gardens Croatia has the approximate share of other forms of agricultural land in the total one, as well as Serbia has. The conclusion is that Serbia and Croatia have a similar structure of agricultural land. Unlike Serbia and Croatia, which are characterized by a high share of plough land and gardens, Bosnia and Herzegovina, Macedonia and Slovenia are characterized by a high share of areas under meadows and pastures. The highest share of meadows and pastures has Montenegro, 87.4%. Due to poor configuration of the terrain and poor quality of soil, the land in all these countries is characterized by high share of meadows and pastures. Those are predominantly hilly terrains, as well as mountainous terrains which have an effect on a fact that major part in the total agricultural land makes the areas under meadows and pastures which cannot be used for other purposes, i.e. the conversion to arable land (especially meadows).

In Serbia the percentage in the total agricultural land under plough land amounts 65.1%. Regarding plough land use (3,294 thousand hectares) the percentage of totally sown areas (3,067 thousand hectares) in Serbia is 93.1%, of which the largest areas are under cereals (62.3%), industrial crops (14%), vegetable crops (8.9%) and forage crops (14.8%). However, there is a part of uncultivated arable land and fallows 7% (2011). According to calculation in the year 2012 in Serbia were 3,282 thousand hectares under plough land and gardens, therefore their share in the total used agricultural land amounts 65.0% at the state level. Of the totally sown arable land (3,060 thousand hectares) which is 93.2%, the largest sown areas are under cereals with share of 62.7%. Comparing the years 2011 and 2012, there is decrease of areas under plough land, as well as total sown areas, but areas under cereals increase for 0.4%.

In Croatia in the year 2011, of the total used agricultural area, areas under plough land amount 67.3%, cereals 64.5%, industrial crops 14.3%, forage crops 14.5%, in total 93.3% of sown plough land and the rest (6.7%) are sown crops in arable land. There is an increase of arable land in regard to the previous year for 1.2% in 2012, so it is 67.9% in the totally used agricultural area, and therefore increased also areas under cereals, 67.7% of arable land (CBS (2013): Statistical Yearbook of Republic of Croatia 2013).

As far as Slovenia in the year 2011 arable land occupies around 36.7% of the total agricultural land, in the structure of sown areas cereals are 55.8%, industrial crops 7.3%, forage crops 31.5%, which is in total 94.6% and the rest (5.4%) are others sown areas. The calculation for 2012 showed that there was increase of totally sown areas for 4.7%. However, although there is increase of areas under plough land for 1.7%, their share in totally sown areas decreases to 35.8%, but the percentage in the structure of sown areas under cereals increases to 57.3% within the arable land (SORS (2013): Statistical Yearbook of the Republic of Slovenia 2013).

In Macedonia in 2011 arable land had occupied 45.6% of the total agricultural area, while plough land and gardens had occupied 81.2% of the total arable land. Regarding plough land, cereals occupy 39.3% of area (within totally sown areas cereals occupy 58.8%), industrial crops 6.7%, vegetable 12.3% and crops 8.4%, while 33.3% are nursery beds, fallows and uncultivated fields. According to statistical data of the Republic of Macedonia (Statistical Yearbook of the Republic of Macedonia, 2014) the calculation for the years 2012 and 2013 was showed that there was decrease of arable land for

around 1.0%. Nevertheless, in 2013 there is increase of sown areas for 1.4% in regard to 2011. As for the percentage share in totally sown areas for the year 2013, cereals occupy 59.8%, which means that there is increase in regard to the previous two years.

In 2011, Bosnia and Herzegovina had 61% of crop acreage in the total agricultural area, of which 56% are plough land, sown areas within the plough land amounts 50.2%, of which the largest area occupy cereals 43%, industrial crops 1.0%, vegetable crops 22.4% and forage crops 33.6%. Other crops, fallows and uncultivated fields occupy the area of 49.7%. Considering that crop acreage in the year 2012 had increased for 3.3% in regard to the previous year, the share of plough land in the total crop acreage had amounted 55.1%. Within arable fields cereals occupy 21.7% and in total sown areas their share amounts 44.1%, which means that there is increase of sown areas under cereals (SSO (2014): Statistical Yearbook of Republic of Macedonia).

The total agricultural area in Montenegro occupies 515,740 ha, of which plough land and gardens occupy 24.2% of all crop acreage, while the total sown area within plough land is 70.3%, of which cereals are 16.1%, industrial crops 0.4%, vegetable crops 58.7% and forage crops 24.8%. Fallows and uncultivated fields occupy 29.7%. The calculation for the year 2012 was shown that the share of plough land in crop acreage had remained unchanged in regard to the previous year. However, although the share of total sown area in crop acreage has increased to 71.1% the share of sown cereals has decreased to 15.7% (Montenegro Statistical Office (MONSTAT) (2012): Statistical Yearbook 2011.).

## Wheat production

Wheat is one of the very important agricultural products due to its multiple uses. It uses for production of flour, as very important product for baking and food industry, as well as for the development of livestock production. The price of flour depends directly on the price of wheat, and thereby also of many final products, primarily bread as a basic food. In those years when yields are bad, i.e. when the total produced amount is under the acceptable one, the price of wheat increases which reflects to the above mentioned products. It is very important role of the state which should intervene in those years with poor yields, from the stock reserves, which form in a time when yields are good. The role of the state is also to have an effect on size of production by its measures of agrarian policy, in order to provide uniformly and stable supply of the market, as well as to have a positive effect on a phenomenon of more significant decrease of production, as it is the case in our country (SEEDEV team, 2012)

In Serbia, on approximately 500 thousand hectares produces annually around 2 million tons of wheat. The largest share in Serbia of areas under wheat for the year 2012 had the region of Vojvodina (49.3%), where produces around a million ton of wheat on the area of 237 thousand hectares. In the year 2013 the percentage share for the region of Vojvodina was amounted 52.2% of sown areas under wheat in regard to total sown areas in Serbia. Together with the Belgrade region share (4.9%), Serbia-North occupies sown area of 57%. Serbia-South occupies 43%, where the region of South and East Serbia has the percentage share of sown area under wheat of 25.2% and the region of Šumadija and West Serbia 17.8%.

At the beginning would be useful to perceive the share of areas under wheat in regard to the total sown areas. Except for Serbia also data for the ex-Yu countries will be presented, which will be compared to.

According to the table 2 we can notice that, when it comes to the ex-Yu countries, Montenegro has the lowest share of areas under wheat in regard to total sown areas. This percentage is a bit higher than in Bosnia and Herzegovina in comparison to Montenegro, but much lower in comparison to Croatia, Slovenia and Serbia, where areas under wheat occupy almost one fifth of the total sown areas. These relations are only regarding the percentage share and they show the percentage of sown areas used for wheat sowing. In that way, we can see production orientation of producers and the state regarding some specific agricultural products production. Factors which affect this are numerous. That is to say, crop acreage can be used for sowing of numerous crops (maize, oats, barley, etc.) and choice, i.e. orientation of producers will depend on conditions in which do business (purchasing price, subsidy, price of seed and fertilizers).

Table 2 *Share of areas under wheat in regard to total sown areas in ha and share in % (000 ha)*

Countries	Years	2008	2009	2010	2011	2012
Serbia	Wheat-sown area	488	568	493	494	481
	Total sown area	3099	3089	3066	3067	3060
	Share in%	<b>15.7</b>	<b>18.4</b>	<b>16.1</b>	<b>16.1</b>	<b>15.7</b>
Croatia	Wheat-sown area	156 536	180 376	168 507	149 797	186 949
	Total sown area	855416	863023	899 594	892221	903 508
	Share in%	<b>18.3</b>	<b>20.9</b>	<b>18.7</b>	<b>16.8</b>	<b>20.7</b>
Slovenia	Wheat-sown areas	35413	34534	31946	29665	34586
	Total sown area	180303	175189	170144	168744	171668
	Share in%	<b>19.6</b>	<b>19.7</b>	<b>18.7</b>	<b>17.6</b>	<b>20.1</b>
Macedonia	Wheat-sown areas	86 890	88 256	79 946	78 588	79 750
	Total sown area	424	420	415	415	414
	Share in%	<b>20.5</b>	<b>21.0</b>	<b>19.2</b>	<b>19.0</b>	<b>19.2</b>
B&H	Wheat-sown areas	19 604	19 011	17 282	17 836	18 866
	Total sown area	198	192	189	196	195
	Share in%	<b>10.0</b>	<b>10.0</b>	<b>9.1</b>	<b>9.1</b>	<b>9.6</b>
Montenegro	Wheat-sown areas	826	846	734	756	773
	Total sown area	31317	31 886	31 025	32 149	32 475
	Share in%	<b>2.6</b>	<b>2.6</b>	<b>2.3</b>	<b>2.3</b>	<b>2.4</b>

Source: Calculations based on data from SORS (2012) *Statistical Yearbook of Serbia 2012*; CBS (2013): *Statistical Yearbook of Republic of Croatia 2013*; SORS (2013): *Statistical Yearbook of the Republic of Slovenia 2013*; SSO (2014): *Statistical Yearbook of Republic of Macedonia, 2014*; Institute for Statistics B&H (2012): *FBiH in figures 2012*; Montenegro Statistical Office (MONSTAT) (2012): *Statistical Yearbook 2011*.

The previous table 2 was also helpful in perceiving the changes in this share for the period 2008-2012. We can notice that in Serbia the percentage of this share has constantly decreasing and in the year 2012 it had achieved the level from the year 2008 (15.7%), which meant that there were less areas under wheat in comparison to the total sown areas. In the year 2012 the production of 1.910,914 tons of wheat was realized on



481 thousand hectares, which means that production of wheat is for 8.0% lower than the one realized in the year 2011. However, in 2013 the wheat production had increased to 17.5% in regard to the total sown areas under wheat, wherefore the production of wheat had increased for 40.8% in regard to the year 2012 and yield per a hectare had amounted 4.8 tons. In Bosnia and Herzegovina this percentage is very stable, unlike Montenegro where it records a slight decline. In Croatia, this share records small oscillations, but in 2012 it almost was achieved the level from the year 2009 (20.9%) to 20.7%, while there was increased sown area under wheat for 24.8% in regard to the previous year 2011. Slovenia had also oscillations in these years, but in 2012 was present increase; it had achieved the share of 20.1% or for 16.6% more sown areas in regard to the previous year 2011. As for Macedonia, there was a decrease in share of sown areas under wheat. In the year 2012 the share was for 8.2% lower than in the year 2008 and in 2009 for 9.7%, but Macedonia was nevertheless in the third place behind Croatia and Slovenia regarding the percentage share of sown areas under wheat in the last observed year 2012, because there was an increase of sown areas for 1.5% in regard to the previous year 2011.

Besides the sown areas, which represent the first factor to affect the quantity of wheat that is going to be harvested during the year, yield per a hectare is maybe even more important factor. The yield can be defined as the quantity of wheat that has been harvested, expressed in kilograms or tons per one hectare of sown area. Data on crop yield are so called a net granary yield of normal humidity, i.e. the yield after deduction of losses which appear in ripening, harvesting, transporting or threshing season.

Many factors have an effect on the yield, such as: soil quality, seed quality, quantity of fertilizers, method of soil cultivation, etc. Very important factor, besides those mentioned ones, are also climatic conditions. That is to say, it is very important what were the weather conditions, if there were enough rainfalls, what was the winter like, if there was bad weather (natural disasters), as hail, etc. All cited factors determine significantly the quantity of wheat which is going to be harvested. In the following table 3 presents data on yield per a hectare in Serbia and the ex-Yu countries.

Table 3. *Average yield of wheat per a hectare in tons for the period 2008-2012*

Year	Serbia	Croatia	Slovenia	Macedonia	B&H	Montenegro
2008	4.3	5.5	4.5	3.5	3.8	3.4
2009	3.6	5.2	3.9	2.6	3.9	3.6
2010	3.4	4.0	4.8	3.0	2.9	3.3
2011	4.2	5.2	5.2	3.3	3.8	3.2
2012	4.0	5.3	5.4	3.0	3.6	3.2
<i>Average</i>	3.9	5.0	4.7	3.0	3.6	3.3

*Source: SORS (2012) Statistical Yearbook of Serbia 2012; CBS (2013): Statistical Yearbook of Republic of Croatia 2013; SORS (2013): Statistical Yearbook of the Republic of Slovenia 2013; SSO (2014): Statistical Yearbook of Republic of Macedonia, 2014; Institute for Statistics B&H (2012): FBiH in figures 2012; Montenegro Statistical Office (MONSTAT) (2012): Statistical Yearbook 2011.*

In the table 3 were given data for five years, which is sufficiently long period to eliminate differences in yield, occurred due to influences of different weather conditions.

Considering that each year the ratio in yield is almost the same, there was calculated the yield for that period, owing to easier comparison. According to the presented average yield for five years, the highest yield per a hectare has Croatia and follows Slovenia. In comparison with them, Serbia lags behind significantly, but it has a higher yield in regard to Bosnia and Herzegovina, Montenegro and Macedonia. Reasons that can lead to differences in yield are numerous. Owing to similar soil configuration and climatic conditions, the greatest impact to the yield has the quantity of fertilizers and the method of soil cultivation.

Since the yield per a hectare in that period was rather homogenous, this means that totally produced quantity of wheat reduces constantly. In case that needs for wheat stay at the same level, and the production decreases, it will first of all decrease export and then also forming a higher price of this product on the market, which further affects the increase of prices of other products.

Wheat production in the world in 2008/2009 had recorded a top production of 682.7 million tons on the area of 225.0 million hectares, which was the second largest yield in the world. However, in 2009/2010 the production of wheat was decreased for 5.3 million tons (677.4 million tons) in regard to the previous top production of wheat. The wheat production was decreased in USA (from 68.0 to 60.3 million tons), Canada (from 28.6 to 26.5 million tons), Russia (from 63.4 to 61.5 million tons) and Ukraine (from 25.3 to 21.1 million tons) and was increased in China, India, Australia and Kazakhstan. Within the European Union the biggest producer of wheat is France with annual production of over 36 million tons, than follow Germany with 25 million tons, Great Britain with 15 million tons, Poland 9 million tons, Romania 6 million tons, and Denmark and Hungary with over 5 million tons.

## Maize production

The areas favourable for growing maize in Serbia are plough land in lowland areas (around 70%) and 30% in highland and mountain areas; in our conditions, production of maize is of great significance. Maize is a crop which is the most important for livestock feeding. It uses in all branches of livestock in specific phases of livestock feeding. In Serbia and the other ex-Yu countries too, orientation to maize production has always been very represented in agricultural cooperatives, as well as the individual producers. Individual farmers decide in most of the cases for maize or wheat sowing, while other crops (oats, barley, rye, sunflower, etc.) are less represented. With over 1.2 million sown hectares in Serbia maize has been the most represented crop in production structure, while it participates with 42.1% in total sown areas under cereals. Significant domestic and foreign demand for maize is one of the reasons for such large sown areas. Besides, it also affects development of market chains and safe sale. Availability of mechanization and labor, poor investments for storing on their own farms, favorable climatic conditions for this production, as well as the fact that it belongs to a group of crops which contribution in forming the reimbursement margin of a husbandry is higher than its share in optimal structure of sowing (Todorović and Muncan, 2009).

When it comes to areas under maize, the share is pretty constant, unlike wheat where there are significant oscillations. Areas under maize have been a homogenous year

in year out; there were not significant aberrations in any of the years. In the observed period from 2008 to 2012 we cannot see more significant changes, in the whole period the share of areas under maize was homogeneous, with negligible oscillations.

In this case, more interesting data than the change of share is a size of that share in some countries. It is interesting that almost a third of sown areas in Croatia are the areas under maize. It follows that Croatian producers are very much oriented toward maize production. In Slovenia the share of these areas is also high, but significantly lower in comparison to areas in Croatia. The same is with areas in Bosnia and Herzegovina, where the areas under maize are twice as much as the areas under wheat. Serbia, for example, has a significantly higher share of these areas (42.1%) in comparison to all previously mentioned countries in the last observed year (Table 4).

Table 4 *Share of areas under maize in regard to total sown areas (in 000 ha)*

Countries	Years	2008	2009	2010	2011	2012
Serbia	Maize-sown area	1277	1211	1235	1262	<b>1288</b>
	Total sown area	3099131	3089	3066	3067	3060
	Share in%	<b>41.2</b>	<b>39.2</b>	<b>40.3</b>	<b>41.1</b>	42.1
Croatia	Maize-sown area	314062	29691	29676	29676	299161
	Total sown area	855416	863023	897416	892221	903508
	Share in%	<b>36.7</b>	<b>34.4</b>	<b>33.1</b>	<b>33.1</b>	<b>33.1</b>
Slovenia	Maize-sown area	43698	38611	36433	40185	39166
	Total sown area	180303	175189	170149	168744	171668
	Share in%	<b>24.2</b>	<b>22.0</b>	<b>21.4</b>	<b>23.8</b>	<b>22.8</b>
Macedonia	Maize-sown area	31 582	32 737	28 644	29 390	29 198
	Total sown area	(286)	(293)	(277)	(277)	(276)
	Učešće u % Share in%	<b>(11.0)</b>	<b>(11.2)</b>	<b>(10.3)</b>	<b>(10.6)</b>	<b>(10.6)</b>
B & H	Maize-sown area	50023	48685	46714	48620	48558
	Total sown area	198056	19200	189164	196925	196799
	Share in%	<b>25.2</b>	<b>25.3</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0/24.6</b>
Montenegro	Maize-sown area	2712	2664	2734	2798	2798
	Total sown area	31.317	31.886	31.025	32.149	32.475
	Share in%	<b>8.7</b>	<b>8.4</b>	<b>8.8</b>	<b>8.7</b>	8.6

Source: Calculation of authors according to data from SORS (2012) *Statistical Yearbook of Serbia 2012*; CBS (2013): *Statistical Yearbook of Republic of Croatia 2013*; SORS (2013): *Statistical Yearbook of the Republic of Slovenia 2013*; SSO (2014): *Statistical Yearbook of Republic of Macedonia, 2014*; Institute for Statistics B&H (2012): *FBiH in figures 2012*; Montenegro Statistical Office (MONSTAT) (2013): *Statistical Yearbook 2012*.

The areas sown with maize in the last observed year (2012) in Serbia are for 2% largest than in the past year, however, the production of maize was for 45.5% lower than in the year 2011, so the yield per a hectare was also lower and it was amounted around 3.0 t/ha. According to the SO RS data for the year 2013 we come to the results which point out to decrease of share of areas sown with maize for 7.3% in regard to the previous year. In regard to total sown areas of 3,054 thousand hectares, the share of sown areas under maize was 39.1%, or close to the average in 2009. Within the sown areas under

cereals the share of maize is 62.2% in the year 2013. Around 800 million tons of maize produce in the world, while Serbia takes 10<sup>th</sup> place in the world regarding maize production, and in Europe it is in sixth or seventh place.

Table 5. *Average yield of maize per a hectare in tons for the period 2008-2012*

Year	Serbia	Croatia	Slovenia	Macedonia	B&H	Montenegro
2008	4.8	8.0	7.3	4.0	4.6	3.6
2009	5.3	7.4	7.8	4.7	4.9	3.8
2010	5.9	7.0	8.5	4.5	4.4	3.8
2011	5.1	5.7	8.7	4.3	4.2	4.2
2012	3.0	4.3	7.1	4.0	3.0	3.2
<i>Average</i>	4.82	6.48	7.88	4.3	4.2	3.7

*Source: SORS (2012) Statistical Yearbook of Serbia 2012; CBS (2013): Statistical Yearbook of Republic of Croatia 2013; SORS (2013): Statistical Yearbook of the Republic of Slovenia 2013; SSO (2014): Statistical Yearbook of Republic of Macedonia, 2014; Institute for Statistics B&H (2012): FBiH in figures 2012; Montenegro Statistical Office (MONSTAT) (2012): Statistical Yearbook 2011.*

According to the calculation of the average yield of maize per a hectare (Table 5) for the observed period (2008-2012) we can notice that Slovenia is on the first place with round 7.9 t/ha, although there are specific oscillations in hectares of sown areas, but yields are higher. The second one by the yield average is Croatia which has around 6.5 t/ha of maize. In the year 2013, on 290,000 hectares, was produced 1,914.000 tons of maize in Croatia, which is 47% more than in the previous year, which show data of Croatian Bureau of Statistics on areas and production of cereals and other crops. *According to the same source* the realized average production of maize per a hectare in 2013 was amounted 6.6 tons, which was much higher yield than in 2012, when it was amounted 4.3 t/ha, although there was for 3% less sown areas under maize. Serbia is in the third place (4.8 t/ha) regarding the average yield of maize for the observed period. In the year 2010 maize in Serbia had yielded a bumper crop with over seven million tons of yield (7,207.191) on 1.23 million hectares, when the yield was highest, 5.9 t/ha (SORS, 2011). If we observe by the regions in regard to the Republic of Serbia the share of sown areas under maize (2013) is the largest in the region Serbia-North with 62%. Here belong the Belgrade region with 4.5% (with a yield of 4.1 t/ha) and the region of Vojvodina with the largest share of 57.5%, which has the largest share of 5.8 t/h of maize. Then follows Serbia-South with the share of 38%, where the regions of Sumadija and West Serbia participate with 20.7% and the yield per a sown area of 4.1 t/ha and the region of South and East Serbia which takes part with 17.3% and the yield of 3.4 t/ha.

Macedonia with 4.3 t/ha and Bosnia and Herzegovina with 4.2 t/ha have approximately the same average yield of maize per a hectare in the observed period. Montenegro has the lowest average and it amounts 3.7 t/ha (table 5). That is why they are the most important buyers of maize from Serbia. Most of the Serbian maize surpluses end on the European Union market, then in the surrounding countries, as Bosnia and Herzegovina, Macedonia, Montenegro and Albania, even on the markets of South Korea and Japan.

In the season 2012/2013, world stocks of maize, according to the United States Department of Agriculture, had decreased for 11% in regard to the level in 2011/2012 to

the lowest level in six-year-lasting period, primarily due to drought in the U.S.A., as well as for 2.6% less maize in the European Union. Nevertheless, the European Commission had reduced prognosis for maize yields in the European Union in the year 2012, after the great heat and little precipitation in South-East Europe in August and in the beginning of September. The projected decline in yields of 20% in the EU was a consequence of a great decline in yields in Hungary, Bulgaria, Romania and Italy.

Maize as a crop grows mostly in the United States of America. For the period 2013/2014, the International Grains Council has increased a global prognosis of maize production for three million tons to 945 million, or for 10% in regard to the period 2012/2013, regarding that there was a increase of maize production in the U.S.A. ([www.agrarije.com](http://www.agrarije.com), visited on 26<sup>th</sup> February 2015).

## Problem of agricultural production in Serbia

Besides land, as a basic factor of agricultural production, significant factor are also employees in agriculture as well as an agricultural inventory. That is to say, a good land is a precondition of high quality and productive production, but it is not the only one. By a correct cultivation the use of high quality fertilizers in sufficient quantities and by apply of modern knowledge considerably affect the yields. As for the first condition, Serbia has a high quality land. In central Serbia land can be characterized as land of medium quality, while land in Vojvodina is extremely fertile. However, when it comes to other factors, the problems appear in form of decreasing a number of employees in agriculture, poor working conditions, bad agrarian policy of the state and many other factors which have an effect on decreasing orientation of people toward agricultural production. Incomes which can be realized in other activities have been usually higher than in agriculture, and it also has an impact. Decrease of employees in agriculture has been mostly caused by a decreasing number of rural population, which have been carriers of agricultural production, and it also had affected the average age of people (over 60 years of age), as incapable to work. Decreasing a number of rural populations could not be a problem *per se* if development of agriculture is on a higher level. In countries where there is a high share of areas cultivated by big land-owners and agricultural organizations and where has been applied modern mechanization, there is a low share of employees in agriculture. Regarding that in our country dominate individual producers and households, decreasing number of employees in agriculture also means decreasing of agricultural production. As for mechanization which uses in agriculture, it decreases, especially in the last years, while mechanization is quite obsolete and therefore inefficient. Investments in mechanization are minimal, and the reason is a high price of mechanization and poor support of the state to agricultural producers in the amount of subsidies for purchasing new mechanization, on the other hand. We also know that high quality mechanization is a precondition of productive and competitive production.

It is well known that the quantity of fertilizers and active substances which use per 1 ha of arable land affect directly, as on the quality of soil (reduction of weed, increase of fertility), as well as on yields. Satisfying consumption of fertilizers and preparations per 1 ha is only present in bigger agricultural organizations, which have more financial resources. Regarding individual producers, they have lower consumption of fertilizers. In that sense, the role of the state is very important.

It means that, besides soil, the employees in agriculture, mechanization and use of fertilizers and active substances are the factors which substantially determine the quality of a product and yield, and therefore was paid attention to them. Finally, it is important to mention one factor on which cannot be influenced, and those are weather conditions. An agricultural producer has to do everything that is in his power to provide conditions for high yields, but weather conditions will judge and this is when a man is powerless.

## Conclusion

In previous presentations were mentioned the most significant characteristics of land capacities in our country and methods of their use. There can be noticed that the structure of agricultural land is constant, which is logical too, because this value is tardily variable. That is why the structure analysis wasn't done for longer time period, because there were no significant changes. Opposite to it, a comparison of the structure between the countries is much more interesting. A difference in structure among the countries could notice, and causes were discussed. Since the scope of work was limited, there was impossible to make more detailed analysis of overall agricultural land structure, but an accent was put on the structure of plough land (first of all, because they occupy the largest area). Within the plough land, there was analysed in detail the production of wheat and maize, as products with the highest share in agricultural production. There was useful to compare the share of these areas with those in the surrounding countries. Very interesting and useful were data on yields per a hectare of sown area. When yields are concerned, it is noticeable that Serbia lags behind Croatia and Slovenia. Although they have no more fertile land than Serbia has, on the contrary, those countries manage to realize higher yields. The reasons are higher investments in agriculture. High quality soil cultivation, good preparation of soil before sowing, applies of high quality fertilizers and seeds etc. leads to yield increase. Anyhow, Slovenia is well known by high subsidies for agricultural producers. Investments in modern production and good agrarian policy have affected circumstances that, e.g. yield of maize in Slovenia be almost double than in Serbia. Even more interesting data are those on maize yield in the European Union countries (Belgium 12, Germany 9.8, Austria 8.7, the Netherlands 13 tons per a hectare, etc.). Stagnation of Serbia is significant. As it was already mentioned, soil fertility is the most important factor, and Serbia has very fertile land, especially Vojvodina (“Breadbasket of Europe”). Thus, the problem lies in a proper utilization of land. The role of the state is very important here. By the agrarian policy measures, investments in agricultural production and adequate subsidizing of this production, the state can have an effect on its development and increased competitiveness. In the final part of the paper were mentioned the basic problems of this production nowadays and in that way could perceived which were the main aspects of agricultural production where should be reacted. It is evident that there must work on these problems resolution and that good agrarian policy at the state level is inevitable. Agriculture used to be one of the most significant activities in Serbia, while in that period had produced sufficient products, as for local needs, as well as for export. As it was already said, the land is maybe the most important capacity in agriculture and it is necessary to use those capacities in the best possible way. Thus, Serbia has the capacities for high quality agricultural production, but it remains to be seen whether these capacities will be used in the right way.

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## INVESTMENT RANKINGS BASED ON TECHNICAL ANALYSIS BY FUZZY MCDM IN TEHRAN STOCK EXCHANGE

### Abstract

*There are too many numbers of criteria for the investor to consider before making the final decision, including Overall Trend, Buying/Selling Pressure, Reward to Risk Ratio of a New Position and Potential entry levels for new long position, etc. When the investment strategies are evaluated from above aspects, it can be regarded as a fuzzy multi-criteria decision-making (FMCDM) problem. This research explains a fuzzy hierarchical analytic approach to determine the weighting of subjective judgments. In addition, it presents a non-additive fuzzy integral technique to evaluate technical analysts. Since investors cannot clearly estimate each considered criterion in terms of numerical values for the anticipated alternatives, fuzziness is considered applicable. Consequently, this research uses triangular fuzzy numbers to establish weights and anticipated achievement values. By ranking fuzzy weights and fuzzy synthetic performance values, we can determine the relative importance of criteria and decide the best strategies. We also apply what is called a fuzzy measure and non-additive fuzzy integral technique to evaluate aquatic investment. In addition, we demonstrate that the non-additive fuzzy integral is an effective evaluation and appears to be appropriate, especially when the criteria are not independent.*

**Key words:** *Investment Rankings, Technical Analysis, Fuzzy MCDM, Non-additive fuzzy integral.*

**JEL classification:** G11, G17, C02

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## РАНГИРАЊЕ ИНВЕСТИЦИЈА НА ОСНОВУ ТЕХНИЧКЕ АНАЛИЗЕ ПО „FUZZY MCDM“ НА ТЕХЕРАНСКОЈ БЕРЗИ

### Апстракт

*Постоји веома велики број критеријума које инвеститор треба да размотри пре доношења коначне одлуке, укључујући и Општи тренд (Overall Trend), Куповини/продајни притисак (Buying/Selling Pressure), Награда за рачио ризика нове позиције (Reward to Risk Ratio of a New Position) и Потенцијални нивои улаза за нову дугу позицију (Potential entry levels for new long position), итд. Када се инвестиционе стратегије оцењују на основу наведених аспеката, такав приступ се може сматрати „fuzzy“ мултикритеријумским одлучивањем о проблему (fuzzy multi-criteria decision-making - FMCDM). Ово истраживање објашњава „fuzzy“ хијерархијски аналитички приступ у одређивању пондера субјективног одлучивања. Поред тога, оно представља неадитивну „fuzzy“ интегралну технику за процену техничких аналитичара. Пошто инвеститори не могу јасно проценити сваки разматрани критеријум у смислу нумеричке вредности за предвиђеније алтернативе, ова техника се сматра примењивом. Сходно томе, у овом истраживању се користе троугаони „fuzzy“ бројеви за успостављање пондера и предвиђање постигнутих вредности. Рангирањем „fuzzy“ пондера и „fuzzy“ синтетичких вредности перформанси, можемо одредити релативни значај критеријума и одлучити се за најбоље стратегије. Такође примењујемо такозвану „fuzzy“ меру и неадитивну „fuzzy“ интегралну технику за процену разводњености инвестиција. Показујемо да је неадитивна „fuzzy“ интегрална техника једна ефикасна евалуација која се чини одговарајућом нарочито када су критеријуми независни.*

**Кључне речи:** рангирање инвестиција, техничка анализа, Fuzzy MCDM, неадитивни „fuzzy“ интеграл.

### Introduction

Technical analyst, who has huge market potential, has been gaining momentum in the financial market. The complexities are numerous, and overcoming these complexities to offer profitable selections is a technical analyst challenge. It is significant that the limited number of investment funds should be efficiently allocated over many stocks. The technical analysts need to evaluate the aquatic return to reduce its risk and to find the optimal combination of investing stocks out of many feasible stocks. The purpose of the technical analyst is to minimize the risk in allocating the number of investing funds to many stocks. In a real problem, because of the limit number of funds to invest in stocks, the solution of the portfolio selection problem proposed by H. Markowitz (1952) has a tendency to increase the number of stocks selected for technical analysts. In a real investment, a portfolio manager first makes a decision on how much proportion of the investment should go to the market, and then he invests the funds to which stocks.

After that, maximizing the technical analyst performance is the primary goal of technical analyst in a corporation. Usually, the technical analyst return reflects the profitability of a fund corporation for operating and improving. This research explores which criteria, including the overall trend; Buying/Selling Pressure; Reward to risk ratio of a new position and Potential entry levels for new long positions by taking as overall evaluation and adopting the financial ratios as evaluation criteria, can lead to high profitability. The profitability is evaluated by fuzzy multi-criteria decision-making (FMCDM), this information could supports analysts' decision- making.

We use trading prices and statistic data to evaluate the sub criteria. The trading price analysis, which is used to evaluate profitability, involves ratio analysis, trend analysis. The ratio analysis provides a basis for a company to compare with other companies in the same industry. The trend analysis evaluates trends in the company financial position over time. Several alternative strategies have to be considered and evaluated in terms of many different criteria consequenceing in a vast body of data that are often inaccurate or uncertain. Therefore, the purpose of this article is to improve an empirically based framework for formulating and selecting a technical analyst strategy. We propose a hierarchical Fuzzy Multi-Criteria Decision-Making (FMCDM) framework, where we combine AHP and fuzzy measure techniques in order to determine the relative weights of each criterion. The proposed strategies are then ranked using the fuzzy integral technique. To demonstrate the validity of this technique, an illustrative case is provided. The consequences explain the strategies that were adopted by this have proven to be very profitable in performance. This also proves the effectiveness of the approach proposed by this research.

In real world systems, the decision-making problems are very often uncertain or vague in a number of ways. Due to lack of information, the future state of the system might not be known completely. This type of uncertainty has long been handled appropriately by probability theory and statistics. However, in many areas of daily life, such as technical analyst, stock, debt, derivate and others, human judgment, evaluation, and decisions often employ natural language to express thinking and subjective perception. In these natural languages, the meaning of words is often vague, the meaning of a word might be well defined, but when using the word as a label for a set, the boundaries within which objects do or do not belong to the set become fuzzy or vague. Furthermore, human judgment of events may be significantly different based on individuals' subjective perceptions or personality, even using the same words. Fuzzy numbers are introduced to appropriately express linguistic variables. We will provide a clearer description of linguistic expression with fuzzy scale in a later section.

In this research, the fuzzy hierarchical analytic approach was used to determine the weights of criterias for subjective judgment, and a non-additive integral technique was utilized to evaluate the performance of investment strategies for technical analysts. Traditionally, researchers have used additive techniques to evaluate the synthetic performance of each criterion. In this article, we demonstrate that the non-additive fuzzy integral is a good means of evaluation and appears to be more appropriate, especially when the criteria are not independent situations. The conceptual investment of technical analysts is discussed in the next section, and the fuzzy hierarchical analytic approach and non-additive fuzzy integral evaluation process for multi-criteria decision-making (MCDM) problem are derived in the subsequent section. Then an illustrative example

is presented, applying the MCDM techniques for aquatic investment processors, after which we discuss and illustrate how the MCDM techniques in this research are effective. Finally, the conclusions are presented.

Technical Analysis is the forecasting of future financial price movements based on an examination of past price movements. Like weather forecasting, technical analysis does not consequence in absolute predictions about the future. Instead, technical analysis can help investors anticipate what is “likely” to happen to prices over time. Technical analysis uses a wide variety of charts that show price over time. Technical analysis is applicable to stocks, indices, commodities, futures or any tradable instrument where the price is influenced by the forces of supply and demand. Price refers to any combination of the open, high, low, or closes for a given security over a specific period. The period can be based on intraday (1-minute, 5-minutes, 10-minutes, 15-minutes, 30-minutes or hourly), daily, weekly or monthly price data and last a few hours or many years. In addition, some technical analysts include volume or open interest figures with their study of price action. At the turn of the century, the Dow Theory laid the foundations for what was later to become modern technical analysis. Dow Theory was not presented as one complete amalgamation, but rather pieced together from the writings of Charles Dow over several years. Of the many theorems put forth by Dow, three stand out:

- Price Discounts Everything,
- Price Movements Are Not Totally Random,
- “What” Is More Important than “Why”.

Ghobadi (2014) test the Profitability of Technical Analysis Indicators to Earn Abnormal Returns in International Exchange Markets from 2008 through 2013. They conclude that the positive returns according to technical analysis indicator returns and these returns is significantly more than the London Interbank Offered Rate. They observe that the Stochastic Oscillator, Relative Strength Index, Money Flow Index, Commodity Channel Index, Simple Moving Average indicators produces the best consequences, followed by the London Interbank Offered Rate.

Manzur and Chew (2002) test the performance of the moving average method and the Relative Strength Index (RSI), a common counter-trend indicator, on the Singapore STII from 1974 through 1994. They conclude that technical indicators can play a useful role in the timing of stock market entry and exits. They observe that the single moving average produces the best consequences, followed by the dual moving average and the RSI. They note that technical analysis give returns more attractive to the trading members of the stock exchange since transaction costs may tend substantially lower the gains.

Fama (1960) developed this concept into three forms of market efficiency, or the market responds to given information set. Empirical research of weak- form efficiency of the market categorized as the tests of trading strategies using historical data. These statistical tests examine the correlations between historical price changes and run testing.

Ben R Marshall and Jared M. Cahan (2006) evaluated the profitability of CRISMA technical trading system. They collect information of companies on the CRSP database in the period of January1, 1976 to December 31, 2003 including 200 days of past closing prices and 20 days of past volume. They examine both long and short CRISMA filter rules in this study and found that even the system generates some profit but not consistently.

Traditional AHP is assumed that there is no interaction between any two criteria within the same hierarchy. However, a criterion is inevitably correlated to another one with the degrees in reality. In 1974, Sugeno introduced the concept of fuzzy measure and fuzzy integral, generalizing the usual definition of a measure by replacing the usual additive property with a weak requirement, i.e. the monotonic property with respect to set inclusion. In this section, we give a brief to some notions of the theory of fuzzy measure and fuzzy integral.

## General fuzzy measure

The fuzzy measure is a measure for representing the membership degree of an object in candidate sets. It assigns a value to each crisp set in the universal set and signifies the degree of evidence or belief of that element's membership in the set. Let  $X$  be a universal set. A fuzzy measure is then defined by the following function  $g: \mathfrak{N} \rightarrow [0, 1]$

That assigns each crisp subset of  $X$  a number in the unit interval  $[0, 1]$ . The definition of function  $g$  is the power set  $\mathfrak{N}$ . When a number is assigned to a subset of  $X$ ,  $A \in \mathfrak{N}$ ,  $g(A)$ , this represents the degree of available evidence or the subject's belief that a given element in  $X$  belongs to the subset  $A$ . This particular element is most likely found in the subset assigned the highest value.

In order to quantify a fuzzy measure, function  $g$  needs to conform to several properties. Normally function  $g$  is assumed to meet the axiom of the probability theory, which is a probability theory measurement. Nevertheless, actual practice sometimes produces a consequence against the assumption. This is why the fuzzy measure should be defined by weaker axioms. The probability measure will also become a special type of fuzzy measure. The axioms of the fuzzy measures include:

- (1.)  $g(\emptyset)=0$ ,  $g(X)=1$  (boundary conditions);
- (2.)  $\forall A, B \in \mathfrak{N}$ , if  $A \subseteq B$  then  $g(A) \leq g(B)$  (monotonicity).

Once the universal set is infinite, it is required to add continuous axioms (Klir and Folger, 1998).

Certainly, the elements in question are not within the empty set but within the universal set, regardless of the number of evidence from the boundary conditions in Axiom 1.

The fuzzy measure is often defined with an even more general function:

$$g: \beta \rightarrow [0, 1]$$

where  $\beta \subset \mathfrak{N}$  so that:

1.  $\emptyset \in \beta$  and  $X \in \beta$ ;
2. if  $A \in \beta$ , then  $\bar{A} \in \beta$
3.  $\beta$  is closed under the operation of set function; i.e., if  $A \in \beta$  and  $B \in \beta$ , then  $A \cup B \in \beta$ .

The set  $\beta$  is usually called the Borel field. The triple  $(X, \beta, g)$  is called a fuzzy measure space if  $g$  is a fuzzy measure on a measurable space  $(X, \beta)$ .

It is sufficient to consider the finite set in actual practice. Let  $X$  is a finite criterion set,  $X = \{x_1, x_2, \dots, x_n\}$  and the power set  $\mathfrak{N}$  be a class of all of the subsets of  $X$ . It can be noted that  $g(\{x_i\})$  for a subset with a single element,  $x_i$  is called a fuzzy density. In the following paragraph, we use  $g_i$  to represent  $g(\{x_i\})$ .

The term “general fuzzy measure” is used to designate a fuzzy measure that is only required to satisfy the boundary condition and monotonic to differentiate the  $\lambda$ -fuzzy measure,  $F$ -additive measure, and classical probability measure.

## $\lambda$ - Fuzzy measure

The specification for general fuzzy measures requires the values of a fuzzy measure for all subsets in  $X$ . Sugeno and Terano have improved the  $\lambda$ -additive axiom (Sugeno and Terano, 1997) in order to reduce the difficulty of collecting information. Let  $(X, \beta, g)$  be a fuzzy measure space:  $\lambda \in (-1, \infty)$ . if  $A \in \beta$ ,  $B \in \beta$ ; and  $A \cap B = \phi$ , and

$$g(A \cup B) = g(A) + g(B) + \lambda g(A)g(B) \quad (1)$$

If this holds, then fuzzy measure  $g$  is  $\lambda$ -additive. This kind of fuzzy measure is named  $\lambda$  fuzzy measure, or the Sugeno measure. In this research we denote this  $\lambda$ -fuzzy measure by  $g_\lambda$  to differentiate from other fuzzy measures. Based on the axioms above, the  $\lambda$ -fuzzy measure of the finite set can be derived from fuzzy densities, as indicated in the following equation:

$$g_\lambda(\{x_1, x_2\}) = g_1 + g_2 + \lambda g_1 g_2 \quad (2)$$

where  $g_1, g_2$  represents the fuzzy density.

Let set  $X = \{x_1, x_2, \dots, x_n\}$  and the density of fuzzy measure  $g_i = g_\lambda(\{x_i\})$ , which can be formulated as follows:

$$g_\lambda(\{x_1, x_2, \dots, x_n\}) = \sum_{i=1}^n g_i + \lambda \sum_{i_1=1}^{n-1} \sum_{i_2=i_1+1}^n g_{i_1} g_{i_2} + \dots + \lambda^{n-1} g_1 g_2 \dots g_n \quad (3)$$

For an evaluation case with two criteria,  $A$  and  $B$ , there are three cases based on the above properties.

Case 1: if  $\lambda > 0$ , i.e.  $g_\lambda(A \cup B) > g_\lambda(A) + g_\lambda(B)$ , implying that  $A$  and  $B$  have a multiplicative effect.

Case 2: if  $\lambda = 0$ , i.e.  $g_\lambda(A \cup B) = g_\lambda(A) + g_\lambda(B)$ , implying that  $A$  and  $B$  have an additive effect.

Case 3: if  $\lambda < 0$ , i.e.  $g_\lambda(A \cup B) < g_\lambda(A) + g_\lambda(B)$ , implying that  $A$  and  $B$  have a substitutive effect.

The fuzzy measure is often used with the fuzzy integral for aggregating information evaluation by considering the influence of the substitutive and multiplication effect among all criteria.

## Fuzzy Integral

In a fuzzy measure space  $(X, \beta, g)$ , let  $h$  be a measurable set function defined in the fuzzy measurable space. Then the definition of the fuzzy integral of  $h$  over  $A$  with respect to  $g$  is

$$\int_A h(x)dg = \sup_{\alpha \in [0,1]} [\alpha \wedge g(A \cap H_\alpha)] \quad (4)$$

where  $H_\alpha = \{x | h(x) \geq \alpha\}$ .  $A$  is the domain of the fuzzy integral. When  $A=X$ , then  $A$  can be taken out.

Next, the fuzzy integral calculation is explained in the following. For the sake of simplification, consider a fuzzy measure  $g$  of  $(X, \mathfrak{N})$  where  $X$  is a finite set. Let  $h : x \rightarrow [0, 1]$  and assume without loss of generality that the function  $J$  is monotonically decreased with respect to  $j$ , i.e.,  $h(x_1) \geq h(x_2) \geq \dots \geq h(x_n)$ . To achieve this, the elements in  $X$  can be renumbered. With this, we then have

$$\int h(x)dg = \bigvee_{i=1}^n [f(x_i) \wedge g(x_i)] \quad (5)$$

where  $X_i = \{x_1, x_2, \dots, x_i\}$ ,  $i = 1, 2, \dots, n$ .

In practice,  $h$  is the evaluated performance on a particular criterion for the alternatives, and  $g$  represents the weight of each criterion. The fuzzy integral of  $h$  with respect to  $g$  gives the overall evaluation of the alternative. In addition, we can use the same fuzzy measure using Choquet's integral, defined as follows (Murofushi and Sugeno, 1991):

$$\int hdg = h(x_n)g(X_n) + [h(x_{n-1}) - h(x_n)]g(X_{n-1}) + \dots + [h(x_1) - h(x_2)]g(X_1) \quad (6)$$

The fuzzy integral model can be used in a nonlinear situation since it does not need to assume the independence of each criterion.

## Evaluation Model for Prioritizing the technical analysts strategy

This study utilized the PATTERN (Planning Assistance through Technical Evaluation of Relevance Number) technique (NASA, 1965, 1966; Tang, 1999; Tzeng, 1977; Tzeng and Shiau, 1987) to build up a hierarchical system for evaluating technical analysts strategies. Its analytical procedures stem from three steps: (i) aspects, (ii) issues, and (iii) strategies. In this section, we focus on scenario writings and building relevance trees. Scenario writing is based on determining the habitual domain (Yu, 1985, 1990, 1995), i.e., past problem understanding, personal experience, knowledge, and information derived from brainstorming techniques so as to determine the factors affecting the profitable selection of technical analysts capability. We consider the problems from four aspects: (1) Overall trend (2) Buying/Selling Pressure (3) Reward to risk ratio of a new position (4) Potential entry levels for new long position. In addition, the technical analysts with investment model classified as S1: Asset Allocation model;

S2: Aggressive Increase model; S3: Equity Income model; S4: Increase model; S5: Increase Income model. Based on a review of the literature, personal experience, and interviews with senior technical analysts, relevance trees are used to create hierarchical strategies for improving the optimal selection strategy of technical analysts.

Minimum risk or maximum return is usually used as the only measurement index in traditional evaluation techniques. Within a dynamic and diversified decision-making environment, this approach may neglect too much valuable information in the process. Hence, we propose a FMCDM technique to evaluate the hierarchy system for selecting strategies. In addition, the issues in the investment process are sometimes vague. When this occurs, the investment process becomes ambiguous and subjective for the investor. The evaluation is conducted in an uncertain, fuzzy situation and to what extent vague criteria are realized by research is unknown (Tang and Tzeng 1999; Chiou and Tzeng, 2002). Evaluation in an uncertain, fuzzy situation applies to the formulation of technical analysts strategies as well. We have chosen a fuzzy multiple criteria evaluation technique for selecting and prioritizing the technical analysts' strategies to optimize the real scenarios faced by manager or investors.

Bellman and Zadeh (1970) were the first to study the decision-making problem in a fuzzy environment and initiated FMCDM. In this study, we use this technique to evaluate various technical analysts' strategies and rank them by their performance. The following subsection explains the technique of FMCDM.

### Fuzzy weights for the hierarchy process

An evaluator always perceives the weight of a hierarchy subjectively. Therefore, to consider the uncertain, interactive effects coming from other criteria when calculating the weight of a specified criterion, we have used fuzzy weights of criteria.

Buckley (1985) was the first to investigate fuzzy weights and fuzzy utility for AHP techniques, extending AHP by geometric means technique to derive the fuzzy weights.

The fuzzy weights  $\tilde{w}_j$  corresponding to each criterion is as follows:

$$W_i = r^i$$

$$\tilde{w}_j = \tilde{r}_j \times (\tilde{r}_1 + \dots + \tilde{r}_m)^{-1} \quad (7)$$

Where  $\tilde{r}_i$  is the geometric mean of each row of the AHP reciprocal matrix?

$$\tilde{r}_j = (\tilde{a}_{j1} \times \dots \times \tilde{a}_{jm})^{1/m} \quad (8)$$

The evaluators were asked to make subjective judgments using linguistic variable measurement to demonstrate the criteria performance with expressions of effectiveness ranging from “very high”, “high”, “fair”, “low”, to “very low”. Each linguistic variable was indicated using a Triangular Fuzzy Number (TFN) with a range from 0 to 100. Let  $\tilde{E}_{ij}^k$  indicate the fuzzy performance value in terms of evaluator  $k$  toward strategy  $i$  under criteria  $j$  and the performance of the criteria is represented by the  $S$ , then,

$$\tilde{E}_{ij}^k = (L \tilde{E}_{ij}^k, M \tilde{E}_{ij}^k, U \tilde{E}_{ij}^k), j \in S \quad (9)$$

In this study, we used the notion of average value to consolidate the fuzzy judgment value of  $m$  evaluators, i.e.,

$$\tilde{E}_{ij}^k = (1/m) / (\tilde{E}_{ij}^1 + \tilde{E}_{ij}^2 + \dots + \tilde{E}_{ij}^m) \quad (10)$$

The sign denotes fuzzy multiplication and the sign  $\oplus$  denotes fuzzy addition.  $\tilde{E}_{ij}^k$  is the average fuzzy number from the judgment of the decision-maker. It can be represented using a triangular fuzzy number as follows:

$$\tilde{E}_{ij}^k = (L \tilde{E}_{ij}^k, M \tilde{E}_{ij}^k, U \tilde{E}_{ij}^k) \quad (11)$$

where,

$$L \tilde{E}_{ij}^k = (1/m) \square \left( \sum_{k=1}^m L \tilde{E}_{ij}^k \right)$$

$$M \tilde{E}_{ij}^k = (1/m) \square \left( \sum_{k=1}^m M \tilde{E}_{ij}^k \right)$$

$$U \tilde{E}_{ij}^k = (1/m) \square \left( \sum_{k=1}^m U \tilde{E}_{ij}^k \right)$$

The preceding end value may be solved using the technique introduced by Buckley (1985) or by Chiou and Tzeng. (2002).

## Empirical Study and Discussions

In order to demonstrate the practicality of our proposed technique of enhancing the performance of technical analysts, we conducted an empirical study based on 30 valid samples from 12 iranian technical analyst companies and 8 research institutes and universities. The majority of the respondents were portfolio analysts who are responsible for financial or general management. The technical analysts' strategy selection process is examined below.

### Evaluating the weights of issues

By using the fuzzy AHP technique, the weights of the issues and aspects were found and are illustration in Table 1.

*Table 1 The weights of issues for evaluating the technical analysts*

Aspects/issues	Local Weights	BNP of overall weight
<b>Overall trend</b>	(0.236 0.427 0.719)	0.461
Keltner Channels	(0.114 0.197 0.359)	0.233
Bollinger Bands	(0.263 0.437 0.729)	0.476
Moving Averages	(0.130 0.242 0.432)	0.268
Price Channels	(0.066 0.124 0.226)	0.139
<b>Buying/Selling Pressure</b>	<b>(0.218 0.353 0.592)</b>	0.388



Rate of Change	(0.119 0.211 0.368)	0.232
Relative Strength Index	(0.081 0.143 0.257)	0.160
Stochastic RSI	(0.039 0.062 0.110)	0.070
Vortex Indicator	(0.097 0.172 0.323)	0.197
<b>Reward to risk ratio of a new position</b>	<b>(0.090 0.143 0.244)</b>	0.159
Decision Point Rydex Ratio	(0.207 0.323 0.522)	0.351
High-Low Index	(0.087 0.129 0.218)	0.147
Volatility Index	(0.335 0.548 0.851)	0.578
<b>Potential entry levels for new long position</b>	<b>(0.049 0.076 0.133)</b>	0.086
Standard Deviation	(0.130 0.269 0.452)	0.284
Money Flow Index	(0.081 0.138 0.270)	0.163
Force Index	(0.253 0.439 0.776)	0.489
Mass Index	(0.095 0.154 0.292)	0.180

### Estimating the performance matrix

In this study, the evaluators define their individual range for the linguistic variables employed in this study based on their judgments within the range from 0-100. The fuzzy judgment values of different evaluators regarding the same evaluation criteria are averaged. In general, fuzzy addition and multiplication were used to retrieve the average fuzzy numbers for the performance values under each criterion indicated by the evaluators for technical analysts' strategy.

Table 2 The evaluation consequences of technical analysts' strategy

Technical analysts' strategy ranking	
SAW	S2 > S4 > S3 > S1
$\lambda = 1$	S2 > S4 > S3 > S1
$\lambda = 2$	S4 > S3 > S2 > S1
$\lambda = 3$	S4 > S2 > S3 > S1
$\lambda = 4$ OR MORE	S4 > S1 > S2 > S3
$\lambda$ : Number of Technical Analysis Strategies Criteria in Each Time for Trading	
Where: S1: Overall trend S2: Buying/Selling Pressure S3: Reward to risk ratio of a new position S4: Potential entry levels for new long position	

*Table 3 The synthetic performance of technical analysts' strategy*

$\lambda$	1	2	3	4 OR MORE	SAW
S1	0.380	0.520	0.290	0.298	0.372
S2	0.600	0.970	0.312	0.309	0.548
S3	0.450	0.670	0.319	0.313	0.437
S4	0.550	0.850	0.317	0.311	0.508

## Results and Conclusion

The empirical evidence in this research indicates that the weight of criteria such as the overall trend (0.372), Buying/Selling Pressure (0.548), Reward to risk ratio of a new position (0.437) and Potential entry levels for new long position (0.508). So the 'Buying/Selling Pressure' was the most significant factor to influence the performance of a technical analyst, next was the 'Potential entry levels for new long position'. Some econometric techniques are improved to simultaneously estimate the magnitudes of these strategies performance evaluation measures. The consequences illustrate that technical analysts are on average with positive security selection and overall trend ability. Therefore, the technical analysts should enhance the ability of an overall trend, the performance of technical analysts can be better. The fuzzy synthetic performance of each alternative using different  $\lambda$  is as illustrated in Table 2 and Table 3. In table 2, our empirical consequences illustrate that when  $\lambda > 1$  the consequences illustrate that S2 "Buying/Selling Pressure" was the most significant strategy. In addition, S4, "Increase model" was selected as the second most significant strategy. When  $\lambda > 2$  the consequences illustrate that S4, "Buying/Selling Pressure" was the most significant strategy regardless of the variation of  $\lambda$ . Moreover, S3, "Reward to risk ratio of a new position" was selected as the second most significant strategy. When  $\lambda > 3$ , S2 replaces S3, becoming the number 2 ranking. Nevertheless,  $\lambda > 4$  OR MORE, S1 replaces S2 and S3, becoming the number 2 ranking. We can infer that the asset allocation model more efficiency when the multiplicative effect exists. From Table 3, we know that when  $\lambda$  was bigger, the synthetic performance was bigger too. Therefore, these consequences implied that technical analysts have no multiplicative effect. Therefore, from investment model an average illustrates that the Buying/Selling Pressure has the largest maximum performance, but it also has the largest deviation in performance. In other word, the more Pressure the markets are, the more volatility of the market performance will be. However, the overall trend has the smallest expected performance. Next was Reward to risk ratio of a new position.

## Discussions and implications

The technical analyst is moving rapidly towards financial market improvement in response to increasing market demand. The traditional quantity technique does not solve the complex problems of technical analyst improvement. Therefore, what is needed is a useful and applicable strategy that addresses the issues of improving technical analysts.

This study addressed this issue in a more rational and objective fashion by using a FMCDM technique to achieve this goal.

Few studies have addressed technical analyst related strategic planning. Providing that this is a first attempt to formally model the formulation process for a technical analyst's strategy using FMCDM, we have the confidence that the analysis here is a significant theoretical contribution to the literature, and will help to establish the groundwork for future research. Even though we are dedicated to setting up the model as completely as possible, there are additional criteria and techniques that could be adopted and added in future research. In the meantime, we should also begin to investigate how to execute several strategies simultaneously in order to achieve the best performance of technical analyst under the constraint of resources. This study focuses on providing a technical analysts strategy for the holding companies, so that they may be profitable in their decision-making. Our empirical study demonstrates the validity of this technique. In this study, the technical analysts' strategy stems from four aspects: overall trend, Buying/Selling Pressure, Reward to risk ratio of a new position as well as Potential entry levels for new long positions. The related issues, evaluation criteria and strategies are defined in this research. Technical analysts have difficulty in utilizing the proper strategy. The major reasons are the uncertain and dynamic environment and numerous criteria that they are facing. Analysts are hence overwhelmed by this vague scenario and do not make proper decisions or allocate resources efficiently. The hierarchical technique guides the manager how to select the model of technical analysts in the uncertainty environment. With the help of this model, analysts can employ different experts to conduct the same proposed procedures and select the best investment alternative. The subjective judgment and risks of making wrong decisions is then minimized. In addition, this technique can be applied to solve different kinds of problems by modifying the constructs of the hierarchy trees and finding the appropriate solution.

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## WORKING FROM HOME AS ALTERNATIVE FOR ACHIEVING WORK-LIFE BALANCE

### Abstract

*In this paper, the authors are addressing the issue of family – work balance, as well as the connection between this phenomenon and working from home. The basic, initial point is that the desired balance can be achieved if the employees are provided with more flexible work schemes, one of which is having the option to perform their work from home. According to the forecasts regarding the work place of the future, employees from almost all demographic, cultural and social groups decided that the trend of the life being reduced to work only, the motto „live to work“, is obsolete. The expression „live to work“ implies the full commitment of individuals to their work, which they deem the „centre“ of their lives. Today, employees are not only employed in an organization, they have several roles which should be brought to a mutual balance. The expression „work - life balance“ which is the outline of this paper, means establishing a balance between the professional and private (family) life. There are more and more employees who do not want to feel the work pressure after work hours, especially those belonging to younger generations. The goal of this paper is to present the main future challenges of the managers worldwide, that is, motivation of employees. It is deemed that a person will stop self-sacrificing or investing their efforts just for money, but will be prepared to do so for other immaterial aspects (Gijic, Jovic, Reko, 2013). The basic methods used in this paper were analysis, synthesis and comparative method. The analysis and synthesis method, as the basic methodological means, is applied throughout the whole paper, while the comparative method is applied in order to compare the results obtained by the researchers up to this day.*

**Key words:** HR management, work e-home balance, work from home

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## РАД ОД КУЋЕ КАО АЛТЕРНАТИВА ЗА ПОСТИЗАЊЕ ПОСЛОВНО - ПОРОДИЧНОГ БАЛАНСА

### Абстракт

*Аутори се у раду баве дефинисањем проблематике породично - пословног баланса, као и повезаности овог феномена са радом од куће. Основна теза од које се полази јесте да се жељени баланс може постићи уколико се запосленима пружи флексибилније радне шеме, а као једна од њих, и могућност да свој посао обављају од куће. Према предвиђањима везаним за радно место будућности, запослени из готово свих демографских, културолошких и социолошких група определили су се да тренд по коме се живот своди само на рад мото “живи да би радио” више није актуелан. Под термином „живи да би радио“ подразумева се потпуна посвећеност појединца послу који он сматра „центром“ свог живота. Данас запослени више нису само запослени у организацији, они “играју” више улога које је потребно међусобно помирити. Термин “ворк лифе баланце“, који је окосница овог рада, представља успостављање равнотеже између пословног и приватног (породичног) живота. Све је већи број запослених, посебно када се ради о припадницима млађих генерација, који не желе да осећају притисак посла по завршетку радног времена. Циљ овог рада је да представи главне изазове руководилаца широм света у будућности, а то је мотивација запослених. Сматра се да особа више неће подносити жртву или напор само због новца колико ће на то бити спремна због других нематеријалних момената (Гијић, Јовић, Реко, 2013). Основне методе које су коришћене у овом раду су анализа и синтеза и компаративни метод. Метод анализе и синтезе, као основно методолошко средство, користи се у целом раду, док је компаративни метод коришћен у сврху поређења резултата до којих су истраживачи до данас дошли.*

**Кључне речи:** менаџмент људских ресурса, рад од куће, баланс.

### Introduction

In the modern business world, employees are finding it more difficult to adjust their work and family duties. For that reason, they become more stressed and less motivated. They often change workplace and do not come to work, which results in less productivity. It is completely logical to expect that the consequences of such behavior will have an effect on the organizations they work for and will reflect indeed on their performance. How to attract and how to keep qualified personnel are, therefore, two key issues today. A person never will bring a great sacrifice or effort for the money, but because of some other, intangible moments. Inspiration, afflatus, a higher goal and purpose do not come from money (Gijić, Jović, Reko, 2013).

Modern organizations have become aware that they practically do not exist without their employees. So, an increasing number of them are trying to find different ways of making work hours more pleasant for their employees as well as they are trying to help their employees overcome the inner conflicts that arise from their intertwined duties at work and at home. One of the alternatives is to give employees an opportunity to work from home. This

issue becomes especially significant if two undeniable facts are recognized: firstly, the time of an employee within a traditionally structured organization is a matter of the past; secondly, modern employees are increasingly opting for the motto “work in order to live”. It should be mentioned also that there is no permanent psychological contract between an organization and its employees any longer, in terms of guaranteed jobs. Therefore, employees change a lot of jobs during their professional careers in search for the one that would provide them the best prospective for achieving personal goals.

Accordingly, the authors will define and discuss the work-life balance and the issue of working from home in this paper. Their thesis is that the desired balance can be achieved if employees are offered some flexible work schemes and a possibility to work from their home. The authors have provided an overview of contemporary references which can illustrate and corroborate the above-mentioned issue.

### **Definig the term “work – life balance”**

In our modern society, characterized by a huge gap between the professional and private/family life, the issue of balance between these completely separate segments is turning into a pressing matter. Trends such as aging of the workforce on the global level, an enormous and ruthless competition, a decision made by the contemporary population to put work in the second place, have made this problem even more relevant (Friedman, Greenhaus, 2000).

There is no doubt that the twenty-first century employees have a greater need to strike a balance between their work and family life. According to some estimations related to a workplace of the future, employees within almost all demographic, cultural and social groups have reported that the motto “live in order to work” is not popular any more. Surveys also show that inability to achieve the desired balance is one of the main reasons why one leaves the workplace, i.e. resigns (SHRM, 2008).

A propos the very term ‘work-life balance’, it can be defined as a state of equilibrium between demands within an organization, on one hand, and those at home, on the other (Friedman, Greenhaus, 2000).

‘Work-from-home’ is becoming an increasingly conventional way of employment. According to SIPP the share of the population working from home has tripled in the period of 3 decades and in the period 1997-2010 there is recorded an increase of over 4 Million in home-based workers (Mateyka, Rapino, Landivar, 2012).

In such a situation, the most suitable solution to this challenge, which is not simple at all, should be found - how to play the role of a professional and family woman/man in the most successful way in terms of work and in the least harmful way in terms of family life. A large number of employees complain most frequently that they experience so-called *role conflict*, i.e. a situation when they do not fulfil their needs as individuals in either of segments in the way they want and that would satisfy them.

Although this issue became more relevant in the last couple of decades, it is important to mention that some programs existed even in the 1930s. In the 1970s, Kanter termed the “myth of separate worlds”, trying to point out that work and private life are inseparable aspects in one’s life (Kanter, 1977). However, regardless of numerous pioneer attempts, companies started introducing actual and target programs on work-life balance at the end of the 1980s and the beginning of 1990s. Many of them supported exclusively women



with children at the beginning. But, these programs are less gender-orientated today. It is a general attitude that all employees, regardless of their sex, should have a private life, family, children and homes. In addition, it is equally important to everybody to possess a dose of flexibility and control over these two separate aspects of their lives. Generally speaking, the demands any individual should address are increasing. This leads to an elevated level of stress, a decrease in productivity, physical and mental diseases and absence from work et al. The above-mentioned undesired psycho-physical effects unfortunately have become omnipresent among employees in the majority of modern organizations. Workforce under a lot of pressure because of diverse obligations and demands starts getting ill, which results in reduced productivity.

Meaning of the term ‘work-life’ balance surely cannot be defined in one way. For the purpose of better understanding it, one should take its aspects into consideration (Swift, 2002): conflicts experienced by an individual because she/he is trying to strike a balance between her/his duties at work and at home; ‘work-life balance’ from the viewpoint of the employer, i.e. the employer considers that the individual must fulfill her/his obligations at work first, regardless of the fact that the organisation, on the other hand, respects to a great extent its employee as an individual who has her/his personal life; the programs implemented by the employer in order to help the individual to harmonize her/his professional and private duties (so-called giving flexibility); the organizational culture of a company which can respect responsibilities and duties of an employee to a larger or smaller extent when her/his private life is at issue.

However, the problem of achieving balance between work and family becomes even more complex when one realizes the fact that a large number of organizations are structured today in a way to solely suite management and to achieve organizational goals. No matter that a workplace has changed a number of its characteristics in comparison to its equivalent from the previous century (including new and modern organizational forms, a possibility to work from home, etc.), it seems that employers still do not fully understand that demanding interaction between work and family. Today’s academic literature shows that more than 200 articles on this subject-matter have been published, and all of them study the same problem - how to separate work and family/private life and how to reduce tension which, due to their unbreakable bond, individuals feel (MacDermid, 2005).

As already mentioned, the conflict between work and family life is associated with a number of adverse outcomes, both for an individual and an organization. Given that different, incompatible demands cause it, an individual goes through a state of high tension when trying to fulfil all that is expected. Therefore, it is logical to argue that the work-life balance cannot be achieved until the very notion of this conflict is fully understood and explained. Only then will both organizations and individuals know what they are dealing with, and suitable solutions will be applied accordingly (Stroh, 2005). Another fact that speaks in favour of the above-mentioned claims is that most of the researchers on this issue are focused on the organization to a larger extent and less on the individual. Likewise, the studies so far have not yet provided a critical amount of sufficient information that would assist organizations to create an effective set of measures that would help both sides (Cummings, Jones, 2003).

## Modern organisation and balancing work and family life

Modern business realities shows that the traditional workplace is a matter of the past. There are virtually no more employees who think in the “Weberian” mode. The situation in their environment has changed the way people approach their work and earn their livelihood. Firstly, technology is developing faster now - individuals have the most sophisticated softwares at their disposal; they become members of social networks et al. Then, there is an increasing number of households with several sources of income - the traditional role of women as family members exclusively in charge of household has changed completely. Diverse needs of the employees belonging to different age groups become more manifest; for example, employees who are less than 35 years old prefer flexible work hours. Also, more and more employees make a conscious decision, even at the expense of their income, to take care of their children, elderly family members and household a greater part of the day. Trends suggest that the number of single-member and single-parent families is constantly on the rise. Of course, all these changes have affected the organizations that now are not considered to be sufficiently competitive if they do not care about the quality of their employees’ life and wider community in general.

Ergo, organisations are forced in this new situation to find ways to reduce that feeling of pressure their employees are feeling more and more. In order to ensure a higher level of the work-life balance, most organizations adopt some of the following measures (Kersley et al., 2005): flexible work hours that allow the employee to begin working when it would be the most appropriate and to finish work day when the employee decides, of course, provided that the required number of hours as well as all tasks are completed; working from home; the possibility to share the entire amount of work with a colleague; programs of paid leave (maternity leave, sick leave due to illness/death of a family member, absences after a strenuous period of work, stress, etc.); financial participation of the organisation in their employees’ childcare or care of elderly family members.

Which of these approaches will be adopted by the organization depends upon many factors. However, the organization will implement, as the most appropriate approach, the one that enables it to attract new candidates without any difficulty in any period of time, and that reduces at the same time, even in case of people who are already employees, the conflict that arises between work and family.

The organization must not remain focused solely on family obligations and responsibilities. Human beings are “social animals”. Therefore, the time that the employee spends socializing with friends or on favorite hobbies and sports activities should not be neglected as well. (Tausig, Fenwick, 2001).

There is no doubt that every measure taken by the organization for the purpose of reducing the discussed conflict and increasing the balance would reflect on the growth of performance, productivity and effectiveness. The previous experiences have shown that employees have a higher level of commitment to their organization and to their work in situations where they have an opportunity to choose flexible work hours, to work from home, to decide on their own when their work hours will be day by day during their workweek (Halpern, 2005). A similar situation is with business managers: by making deliberate choices about which opportunities they’ll pursue and which they’ll decline, rather than simply reacting to emergencies, leaders can and do engage meaningfully with work, family, and community (Groysberg and Abraham, 2014).

When organizations have established some practices that will help their employees to achieve the necessary balance, the benefit to the entire organization will become visible. Their employees will become committed to their work in the right way and they will make more efforts. This contributes to the growth of performance on all organizational levels. It is certain that the employees who feel that they have control over their time, life and obligations will be indeed happier and will not look for another organization where they can achieve the desired balance. The stated claims can be easily explained by the theory of social exchange (Blau, 1964). When an employee in an organization feels good and respected, it is reciprocated with the need to express gratitude and respect in return. If this *quid pro quo* is understood as part of social exchange, it is quite logical that those organizations who recognize that their employees have their private/ family lives as well will get significant benefits in return - a higher level of commitment, satisfaction, motivation, a lower level of abstention et al.

However, the behavior of employees, as far as various programs implemented by the organizations they work for are concerned, is not always as expected. It has been confirmed that there is a large number of employees who do not feel the need to show their appreciation to the organization for the perks they get from it. Instead, they treat everything that the organization provides them with as “given”, something they automatically deserve. Some researchers also report that a large number of employees are not aware or informed of the benefits they are entitled to. Then, there are employees who are not willing to use the benefits of these programs designed for balancing work and family life; male part of the population, especially those men who may be labelled as “career men” and /or are positioned higher in the hierarchy, very rarely take leaves when a child birth, education of their children or solving family problems are involved. In their opinion, such behavior indicates a lack of commitment to the job, leaving colleagues in the lurch, an impediment on their way up the ladder etc. The situation is quite different when it comes to working women (Lewis, Smithson, 2001).

It should not be forgotten that, in spite of all these trends, a lot of organizations are still well-known for their culture of overtime work. Their employees know from the very moment they start working for them that they cannot count on the aforementioned benefits at all; these organizations themselves discourages their employees in advance. As though the business culture of these organizations does not recognize that their employees have their own family and private lives beside their work. Some completely different qualities are highly valued - permanent presence at work, willingness to work overtime. The employees who fit into this environment without any opposition are considered to be loyal, competitive and to have more requirements for advancing.

However, what the experience indisputably shows is that the organizations that offer to their employees the work-life balance programs win over employees extremely easier and the one already working for them do not leave them hastily. Most employees today favor more those organizations that provide them with an opportunity to build their careers in a flexible way than the traditional ones where one’s career path has been traced in advance.

### **Working from home as an alternative in achieving a desirable balance**

World Economic Forum (WEF) defines competitiveness as “set of institutions, policies and factors that determinate the level of productivity of a country”. Thos suggests that the

nation is competitive if its population can on a sustainable basis revel in high and rising standard of living with high levels of employment (EC, 2012)

Working from home is gradually becoming everyday life for the majority of occupations and professions in the twenty-first century. Of course, this somewhat abstract way of doing business is getting more and more importance in the era when the work-life balance is being promoted extensively. As it is well known (and it has already been mentioned it), the motto of “live in order to work” has been almost completely modified over the years into its opposite - “work in order to live”. Therefore, the governments of many European countries had to consider this matter very seriously; the pressure to work from home, especially by those employees with families, was becoming stronger. On the other hand, working from home definitely seems to be a better solution in the situation when an individual “play” more than one role on a daily basis.

Working from home is constantly on the rise both in Europe and the United States. However, an amount of skepticism is still present - whether working from home is really effective or does it represent some kind of “shirking” far away from the manager’s control. But, what can be argued with certainty is this domain give a lot of space for researching.

Technological changes have almost completely erased and changed the relationship between the time spent at work and the time spent at home. In the period before the Industrial Revolution, a great part of the population in Europe and the United States worked from home. Those were season jobs. Then, family members worked as a team and the periods of intense work ended with distinctive, ceremonial celebrations and a longer rest (Gutman 1988).

Industrialization brought a new trend – working at home was replaced by working in an office (or in a factory), so the male part of the population and single women started going to work every day. Since no type of change goes smoothly, this trend was accompanied by certain problems as well. Workers /employees were complaining mostly about the same things as their twenty-first century counterparts. It was difficult for them to accept that they were separated from their families all day and that they had to worked fixed hours (Cowan 1997).

Today’s technological changes have generated two categories of employees working from home (Fredriksen-Goldsen, Scharlach 2001). Firstly, there are employees who sell different types of services (i.e. Telemarketers). Their work is under the constant supervision of their management and they work the same shifts at home as they would work in an organization. Other categories of employees are independent and highly educated professionals. Their type of work gives them greater flexibility and autonomy in their work. These employees usually undergo a number of extensive training sessions, which makes them psychologically more focused on their work. They also have higher incomes in comparison to their counterparts from the first category. In order to work, they need peace and privacy since their work involves planning and analyzing; therefore, they have no fixed work hours. Also, some trends suggest that the employees in the domain of information technology are the best candidates for working from home.

Individuals choose to work from their home for various reasons. The most common categories of employees that are willing to work from home are as follows (Hakim, 2000): individuals who begin to work from home after they have finished raising children (forty years old); young people who have just finished college, but have always wanted to start their own business; people who are about to retire and who believe that working from home will give them more in every sense of the word than finding a new job, which is quite difficult

at their age. A lot of people have decided to work from home because they did not like the atmosphere in their office. In their opinion, they often stayed in their offices and did nothing after they had finished their job, while such a thing rarely happens at home.

Naturally, we should not forget changes in the very environment which have forced many individuals to choose working from home. Re-structuring and re-organising of jobs and the entire organisation have become trends nowadays.

According to Laura Shin, Forbes contributor, the top industries offering remote work opportunities include healthcare, information technology, education, non-profit and philanthropy, and sales and marketing. A wide spectrum of jobs is available for home-based workers, ranging from job titles such as sales representative, senior analyst, nurse case manager, accountant, account executive, to the Web or software developer, and virtual teacher (Shin, 2014).

### **Advantages and disadvantages of working from home**

Since obligations at home and at work are intertwined, three types of conflict arise in the twenty-first century employees: a conflict related to time, a conflict related to a high level of stress and a conflict related to behaviour (Grover, Crooker, 1995).

The educated employees who choose to work from home indeed reduce the potential for the outbreak of the first type of conflict given that their working from home, as already mentioned, allows greater flexibility when it comes to the way of doing job. However, in this case, there are some disadvantages. If they add some new obligations at home to the existing responsibilities (it usually happens when working woman are concerned), excessive stress is unavoidable again. The same phenomenon occurs in cases when the work is too demanding, when working from home means longer hours and so on.

Therefore, in order to manage their time successfully, the employees working from home need to set some clear boundaries between family and business commitments. The aforementioned issues are gaining more and more importance, so some authors have even defined and elaborated this-called theory of setting boundaries (Ashforth, Kreiner, Fugate 2000). In their opinion, the individuals working from home must constantly balance in order not to provoke the disagreeable role conflict.

The employees who work from home must maintain contact with the outside world, their employers, co-workers and clients. The opposite, as well as not setting the clear boundaries, can lead them to professional and social isolation (Felstead, Jewson, 2000).

The employees engaged in some kind of highly professional expert work can face a particular problem related to the role conflict. They are expected to work with more dedication, and their work hours are often very long and flexible. This profile of employees is also distinctive because they are very committed to their work which prevents them, on the other hand, from dedicating themselves to their home and family and even if they are physically present.

Further, working from home can be slowed down by a number of distractions, which would not happen in an organization. In this case, there is no secretary, office or business privacy. Therefore, these employees are forced to eliminate different kinds of diversion while working. It has been established that the lack of understanding comes mostly from home - children, family members, neighbors, relatives, as well as others who are under the same roof.

They often do not realize that working from home requires peace and quiet, both physically and mentally.

Knowing the problems, the practitioners have written a lot of books that provide instructions for self-help and suggest specific strategies. Many of them argue that employees should maintain a strict division between the time for work and the time for family. Also, it is advised that one should thoroughly explain responsibilities to family members and inform them about a schedule everybody should stick to in the course of work hours at home. Phone calls during the “home work hours” should be limited. Sometimes it is even advisable to set imaginary deadlines. One of the recommended strategies is to convene a family meeting. The employee should explain professional commitments to family members in order to shield her/himself and her/his work hours (when they should be “left alone”) (Edwards, Edwards 1994).

The employees working from home are tempted to resort to many bad habits - disturbed sleeping patterns, taking larger quantities of meals more frequently, watching television, reading all the daily newspapers, too long telephone conversations. As far as this, it is even suggested to mark the beginning of working hours in a distinctive way - physical activity, dressing, breakfast and then the beginning of one’s workday. So, the whole ritual is essentially very similar to the one the employee would go through if she/he worked in an office (Edwards, Edwards, 1994).

Then there is the issue of isolation. The employees working in the office are not confronted with it at all. Constant interaction with other people in the organization, and even making friends with co-workers, often create a sense of belonging to a group and a sense of loyalty. However, the employees working from home do not have such opportunities. They often suffer from a lack of social contacts. Generally, they are short of opportunities to learn from their co-workers. Of course, depending upon the type of personality and/or work, many will not feel isolated and bad. Some employees have even stated that they work more efficiently and faster at home just because nothing interferes with their work - specific stories told by colleagues, office hubbub, etc. (Nippert-Eng, 1996).

To conclude Work-from-Home represent statistically important factor that affects the level of income satisfaction in two ways. Factor 1 values in the sample range from -2.2 up to +2.0 and they can have both positive and negative impact as long as current ability to work from home has a positive impact. (Krasulja, Radojevic, Zubovic, 2014) For example Bloom et al. (2013) have conducted an experiment in China showing that there is a highly significant 13% increase in performance from home-working persons as compared to control group.

## Conclusion

In view of all this, it can be concluded that the modern workforce no longer wants to be a “slave to” obligations as imposed by the employer, and this is particularly evident if the above- mentioned features are observed in the generation Y. The employees are not just employees of an organization. They now play multiple roles between which they should strike a balance.

It is completely certain that working from home can represent a great perspective when it comes to solving the issue of the work-life balance. As it has been mentioned, the positive sides are undeniable - flexibility of organizing time during the day, a possibility

to take care of children and family, a higher degree of casualness. What might be pointed out as a distinct advantage is that this kind of work gives a chance to the employees from the category of professionals to express their creativity better. It is safe to say that there are numerous employees who feel under pressure in an office environment and because of work schemes. Therefore, they achieve worse results within an organization than at home. In this case, the thesis that only satisfied employees contribute to productivity growth of an organization is fully substantiated.

Given that working from home has not become a generally accepted practice yet, the organizations that decide to enable their employees to “take their work home” should establish together with them a system of work, a method of monitoring results, as well as other categories that will ensure that this mode will bring the maximum benefit to both sides. In addition, the employees who are not familiar with the concept should go through the process of training.

Naturally, it should be also mentioned that some professions are not suitable for this type of work (medical doctors, policemen, workers in public administration and the like.). However, they should be given an opportunity to have flexible work hours, which would contribute to their achieving a higher degree of the work-life balance as well.

There is no doubt that organizations may save a lot by allowing their employees to work from their home. Many expenses, particularly those related to the lease of their premises, electric energy consumption, meal allowances and other, can be reduced to a minimum.

The authors are planning to conduct a research in their future work. This research should provide some clear parameters of how many employees (and employers) on the territory of Serbia are at all familiar with the concept of working from home, how many of them have already done that and whether they think that this concept can contribute to a better quality of life.

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## MANAGEMENT AND CHANGES IN BUSINESS ENVIRONMENT

### Abstract

*This study emphasizes the need for managers to promptly and effectively respond to changing business environment. Also, special review on limiting factors in the activities of managers and limiting their ability to anticipate and respond to the challenges of change in the business environment. This study also suggests some ways in which managers and organizations might improve own readiness and flexibility which is needed to respond promptly to business environmental changes. Different types of organizational learning and their relationship to strategy formulation and implementation are described in this study.*

**Keywords:** management, organization, business environment, organizational learning, changes.

**JEL classification:** M21, M54

## МЕНАЏМЕНТ И ПРОМЕНЕ У ПОСЛОВНОМ ОКРУЖЕЊУ

### Апстракт

*У раду се апострофира потреба да менаџери парвовремено и ефектно реагују у променљивом пословном окружењу. Такође, посебан осврт је дат на ограничавајуће чиниоце у деловању руководиоца и сужавању њихових могућности да предвиде и одговоре на изазове промена у свом пословном окружењу. У раду се предлажу начини на које би менаџери и организације могли унапредити сопствену спремност и флексибилност која је потребна да се брзо одговори на пословне промене у окружењу. Сви ови предлози су на неки начин повезани са управљачким и организационим учењем, тако да ова студија дескрибује различите врсте организационог учења и њихов однос према формулисању и спровођењу стратегије.*

**Кључнe речи:** менаџмент, организација, пословно окружење, организационо учење, промене.

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## Introduction

It is a fact that nearly all business environments are in a state of ongoing change or disequilibrium. Companies must either stay aligned with changes in their competitive environments and react to these changes promptly, or actively anticipate changes in customer demographic, future technologies, and potential new products and services and thereby recreate their industries. It should be noted that industry changes are requesting answers from companies, especially entrepreneurial ones, for them to use the chance to reshape themselves as well as their branch of business.

The risk of falling out of step with industry changes will almost certainly increase in the future as competition intensifies; with existing and new technologies continue to be exploited. Changes in consumer demographics lead to new customer needs. Organizational change will, therefore, be essential to companies' survival. Organizational change management and transformation have become permanent features of the business landscape. In fact, strategic management might more appropriately be called “strategic change management”.

### 1. Limiting factors and anticipations

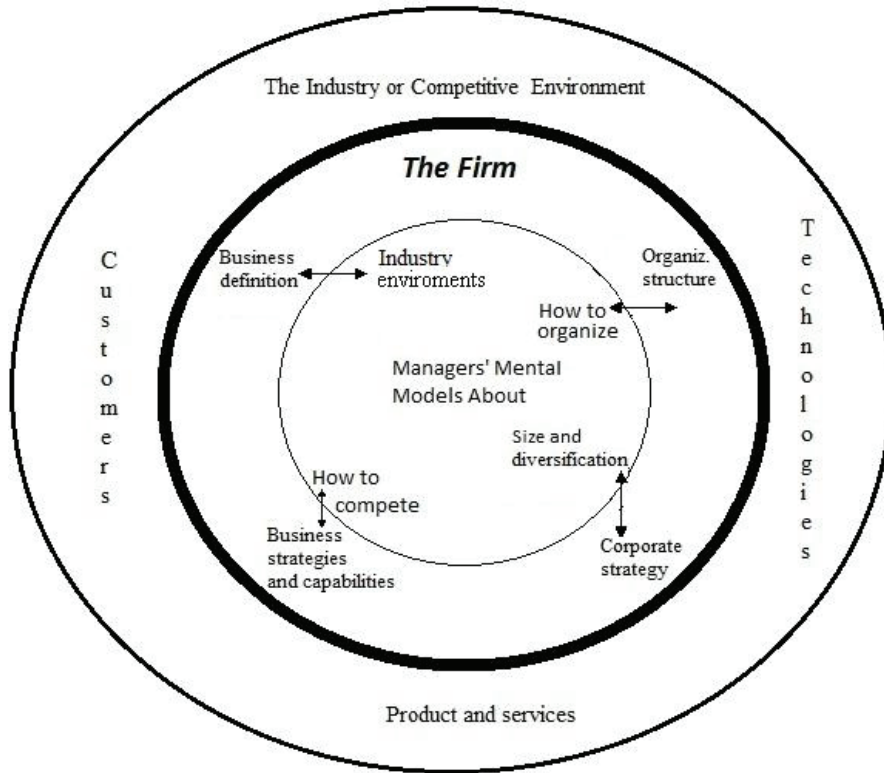
There are many limiting business factors. This paper focuses on spotting key factors that limit manager capabilities for them to be discovered and to shorten their reach in the environment (Kanton, 2009, p.16). Also, there are some of the organizational and industry factors that are limiting the responsiveness of managers and their firms to environmental change.

Consolidating what is learned from the current change to help the company improve the change process in the future. If you want to avoid a long and heavy adaptation process you must improve your capacity to anticipate and prepare for future change. The ability to anticipate is the key ingredients of efficient speed and change management.

### 2. Business environment and managers

Practice has shown that managers in many cases fail to anticipate or adequately respond to change for a number of reasons. It happens that, managers simply do not notice change in their business environments. As a result, they are blinded by the changes that have occurred quite unexpectedly. Certain research has also shown that managers can be aware of changes in their industries, but they may fail to interpret these changes correctly. They often underestimate the importance of these changes, and they may wait too long to respond, or may not respond at all. Research has also shown that those managers that correctly notice changes can even correctly interpret the possible impact of these industry changes, but they might still fail to adopt an appropriate course of action. Relationship between firms and the competitive environment is illustrated in Figure 1.

Figure 1: Model of Strategic Management



Researchers, S. Kiesler and L. Sproull, have written about the problem of responding to environmental change and have suggested that:

- (a) Crucial component of managerial behavior in rapidly changing environments is problem sensing, the cognitive process of noticing and constructing meaning about environmental change so that organizations can take action (Kiesler, Sproull, 1982).
- (b) Note the implications of this statement: Noticing is crucial because if changes are not noticed, action will not be taken (Senge, 1990.)

Empirical evidence suggests that managers in current industry environments fail to notice how their industries are changing. How is it possible that experienced and competent managers can simply fail to notice important changes in their organizations environments? Using foresight and anticipation to envisage possible future scenarios is the first step in preparing for change and managing it successfully.

Managers are more committed to their firms ongoing strategies so their ability to recognize unrelated data and other environmental stimuli, are significantly reduced, and so they will “actively ignore” data that are inconsistent with those strategies.

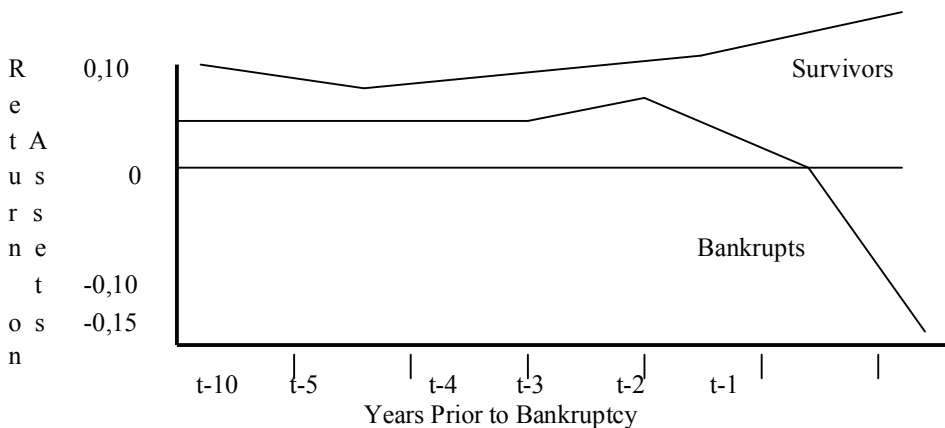
Changes may be happening in their industries, but managers may simply fail to detect these changes because their attention is focused on personal strategies or other related aspects.

Most research suggests that changes must often be dramatic or have major consequences for firms before their managers will take notice of them. Noticing changes depends on those changes being seen as “breakpoints” (Kiesler, Sproull, 1982). Changes that tend to be noticed are those changes that are significant, sudden, or catastrophic. It seems, unfortunately, when managers and their firms face with significant and sudden changes in their industries, it is often too late for them to respond effectively. Business is declining as a result and some companies never fully recover.

There is a possibility for managers to notice industry changes, but fail to react to them properly so consequences follow. A number of studies suggest also that managers can see changes but find difficulty to understand or interpret problems. For example, a study that examined companies in the declining railroad industry during 1950s and 1960s found that railroad managers noticed or were aware of the significant competitive threat posed by trucks and an improved national highway system by the early 1950s. Those same managers continued to believe that government regulation, the railroad labor unions, and even the weather were more serious problems than competition from trucks (Barr, Stimpert, Huff, 1992, p. 15-36).

Another study compared the financial performance of matched pairs of sample firms from a variety of industries (Cohen, Levinthal, & Daniel, 1989, p. 128-152). In each pair, one firm went bankrupt while the other firm survived. As illustrated in Figure 2.

*Figure 2: Survivors versus Bankrupts-Return Assets in Years Prior to Bankruptcy*



Managers of the low performing firms are certainly noticed that their companies have failed in the race with competition, given such a long lead time, were the managers of the low performing firms unable to formulate and implement strategies that would have changed the course of their histories and avoided eventual bankruptcy? And, in the case of the railroads, why did given managers awareness of the potential threats continue to focus their attention on other factors, such as government regulation and the weather? Possible explanation for this kind interpretation is that manager’s mental models will allow them to rationalize away unfavorable stimuli.

The managers of troubled firms might therefore be able to overlook poor performance on one dimension (say, return on assets), but they can be focused instead on some more positive dimension of performance (such as an increase in sale). As far as railroads are concerned, their business decline was relative rather than absolute. Railroad managers ignored market share losses and took consolation in handling increasing freight volumes even when truck competition increased. Similar thing happened with General Motors and company's share in the US automobile market when declined from over 50 percent in 1980 to only about one-third of the market a decade later. During most of the 1980s, General Motors enjoyed record profits. Because of that, consequences of losing market share were ignored by the managers.

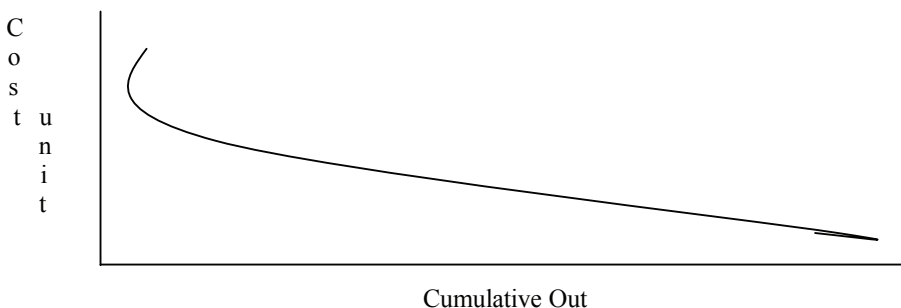
### 3. Effective action and fast respond

Even when managers are fully aware and recognize the seriousness of the changes that are occurring in their competitive environments, they may still have difficulties to formulate appropriate responses or strategies to prevent these threats. A good example how to successfully deal with this problem is Kodak. Kodak's leadership equipped themselves with the adequate flexibility needed to respond quickly to business environmental changes.

We have already mentioned the cognitive factors, besides them there are learning issues. Failures in organizational learning also limit organizational adoption and ability to change. Here, we examine one of the most important organizational learning issues, the distinction between lower-level learning and higher-level learning. Lower-level learning is characterized by improvements or refinements of existing beliefs, understandings, and organizational processes. Higher-level learning involves developing completely new beliefs, understandings and organizational processes.

As illustrated in Figure 3. lower - level learning leads to refinements of existing organizational knowledge and processes that allow firms to reduce unit costs as cumulative output increases. Problems arise when company managers emphasize lower-level learning at the expense of higher-level learning. Companies made significant improvement within the activities they are engaged in, but risk failure to develop new abilities, products, services and new technologies to compete.

*Figure 3: An Illustration of Experience Effects*



Most companies allocate the majority of resources to lower-level learning rather than higher-level. That allocation is clearly harmful but managers have good reasons to make that decision. Low-level learning has a predictable and positive impact on performance. High-level learning is more likely to have those effects on financial performance in bottom line. Lower-level learning is based on improving current work, while higher-level learning might take whole new ways, markets and strategies.

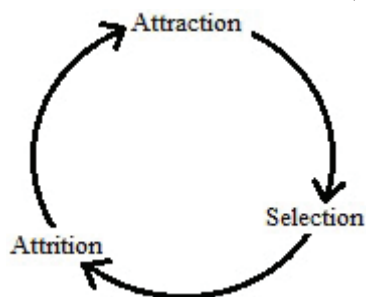
The exploration of the new, in Kodak’s case, their attempts to improve technologies order to develop new products, typically requires considerable investments and often results in financial losses for many years before firms see some significant benefits. Financial instruments for maintaining business success of the company in terms of crisis are varied. They have impact at the material content in the company’s balance, its financial position and financial result.

There is another factor that is important to the success of higher-level learning efforts is absorptive capacity (Cohen, Levinthal, 1989. p. 128), which has been defined as the ability of firms to “recognize the value of new information, modify and apply it to commercial ends.” (Schneider, 1987, p. 439). High absorption capability companies have a better view on external environments. They can recognize new technology, and use that knowledge in the organization. Firm absorptive capacity is determined by the organization ability to recognize new developments.

#### 4. A-S-A Cycle (Attraction-Selection-Attrition)

There is another important factor that limits the ability of a genuine response to change in business world is homogeneity in thinking among managerial structures. Many large organizations are caught in an “Attraction-Selection-Attrition” cycle (illustrated in Figure 4.) that tends to promote homogeneity in opinion managers. (Finkelstein, Hambrick, 1996),

Figure 4: The Attraction-Selection-Attrition (A-S-A) Cycle



Certain people are attracted to particular firms according to the model. Companies will select among those who has already been attracted, primarily on the basis of “fit”, a limited number of individuals to join. Those employees who think that they do not “fit” with these companies will are likely to leave. The A-S-A cycle therefore predicts that the thinking of employees within their responsive companies will become more and more homogeneous over time.

Although this “thinking alike” can certainly facilitate rapid decision making, it can also have very serious negative consequences for firms operating in fast-changing environments. A management team composed of “alike thinking” individuals has much more chances to avoid to notice important environmental changes or to misinterpret the nature of those changes. Companies can overcome the trap of similar opinion in at least two ways. One would be to pay attention on contrarian voices. Within nearly all organizations there are managers and employees whose ideas are at odds with the prevailing opinion. These individuals and their ideas tend to be ignored, and pushed aside. It is precisely these contrarian members ones who can see aspects of changing industry environments that are ignored by top managers, and they are feel obligations to suggest new ideas and strategies for coping with these industry changes. A second way organizations can overcome the dangers of like-minded would be to encourage the greater turnover among top management ranks. Most research in this matter has focused on the negative organizational consequences (such as the loss of skilled employees and recruiting and training costs) of turnover among lower-level employees. Some studies suggest, however, that a lack of turnover among top managers can have a negative impact on organizations. Studies have shown that executives become more and more committed to the *status quo* as they remain in the same industry (March, 1991, p. 71). Companies with the same executives are risking pursuing strategies that don’t work in their industry environments.

The choice of an appropriate strategy and its realization through the development and business policy needs to make profit. Profit appears as the aim and purpose of the establishment, ongoing business of the enterprise development and its business and organizational components. (Djordjevic, 2010, p. 214-216).

Introducing new individuals into an organization is valuable not because of their superior knowledge; In fact, this same study asserted that organizational veterans almost always have more knowledge. New employee certainly doesn’t have knowledge as experienced managers, but what they know is less redundant, is often insightful, and offers more opportunities for improving existing routines or suggesting new procedures. (Hambrick, 1982. p, 156.)

## 5. Different approaches and its role

Using the same practice can bound organizational changes. Companies operating in the industry also developed a common language and similar understandings about how to compete. Managers of these firms develop a “common body of knowledge” that is reinforced by reading the same publications, participating in professional networks and trade associations, moving across firms.

This institutional context in which firms compete will reinforce existing patterns of competition and firms seeking to adopt new strategies will have to contest industry norms and influences. Companies that deviate from these industry standards – by introducing totally new products and services or by incorporating totally new technologies – will experience considerable upside, but also significant downside, risks. A lot of companies choose to make small product changes or service offerings. Account of organizations struggling to formulate totally new strategies suggest that the process is a very painful



and highly uncertain, characterized by periods in which organizations are “grouping” or “in flux” without a clear definition or focus. Consequently, many firms choose to pursuing strategies that are consistent with industry norms rather than face the ambiguity and uncertainty associated with formulating and implementing totally new strategies. Few factors can slow manager reactions and limit their ability to anticipate changes in the business environment. These factors include:

1. Cognitive limitations and problems associated with noticing and interpreting, and responding to ambience change,
2. The tendency managers to emphasize low-level learning over high-level learning,
3. The tendency for organizational hiring and promotion practices to foster homogeneity in thinking among managers, and
4. The power of institutionalized industry practices to focus managerial attention on the status quo.

## Recapitulation

Senior managers, not industry forces, are a much more important for organizational success. Managerial thinking, more than industry structure, influences the choice of strategies that allow high performing firms either to occupy unique positions in their competitive arenas or to possess unique competencies that cannot be easily replicated by their rivals.

Business evaluation study is focusing on evaluation, financing, and investment accounting in physical assets. Investing in physical assets are less important than the managers think. The relative importance of managerial thinking, organizational learning, and other intangible organizational assets will almost certainly continue to increase in the years ahead. The obvious fact is that managers need to force studies and organizational changes. We have argued that managers must pursue two types of learning and initiate two types of organizational change. Managers must pursue what they already know – which means, they must apply and refine existing knowledge in order to develop the capabilities and competencies that will provide to their firms a competitive advantage. Simultaneously, they must focus on “exploring the new“ in order to initiate change and redefine their business and develop the capabilities and competencies that will be needed to enjoy a competitive advantage in the future. Unfortunately, a good deal of facts offered in this paper suggest that managers prefer known over speculative unknown.

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## SOCIAL NETWORKS AS MARKETING CHANNELS

### Abstract

*Fast technological development in social media offers many opportunities for companies in order to have better connection with their customers. Traditional tools become less effective and companies are working intensively to be present on the web. This paper will try to answer the question what are the advantages of social media as a marketing channels compared to conventional way of advertising. The authors will specially pay attention to how can companies improve and increase their presence in social media by using different strategies and which tools and services can be used in order to have better connection with the customers.*

**Key words:** social media, social networks, visual marketing, tools and services of social networks, the Internet

**JEL classification:** M3, M30, M31

## ДРУШТВЕНЕ МРЕЖЕ КАО КАНАЛИ МАРКЕТИНГА

### Апстракт

*Брз технолошки развој у друштвеним медијима нуди нове могућности за компаније да се боље повежу са својим купцима. Традиционални алати постају мање ефикасни и компаније интензивно раде на својој онлине присутности. Овај рад покушаће да да одговор на питање које су предности друштвених медија као канала маркетинга у односу на класичан начин рекламирања. При томе, посебно ће се сагледати како да компаније унапреде и повећају своју присутност у друштвеним медијима користећи различите стратегије, као и који су то алати и сервиси које могу применити у циљу веће онлине повезаности, односно како да се на најбољи могући начин повежу са својим купцима.*

**Кључне речи:** друштвени медији, друштвене мреже, визуелни маркетинг, алати и сервиси друштвених мрежа, Интернет

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## Introduction

In nowadays we can find marketing everywhere. Whether we like it or not, formally or informally, organizations and people are involved in a number of activities that could be freely called marketing. It significantly influences our everyday life; good marketing is increasingly becoming a key for the success of a business. We can also say that good marketing is not accidental, but is the result of detailed planning and realization. If there have only been attempts in the beginning of the 21st century to anticipate what will happen in the field of marketing, I think we could not imagine how far the way of presenting brands and services can go and how it is necessary that we are constantly up to date with marketing trends.

The beginning of the 21<sup>st</sup> century brought a new concept of creating a multi-tasking *e*-business platforms that have allowed the current exchange of information and knowledge and the simplified usage of increasingly complex opportunities in the online environment. Since the Gutenberg's discoveries of modern printing machines for more than five hundred years ago, which made books and scientific papers widely available to the masses, not a single new invention has encouraged individuals, and transformed access to information as thoroughly as Google. The quest for current information on anything and everything ends with “googling” via computer or mobile phone (Vise & Malseed, 2011, p. 15). We believe that today there is no person who has not heard of the term “social network”, a phenomenon that has reached unimaginable proportions and opportunities in the field of marketing. In recent years, the term social media or social network is adopted, which includes various types of very influential and visited services such as social networks (Facebook, Google+, MySpace, Pinterest, Twitter, LinkedIn ...), systems of content aggregation (Vesti.rs, News.google.com, Blogodak.com...), multimedia social services (Flickr.com, Ustream.com, YouTube.com ...), social bookmarking systems (StubleUpon.com, Delicious.com ...) as many other services that are based on the active participation of users.

## The advantages of social media marketing compared to traditional marketing

In nowadays, more than ever, managers of companies from the region of old economy need the right tools that will support and promote their effectiveness in making major strategic moves, allocating the lack of resources and managing the risk. Why is that so? Because the large companies from the old economy - from manufacturers of goods of wide consummation to industrial consumption - began to realize that new companies take a relatively small part of their market that do business via the web. As a result, these companies became interested in danger that e-commerce brings and turned to more efficient digital strategies, based on optimization of users activity, the integration of their chain value and accelerate the flow of information (Kalakota & Robinson, 2002, p.77).

Changing the way of making businesses in the global marketplace leads to changing the rules of exposure in social media in order to provide the best way to respond to the

needs of the continuously variable market. Regardless of whether you are a small or large company, social networks and media today represent a powerful channel connection with customers and potential customers. We can say freely that social networks today offer the potential for incredible opportunities as no other marketing way so far. By giving such great importance to social media today, we must agree that it is therefore particularly important to create and implement a strategy that will be effective and have positive results.

In the past, customers had to work hard in order to gather information on suppliers from around the world. On the Internet, customers come easily to large amounts of information. Sources of information are: (1) the website of the supplier; (2) info mediators, third parties that add value to the gathering of information on alternatives; (3) market makers, third parties that create markets by connecting buyers and sellers, and (4) consumer community, a website where customers can exchange stories about the supplier's products and services (Abler, Adams & Gould, 1971).

With the appearance of social networks and their ever-faster development, the well set ways of business models are also changing. Social networks are the ideal platform for building and running a positive online PR strategy and the “world of mouth” marketing. There are millions of connected surfers, potential clients, partners, customers, consumers and even competitors gathered at various locations. These groups focused in this way make almost an ideal aim for an army of marketers, advertisers and an ideal field for performing sophisticated communication activities (Mirković, 2009, p. 12).

The purpose of any marketing is a line of business activities and actions taken in order to direct the goods and services from producers that is a trader to the consumer. If we consider some of the characteristics of traditional marketing such as communication in one direction, a closed system, the mass marketing, controlled communication, passive participation, formal language, platform that is paid, as opposed to marketing through social media and networks which bring two-way communication (two -way conversation), an open system, transparency, one on one marketing, it is not a story about me, but it is about you, the authenticity of the content, a platform that is not paid (Facebook, Twitter, Google + ....), the active participation of the users of our services and many other advantages, tells enough about the immeasurable advantage of this second model of exposure compared to the classical way. Meaning that the current form of traditional marketing, which included product advertising and services with insufficient information and market exploration, is slowly forgotten and it is linked to the business over the Internet.

Basic features of social media (Social Media) are simple participation of users and content that users generate (User Generated Content). The importance of content is reflected in the fact that social media are becoming more influential with increasing content of users (for example. Wikipedija.org). Social networks present a very important part of social media with increasing impact on business.

Companies use social media (Social Media Optimization - SMO) for the achievement of the stated goals of the company it actually presents the design and implementation of different methods of communication via social media, which result in generating publicity. In implementing that task into action, we can ask ourselves:

- What the optimal number of using social media is or whether “an optimizing strategy of social media” is done:

- Whether it is necessary to study and use all the familiar social media;
- Is it enough to be included in only one social medium (for example Facebook or Twitter)?

At what level will social media as a marketing channel be represented in a company depending on the consciousness of their strong influence on the possibility of improving the business, because whether we like to admit it or not, if the company is not present in social networks is the same as that it does not exist. However, although the understanding of different companies about their significance, according to the survey of Hubspot.com there are the following results:

- 92% agrees that social media (social media) is relevant to their business, which has increased compared to 2013 when the percentage was 86%;
- 80% agrees that investing in social media has generally increased the turnover;
- 72% confirms that social networks used to achieve the loyalty of current and future users;
- More than half of the users of social media that were present within them for the last three years, confirms that this helped them increase the turnover;
- 74% of users who have spent more than 40 hours a week using social media received several job offers;
- More than half of the users who have invested in social media at least a year also tell about increasing the actual contacts and new business results;
- The total number of those who have used social media for at least one year, 69% confirmed that it has built a larger base of loyal consumers.

Even though this confirms the fact of the great potential of marketing through social media, it is necessary to know how to reach and achieve these results. As some of the ways that companies may improve their business could be (DeMers, 2014):

- Increase the brand recognition - the circumstances require the use of every opportunity to increase the visibility of the brand or company, and social media are just a powerful marketing channel promotion of what you do;
- Improve the brand loyalty and the company - according to the survey undertaken by Texas Tech University (Bell, 2013) brands that use the way of their promotion channels through social media enjoy greater loyalty to their clients. A further conclusion is that companies should take advantage of social media tools that allow them a greater connection with a wider audience;
- More opportunities to attract new clients - each video, blog post, video content or comment that you share present an opportunity for someone's comment, response, conversation, all of which can contribute to visiting the website of the company itself, which means greater opportunities for new business. Even though it won't have the same number of positive responses to posts every time, each post company make in social media is an opportunity for gaining new customers;
- Higher level of great results - can be achieved in several ways, but the most important is the human factor, and the thing is that brands are becoming much closer to the people with interaction through social media. This is where brands can act like humans because an individual likes to deal with another individual, not with the company;

- Increased visit to the company’s website - without the use of social media attendance can generally be limited to people who use the company’s brand. Putting the profile of the brand on various social media gives a chance for new visitors;
- Greater authority of the brand - as in everyday life, when people want to hear compliments about a product or a service, the first thing they will do is to go to one of the social networks or media. The moment they type the brand name, a new potential consumers will want to know what is new that we are offering. What proved to be correct, is that the more people are talking about company on social media, the greater value brand will have for new users, and not to mention, if someone have the opportunity to connect with the most influential people on Twitter -u, the visibility of the brand will be immeasurable;
- Lower costs of marketing - advertising through social networks may be more favorable than the classic form of advertising, for example through Facebook and Twitter, depending on the goals we want to achieve;
- A better position when searching - Google and other search engines take into account the presence in social media as an important factor when ranking search because it is seen and understood that a strong and significant brands use social media. Being active on social media provides a signal that a brand is legitimate, credible and something you can trust. We can conclude that presence is simply necessary;
- More colorful experience with clients - social media is something like a phone call or an email. Every interaction we have through social media is an opportunity to present our brand in a way that will lead to creating the connection between us and our customers. It is very important that if a client complains on or praises us through a social network, in either case, it is necessary to respond, either in the form of an apology and promise that we will correct the error, whether we will thank for positive comments. What is important is the personal experience of the client who then knows that we care about his opinion;
- Better insight about what people think of brand - listening, or reading carefully the comments on social media, we can get a picture of what people think of the brand they are using and the company.

Here are listed some of the benefits of active usage of social media in the long term, but surely we must be keep in mind that our competition present is also present in those same social media and it carefully monitors our activities, which means that time is running out and if we have not used them so far, it’s time to start applying them.

## **Creating marketing strategies on social networks**

Past 2014 was a year of enormous growth in the field of social networks, as illustrated by the fact that over the social network Twitter during the day more than 500 million twits were posted, the social network Instagram posted over 35 million images



and the members of the social network Facebook posted 350 million photos each month. Social media present more than mere entertainment and communication with friends. Today, they can be a very powerful marketing tool for your business, if we have made a strategy. Changing the way of doing business of commercial operators in the market, carries with it a change in the rules of exposure in social media, in order to achieve a better interaction in responding to the needs of the constantly changing market. We can freely say that social media and networks, today offer great potential for amazing opportunities and if we are not present in it, we are losing a big chance in winning new users of our services. So much power and importance of social media show some of the following statistics based on the research that is conducted by Search Engine Journal (Jones, 2013) - 72% of the total number of Internet users are active in the social networks; 89% is 18 to 29 years old; 72% are between 30-49 years of age; 60% of active users between the ages of 50 to 60; and 43% of users are over 65 years old. When we talk about the time spent on Facebook the United States take the first place, the Australians are the second, while the British are the third; 71% of users of social networks are connected via mobile phone. Social network Facebook is still the largest social network, but some predictions say that Google+ could replace it in 2016. Facebook has over 1.5 billion users, about one million of websites is offering to login through Facebook (“Login with Facebook”), about 23% of its users logs in at least five times a day, 47% of Americans say that for them Facebook is the number one by the influence on the purchase, while 70% of trade uses Facebook to acquire new clients. As for the social network Google+, it now has over one billion users; it reaches about 359 million of active users per month, while the number of users is increased by 33% per year. If one takes into account the fact that Google+ as a social network exists only for about three years, it is certainly a success. Social network Twitter today has more than 550 million registered users, and during 2012-2013 he was the fastest growing social network, it has 215 million of active users, 34% of trade uses it as the number one of the social networks. During the last period, Twitter has made a few visual enhancements which are one more reason to use it in your business. There are some other social networks that certainly should not be passed by are the Pinterest with over 20 million active users per month, Instagram 150 million of active users per month, then YouTube, Tumblr, LinkedIn, Vine, Slideshare and many others. Creating marketing strategies on social networks involves many identical elements as well as classic marketing strategies. The survey of targeted market and consumer habits is obligatory. It also means identifying the strengths and weaknesses of the brand or service you offer. The elements that could be part of your strategy on social networks are:

- Defining what is target market, which means to be familiar with the ways of using social media and networks in different demographic areas, to understand how, when and why the target market uses social media and networks;
- Make time to think what will our content do on social networks - this means that each set post, blog or message must serve the realization of the goal, but should also not lose sight of the result, which is still used for new directions in a social media campaign;
- Appoint a person to the position of a manager of social media (social media manager) - it is necessary to have a person or several people, depending on the size of the company, which will be responsible not only for monitoring and respect of the content, but also to respond to comments and to provide

feedback. Consumer surveys show that the most significant inhibitors lack of affordable online shopping experience, social interaction and personal consultation with a representative of the company (Barlow, Siddiqui & Mannion, 2006, p. 157). Companies have started to react; many of them now offer live online communication to immediately advise potential customers about the products and the proposed purchase of additional items. When there is an active sales representative, the average amount per order is usually higher. Marketing experts on the market of business spending (B2B) should also put a human face on their presence in e-commerce, and some are taking advantage of the Internet 2.0 technologies such as virtual environments, blogs, online video and chat (Kotler, Keller & Martinović, 2014, p. 439);

- Creating a page for brand or service - first we need to determine in which social media sites we want to use, or where we want to be present. For small business the recommendation is to use Facebook, Twitter and Google+, and in some cases, depending on the activities that we do, it can be Pinterest, LinkedIn or Houzz. What is important is that all the social media that use the created visual appearance is identical to the website of our company. After we have created the page, make sure that it includes links to the website of our company as well as to invite all members to join us on social networks where we are;
- Develop an action plan on social networks - it is not enough just to create a presence on social networks, but it is necessary to constantly inform the public about developments in the company and for this reason it is necessary to make a plan that will include a number of weekly posts, the time when the content will be put, what the content will be;
- Generating an interesting content – includes presence on social media it does not end with determining the person responsible for social networking, creating identity and making a plan. The strategy further includes generating the interesting content, and it can help us to set ourselves as we are in the role of our customers and clients and thus to discover what it might be interesting to them and what content would our followers on the social networks wanted to share further. Creating such content is the fastest way to gain new followers (weekly tips, healthy humor content, interactivity - asking questions that people will want to respond, visual and video content, sales or special events);
- Monitor constantly the responses and results - driven by the imperative is to follow comments; either positive or negative, it is necessary to respond in short notice. If someone praises our product or service, be sure to thank him. If we have a complaint, we will try to find a reason and it is always important to explore why someone has a negative comment and send feedback. This information helps us to better understand the reactions to our products or services and to work on the improvement and to make them even better;
- Use the results to better understand the consumer behavior and their response to our products and services - what better way to get information about our product or service, if we do not just ask those who use them, or our customers, and we should not be afraid of the answer. By doing so, we give ourselves

the opportunity to get to know our strengths and advantages but weaknesses and shortcomings as well. The sooner we respond to comments we create a greater connection with the customers. As a good example of customer we can name a multinational company Walmart (<http://www.walmart.com/>) which seeks to find a solution to all the problems that the users of its services face;

- Cross-marketing strategy – experiences of the most successful companies in the world have shown that the creation of cross-marketing strategy yields positive results, and that includes our simultaneous presence on social networks (for example Google + and Pinterest are connected with Tumblr and LinkedIn, Twitter and Facebook with Instagram);
- Making variations - this means that company does not get stuck with the same “old pictures” since appeared on the social networks so to this day. As best strategy proved to be a strategy which contains modifications, changes, mixing regardless of whether it is related to the link, image, text, or post;
- Abide by the rules 70-30 - this would mean that the greater part, or 70% of the content that we post should be the content that will encourage active participation and interaction of our current and potential customers, and the rest should make a promotion. As for the content, it should be primarily useful and interesting to our followers on the Internet, which allows better connection and the fact that the company respects their opinion;
- Track trends, analyze, examine, make corrections - today social networks are filled, large database of statistical data and analysis that can be helpful in creating better marketing strategies in social networks, and also there is a huge number of applications and services that will serve to obtain the relevant statistical data on how to present ourselves in the best possible way, to improve and upgrade strategies. Knowing that social media and network are constantly changing, it means that we constantly have to analyze, to investigate steps we have made, to make adjustments and be flexible in accordance with the trends.

## **Tools and services for promoting the content on social networks**

Regardless of whether create the absolute best content, the question that should ask is: how to reach the people we want to attract to its content? Posting articles or content for example on blog is just one of the ways of promoting the brand, and goal is to attract the target audience about what company does (Kuenn, 2014). There are different tools and platforms that can help in promoting the brand and can facilitate reaching the largest possible number of visitors. Some of the tools and services are the following:

1. *HootSuite* - this platform was originally designed to be optimized and managed by the users of Twitter, but it was also used to make posts from personal profiles on Facebook and LinkedIn. Unfortunately, this service does not connect profiles from the Google+ social network, but allows us to manage our Google+ page on this service. Today it is the social media management for any company, providing us to manage our brand through s

social network, schedule for setting posts, greater visibility and measurement of results. It is a perfect tool for small and enterprises, agencies, but also for corporations and state-owned companies that have the need for management, engagement and measurement via the intuitive platform where we are given the opportunity to be associated with more than 35 popular social networks. The ability to make a timetable posts on HootSuite in a very powerful tool, allowing companies to make plans and to be in touch with the visitors in just a few simple steps.

2. *Google+* - after the beginning at a low level the social network Google+ has reached a figure of more than 300 million active users compared with Twitter which has 270 million users. Although it is not as popular social networks like Twitter and Facebook, Google+ is becoming a place that we cannot skip as it concerns the promotion of our brand. What is good on Google+ is that allows us to put the link of the brand or the company directly on our profile page thus allowing content to be more visible to people who are involved in our region or by simply using the link. So called “Hashtag” plays a very important role in the promotion of content, it is marked with the sign # and gives a greater possibility that someone will notice our brand with the help of a key word and it is related to the post on this social network.
3. *Followerwonk* - Followerwonk is a tool for users of Twitter, and it gives the possibility to monitor, analyze and optimize our way of presenting at Twitter. This tool will help us find out who our followers are, where they are from, when they post a tweet, then we can connect with influential people within the field of our interest, to work graphical comparisons with other users, the presentation of content is simple, etc. As the most useful function of this service we can mention “Search Twitter Bios” which offers the possibility of finding the most popular Twitter profiles within our field of interest. For example If someone is a person who is engaged in internet marketing, he can type the word “SEO” or “Link building” in the search field, and Followerwonk will give him suggestions for all Twitter profiles that contain characteristic words “SEO” or “Link building” or they somehow connected to a given word in their Twitter profiles. Some of the well known users of this tool are Xerox, MerrillLyndh, Pingdom, Rhapsody, IMAX and many others.
4. *Taboola* – believe it or not in nowadays Taboola as a platform is the world leader in the discovery of significant content, it works with over 150 billion of the recommended content, reaching 400 million visitors each month, including the USA Today, The Weather Channel, The Atlantic, Fox Sports and so on. Taboola studies the behavior of visitors when they interact with the content that predicts which web sites are the most interesting to visitors. Taboola is significantly focused on video content for the simple reason that it is the best way to display the message we want to convey which is confirmed by the CMO.com (Abramovich, 2013) that says that users are 27 times more likely to click on the link for online video content than it will do for the standard banners.
5. *BuzzStream* - BuzzStream represents a popular service that helps to create so called buzz for our content, to post links and increase the visit to our site so

that we will be “found” or tagged through various marketing channels. This tool is designed to help the best web marketers to promote their products, services and content. BuzzSumo is a supplement to BuzzStream and helps people who are engaged in marketing to find content with a high sharing and influential companies of specific professions.

6. *Contently* – this service and tool helps brands to create entertaining stories to engage visitors to actively participate and to present the results in scales. It will not only help us in creating the content, but it will also assist us in identifying the best promotional strategy for any type of business or brand. Some of the major companies that use this service are Coca-Cola, Google, Walmart, GM and others.
7. *Outbrain* - Outbrain is an important tool that makes the categorization of content and displays it to visitors based on their online behavior. It helps in increasing the attendance of individual blogs, posts or articles, visual content, content that is distributed via mobile phones and much more. All the big companies that do not depend on the type of activities they are involved in consider this service to be indispensable. This service offers a much more personalized experience for our visitors, it displays our content in a context that visitors are willing to participate actively it directs us to improve results, to redefine its media strategy and etc. Each advertisement via Outbrain that is all contents are checked for quality and the categorization depending on the topic, which in other words means that you cannot advertise any content. Some of the known users of this service are CNN, Allstate, NBCNEWS.com, MarketWatch and many others.
8. *StumbleUpon* - This service includes displaying content through understanding personal interests of users that begins with a brief overview of the categories when creating a profile, but the number is growing as the content is used. Users by clicking on “stumble” button which is located on the toolbar have the option to mark the content if they like it or not, the content of people who rank it positively is more likely to be offered to them when there is a new search. Considering this possibility, from these data, we can see a number of different trends, like: “Recently Hot” tags, these tags are actual people whose content we tagged, then the “Most Popular All Time” tags, they are much less likely to change, but we can change it by exploring deeper content, then “Stumbles by topic” that shows activity depending on the chosen theme and “Top Rated websites” refer to pages that are most popular by users of this service.
9. *Facebook (Ads)* - this certainly is the biggest social network and certainly a place of great opportunities to promote our content. Within these social networks we have three main locations where we can choose to make our content public, such as: Newsfeed, this is the most popular place on Facebook for placing advertisements or contents because of this ads seamlessly appear along with the other content that can be seen from friends and people who follow; then there is Mobile, at the beginning of this year the number of users of these options amounted to a staggering 1.01 billion active mobile users on the social network per month, which means that our ad or content

should tend to be optimized for mobile phones because this is definitely a great opportunity to make our content visible and “Right-Hand Column”, this option is visible below the “Trending” top sections. The benefit of this option is that here placed advertisements moves downwards together with further research site users and it is always visible. This would mean that with advertising on Facebook we have the ability to reach the largest audience in the world like never before.

10. *Pinterest* - this social network is based on the visual content in the form of an album where users according to their interest open so-called “Boards” or tables in which they store images and visual content that is becoming extremely shared with success. Putting the option “On Hover Pin” and “Pin” addition to all the visual content on our website, we encourage people to pin or insert our content to their boards. This is a great opportunity and a possibility to make our content via Pinterest visible for many people as possible and so to encourage our site visitors to follow us on Pinterest, as well as giving us the opportunity to increase our chances of making a new business and cooperation.

### **Tools and services of social media that can be useful for small business**

Considering the need for constant presence on social networks and media, which requires a lot of time, here we list some of the tools and services that can significantly facilitate the work, and appear to be very useful and functional. No matter which tool we choose to use, be sure that they will bring us efficiency and the ability to interact within online communities.

As for management, or managing the content of the company or posts on social media, the first useful tool would be *Sprout Social*, strong social media software, designed for business through which we can check, supervise and monitor our presence on social networks. Also, this tool has an automatic scheduling of content updates to multiple social platforms. Another useful tool or service that has its own daily use is *Buffer* that allows us to do the time planning of our posts on social media so that we make the order of their appearance on social networks. If you find the content that we would like to share, we can add it to our Buffer account from our browser or mobile device and it will automatically be posted in accordance with pre-made schedule for publication. When we talk about the data analysis, a useful tool could be already mentioned above the *Followerwonk*. It solves our dilemmas about when is the best time to, for example, publish the content on Twitter and it will automatically pull the schedule in our account that we have on Buffer. If we want to increase our presence on Facebook, Google+, Instagram, Twitter, LinkedIn, Vine or on any another social network, *Simply Measured* is a tool that will allow us to do that. This service offers free reports where the analysis of our profiles is done on various social networks, helping us to post content at the right time and at the right place. Some of the big companies that use this service are Samsung, Pepsi, Hyundai, Adidas, Microsoft, Whole Foods, AOL and many others. As for the search, *SEMRush* could be a useful service. If we want to understand better whether

we are using adequate key words or how potential customers find our competition on the web, there is SEMRush to help us (Philips, PayPal, Forbes, Hyatt, and National Positions). *BuzzSumo* is another service that is essential for the search. BuzzSumo will give us the way to peek of what is going on in the minds of our customers to browse the contents and identify important competition. BuzzSumo is a great place where we can find out which topics are related to our business that attract the most attention, to see which content is a good one and which companies have the greatest impact on the business we are involved (Spotify, WMG, HubSpot, Wyatt, DigitasiLBi). Regardless of the social network, finding the content that will be of interest to our visitors sometimes it can be a great challenge. And if we think about it happens very often that we have a problem to find the content that we would like to share. We have also *PostPlaner* to help. Directly integrated with Facebook, PostPlaner identifies popular content on Facebook, selects and organizes them into our PostPlaner profile where we can easily continue to manage any of our Facebook pages. *Swayy* tool which connects our site on Twitter, LinkedIn and Facebook, allows us to see the most popular content of these pages and we can directly share or post on our social media profiles. As far as the visual content, tools that can be helpful are *PicMonkey* and *Canva*. As we can notice, social networks are becoming more visual, but the question that arises is how do we come up with a good visual content without using Photoshop? Canva could solve this problem which is ideal for any business and will save us a lot of unnecessary time spent in trying to create visual design you want. Canva is a quick, easy and mostly free way in creating visual content; it provides many opportunities for different purposes of creating such content according to the type of social network where we want to publish the text, whether it is about a general social media, some presentations, graphic blog and etc. PicMonkey is very similar to Canva; it will ensure that our images and visual content are professional in the way that will make our old uninteresting graphic or picture turn into a real piece of art. It is also easy to use; it has a huge database of templates, images and graphically offered solutions. Another service of creating visual content is *Photoshop Express*. Adobe Systems Incorporated or just Adobe, the US software company has created a free version of Photoshop called Photoshop Express. It has many advanced features that graphics professionals use every day. But we still have fewer opportunities than of course the complete version of Photoshop, but there is still enough to create an interesting visual content. The difference between this service Canva and PicMonke is that Photoshop Express does not offer ready-made templates, but we have to find them, insert and then create. *Pixlr Editor* is very similar to Photoshop Express, but with even less abilities and is not of agreeable interface. *GIMP* (GNU Image Manipulation Program) is one of the oldest applications for processing and creation of visual content and it is also very similar to Photoshop and has a wide range of options. As far as applications and services to create visual content that is not free, but not as inaccessible as a professional Photoshop, we can mention one of the best and that is *Pixelmator*. If a company wants to get a seriously creative and visual content and does not want to spend more than \$30, then the application Pixelmator is for her. Another such application is *Sketch*, which has a very good user interface and a powerful set of features for creating complex visual contents.

## How to improve the performance on social networks by using visual content

Why should we use visual content (Visual Social Media) in social media? Of course it is because it grabs attention a lot faster than a plain text. If we take into account the fact that ninety percent of the information received is visual and that visual content process 60,000 times faster than text which visual marketing and visual content makes much more powerful tool than any other possibilities to be applicable in business. The visual content will not only contribute to our online visibility, but it also becomes unique identity because in the sea of numerous companies in social media, visual content creates our uniqueness and makes us easily recognizable. In April 2012, Instagram, a visual platform, has increased the number of its customers for ten million within ten days, but today that number is 100 million. Currently the second largest social network among the visual content is Pinterest. Considering the fact that every sixty seconds people share about 136,000 images on Facebook per day, we can understand how significant is to create visual content on social media. Pictures are powerful means of communication, as the research by MDG Advertising presents and says that content which includes visual contents are 94% more evident compared to the content that is not visual. What you want to present simply must include a good visual perception that it could be noticed by visitors. Therefore, the successfulness of the content's visual presentation means to draw attention of potential and current users of our activities and their greater loyalty. There are some ways of displaying visual content and they can be (Radice, 2014):

1. *A short quote that relates to our brand* (Branded Quotes) - regardless of whether we use the quotes or not on Twitter, Facebook or for example Pinterest, opposite to the posts based only on the text, a quote with a certain visual content may constitute a recognition of our brand;
2. *Infographics* (Infographics: Data, Charts and Graphs): a chart, data and graphics - no matter what kind of activities they do, infographics as a means of visual representation promotes our authority and credibility and therefore presents information that encourages interaction between companies and consumers and builds thus their loyalty towards us;
3. *The initiator of the conversation* (Conversation Starters) - invitation to a conversation, exchange of opinions and questions are a good way to combine text with visual display. To support that there is the fact that if we just try to remember when reading information, comments, etc. on the Facebook page of our company, we will see that we usually respond to texts which are combined with the image, or when they are proactive and cause a reaction in us to respond. What we can do is to talk about current issues, share stories that our company, services or products make unique, humane, socially responsible, to give answers to frequently asked questions, ask questions that are easy to answer, etc.
4. *Making a creative video presentation* (Creative Videos) - although the video presentation is nothing new in marketing, for many companies it is still an undiscovered area of operation. In this sense, video presentations on social networks of companies should offer a simple and in interesting way weather information, address or party. Some of the facts we need to know when



talking about video presentations are that about 1/3 of active users watch online video content, 100 million people are watching online video every day, video presentation increases the awareness of consumers about our industry for 74%, and 75 % of those who have seen our video presentation and will see the company's website as well.

This means that nowadays a modern consumer depends on visual effects and the text itself is no longer sufficient to attract and keep his attention to a particular product or service. The big question might be: what content to create? The answer may be very simple, and it is to create anything that is worth the time visitors spent, but we should pay attention that the visual content, except for its attractiveness has to be in accordance with the objectives or purposes of the company and what it wants to achieve.

## Conclusion

To be present on social networks and the media is no longer a caprice or a modern way to be In, but an absolute necessity and an important tool in the modern way of doing business and communication. As we have seen changing the way of doing business requires new ways of presenting companies in social media, all in order to adapt to the new rules of business. Social networks take the absolute lead as the most active marketing tool of a company towards its clients. They represent a powerful channel of connection with customers and potential customers, so that we will choose between classical marketing that makes communication in one direction and marketing through social media and networks that represents two-way communication, we will definitely choose the second because it brings many advantages - greater brand recognition, greater loyalty and authority to the brand and to the company, making new clients and business partners, increases visiting the company's website, lower marketing costs, better communication with customers, a closer insight on what consumers think about a brand, and many other advantages.

Achieving these goals, as we have seen it is possible with making adequate marketing strategies that will with the help of the appropriate tools and services within social media and networks are going to bring extraordinary results. Which tools and services companies will choose depends on the purpose and priorities that it wants to achieve. Meaning that social media give the opportunity to hear and to listen the consumers and give them exactly what they want. If are used correctly, the social media can help in achieving the set goals. And in the end, we should have in mind a few “universal” rules, that it is important that brands turn to its users, communication is expected, rather than the mere dissemination of information; a huge number of possibilities require content that can be adapted and shared in various places on the Internet; and we must not forget that social networks are the internet tool, but we must be the ones who will build a community that will work towards its objective.

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## CLUSTER DEVELOPMENT AND IMPROVEMENT OF THE COMPETITIVENESS OF THE ECONOMY IN SERBIA

### Abstract

While in developed countries is growing interest in clusters, they are still in Serbia have not attracted enough attention to policy makers, so even businessmen. In this sense, the task of our government is to create a favorable economic environment in which clusters emerge and develop. To accomplish this task, it is necessary to use the experience (recommendations and measures) that are developed at EU level, but also examples from countries that have managed to seize the concept of clusters in order to improve competitiveness to national economy. For our SME association is a precondition for their effective involvement in the supply chains of large systems and increase their business and export performance.

**Keywords:** cluster development, competitiveness, cluster policy, Regional policy development, innovative SMEs

**JEL Classification:** R11 L22 L26

## РАЗВОЈ КЛАСТЕРА И УНАПРЕЂЕЊЕ КОНКУРЕНТНОСТИ ПРИВРЕДЕ У СРБИЈИ

### Апстракт

*Иако код развијених земаља расте интересовање за кластере, они још увек у Србији нису привукли у довољној мери пажњу како креатора политика, тако ни привредника. У том смислу, задатак наше Владе је да створи повољан привредни амбијент у коме ће кластери настајати и развијати се. За остварење тог задатка, потребно је користити искуства (препоруке и мере) које су развијене на нивоу ЕУ, али и примере из праксе земаља које су успеле да искористе концепт кластера како би унапредиле конкурентност националне привреде. За наша МСПП удруживање је предуслов њиховог ефективнијег укључивања у ланце снабдевања великих система и повећање њихових пословних и извозних перформанси.*

**Кључне речи:** развој кластера, конкурентност, политика кластера, регионална политика развоја, иновативност МСПП

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## 1. Introduction

The impact of the global environment necessitates focusing firms to create competitive and innovative products and services. Companies can raise their benefits through a variety of business activities, the most accelerating product innovation and increasing productivity. However, experience has shown that there is no limit to the diversification and, if it is not closely related to sustainable competitive advantage at the level of the business units, often destroying economic value. One way of raising the efficiency and effectiveness of business development companies (companies), and therefore their competitiveness is through joining the cluster. Firms can achieve much more by working together as a group of interconnected companies, suppliers, service providers and organizations relevant to their business within the cluster. Stimulate networking firms in clusters proved in practice to be effective concept or instruments for strengthening the competitiveness of companies and their training to produce goods and services of a higher level of processing that will be sold in the domestic and global markets.

To be competitive, companies need to identify competitive advantages that the cluster may have, and to know how these benefits can be increased or expanded. As for the success of the cluster is not enough to simply associating entities, neither company by joining the cluster will provide better performance and higher profits, but success will depend on whether you have created value and innovative potential. A successful cluster can create the necessary basis for cooperation between firms and specialization, promote private-public dialogue, to encourage external stakeholder and accelerate innovation.

This article is the result of the work of the authors, using data of primary research in reference domestic and foreign institutions, data and information from interviews with a number of managers of clusters, cluster members and / or representatives of institutions involved in the implementation of cluster initiatives, as well as secondary data and results of domestic and foreign authors in this field, whose aim was to show how to improve the competitiveness of the national economy through the development of clusters. Question popularization of clusters is particularly important in current Serbian economy, in which the policymakers are increasingly prominent focused on finding the leading multinational corporations, whose entry into the domestic market and the start of production, with the possibility of its investments around the world, to create conditions for download part of their supplier functions of the domestic segment of small and medium enterprises and entrepreneurs (hereinafter referred to as SMEs).

## 2. Cluster connection as a premise for strengthening the competitiveness of enterprises

Harvard professor Michael Porter, first introduced the concept of clusters (clusters) in the economic literature in 1990 and defines them as “geographically close group of companies and associated institutions in a particular field of industrial / branch, connected to the common benefit and complementary” (Porter, 2008, p. 6).

The advantages of clusters to strengthen competitiveness are numerous, and one of the main consists in the fact that clusters enable economies of scale, as they are usually formed within specific industries, like the value chain, similar to the structure and often follow a similar strategy. Clusters are the result of voluntary association, and for the survival and development of the cluster there are national and regional barriers. Also, the benefits of association of enterprises in clusters reflected through easier access to

the latest knowledge, stimulate the exchange of knowledge, provides the cost savings, creates the possibility of cooperation, support to innovation and encourage competition, and creates the critical mass necessary for further growth (Andreozzi, 2005, p. 2).

The success of enterprises and economic development of enterprises in the cluster is not limited to these companies, their employees and associated sectors. Progress and production activities in the cluster have a synergistic effect on the entire community, as well as the macro-economy. The successful development of clusters and creates structural changes, both at local and at the macro level. The development of industrial activities in the cluster encourages the development of the sector outside the cluster, as a result of the interaction of industrial relations that exist at the regional level.

Clusters arise primarily because of the necessity of survival of SMEs. Through its association, these companies simply ‘mimic’ operation of large enterprises, while retaining legal and business independence. In that way, clusters become competitors or collaborators of large enterprises. In this way, SMEs were able to maintain their market position and achieve sustainable growth and business. The most common association in clusters of entrepreneurs and SME owners are in sustainable development and profit. Activities such as price agreement, transfer of technology, conquering new markets, buying licenses and others can not be successfully done by an entrepreneur or small business owner.

Clusters as the concentration of specialized institutions and companies linked through multiple contacts, enabling the creation of useful innovations. In the conditions of modern competition, the tendency is that the clusters are more innovative clusters. Empirical evidence supports the argument that the member companies of clusters of innovative companies that are not members of the cluster (The Gallup Organization, 2006, p.11-15). Also, empirical evidence suggests that there is a positive correlation between the strength and power of the cluster regions in innovation and development of new invention.

Specialization of enterprises is essential to the success of the cluster, where a small company focused its resources (which are usually extremely limited) on what they do best (Ketels et al, 2003, p.18). Specialized firms usually do not have problems with quality control, as do only one thing, but we have to work very well. Development of cluster is accompanied by an increase in specialized technical and marketing skills of local human resources. Local workers, technicians, managers and consultants often vary from company to company and thus the advantage of specialization belongs to the local system, not just one company. Moreover, local infrastructure and training institutions are becoming specialized in cluster activities.

One of the key factors for successful business clusters, the production of products which must be complied with all members of the cluster. Therefore, as the need arises standardization of the entire management system. Clusters by standardizing can more easily manage their production process.

Some clusters may initially have a weak competitive position and limited growth potential, but that does not mean they should be ignored in terms of further growth. Many small clusters provide highly specialized services in the global market and continue to develop further. Such a situation is, for example, in the software industry clusters. Many clusters of manufacturing experience this situation, for example, during the restructuring.

### **3. Privacy and software development of clusters**

Although clusters are primarily the result of individual effort and private companies, one of the ways that successful clusters appear in the economy of a country or region is that there is an appropriate policy of cluster development. In this sense, there may

be one comprehensive policy for clusters which give specific frames as they should be encouraged to monitor their development. In addition to the general framework, the clusters can set the framework for other policies. First of all, it is usually the case in three key areas: policy innovation and technological development, regional economic development policy and policy entrepreneurship / SME. But it can be manifested in many other policy areas. The European Commission, for example, stimulates the development of border clusters and the emergence and revival of strong European clusters through trans-European Cluster Policy participate in the support and development of clusters (Sölvell, 2008, p. 50-58).

Combining the efforts of the public sector and private and implementation of cluster policy are important elements of building strong innovation systems as a prerequisite of growth and job creation. Privacy clusters may be the way the economy of a country can build competitiveness and mobilize the necessary multi-year software support and commitment of all major carriers of the innovation process. Because of their complexity cluster policy can be categorized into three segments: The first segment is the microeconomic policies to create an attractive business environment for growth and innovation that directly encourage the development of clusters. The second segment includes SME policy, research and innovation policy and regional development policy. The third segment is developing policies aimed at creating, mobilizing and strengthening certain level of categories of clusters, and result of certain sector's cluster initiatives (OECD, 2007, p. 5-13).

The fact is that the vast majority of cluster develops without the help of a policy aimed at their conception and surprisingly often cluster participants do not meet each other, and the public authorities or insufficiently recognize the importance of the clusters for the local economy. However, these clusters make a positive contribution to the region where they are, and create growing pressure to create policies that can encourage creating conditions for the development and the revival and development of clusters or increase economic benefits from them.

The success and the level of development in the EU clusters largely depends on institutional support. Decision-economic policies are especially advocated a policy of cluster development due to a shift of focus from macro to micro-economic issues. In some EU countries, the development of regional clusters represents a new form of industrial policy, while in other countries such as Portugal, Denmark and the UK there is an initiative to create a map of clusters and cluster policy formulation. Otherwise, in all European countries, monetary and fiscal policies are generally well developed, but it turned out to be successful macroeconomic policies only prerequisite, but not a sufficient guarantee for faster development. Key developments in the microeconomic efforts aimed at new connections with the private sector, universities and other institutions also to enable it to effectively implement macroeconomic objectives.

No matter what the significance of cluster policy at the national level varies among EU countries, it is considered to have a high or medium priority in most countries. One gets the impression that the national cluster policy in some countries less important especially in countries that are organized as federations and / or where there is a high degree of regional autonomy (Sölvell, 2008, p 50-53). On the other hand, although the formation of clusters is crucial initiative “bottom up”, in countries such as Serbia process of creating clusters is necessary to initiate, manage and financially encouraged.

Within the cluster policy is necessary to achieve a significant degree of integration of different types of measures, determining the duties and responsibilities of specific institutions and entities for the implementation of the policy, which requires strategic alignment and practical cooperation within the framework of state institutions. Cluster

policy should be designed to support the emergence of new connections and growth (development and strengthening) of existing clusters (Anderson, et al, 2004, p. 5). In addition, it is necessary to cluster policy be flexible in order to adapt to the new requirements, many barriers and limitations.

Thus, government support as well as creating a climate of mutual trust in the cluster are necessary preconditions for their development. Efforts to develop a cluster must include the search for competitive advantage and specialization, and not attempt to blindly support what exists in other locations. Despite the risks associated with regional specialization, the clusters based regional economy generates better results.

#### 4. Selected European experience in creating clusters

The fact is that in the transitional economy policy development is often based on a centralized approach, and where support when it comes to competitiveness, usually poorly supported. The event challenges is that on the one hand the company weak and lack the confidence and skills of cooperation, while on the other side of the country often lack the resources to do its job. Experience shows that this deficiency usually overrides donor funds to support policies launched cluster development. In the following, we will give experience and steps in the development of cluster policy of some countries that are now in post-transitional stage, and are members of the EU.

Slovenia is applied in designing the cluster approach “dynamic concentric circles”, which enables the connection of small and medium-sized enterprises in clusters around leading companies. Slovenian automotive cluster includes formal Automotive Cluster of Slovenia (ACS), which was formed with the support of the Government of Slovenia in 2000 and a large number of companies and institutions specialized in the supply chain of the automotive industry that are members of the cluster tool manufacturer or Slovenian cluster of plastic, a smaller informal clusters, or are not members of either formal nor informal clusters. A total comes to more than 200 companies, mostly medium-sized, which are included in the automotive supply chain. Joint venture between Renault and Revoz is considered a key moment in the development of clusters. Thanks Revoz, which became an affiliate of Renault, Slovenia became an important trade partner of France. The essence of relationships in the cluster represents the vertical interactions in the supply chain between small and large local companies. Cluster membership is an opportunity for companies that combined can serve large orders, as in the independent appearance is not the case. Today the car and the associated clusters generated close to 15% of total exports of the country, where the third thanks to its Revoz (Borras, Tsagdis, 2008, p. 150). Approximately 80% of the cluster is placed on the EU market (Boskovic Institute, 2011, p. 54-68), a cluster is also one of the largest generators of employment in Slovenia. By combining the concept of a cluster of companies in the supply chain of Slovenian automotive industry, created the conditions for strengthening their individual and collective capacity to develop partnerships in various spheres of business, then for intensification cooperation between companies and research and development institutions, in order to promote innovation and technological development as well as to the realization of joint projects in the field of technological improvements, product development, specialization, joint production and marketing. In addition to the company, an important role in the functioning of the cluster have different institutions, especially universities and colleges, local banks and laboratories for testing and certification. The course of development of clusters is significantly determined by the activities primarily the Ministry of Economy, and Commerce and Industry of Slovenia, IR center and



other relevant ministries involved in numerous projects and activities in order to create conditions for the growth of clusters. The area that according to the research needs to be improved is the prevalence of low trust between large and small companies.

The geographical position, cheap labor, sewing skills among the female population were key reasons for the development of garment cluster in Galicia (Spain) (Bozdemir et al, 2009, p.19). In the frame of garment cluster in Galicia are some of the most famous brands of clothes (Zara and Massimo Dutti). Clothing cluster is characterized by a vertical core and non-vertically integrated manufacturers, designers and retailers, outsourcing machinery, raw materials and production complex logistics system which enables the transport of finished products, semi-finished products and raw materials, a number of banks and educational institutions to provide support services cluster and a system of institutions for the promotion of cooperation between members of the cluster. Thanks to the production specialization and vertical integration along the supply chain, Clothing Cluster Galicia today is the largest exporter of clothing Spain, which in total exports represent 48% (Bozdemir, et al, 2009, p.11). An important feature of garment cluster of Galicia refers to the trend of dislocation, i.e. the migration tool production to countries with cheap labor, primarily in China and Africa. As already pointed out thanks to its geographical position, Galicia has managed to build a complex logistics system. Close to port facilitates the use of maritime transport, particularly significant for the receipt of goods produced in China. The clothing cluster of Galicia, also, there are several companies that provide supportive services. What needs to be emphasized as an important advantage of this cluster and easy access to a market of clothing Spain, which is not negligible. One drawback of this cluster should be noted that there is insufficient cooperation between the parties, then the potential danger of mass outsourcing a productive activity, lower productivity trade work in Galicia, fragmentation manufacturers, and low effectiveness of institutional support. Thus, the institutional support of the Galician Government cluster development mainly focused on campaigns and programs. Galician Clothing cluster is formed and evolved spontaneously So, thanks to the private sector in small Galician towns, i.e. companies which are able to recognize the necessity and benefits of connectivity, cooperation and joint appearance, and not as a result of the initiative of the local government.

## 5. Business environment and cluster development in Serbia

In Serbia, there are clusters of several years, however, there is no explicitly defined policies cluster. Clusters are still mentioned and they are objective, either directly or indirectly, in several national policy document above all as outlined in the Strategy of development of competitive and innovative small and medium-sized enterprises for the period 2008-2013. (“Off. Gazette of RS”) and the draft strategy for the development of entrepreneurship and competitiveness for the period from 2014 to 2020 (www.privreda.gov.rs). Serbia has so far established over 50 clusters and a number of them located beside the other (higher) stage of development, while a few cluster initiatives can say that the zero phase of development. Among the most successful clusters of Serbia are: Automotive Cluster Serbia, ICT Network, Vojvodina ICT Cluster, Cluster fashion and clothing industry Serbia, Vojvodina Metal Cluster and Nis cluster of advanced technologies (www.ict-net.com/klasteri-srbije-udruživanje-kao-ključ-uspeha-2). Apart from them, a group of clusters of the second phase (more) include, for example, and: Construction Cluster-Dunder from Nis, and the Association for the promotion of competitiveness of agricultural machinery cluster BIPOM, In the group of clusters

belonging to the so-called zero phase are: Cluster Association Renewable Energy and energy efficiency, Cluster Serbian Apothecary society, Association of manufacturers of herbal raw materials and herbal products HerbalPharmaNet ([narr.gov.rs](http://narr.gov.rs)).

Clusters in Serbia do not have sufficient critical mass and their significance is still small, both nationally and internationally. According to general indicators are far from those in the EU, particularly in terms of employment, annual turnover and exports. Clusters of Serbia, for example, in 2013 gathered over 400 companies, employing just over 22,000 workers and had a turnover of around one billion euros annually-half of which relates to export ([Vojvodina ICTcluster.org/sr/clasteri-Srbije-potpisuju-memorandum-o-strateskoj-saradnji/](http://Vojvodina ICTcluster.org/sr/clasteri-Srbije-potpisuju-memorandum-o-strateskoj-saradnji/)). For a comparative list of the competitiveness of the economy, in “the Global Competitiveness Report 2014-2015” from 2014, covering 144 countries, Serbia is at the level of cluster development in ranked 115th place. When you take into account that by the quality of local suppliers occupies the 98th position, quantity of local suppliers also the 110th place, and that is by cooperation between universities and industry in research and development on the 95th (World | Economic Forum, 2014, p. 329), then the answer to such a bad position when it comes to the level of development of clusters can be found primarily on two key factors: due to the insufficient level of perception management of local companies about the benefits that can be given to companies from the “cluster” of association and insufficient commitment and focus of government policy on cluster development.

Privacy cluster that has so far been applied in Serbia is insufficiently focused on the development of clusters, since cooperation in the process of research and development was very weak. Cooperation between companies within the cluster is mainly directed towards the attempt to internationalize rather than innovation and the creation of added value. Domestic clusters do not have or do not have adequate mechanisms of technological mediation and commercialization of scientific and technological research, such as technology centers and centers for the evaluation of the results of research and development, and cluster management is not able and willing to develop these skills.

Financial support clusters Government of the Republic of Serbia conducted by the competent Ministry of Economy and Regional Development through annual program to support cluster development. The programs are primarily aimed at citizens’ associations, foundations or corporations that operate on the principle of the cluster. In order the program received funding, cluster must have at least 12 members, of which nine companies and three supporting institutions (R & D institutions, educational or other institution). Funds are allocated to clusters irrevocably refund up to 50% of completed projects. So for five years (2010-2014) approved 69 million dinars for the 61 cluster ([www.napr.gov.rs](http://www.napr.gov.rs)). Cluster Development Program have supported or supported by some international development agencies and organizations ([narr.gov.rs/index.php/projekti](http://narr.gov.rs/index.php/projekti)).

Further incentives for the formation of clusters in Serbia should be directed at those locations or product groups in which they identified the potential benefits in terms of efficiency (lower cost, including transaction), flexibility (e.g. Labor mobility) and innovation (diffusion of knowledge and cooperation). In line with this recommendation, it is necessary to reorganize the existing Program Cluster Development of the Government of the Republic of Serbia in a way that not only relate to the development of cluster initiatives, but also the development of clusters as geographic concentrations of companies from the sector. For example, the formation of Serbian garment cluster with a focus on production, would enable the joint appearance of domestic textile manufacturers in the markets of the EU and the Russian Federation, and, consequently, higher capacity utilization. Also, the arrival of Fiat can affect the intensive development of Serbian automotive cluster, which should lead to the creation of new jobs, to increase profit automotive industry and

income of all participants in the production chain, to the successful export of Serbian products, deficit reduction and macroeconomic stability properties of the country. Potential entry of Ikea on the Serbian market could affect the formation of clusters in the Serbian furniture industry, in which a network of local producers and suppliers to operate at satisfying the needs of Ikea system, of course, assuming that instead of just opening a trade center, a Swedish company to achieve production cooperation with a local company (e.g. with Simpo or other furniture manufacturer) and a set of small and medium-sized suppliers. By establishing partnerships for example with Simpo, as well as assuming the role of a generator Serbian furniture cluster Ikea to Serbia has managed to secure what makes all these years distinctive, high quality and at a price affordable products, thanks to cheap labor and in our market. In addition, the arrival of Ikea in the Serbian market and better quality cooperation and mutual integration of the participants in the supply chain, raised to the level of their export and business opportunities, would provide the basis for the introduction of more sophisticated equipment and technology experience, as well as requirements for higher capacity utilization, increase productivity and competitiveness. Of course, if some other industries and other economic activities for the Serbian found a business partner with whom to connect local companies that would no doubt have multiple effects on our economy as a whole.

## 6. Conclusion

In Serbia, the clusters are not well developed, and is one of the goals of this work to promote their importance and necessity for the recovery of the Serbian economy and development. In overcoming the difficulties that arise in the process of building a cluster, the important role the state should play a leading economic factors involved in their creation and business (chambers of commerce, agencies and associations, as well as NGOs).

In order to create a more favorable environment for the development of clusters and strengthen existing cluster initiatives, it is necessary to implement the following policies: 1) Identify a clear long-term goals and strategies. 2) Enhance collaboration between the public and private sectors. 3) Strengthen cooperation with academic and research institution . 4) Strengthen support for clusters and provide a variety of funding sources. 5) Policy clusters align with other policies, so that it can provide a comprehensive and coordinated support to clusters. 6) work out a national network of clusters that would gather all the clusters and facilitate the exchange of experiences and practices, management skills development and implementation of targeted training and capacity building. Also, international networking should be one of the tasks of the network. 7) The new clusters should arise from the process of bottom-up (bottom-up), motivated by the objective of creating an efficient value added and creating sustainable creation of clusters, and not induced by short-term financial incentives. 8) Encourage cluster initiatives in underdeveloped regions to balanced regional development.

The fulfillment of these policy measures for the growth of clusters would contribute to improving the competitive position of Serbia, especially with a large number of SMEs as key generators of entrepreneurship and innovation potential and significant subcontractors in networking activities involved in attracting investment, which would start the whole economy. Generally, entry into systems of multinational giants would increase the degree of capacity utilization of local SMEs, as well as their productivity, competitiveness, trade and export performance.

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## BOOK REVIEWS

Zoran D. Simonović

### MANAGEMENT OF SERBIAN AGRICULTURE IN TRANSITION

Institute of Agricultural Economics, Belgrade 2014.  
(Monograph), 2014

Зоран Д. Симоновић

### УПРАВЉАЊЕ АГРАРОМ СРБИЈЕ У ТРАНЗИЦИЈИ

Институт за економику пољопривреде, Београд 2014.  
(Монографија), 2014

It should be noted that the author of the first part of his monograph accentuate and generate the postulates of development of modern management theory and its possible application in Serbia. It is a radical change of the concept of governance, full orientation to the market form of economy and overcoming the established way of understanding the concept of successful agriculture. In this sense, it emphasizes the necessity of modernizing management systems due to changing internal organization in Serbian agriculture. It should be understood that in the analysis of these regions approached by deep knowledge related to the evaluation of resources and the capabilities of identifying changes in management occurred due to changes in the organizations themselves and / or their environment.

The second part of this monograph highlights issues and problems related to the agrarian policy of Serbia in the pre-transition period and the evolution of the dominant concept in the new program basis. The author here with a lot of knowledge and experience stands out significant details that characterized the pre-transition period of neglect of agriculture in Serbia, and hence agricultural policy. Absence of consistent agricultural policy indicates the absence of stable long-term measures in the field of economic policy. This situation, according to the author can be changed through the process of changing the existing institutional setting, in which the core of the change of the established system of values. So, it's a number of very important questions that essentially much closer to the issues of transformation of agricultural policy and its solution in an organization.

In the part which refers to the management issues of agriculture in the process of European integration were analyzed key aspects of agriculture to comprehend the quality principles of functioning of agrarian policy of the European Union. The author has rightly concluded that it was necessary to the function of knowledge management methods and prepare for successful and rapid transition and integration of Serbian agriculture in European agricultural trends. We have carefully researched and well analyzed all major segments of the construction of a modern management concept of agriculture in terms of preparing for his more successful inclusion and functioning of the agricultural system of the European Union.

Besides this, it is quite understandable that the author of an overall attention to Serbian agriculture. Through this monograph he exhaustively and thoroughly elaborated on the matter of the management of Serbian agriculture in transition. We have to

emphasize the comparability analysis management of agriculture in the European Union and Serbia. We have investigated numerous comparative terms of integration and transition. The agriculture as a sector has often been considered as Serbian comparative advantage, which does not mean that today it should not be like that, keeping in mind the contemporary understanding of agrarian development. The author points to the need for a comprehensive knowledge of the role and importance of full agrarian development for our faster recovery from the transition and to quickly launch economic activities and involvement in the European Union.

A special part that caught the attention of the author relates to issues related to the reform of the agrarian policy of Serbia in the process of transition and European integration. Out of its total reflection and analysis that based on all the current official document of the highest institutions of Serbia, agriculture is an essential element of economic development. The importance of agriculture for the Serbian economy is reflected in the fact that in addition to economic and a social and environmental dimension. On that basis, the author concludes that the Serbian agriculture has a level necessary for the successful production of high quality food. But despite the significant potential in the sector of agricultural production as a result of favorable climatic conditions, the natural characteristics of land and available water resources, agriculture is not sufficiently used. Agriculture Serbia its capacity barely meets the domestic market in agricultural products, although it has potential. Author of this chapter concludes with useful and essential analysis, which refers to the future, with the conclusion that the domestic market is not sufficiently regulated by the standards which apply in countries in the European Union, on what to do.

This work ends by empirical research related to the application of modern management concepts Serbian agriculture in the transition period. Geographic has chosen to explore space Nis District who developed secondary and the aspect of the overall agricultural policy representative for the research. After statistical analysis of the collected data, obtained results indicate that the use of modern management concept is being born. This means that modern managers have enough evidence of practices that the management system agriculture can drastically improve.

The present monograph is a significant contribution to the knowledge of management of Serbian agriculture in practice. The more you work covers two important aspects of research - theoretical and empirical. This way the author's exhaustive and detailed the matter of governance Serbian agriculture in transition, thus showing a solid knowledge of agricultural flows in both Serbia and the European Union. The work is written in simple, short and concise sentences and truth that is somewhat confusing. For it is not the case that many of our actions does not in itself rarely contain euphemisms or categories for which it is necessary to look for solutions in the knowledge matrix terms. Through the power of experience and knowledge the author has come up with useful information required for management of agriculture in transition, for which he should be applauded.

In Nis, March 2015

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## ШАБЛОН / ТЕМПЛАТЕ ЗА ПИСАЊЕ РАДОВА

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## Литература

### 1. Списиак литературе

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