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THE ANALYSES BUSINESS PERFORMANCES OF AGRICULTURAL ENTERPRISES IN VOJVODINA DURING THE CURRENT CRISIS

Jasenka Bubić,[1] Jasmina Hajnrih[2]

Summary

Since the global economic crisis has spilled out into the real sector of Serbia, companies are facing a significant worsening of the financial situation and business efficiency, affecting the country's overall economic activity. Agricultural activity, as the pillar of the successful development of the Vojvodina region, is also experiencing the negative effects of crises that have only deepened the already existing problems of bad privatization and its failure to restrict the level of companies' total debt, especially short-term debt. The goal of this paper is to estimate, by using indicators of financial health, the corporate success of leading agricultural enterprises in Vojvodina in the period 2008-2010 and to determine the prospects for their business efficiency for the next two years. Based on financial statements, analysis and assessment of business performances shell be done using BEX index in the selected sample of agricultural enterprises, with the prognostic expectation for the further period.

Key words: *agricultural enterprises, analysis, business success, prognosis*

JEL: *Q12*

Introduction

The global economic crisis hit the economy of Serbia at the moment of accession process to the European Union. Rather than correcting a number of negative trends in national economy in this period of time and concentrate on development and improvement of agricultural activity, especially in Vojvodina, crisis is allowed to deepen the problems that agricultural enterprises are facing during the transition period. Due to reduction of financial resources for developing programmes, financial efficiency of agricultural producers deteriorated, which caused decrease in number of agricultural machines and employees. The negative trend was also reflected in the purchasing power decline, which contributed to the decline

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in demand for higher quality and more profitable agricultural and food products. Thereby the qualitative structure of agricultural production has significantly deteriorated. This paper analyzes the problem of (un)threatened business efficiency of agricultural enterprises in Vojvodina in the period covering the three relevant years- 2008, 2009 and 2010. Business performances and business efficiency of these enterprises have been analyzed by using Business Excellence Index (*Belak, Aljinovic, Barac, 2008*), their ranking was done with the prognostic expectations for the coming period, in order to determine the prospects for corporate success of leading agricultural enterprise in Vojvodina.

Review of the current situation of agricultural enterprises in Vojvodina

At the beginning of July 2011, there were 1537 registered agricultural enterprises in Vojvodina. Regarding the field of plant production, most of them are in the grain-growing business, while in the field of livestock are far fewer companies and most of them are in the business of cow breeding (Table 1).

Table 1. Registered enterprises in Vojvodina (in July 2011)

Code	Activity name	Number of enterprises	Code	Activity name	Number of enterprises
0111	Wheat production	1.224	0141	Breeding of dairy cows	25
0113	Production of vegetables	82	0142	Breeding of cattle otherwise not classified	1
0115	Tobacco production	2	0143	Breeding of horses and other hoofed animals	0
0119	Production of annual plants otherwise not classified	19	0145	Breeding of sheep and goats	16
0121	Production of grapes	20	0146	Pig breeding	31
0124	Production of apples and nuts	45	0147	Poultry breeding	61
0127	Production of plants for beverages	1	**Total of cattle breeding**		134
0128	Production of spice plants and aromatic herbs	10			
Sum of plant production		1.403			

Source: Statistical Office of the Republic of Serbia

The negative effects of the economic crisis resulted in a reduction in profits of agricultural enterprises, significant decline in the purchasing power of consumers of agricultural products and inflow of foreign direct investment in this sector. Serious problems are in the area of profitability due to business losses, that companies cannot leave unless they reduce the level of indebtedness. However, in order to leave the loss zone as soon as possible, in the absence of equity, management is using loans to finance increased investment in production.

Large financial losses do not cause profit enlargement, in spite of an increase in production volume, but the need for new short-term loans to maintain first liquidity and then solvency, which have deteriorating effects on financial structure and financial performance of companies. Due to large financial losses and realized business losses in the last three years, agricultural enterprises in Vojvodina are facing the existential problems affecting employment downsizing and reduction of agricultural machinery in the assets structure.

Analyzing the current situation of agricultural enterprises in Vojvodina, as the largest consequences of current economic events at global and national level, the following trends have been crystallized:

- Modernization of agricultural production is stagnating, considering the fact that the number of machines have decreased considerably during this period and that the high financial losses of this development have influenced further decline in financial strength of enterprises.
- Although these companies have a very significant asset, the following table shows the structure of agricultural machinery in companies in Vojvodina per year and its undoubted decline, which is certainly a consequence of poor results in business and reduced credit potential.

Table 2. Agricultural machinery in agricultural companies in Vojvodina

Year	Tractors	Fertil. spreaders	Planters	Cutters	Sprayers	Combines	Tractor sidecars	Tracks
2005	6.181	884	765	360	1.003	1.475	6.829	405
2006	5.641	769	677	333	901	1.240	6.074	391
2007	5.167	708	650	307	832	1.028	5.520	355
2008	4.807	658	604	302	781	889	5.266	334
2009	4.362	620	557	318	766	804	4.713	252

Source: Statistical Office of the Republic of Serbia

The number of employees is reduced and it has been decreasing constantly over the last five years. Educational structure of the workforce has been characterized by the declining share of workers with secondary education, while the number of highly educated workers (with university education) has declined to a lesser extent.

Table 3. Employees in enterprises and agricultural cooperatives in Vojvodina

Year	No of enterprises in the research sample	Workers	Permanent workers in agriculture	Agriculture experts with		Veterinarians	Economy experts with	
				College or university	Secondary school		College or university	Secondary school
2005	464	30.512	26.436	1.679	3.055	691	537	1.702
2006	459	26.293	22.412	1.470	2.725	512	507	1.417
2007	434	23.156	19.557	1.397	2.494	444	452	1.291
2008	440	20.802	17.429	1.360	2.300	397	452	1.124
2009	441	19.638	16.025	1.334	2.085	345	497	921

Source: Statistical Office of the Republic of Serbia

Since the development of agriculture is associated with other industries, such as transport & communications, telecommunications, etc. it is necessary to draw attention to the importance of macroeconomic stability improvement and the encouragement of inflow of FDI in agriculture.

Goals and research methodology

The aim of this study is to determine, by using financial health indicators, business prospects for success or failure of leading agricultural enterprises in Vojvodina in the next two years.

First, companies are ranked by business efficiency using BEX indicator as the prognostic model for the base year 2008, the year in which the current economic crisis began to express its negative consequences. The BEX index calculated in this manner is correlated to the trend index for 2009 and 2010 to determine whether the prognosis for 2008 based on BEX index was correct. Based on the defined objective, derives a working hypotheses which should answer the question whether there is a reasonable correlation between prognosis for the future based on the business performance index, used by management to improve business, and performance indicators in the next two years, after the prognoses had been determined by BEX model. In short, whether it will be possible to prove empirically that the prognostic model could be successfully applied to the economy of Serbia and that using it, the corporate management could conduct successfully further activities to improve and advance the business, in order to leave the zone of poor performance and enter the zone of continuous successful performance that can be expected in the coming years.

Hypotheses X1: Business excellence of an enterprise could be successfully estimated for the period of two years by using combination of different financial ratios and BEX index for the companies in the Republic of Serbia.

For the purposes of research and proof of hypothesis, it is common to take into account the specific time period and qualified sample. The period includes three years- 2008, 2009 and 2010. By defining the sample for this research, two criteria were taken into account: company has more than 50 employees and the company has a higher income than the average in the industry.

Thus, the basic unit of observation is an agricultural enterprise in the territory of AP Vojvodina with 1537 enterprises registered in *01- Agriculture, hunting and services* in the middle of the year. Companies in bankruptcy or restructuring have also been excluded from the research. The selected sample of the research consists of the following companies:

1) PIK Moravica ad, Stara Moravica
2) Agrobacka ad, Backa Topola
3) PD Halas Jozef doo, Ada
4) AD Djuro Strugar, Kula
5) Basta doo, Zrenjanin
6) Dijamant-agrar ad, Zrenjanin
7) Sava Kovacevic ad, Vrbas
8) Nicco agrar doo, Banatski Brestovac

Different methodology that has been used in this paper was based on different aspects of the paper. The methods of analysis, parsing and comparison have been applied. Ratio analysis has been used in the segment in which the overall condition of agricultural enterprises in Vojvodina has been estimated. Prognosis for the future was based on BEX index for the sampled agricultural enterprises for the years 2008, 2009 and 2010. In this paper data from balance sheets for three-year period (2008 – 2010) have been used, which are obtained from the website of the Agency for Business Registers. Farms and entrepreneurs have been excluded from the study, meaning that the sample relates only to the agricultural enterprises whose financial statements are prepared in accordance with International Accounting Regulation. The introduction of these regulations in our legislation has improved the transparency and credibility of the data in the financial statements, especially in agricultural enterprises, and the results obtained by their analysis are more objective and of higher quality.

The theoretical starting point of the model

BEX model was created in 2007, by the authors Vinko Belak, PhD and Željana Aljinović Barać, PhD. The main goal was to create a model for business excellence assessment based on financial indicators calculated on the basis of data from financial statements that are easily accessible to all external users. In addition, the intention was to create a model which is relatively easy to use (*Belak, Aljinovic Barac, 2008*). This model is primarily intended for analyzing business excellence of Croatian companies quoted on the capital market, but it subsequently got its confirmation in the companies that are not quoted in the capital market or have just entered it. Its application is also possible to assess the success of business enterprises in all similar capital markets. Since the market of Serbia is similar to the market of Croatia the intention was to test its application on the selected sample in this research. According to the authors *Belak* and *Aljinovic Barac* (2008) BEX index shows and estimates business excellence in two dimensions - current and expected.

BEX model structure consists of four indicators:

ex1 (profitability) = EBIT/total assets
ex2 (value creation) = net operating profit/equity x price
ex3 (liquidity) = working capital/ total assets
ex4 (financial strength) = 5(profit + D + A)/total liabilities

A special advantage of this model is that it contains a completely new indicator of financial strength, based on the theoretical correlation between free money from all activities, which is equal to profit plus depreciation and amortization, and coverage of liabilities with that money.

The final expression is obtained by applying specific weights:

BEX = 0,388 ex1 + 0,579 ex2 + 0,153 ex3 + 0,316 ex4

BEX index greater than 1 – good enterprises

BEX index between 0 и 1 – improvement needed

BEX less than 1 – threatened existence

Detailed ranking of business excellence with prognostic expectations can be done in the following way:

Table 4. Ranking of business excellence with prognostic expectations

BEX index	Ranking of business excellence	Prognosis for the future
Greater than 6,01 4 years consecutively	World class	The company operates with superior results what can be expected in the next four years if management continues with improvements
Greater than 6,01	Candidate for world class	The company operates excellently what can be expected in the next three years if management continues with improvements
4,01 – 6,00	Excellent	The company operates excellently what can be expected in the next three years if management continues with improvements
2,01 – 4,00	Very good	The company operates well what can be expected in the next two years if management continues with improvements
1,01 – 2,00	Good	The company operates well but the advancement can be expected only with serious improvements
0,00 – 1,00	Bordering area	Business excellence is positive, but not satisfying. Serious improvements are necessary.
Less than 0,00 (negative)	Bad	Existence is threatened. It is necessary to start with restructuring and improvements, otherwise bad business will continue and there is a risk of failure (probability> 90%)

Source: Belak, Aljinovic Barac (2008)

Research results

Further in this paper, the results of BEX index for sampled agricultural enterprises for the year 2008 as the base comparison year have been presented, with special emphasis on each of the four indicators of the BEX index structure.

Profitability is an "inert indicator" that does not have a major impact on final height of BEX index and its contribution is to the stabilization of BEX model. However, it is considered that the good continuous return on total capital is a strong indicator that the company can maintain long-term competitive advantage (Buffet, Clark, 2002). Control measure of this indicator is 17% or higher for the developing market.

Table 5. BEX index for 2008 for sampled companies with rating

Company name	Profitability	Value creation	Liquidity	Financial strength	BEX 2008	Rating by BEX
Basta do	0,1012	4,0593	0,4480	1,0430	2,7877	4
Djuro Strugar ad	0,1134	2,8952	0,3062	2,7114	2,6240	4
Sava Kovacevic	0,6670	2,4817	0,0366	0,4705	1,6171	3
PIK Moravica	0,0348	2,2253	0,0318	0,2599	1,3889	3
Agrobacka	-0,0019	-0,5160	0,3995	1,4272	0,4815	2
Nicco agrar	0,0334	1,3544	0,0623	0,3191	0,9075	2
Halas Jozef	-0,0030	-0,1428	-0,1187	0,4276	0,0331	2
Dijamant-agrar	0,0015	-0,0945	0,2064	-1,9330	-0,6334	No rating

Source: calculation of the author

In 2008, only one company had threatened existence ranked by business excellence and was threatened with bankruptcy. All four indicators are below the limit values, and certainly the most vulnerable company is the one with the financial strength indicator -1.9330 (it should be at least 1 or more). This means that the company is unable to cover its liabilities with untied (free) money from the profit in 2008 which doesn't exist, because the company operated at a loss. Also, all liabilities are long-term liabilities, meaning that the company was overburdened with debt, regarding its low financial strength to settle these liabilities from earnings. BEX index calculated in this manner is a signal for the management that serious improvements must be done in 2009.

Companies which operated on the verge of survival and ranked as "sufficient 2" are Nicco agrar, Halas Jozef and Agrobacka. Although they had positive business results in 2008, it wasn't satisfying and a serious improvement and restructuring was required.

Agrobacka has a good financial strength because most of its liabilities in the balance sheet for 2008 were 86% of short-term character, but its ability to create value is jeopardized, because even though the company achieved a positive financial result, it was the operating loss which influenced a negative indicator in 2008. This means that a company "eats" its substance and does not create value above the cost of equity. The situation is even worse with the company Hallas Jozef which besides generated operating losses, has a liquidity risk, because its current liabilities exceed current assets, so its BEX index is at the upper limit of "the limiting area" and the situation must be taken seriously.

Two companies were ranked as "3" (PIK Moravica and Sava Kovacevic). Based on BEX index, these companies operated well in 2008, but in order to achieve advancement in the coming years, it was necessary to start with the improvements. The ability to create value above the cost of equity capital is good, because they both made big business profit, but it resulted in a very small net gain due to high financial expenses. And this is why the financial strength is also below the expected value.

Basta Zrenjanin and Djuro Strugar Kula are the best ranked companies marked as "very good 4". Their quality business can be expected and in the next 2 years if the management continues to implement improvements in areas that require that. Company Djuro Strugar has greater financial strength, since it generated higher revenue from which it covers its liabilities successfully, but the company Basta Zrenjanin has a greater ability to create value that enables its best ranking in the table. Net operating profit is four times higher than the cost of equity, so the company is successfully developing its economic substance through profit.

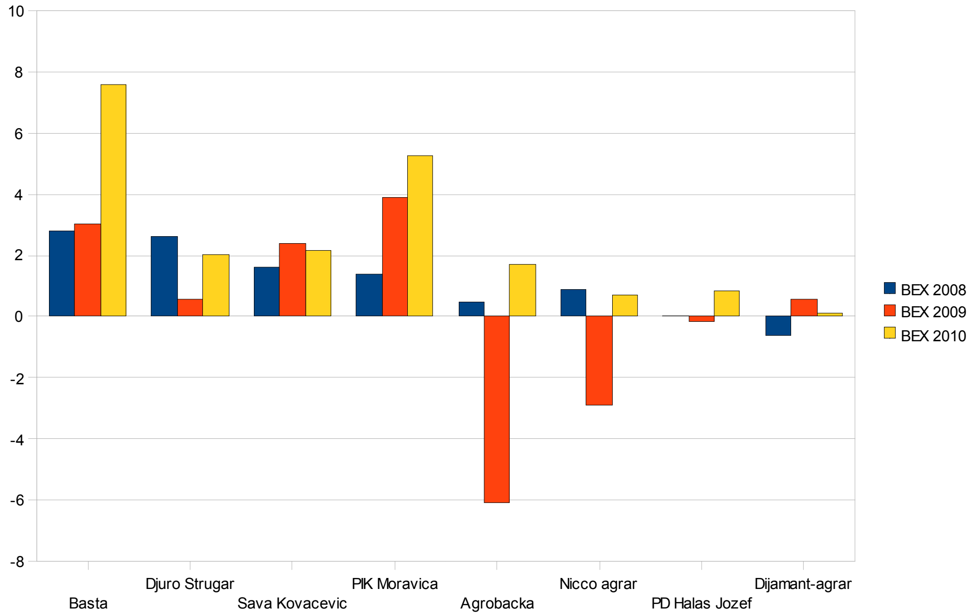
Below are the calculations for BEX index of sampled enterprises for the base year 2008 and the next two years 2009 and 2010, which will be used for comparison and empirical confirmation of BEX index in our country.

Table 6. Comparative view of trend of BEX index for 2008, 2009 and 2010

Company name	BEX 2008	BEX 2009	BEX 2010	Mark by BEX 2010
Avarage	1,1508	0,1660	2,5516	4
Basta doo Zrenjanin	2,7877	3,0390	7,5830	World class
AD Djuro Strugar Kula	2,6240	0,5477	2,0441	4
Sava Kovacevic ad Vrbas	1,6171	2,3757	2,1630	4
PIK Moravica ad Stara Moravica	1,3889	3,9132	5,2640	Excellent
Agrobacka ad Backa Topola	0,4815	-6,0850	1,6938	3
Nicco agrar doo Banatski Brestovac	0,9075	-2,8826	0,7129	2
PD Halas Jozef doo Ada	0,0331	-0,1461	0,8282	2
Dijamant-agrar ad Zrenjanin	-0,6334	0,5660	0,1234	2

Source: calculation of the author

Chart 1. Comparative view of trend of BEX index for 2008, 2009 and 2010



Dijamant-agrar Zrenjanin, as the worst ranked company in 2008, had to make serious improvements in business in 2009, what have been done, because the management was able to completely eliminate long-term liabilities, make recapitalization of the company and realized profit from operating activities. Financial strength of the company has been particularly improved (1,7223) in 2009, because the company achieved profit and reduced long-term liabilities to zero. A new decline of BEX index has been noticed in 2010 due to threatened liquidity (current liabilities exceed current assets) and decline in funding strength (decrease in profit and increase in total liabilities). What we can predict for this company for the next two years is that continuous working on serious improvements and restructuring of the business must be done if the company wants to survive during the economic crisis.

Companies that operated on the verge of survival in 2008 and have been marked as "sufficient 2" are Nicco agrar, Halas Jozef and Agrobacka. Although the signal that serious improvements must be done had been sent to the management, none of these three companies were able to improve their performances in 2009 and their business was quoted as very bad, where the probability of failure is 90%.

Agrobačka experienced the largest decline in operating loss and net loss, and its financial strength was seriously threatened (-11.0890) in 2009, as well as its ability to create value, that is, company does not create value beyond equity (-4.4250), as a result of generated operating loss. Operating income decreased, but the decline was not accompanied by a proportional reduction in operating and other expenses. However, although Agrobačka experienced the largest decline and had the lowest ranking by BEX in 2009, in 2010 it was able to complete the planned improvements and to achieve a net profit at the end of the fiscal year. This caused stabilization of the company's financial strength (5.2169) and besides operating with a profit, it achieved to reduce its total liabilities in 2010, especially short-term liabilities, and thereby brought the liquidity to an enviable level of 34.01%. Nicco agrar and Halas Jozef have also managed to shift from negative to positive rank, but further improvements were required. In particular, they should improve their financial strength, and although both companies achieved operating profit in 2010, due to high level of financial expenses the final business result was negative. Thus one cannot expect settlement of obligations from earnings. Prognosis for the future is uncertain unless serious improvements are made.

PIK Moravica and Sava Kovačević are marked as ”3” in 2008. Both companies improved their business performance in 2009. and increased their rankings at a very good level of "very good 4". Company PIK Moravica made a bigger progress not only in 2009, but in particular in 2010, when it ranked by business excellence as very successful. This company succeeded to triple its operating profit in 2009 which affected its ability to create value, that is net operating profit was 6.3 times higher than the cost of equity (6.3839). This indicator has reached even greater proportions (8.5687) in 2010, because the operating profit in 2010 compared to 2009 was doubled. The company managed to increase its operating income, ensuring itself excellent business performances with the prognosis that the same trend can be expected in the next 3 years If the management continues to improve business in a high quality manner.

In the case of the two best ranked companies for 2008 (Basta Zrenjanin and Djuro Strugar Kula), there was a drastic decline in business performance of the company Duro Strugar, which moved from the ranking "very good" to "limiting area". What happened in 2009? Although the company achieved operating profit and net profit from operations, they were much smaller than in the previous year. This resulted in the deterioration of the financial strength, and although it was above 1 in 2009 (1.3764), it was still significantly lower than in 2008 (2.7114). The company lost the ability to create value because the operating profit declined by 47% in 2009, resulting in its insufficiency to create value above the cost of equity. The company won't be back on the old track until 2010, achieving the rank as "very good 4" by BEX index, though slightly worse than the one it had in 2008. Operating and net profit increased, and the indicators of financial strength (2.9095) and value creating (1.7920) returned to the safe operating zone. However, the company must continue to improve its business if it wants to reach an exceptional level of business success.

The only company rated as the world-class and whose financial statements undoubtedly show that, is Basta Zrenjanin. The company continues to grow, improve and expand its business in each segment, taking into account all the parameters of business success. Financial strength of the company was at an enviable level in 2010, because the company fully covered all of its liabilities with free cash flow from earnings (8.9872). Operating and net profit continues to grow constantly, liabilities are reduced, assets is fund from its own resources, operating revenues increases, operating expenses maintains at almost the same level. In the year 2010, company had an excellent ability to create value, 7.8 times higher net operating profit compared to the cost of equity. Prognosis for the future of this company is that it currently operates with high performance, what can be expected in the next 4 years if the management continues to improve and analyze the business.

Concluding Remarks

The conducted research in function of the set goal and working hypothesis has proven beyond doubt that analysis and prognosis for business excellence and financial health of companies based on BEX index are fully acceptable for our market. Thereby we can say that this model got empirical confirmation on the Serbian market through this research, and thus in the Vojvodina region, which has been taken into consideration. All the results that have been explained in detail in the paper show the justifiability of the calculated parameters and the companies that are really successful, with a growth path of development, and those operating on the limits, needing improvements and restructuring.

This is primarily because the BEX index was modeled under the conditions prevailing in the Croatian capital market which is very similar to ours both by the degree of transparency and the development trend. It may be noted that 2009 was an extremely difficult year, and that the leading agricultural enterprises of the region of Vojvodina, which are not in bankruptcy or restructuring, demonstrated a huge decline in performances in an attempt to survive and preserve their business efficiency. During 2010, the situation has been improved considerably. On the basis of good business decisions, management reduced the high financial expenses, which had been the biggest problem of agricultural enterprises in Vojvodina for a long time and reduced long-term liabilities to a minimum.

It remains to be seen how the further development of the crisis will affect the decisions of the state leadership and consequently the company's management to impose a new strategy of development in the agrarian economy of Vojvodina and the whole of Serbia.

Leading agricultural enterprises in Vojvodina, which were analyzed by random sample method in this paper show that there is potential for agricultural development and that the additional investments and grants are necessary so that this plant would demonstrate its full contribution to our country's approach to the international integration processes and enhance its export potential, which is certainly one of the main conditions for the development of our economy and exit from the crisis.

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ANALIZA POSLOVNE USPEŠNOSTI POLJOPRIVREDNIH PREDUZEĆA U VOJVODINI U PERIODU AKTUELNE KRIZE

Jasenka Bubić,[3] Jasmina Hajnrih[4]

Rezime

Od kada se savremena ekonomska kriza prelila na realni sektor Srbije, preduzeća se suočavaju sa znatnim pogoršanjem finansijskog položaja i uspešnosti poslovanja što se odražava ne celokupnu ekonomsku aktivnost zemlje. Poljoprivredna delatnost, kao nosilac uspešnog razvoja vojvođanske regije takođe proživljava negativne efekte krize koji su samo produbili već postojeće probleme loše privatizacije i propusta da se prilikom iste ograniči stepen ukupnog zaduženja preduzeća, a naročito kratkoročnog. Cilj ovog rada je da se primenom indikatora za utvrđivanje finansijskog zdravlja proceni korporacijski uspeh vodećih poljoprivrednih preduzeća u Vojvodini u periodu 2008-2010. godina i da se utvrdi perspektiva uspešnosti njihovog poslovanja za naredne dve godine. Na onovu finansijskih izveštaja izvršiće se analiza i procena poslovne uspešnosti za uzorkovana poljoprivredna preduzeća pomoću BEX indeksa, s prognostičkim očekivanjima za naredni period.

***Ključne reči**: poljoprivredna preduzeća, analiza, poslovna uspešnost, prognoza*

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IMPACT OF ENERGY PRICES ON INCOME OF LABOUR ON FIELD CROP OPERATIONS[1]

Sanjin Ivanovič[2], Saša Todorovič[3], Lana Nastić[4]

Summary

The starting point of the paper is the fact that the economic effects of field crop operations is highly conditioned by energy prices (primarily diesel fuel prices) as well as by the raw material whose prices to a large extent depend on energy price (fertilisers). Hence, it is determined on the basis of the model of family farm (specialized in field crop production) that the change in the prices of the given inputs influences the change in gross margin and farm profit.

A special attention is paid to the changes in gross margin per worker and per working hour, as well as to the profit per worker and per working hour, which is caused by a varying of the purchase prices of raw materials, whose prices depend on energy prices (diesel fuel and fertilisers).

It is determined by the analysis that diesel D-2 is distinguished because of its importance for profitable business operations of the examined family farms regarding that the 20% price increase of diesel D-2 leads to the decrease in family farm profit by 35.56%. In the second place, the highest impact on the profit is created by the prices of different NPK fertilisers, whereas the prices of KAN and UREA fertilisers do not have so significant impact on the farm profit. By subsidizing the price of the aforementioned inputs for

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family farms, it is possible to produce greater economic effects of labour on family farms and thus influence the reduction of rural poverty. This solution is acceptable only in the short run, but in long term perspective it is needed to emphasize investments instead of subsidies.

Key words: *family farms, gross margin per worker, profit per worker, gross margin per working hour, profit per working hour.*

JEL: *Q10, Q12, Q14*

Introduction

The Republic of Serbia did not avoid the consequences of the world economic crisis as well as the crises related to energy on the global level. Therefore, it leads to the increase in prices of the most important inputs in agricultural production, and primarily in the prices of diesel fuel and fertilisers. It results in the increase of variable costs of agricultural production, and in the rise of total costs, decrease in gross margin and profit (in some enterprises, as well as total for the whole farm). This situation is primarily reflected in farms involved in crop production, and then this prices increase is transferred to livestock production through the costs of animal feed. Through crop and livestock production, this price rise is also reflected in processing industry.

According to Furman et al. (2004) agriculture, as a great energy consumer, annually spends 651,585.8 t of diesel fuel, which comprises 31.89% of total consumption in the Republic of Serbia (2,042,971.5 t). However, it is only a half in comparison with the period of 20 years ago when 1,300,000 t of diesel fuel were spent in agriculture annually (Brkić and Janić, 2005). Bearing that in mind, it is obvious that the increase in fuel prices primarily caused by fuel products world market trends significantly influences the costs of agricultural production (Todorović et al., 2009b). The similar situation can be discerned in the case of fertilisers, which are currently (due to high market prices and uncertainty regarding the prices of agricultural products) much less used than they once were. In other words, given the high price of fertilisers, many family farms are not able to apply a sufficient amount thereof, which is certainly negatively reflected in yield, and accordingly in the profitability of business operations.

The price increase of raw material and fuel adversely affects the level of production intensity. Producers, striving to gain profit in conditions of expensive production, tend to reduce technology and produce at the expense of environment (primarily soil), which is socially unacceptable (Bošnjak and Rodić, 2010). Todorović and Filipović (2010a) stated that the most significant item in wheat production costs (35.75%) is cost of fertilisers, which is a consequence of its high purchase price. The potential savings on fertilisers applied by some farms in the absence of favourable financing sources cannot be called rationalisation, because reduced investments in fertilisers is negatively reflected in the profitability of production (it is well-known fact that the amount of applied fertiliser is one of the factors which significantly influences the level of yield). The same authors state that the example of the farms which fully implemented cultural practices (which comprises the application of an adequate amount of fertilisers), shows that the adequate application of fertiliser, even in the conditions of its high purchase price, has the economic justification given that it contributes to the increase in production profitability. This is stated by the authors because producers in Serbia (due to high prices of fertilizers and absence of financial means) often use minimal quantities of fertilizers (much less than standard quantities).

It is important to consider the possibilities for mitigating consequences caused by high prices of fuel and fertilisers. Bearing in mind the mainly monopolistic position of suppliers related to the family farms and the fact that the farmers individually (independently of each other) procure the necessary inputs for agricultural production, it is completely evident that in such circumstances family farms do not obtain or hardly obtain price discount on greater quantity of purchased raw material.

That is, among other things, the consequence of unfavourable structure of land tenure of family farms at the level of the Republic of Serbia, taking into consideration that according to the research of Bogdanov and Božić (2005), only 5.5% of farms own more than 10 ha of land. Apart from that, the purchases of the inputs for agricultural production are most frequently made at local dealers, where the prices are, as a rule, higher than the prices at wholesale. Due to cyclical cash flow on the family farms specialized in field crop production, the purchases of the raw material are not made in advance, but at the moment when it is needed or on the basis of deferred payment (Todorović et al., 2009a). All this negatively influences family farm operations, due to the increase in production costs incurred as a consequence of the higher purchase prices of the inputs for agricultural production. The associations of producers can have an important role in overcoming this problem regarding either the associations of farmers, cooperatives or any other form of linking small agricultural producers. The association membership can provide better market position of family farm, thereby creating a favourable environment for improving its profitability (Cicea et al., 2009).

This paper aims at examining the economic effects of the change in raw material prices (which depend on energy prices – diesel fuel and fertilisers) on economic effects of field crop operations, as well as on economic effects of labour of farm members. The aim of the paper is also to give some recommendations for agricultural policy. Nevertheless, investigation is focused on direct short term effects on farm incomes of input price changes, due to frequent changes of agrarian policy in Serbia, as well as impossibility to predict with certainty when Serbia will become a member of the EU.

Materials and methods

In order to accomplish the aforementioned aim, the interviews with 15 family farms holders from AP Vojvodina were conducted. A detailed analysis of natural, organisational and economic conditions in which the farms operate was carried out, then the analysis of all available resources which are at their disposal as well as the analysis of production results.

Based on that, a model of family farm specialized in field crop production was made with the following main characteristics:

- The farm is situated in the lowland region and has 10 ha of arable land of uniform quality and optimum plot size,
- The farm is involved in intensive crop production.
- Crop area is used for growing cereals (maize and wheat) and industrial crops (sunflower and soya bean) with respect to crop rotation restrictions. Production technology is typical for the given crops and the region in which the farm is located,
- The whole crop production is market-oriented, that is, there is not any form of internal realisation of the obtained products;
- One family member is constantly engaged on the farm and
- The farm has at its disposal necessary machinery (except for combine harvester) for implementation of the designed production technology (tractor 30 kW and appropriate other machinery).

As a basis for the research, calculations of fixed costs at the level of the whole farm were used, as well as variable costs per enterprises and total variable costs for the whole farm. Based on these elements, the indicators of economic effects of field crop operations were determined, and these are gross margin of the whole farm (as a difference between the total production value and total variable costs) and profit which is made on the farm (as a difference between the total production value and the sum of total fixed and variable costs).

Apart from the aforementioned calculation methods, the sensitivity analysis method was used in the paper for the purpose of determining changes in gross margin and family farm profit depending on the change in purchase price of the following raw materials used on the farm:

- Fuel (diesel D-2) and
- Fertilisers (NPK 8:16:24, NPK 15:15:15, UREA and KAN).

Sensitivity analysis started from the assumption that the purchase price of the observed raw materials varies within the range of ±20%, reflecting the changes that often occur in practice. The same method of analysis was used to determine changes of input prices (in percentage) that will provide information when the farm operation is unprofitable.

Results and discussion

In the paper, firstly are observed the impacts of diesel fuel and fertilisers prices on gross margin and family farm profit. The impact of diesel price on the mentioned economic indicators of field crop operations is shown in Table 1.

Table 1. Change in gross margin and family farm profit depending on fuel price (diesel D-2)

Change of the purchase price of fuel (diesel D-2)	Gross margin of family farm			Family farm profit		
	Value (RSD)	Change (RSD)	Change (%)	Value (RSD)	Change (RSD)	Change (%)
-20.00%	678,066.83	41,671.14	6.55%	158,866.58	41,671.14	35.56%
-10.00%	657,231.26	20,835.57	3.27%	138,031.01	20,835.57	17.78%
0.00%	636,395.69	0.00	0.00%	117,195.44	0.00	0.00%
10.00%	615,560.12	-20,835.57	-3.27%	96,359.86	-20,835.57	-17.78%
20.00%	594,724.54	-41,671.14	-6.55%	75,524.29	-41,671.14	-35.56%

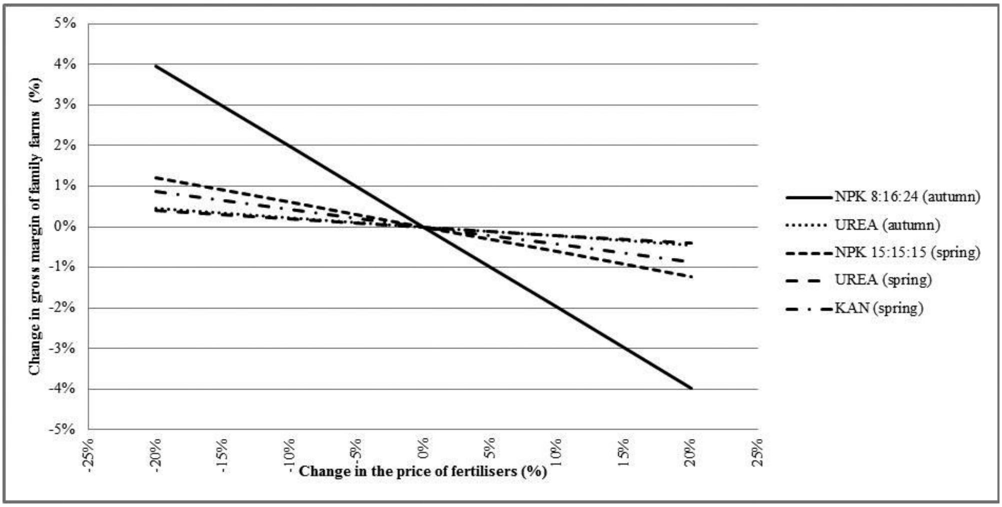
Source: Authors` calculation

It can be noted that the profit of farm is much more sensitive to changes in prices of fuel (diesel D-2) than gross margin. Hence, the change of 1% in fuel price causes the change of 0.327% in gross margin, whereas the change in profit is 1.778%. The significance of diesel fuel prices for economic effects of field crop operations is indicated by the fact that the change of 20% in fuel price (when other factors remain unchanged) results in the change of the total of 35.56% in farm profit. Bearing in mind that the fuel prices tend to rise, it is clear that in the future they can substantially reduce the farms profits.

Fertilisers are raw materials whose price to a large extent depends on energy price on the world market. On the other hand, exclusion of fertilisers from crop production is impossible, since it would significantly reduce the yields of grown crops. Therefore, the analysis of the impacts of different fertilisers` price on gross margin (Graph 1) and on profit (Graph 2) of family farms was carried out.

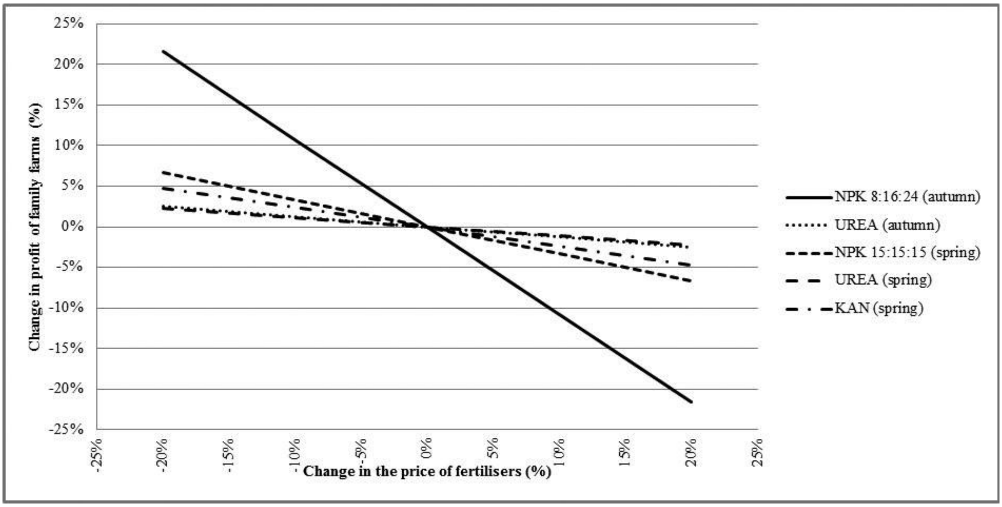
When conducting it, we started from the fact that some fertilisers (such as UREA) are used both in the autumn and in the spring. Their prices can be considerably different in these two seasons, so for that difference in prices, the impact of price of fertilisers used in the spring and in the autumn on gross margin and family farm profit is separately shown in graphs. Graphs 1 and 2 are designed so that the abscissa shows the percentage change in purchase prices of some types of fertilisers, whereas the ordinate reads how much it (expressed in per cent) will affect varying of gross margin (Graph 1) and profit (Graph 2) of family farm.

Graph 1. Percentage change in gross margin of family farms depending on the percentage change in the price of different types of fertilisers



Source: Authors` calculation

Graph 2. Percentage change in profit of family farms depending on the percentage change in the price of different types of fertilisers



Source: Authors` calculation

As regards gross margin and profit, the fertiliser NPK 8:16:24 is distinguished, so 20% increase in its price leads to reducing of gross margin by approximately 4%, whereas profit is reduced between 21% and 22%.

The comparison of the single impact of diesel fuel and fertilisers price on gross margin and profit of the family farm (in case purchase prices of these raw materials changes by 10%) is shown in Table 2.

Table 2. Impact of individual changes in purchase prices of fuel and fertilisers on gross margin and profit of family farm

Rank	Title	Change of input prices	Change of gross margin of family farm	Change of profit of family farm
1	Diesel D-2	10%	3.27%	17.78%
2	NPK 08:16:24 (autumn)	10%	1.98%	10.77%
3	NPK 15:15:15 (spring)	10%	0.61%	3.31%
4	KAN (spring)	10%	0.44%	2.38%
5	UREA (autumn)	10%	0.23%	1.25%
6	UREA (spring)	10%	0.21%	1.12%

Source: Authors` calculation

The results of the conducted analysis show that gross margin and family farm profit are most affected by diesel D-2 fuel, whereas UREA fertiliser is found to have the lowest impact, particularly that portion used in the spring.

Apart from analysing the impact of the changes in prices of individual raw materials on the success of field crop operations, calculation of the joint effects was also made. It is shown what changes in variable costs, total costs, gross margin and profit of the farm would occur if purchase prices of all observed raw materials (fuel and different types of fertilisers) simultaneously increased by 10%, that is, 20% (Table 3). The same changes in percentage value (but with opposite direction) would occur in case of decrease in prices of these raw materials.

Table 3. The joint effect of changes in purchase prices of fuel and fertilisers on the business indicators

Indicators	The initial value	When purchase prices rise 10%		When purchase prices rise 20%	
		Value (RSD)	Change (%)	Value (RSD)	Change (%)
Variable costs	716,090.40	759,000.12	+5.99%	801,909.84	+11.98%
Total costs	1,235,290.65	1,278,200.37	+3.47%	1,321,110.09	+6.95%
Gross margin	636,395.69	593,485.97	-6.74%	550,576.25	-13.49%
Profit	117,195.44	74,285.72	-36.61%	31,376.00	-73.23%

Source: Authors` calculation

It may be noted that the simultaneous increase in prices of fuel and fertilisers (which is in practice possible, since the prices of these raw materials depend on energy prices on the world market, as well as on the economic policy of the state) would lead to the drastic decrease in profit of family farms specialized in field crop production. Therefore, the increase of prices of these raw materials by 20% would lead to the decrease in farms profit by a total of 73.23%. On the other hand, decreasing in prices of fuel and fertilisers (which are currently at a very high level) to a large extent, would improve the effects of field crop operations.

Thus, state incentives regarding production costs have increasingly important role (Todorović, Filipović, 2010b; Todorović, 2010). Hence, it is necessary to bear this in mind when designing agrarian policy in the following periods.

The aforementioned changes would also reflect on the economic effects of labour on the farm, which can be expressed as gross margin and profit per worker and per working hour (Table 4).

Table 4. Impact of purchase price of observed raw materials on the income of labour

Indicators	The initial value	When purchase prices rise 10%		When purchase prices rise 20%	
		Value (RSD)	Change (%)	Value (RSD)	Change (%)
Gross margin	636,395.69	593,485.97	-6.74%	550,576.25	-13.49%
Gross margin per worker	636,395.69	593,485.97	-6.74%	550,576.25	-13.49%
Gross margin per working hour	2,268.31	2,115.36	-6.74%	1,962.42	-13.49%
Profit	117,195.44	74,285.72	-36.61%	31,376.00	-73.23%
Profit per worker	117,195.44	74,285.72	-36.61%	31,376.00	-73.23%
Profit per working hour	417.72	264.78	-36.61%	111.83	-73.23%

Source: Authors` calculation

The analysis showed that gross margin per worker and per working hour changes in the same per cent as well as total gross margin because of the increase in purchase prices. Similarly, the profit per worker and profit per working hour, due to the increase in purchase prices of raw material, changes in the same per cent as well as total profit of the farm. Therefore, the simultaneous increase in the purchase prices of diesel fuel and fertilisers by 20% causes a 3.66 times higher reduction of profit per worker and profit per working hour. On the other hand, the change in the aforementioned prices is much less reflected in varying of gross margin per worker and per working hour.

It is also possible to determine changes of purchase prices of all observed raw materials (Table 5), as well as specific raw materials that lead to unprofitable farm operation.

Table 5. Changes of purchase prices of observed raw materials when the farm operation is unprofitable

Indicators	The initial value	When purchase prices rise 27.31%		When purchase prices rise 148.31%	
		Value (RSD)	Change (%)	Value (RSD)	Change (%)
Gross margin	636,395.69	519,200.25	-18.42%	0.00	-100.00%
Profit	117,195.44	0.00	-100.00%	-519,200.25	-543.02%

Source: Authors` calculation

If prices of all materials (fuel and fertilizers) rise by 27.31%, family farm that deals with field crop operations will become unprofitable. Analysing possible price changes of specific raw materials it is determined that rise of diesel fuel price by 56.25% leads to unprofitable crop production. The same consequence will happen if price of the most important NPK fertilizer rises by 70.99%.

Besides, we should take into consideration that on the small family farms devoted to field crop production, the hidden unemployment is also present. Family members on these farms have great possibilities to be involved in crop production and to be engaged in some other activities (such as cattle fattening) so as to improve their economic status (Todorović et al., 2011).

It is in accordance with OECD data (2006) showing that "farm families relying increasingly on off-farm employment, the economic success of rural communities will depend on the development of new economic engines". Therefore OECD (2006) governments are increasingly interested in place-based approach to rural policy, which means emphasizing investments rather than subsidies. That also means integration of different sectoral policies and improvement the coherence and effectiveness of public expenditure in rural areas. According to Cvijanović et al. (2011) within CAP it could be noted "redirection towards fulfillment of various social and ecological goals". Erjavec and Salputra (2011) stated that "the form and scope of direct payments under the Common Agricultural Policy are controversial for several reasons: high budgetary costs, unfair distribution between old and new Member States and weak argumentation of payments". Therefore, authors suggest certain redefinitions within CAP for the period 2013-2020.

In 2012 (as well as in recent years) Serbian agricultural policy supports investments in agriculture using subsidized interest rates for agricultural loans. But, available amount of such loans for agriculture usually is not in accordance with actual needs. Support of investments in other farm related activities such as rural tourism is not sufficient, as well.

Therefore, in Serbian situation it is necessary (as a temporary solution) to use subsidies to prevent family field crop operations from significant profit decrease. At the moment, Serbian government subsidizes 48% of market price of diesel fuel. But such subsidy is introduced in 2012, and it is not known for how long it will last. It is noticed that Serbian agricultural policy is changing frequently, so that it increases risk in agricultural production and disables farmers to makes long term business plans.

Conclusion

By the analysis, it is determined that the increase in diesel D-2 prices leads to the decrease in family farms profit by 35.56%, what makes this input distinguished for its importance for profitable operations of the observed farms. In the second place, the highest impact on the profit is created by the prices of different NPK fertilisers, whereas prices of KAN and UREA fertilisers do not have so powerful impact on the profit of the farms specialized in field crop production.

If the prices of all kinds of the observed raw material (fuel and various types of fertilisers) together change by 20%, they lead to the change in the whole farm profit as well as in the profit per worker and working hour even by 73.23%. On the other hand, the changes in prices of the observed inputs will not have so significant effects on gross margin of family farm, as well as on the indicators of economic effects of labour derived from gross margin.

Although, general strategy EU 2020 rejects the idea of supporting non sustainable input use, it is necessary to have such support in Serbia. Otherwise, consequence will be significant decline of profit at family farms dealing with field crop operations. Other negative effects of not subsidizing prices of fuel and fertilizers are decline of income of labor, as well as increase of poverty in rural areas. In long run above mentioned subsidies should be avoided and replaced by support to investments. But before that it is necessary to provide certain preconditions (increase in size of parcels and size of entire farms, so that it is possible to apply modern technology in field crop operations).

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UTICAJ CENA ENERGENATA NA EKONOMSKE EFEKTE RADA NA RATARSKIM PORODIČNIM GAZDINSTVIMA

Sanjin Ivanović[5], Saša Todorović[6], Lana Nastić[7]

Rezime

Na ekonomske efekte poslovanja porodičnih gazdinstava ratarskog tipa veliki uticaj imaju cene energenata (dizel goriva) kao i repromaterijala čije su cene u velikoj meri zavisne od cene energenata (mineralna đubriva). Zbog toga je na modelu porodičnog ratarskog gazdinstva utvrđeno kako promena cena navedenih inputa utiče na promenu marže pokrića i profita gazdinstva. Posebna pažnja posvećena je promenama marže pokrića po radniku i času rada, kao i profita po radniku i času rada do koje dolazi usled variranja pomenutih nabavnih cena.

Analizom je utvrđeno da se po svom značaju za profitabilno poslovanje posmatranih gazdinstava izdvaja dizel D-2. Nakon njega najveći uticaj na visinu profita imaju cene različitih vrsta NPK đubriva, dok cene đubriva KAN i UREA nemaju tako veliki uticaj na visinu profita ratarskih gazdinstava. Preko subvencionisanja cena navedenih inputa za ratarska gazdinstva moguće je ostvariti veće ekonomske efekte rada na porodičnim gazdinstvima i time uticati na smanjenje ruralnog siromaštva.

Ovakvo rešenje je prihvatljivo samo u kratkom roku, ali dugoročno je potrebno da se veća pažnja posveti investicijama umesto subvencijama.

Ključne reči: *porodična gazdinstva, marža pokrića po radniku, profit po radniku, marža pokrića po radnom času, profit po radnom času*

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THE ANALYSIS OF SOCIO-ECONOMIC CONDITIONS FOR ORGANIC PRODUCTION IN MONTENEGRO[1]

Miomir Jovanović, Aleksandra Despotović[2]

Summary

Food production and agriculture still play an important role in the economic development of Montenegro. The share of agriculture in total GDP of Montenegro was 8.4 % (2008) and share of Gross Value Added in total GDP was 6.9% (2007). One of the structural characteristics of Montenegrin food production is higher share of agriculture in gross domestic product in comparison to the food processing sector. This indicates a low level in finalization of agricultural products, as well as the emphasized sales of agro-food products through unregistered trade channels. The prevailing existence of extensive agriculture in Montenegro provides a good basis for development of organic agriculture. Development of the organic sector is therefore considered as an important and contributing factor for the overall economic development and rural poverty alleviation. The paper analyzes the socio economic situation of agricultural producers in Montenegro in terms of procedures for organic production.

Key words: *food production, organic, market, economic.*

JEL: *Q12, Q13*

Introduction

Montenegrin agricultural area is only 518 000 ha. Production is very diverse and the degree of utilization of agricultural area is very low. According to the most recent data of FIBL/IFOAM on certificated organic production at the global level, there were 37.2 million ha of organic farmland (including the area under conversion), (*Tomaš,*

1 This paper represents a part of the research on the project of the FAO, entitled Project: TCP/MNE/3201 "Organic agriculture in Montenegro: concerted support for small-scale growers in organic agriculture".

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Pejanović, Glavaš-Trbić, Njegovan, 2011)[3]. Production of safe food is a trend in the world, and the resultant existence of demand for agricultural products produced in this way (*Vlahović, Štrbac, 2007*)[4].

The economic crisis that occurred in nineties caused a significant reduction in consumption of artificial fertilizers and pesticides, thereby preserving the soil from contamination. Analysis of the application of scientific farming methods in agricultural production indicates that the use of artificial fertilizers and chemicals in Montenegro is about 4.5 times smaller than in surrounding countries and over 10 times smaller in relation to the EU average (*Despotović, 2002*)[5]. Mentioned parameters clearly indicate that Montenegro possesses favorable natural conditions for development of organic agriculture. There is a huge potential space in which one can organize organic production with a very short transitional period. For example: the total production of potato in Montenegro (2008) was 134.106 t. Only 80t was from organic agriculture or 0.05% of the total production[6]. At the same time, Montenegro has relatively large areas that could be used for organic agriculture, on one hand, and relatively small production quantities of organic products, on the other hand, in comparison with the neighbouring countries. Western European countries show a remarkable growth of this sector, with databases and statistics that regularly monitor t progress of this production. At the global level, the first recorded single-digit market growth rate of organic products was in 2009 (*Tomaš, Pejanović, Glavaš-Trbić, Njegovan, 2011*)[7]. Demand for organic food is a steadily increasing trend, together with the increased knowledge of consumers about the necessity of rich diversity of high quality food that is chemically and microbiologically safe (*Lazić, 2008*)[8].

Material and methods

In accordance with the set objectives and the research plan, visits were prepared after analyzing the available information obtained from the certification body "Monteorganica". After examining the available data it was concluded that the majority of reported farmers opted for implementation of organic agriculture in plant production.

Thus in the period 2006-2008, the number of registered producers of organic agriculture

3 Tomaš, M., Pejanović, R., Glavaš-Trbić, D., Njegovan, Z (2011): Ekonomika poljoprivrede, Organska poljoprivreda u podunavskom regionu, SI-1 412, UDK. 338.43:63, JU ISSN 0352-3462, pp. 220-228, Beograd.

4 Vlahović, B., Štrbac, M. (2007): Ekonomika poljoprivrede, Osnovne karakteristike tržišta i marketinga proizvoda organske poljoprivrede, vol. 54, br. 2, str. 131-147.

5 Despotović, A. (2002): Prirodni uslovi proizvodnje zdrave hrane u Crnoj Gori, Organska poljoprivreda, grupa autora, Podgorica.

6 Ministarstvo poljoprivrede, šumarstva i vodoprivrede, 2010, www.upitnik.gov.me/ O/Pdf/C11.pdf

7 See footnote 3.

8 Lazić. B., Babović, J. (2002): Organska poljoprivreda, (TOM1), Institut za ratarstvo i povrtarstvo, Novi Sad.

in Montenegro amounted to 26, whereof 12 were certified, while the number of issued organic certification was 6 and the number of certificates for the transition period was 7[9]. As regards the regional aspect, we can conclude that these holdings are, predominantly, located in the mountainous area of Montenegro and the North Mountain and Polimlje-Ibar region. The main criteria in choosing the farms for the conduct of questionnaire surveys were: That the farm was registered with the certification body "Monteorganica"; That the farm possesses the certificate for transition period or organic certificate; that organic production principles were implemented in plant production; That the farm is located in the north - the mountainous and Polimlje-Ibar region;

Questionnaire surveys were conducted on seven farms in 2010 and their main goal was to evaluate conditions and opportunities for further development of organic production in respect to the actual situation of organic agriculture in Montenegro, as well as to present the advantages and disadvantages of the transition process from traditional to organic farming. The survey was implemented in the municipalities: Kolašin, Mojkovac, Pljevlja and Berane.

Results and discussion

The average number of male members in the surveyed households was three and female was 2.29, (Table 1).

Table 1. Average figures for the surveyed households wich have farms

Status	Number of households members	
	Men	Women
Total number of household members	3	2.29
Age (min-max)	1-80	12-65
Number of household members attending school (elementary, secondary)	0.86	0.43
Number of household members (working outside the farm)	1.14	1.14
Number of household members (who are engaged full time on the farm)	1.29	0.56
Number of household members (which are most of the time engaged outside the farm)	0.43	0.29
Number of unemployed household members	0.29	0.14
Pensioners	0.43	0.14
Other household members (children, unable to work, etc.)	0.29	0.14
Seasonal engagement of workforce on the farm	7.57	3.29

Source: Survey conducted by the author in 2010.

9 MONTEORGANICA, www.orgcg.org

The average age of the host farms was 60 years (Table 2).

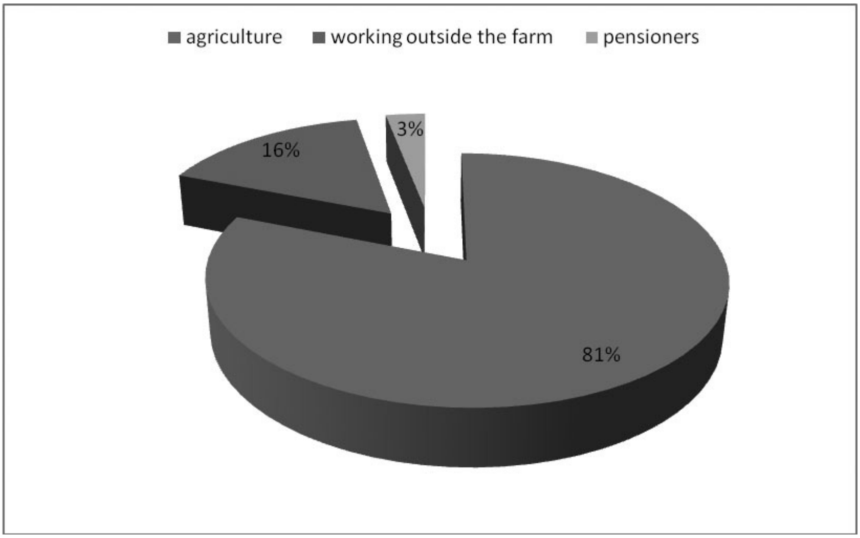
Table 2. The average age of the owners and their education

Age	60
The level of education of the host (select offered)	0 1 2 (1) 3 (4) 4 (4)

Note: (0) No education (1) Primary School, (2) High school, (3) craft (4) College, Faculty
Source: Survey conducted by the author in 2010.

Four farmers had college or university degree. Regarding the participation of income sources at the surveyed farms, the incomes from agriculture dominate with around 81% (Graph 1).

Graph 1. Participation of individual sources in total household income



Source: Survey conducted by the author in 2010.

Analysis of the structure of agricultural land in private ownership, average per farm, indicate a relatively substantial area with20.1 ha of arable land, 12.4 hectares of meadows and pastures and around 1.6 ha of orchards and vineyards, while the forests take around3 ha. Relatively large areas of agricultural land owned by the surveyed households are result of the fact that this land is jointly owned by a larger number of household members and has not been divided among them yet. At the same time, around 20 ha of land are rented (Table 3).

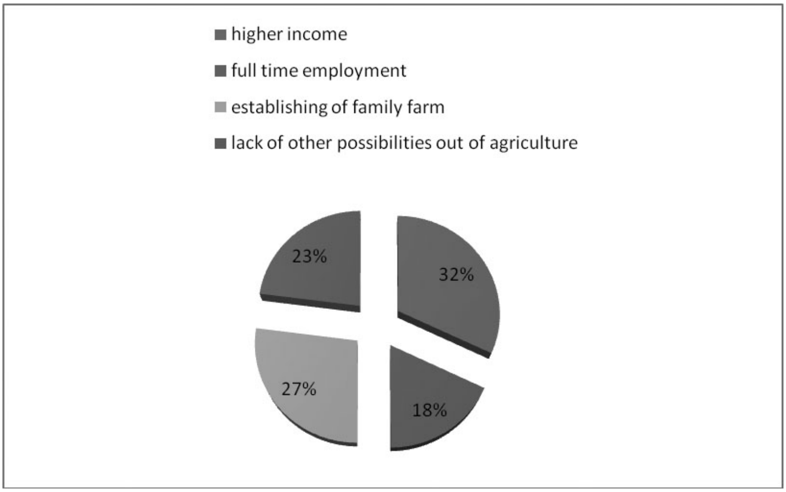
Table 3. The structure and size of agricultural land on farms

(1)	Agricultural land	Privately owned (ha)
	- Arable land (ha)	20.1
	- Meadows and pastures (ha)	12.4
	- Orchards and vineyards (ha)	1.6
(2)	**Forests (ha)**	3.0
(3)	**Land rent (ha)**	20.0

Source: Survey conducted by the author in 2010.

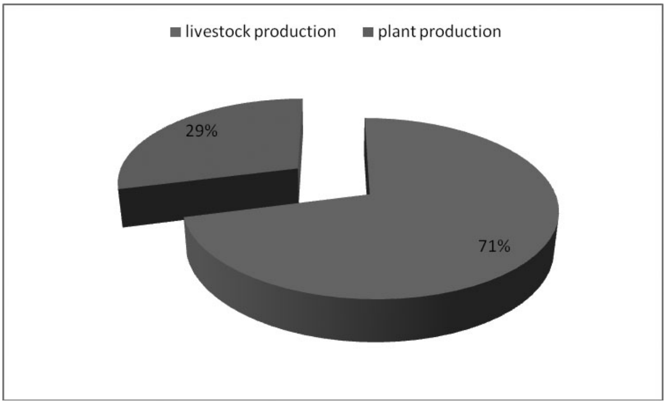
In 2010, there were 12 ha under the grain crop with average production of 35.7 t / h. About 90% of this production was market oriented. The average area under potato was around 2.5 ha with average production of around 4t/ha. Also, over 90% of the stated production had a commercial character. Only 14% of vegetable production at the surveyed households was market-oriented, while 86% of it had the character of natural production. Areas that were under fruits and vegetables amounted, in average, to around2.25 ha and the yields amounted to around 12t/ha. The assessment of main goals has shown that the majority of farmers are engaged in the agricultural production in order to achieve higher incomes (4.86), while the lowest percent was awarded to the lack of other opportunities outside the agriculture (Graph 2).

Graph 2. The primary goals in agricultural production



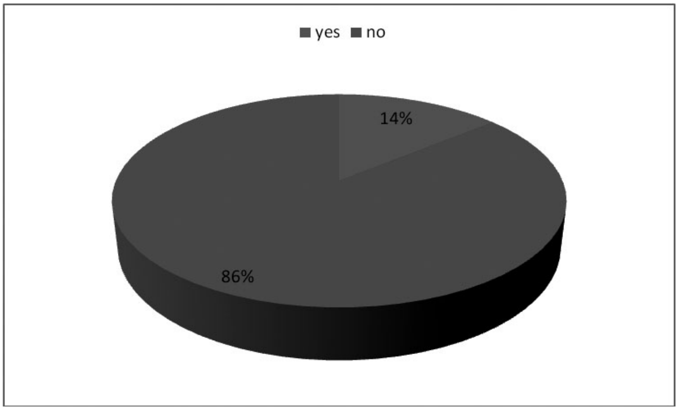
As regards the livestock production, the producers primarily intend production for their own purposes. Thus the average number of heads in 2008 was 2.7 animals per household, with the number of animals under the age categories of cattle (up to 12 months) was, on average, only one head, while the average number of older categories of cattle (over 12 months) was 1.7 animal per farm. The average number of sheep in 2008 was 43 and the average number of pigs was 2 animals per farm. The average annual milk production was around 4560 kg per head. Additional activities on farms included production of fruits and vegetables, mainly for their own needs, which was conducted by 57% of the surveyed owners of households, while the meat and milk production was conducted by 29% of households and the same percent of farmers who use agricultural machinery. Regarding the question which areas of production can achieve higher incomes, 71% of household owners indicated the plant production and only 29% indicated the livestock production (Graph 3).

Graph 3. The source of income



The economic position was satisfactory for 29% of respondents, which is the percentage of households that declared their economic position as good, while42% considered their position as poor. The major barriers for development of agricultural production, according to the respondents are: poor bulk purchasing (100%), lack of credit funds (43%), lack of competitiveness (29%) and poor collection of receivables (14%). On the question of whether they use mineral fertilizer, 86% of respondents answered yes, while 14% answered no (Graph 4).

Graph 4. The structure of surveyed households by use of mineral fertilizer



In terms of sufficiency of information about the concept, rules and organization of organic production- 86% of respondents said that they had enough information and only 14% answered with number around 57% of respondents considered that they need additional education about the concept, rules and organization of organic production and 43% of them deem it as not necessary.

Relating to the structure of training, most of respondents opted for combined model-theoretical and practical, and only 14.5% for the practical. On the question of whether organic production could be considered as a better option for elimination of market risk in milk production, the answer was divided-by 50%.

From the respondent's point of view, it takes three to four years, in average, to convert from traditional to organic production.

The highest grade of 4.6 (proposed grades from 0-5, from the generally unimportant to very important) was given to almost all conditions necessary for the process of converting from traditional to organic agriculture: higher market prices, better information/marketing, better technical advisory support, better administrative control, better opportunities for loans, personal marketing etc….

In terms of interest for construction of processing facilities in their respective villages, 57% of respondents expressed their interest, while 29% were not interested and 14% had no answer.

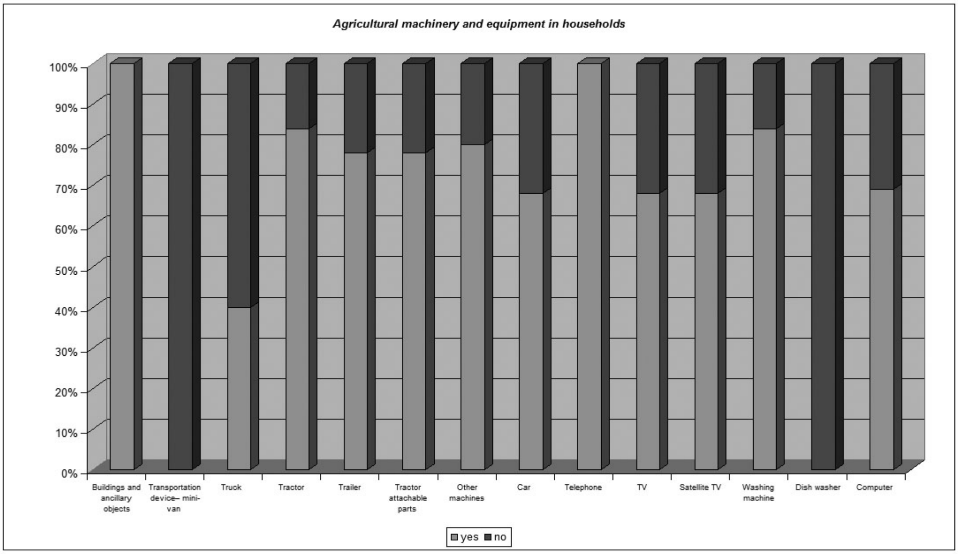
The surveyed farms mostly invested into machinery (100%), while the investments into basic and additional facilities were made by only 20% of respondents. 57% of respondents is of the opinion that knowledge on organic agriculture that is available through (newspapers, radio, TV, etc.) is at a low level. 14% of respondents thought that the mentioned level is sufficient, while 29% had no answer.

As regards the potential sale channel for organic products, the most common channel is retail-sale (86%), while the use of other channels (specialty shops, etc.) is relatively low (14%). This indicates that there is an insufficient level of sale channel dispersion and thereby a emphasized risk for placement of products.

Indicators of living standards for the households in the surveyed area

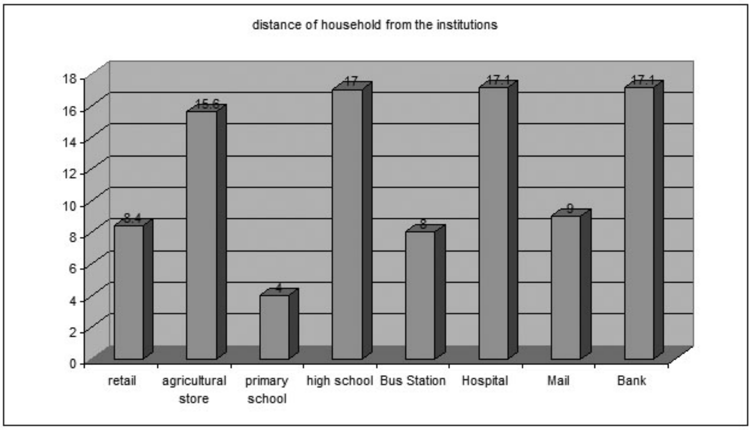
The obtained results of the survey provide a clear picture of the position of surveyed households in terms of conditions for agricultural production and placement of their products. The general conclusion is that, except the means of transportation and machinery for vessels, there is an evident lack of other machinery and equipment (Graph 5).

Graph 5. Agricultural Machinery and Equipment in the analyzed households



In terms of distances of individual holdings from the relevant institutions and thus of conditions and quality of life in the analyzed area, it was noticed that primary schools are rather close to the households, but other institutions-secondary schools and colleges, hospitals and banks are rather far away (Graph 6).

Graph 6. Distance of households from the institutions (km)



Conclusion

In the past few years, the organic agriculture sector of Montenegro established the legal framework and created the necessary institutional support. However, when it comes to the development of products, it can be concluded that they are still at an early stage of development (fruit, vegetables, livestock products, etc.).

Monitoring the development of organic agriculture sector in Montenegro is a complex task, given the heterogeneity of production and the unreliability of data and difficulties in obtaining high-quality statistical information on foreign trade, consumption and processing.

Based on the presented survey results, the slow development of local markets and lack of affordable credit facilities represent a significant constraint to the further growth and sustainability of this sector. Many farmers do not have enough information on placement opportunities and support available for their products. Therefore, a key objective, in the field of organic agriculture, should be development of this sector at the local level through incentives for this type of production and support for the development of local markets with emphasis on environmental protection. This would contribute to better connectivity between potentially interested parties in the field of production, processing and trade of organic products, creating competitive agricultural products of high quality, which would be complementary to European brands.

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ANALIZA SOCIO EKONOMSKIH USLOVA ZA BAVLJENJE ORGANSKOM PROIZVODNJOM U CRNOJ GORI

Miomir Jovanović, Aleksandra Despotović[10]

Rezime

Proizvodnja hrane i poljoprivreda i dalje imaju važnu ulogu u ekonomskom razvoju Crne Gore. Udio poljoprivrede u ukupnom BDP-u Crne Gore je bilo 8,4% (2008), a učešće bruto dodate vrijednosti u ukupnom BDP-u, nešto manje od 7% (2007). Jedna od strukturnih karakteristika crnogorske proizvodnje hrane je viši udio poljoprivrede u BDP-u, u odnosu na prehrambenu industriju. Ovo ukazuje na nizak stepen finalizacije poljoprivrednih proizvoda, dok je i dalje značajno učešće trgovine poljoprivredno-prehrambenim proizvodima preko neregistrovanih kanala prodaje. Naglasak na ekstenzivnu poljoprivredu predstavljaju dobru osnovu za razvoj organske poljoprivrede. Otuda, razvoj organske poljoprivrede predstavlja važan faktor ukupnog ekonomskog razvoja i smanjenja siromaštva na ruralnom području.U radu se analizira socio-ekonomski položaj proizvođača hrane s aspekta bavljenja organskom poljoprivredom.

Ključne riječi: *proizvodnja hrane, organska, tržište, ekonomski.*

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JOB SATISFACTION AMONG THE EMPLOYEES IN NOVI SAD'S TOURIST AGENCIES

Bojana Kovačević[1], Tamara Gajić[2], Mirjana Penić[3]

Summary

This paper deals with current issues in the tourism sector, which is employee satisfaction, and result in the synthesis of theory and research findings on employee satisfaction in travel agencies, a factor for success and achieve greater profitability and competitiveness. The primary goal of this study was to determine the extent of employee satisfaction among staff in Novi Sad's tourist agencies, as well as to determine the parameters of employee motivation and enable the possible influence on bigger productivity and business competitiveness. The main objective of this study was to confirm a specific hypothesis. In this paper, the main hypothesis is that generally observing, staff employed in Novi Sad's travel agencies are mainly pleased with all offered segment or determinants that affect their business and it was confirmed. The basic method in this study is to survey a random sample, and analysis of results obtained from the data collected. Data processing used the SPSS program, version 17.0. Included were 107 respondents and the outcome reached by applying or use of statistical methods and secondary publications, confirming certain hypotheses that have been posted in the paper. Analyzing and processing the survey, which completely had a research character, led to the concrete and practical conclusions, proposals and guidelines about job satisfaction in tourist agencies in Novi Sad.

Key words: *job satisfaction, tourist agencies, Novi Sad*

JEL*:* *J28*

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Introduction

The success of the tourist agency is not only measured by the achieved profit but also by meeting interests of internal and external groups, or to be more precise of the owner of the agency, then employees, and of course customers (Agarwal et al, 2001). However, there is not a precisely defined formalized way to determine the satisfaction level of employees. This paper represents a synthesis of the survey and electronic research, statistical data and available references, and it will result in a critical analysis and confirmation (denial) of certain hypotheses. For the purposes of this paper a survey was conducted, where the respondents evaluated the specific determinants of satisfaction, and overall data processing was done in the programming system Statistical Package for Social Sciences – SPSS, version 17.0. The specific sample included 13 travel agencies in Novi Sad. The statistical analysis determined the relationships between all variables in order to prove or refute specific hypotheses that will be mentioned, concerning the satisfaction of employees in Novi Sad's tourist agencies. The main goal of this work was to determine the extent of employee satisfaction among staff in Novi Sad's tourist agencies; to determine the degree of satisfaction of employees with certain segments of business as well as to determine the parameters of employee motivation and enable the possible influence on bigger productivity and business competitiveness.

The study also highlighted the key aspects of disadvantages, i.e. the segments representing the direct cause of employee dissatisfaction, which is then reflected in the business. This research can be a starting point for other more detailed research in this field with the aim to take corrective measures in business operations, and therefore to achieve higher profits and better competitive position in the tourism market.

Literature Review

Employee satisfaction is a particular trend dealing with a number of scientific disciplines, from which derives the enormous importance of this component in the development of tourism and tourism agencies in an increasingly competitive market (Judge et al, 2000). Most theoreticians believe that employee satisfaction can have large effects on overall business (Kafetsios et al, 2008). Employee satisfaction represents a component of the success of each company (Diaz- Serrano et al, 2005), and more satisfied workers are less likely to leave their employer (Gaziouglu et al, 2002). Organizations have significant effects on the people who work for them and some of those effects are reflected in how people feel about their work (Spector, 1997, Green et al, 2005, Gajić et al, 2011). Employee satisfaction directly or indirectly affects their behaviour (Locke, 1976, Locke, 1969). More satisfied workers are less likely to leave their employer (Clark 2001, Lam et al, 2001, Yee et al, 2010). Job satisfaction includes multidimensional psychological responses to ones job, and that such responses have cognitive (evaluative), affective (emotional), and behavioral components (Brief et al, 2002, Sharpley et al, 2003, Chi et al, 2009).

Empirical studies have shown that relationship between employee satisfaction and productivity is not as clear as it might at first appear (Kovach, 1995). In addition, the pleasure does not affect only productivity but also some other phenomena in the organization, such as absenteeism and fluctuation.

For the purpose of this research created the questionnaire. The survey was conducted in 13 tourist agencies in Novi Sad in May 2011. There were 150 questionnaires distributed in total, out of which only 107 were complete and then analysed. However, due to poor turnout and return of the questionnaires, then to real difficulties in accessing the facilities, the obtained results were only indicative and they should serve as a good example and possible starting point for a representative survey. Nonetheless, many similar studies included even smaller sample. Theorists believe that about 50 respondents of the representative sample can achieve the desired results of the research. The primary objectives of this survey were to:

1. determine the demographic structure of employees at Novi Sad tourist agencies on the basis of the questionnaire created for the purpose of this research;
2. identify the extent of employee satisfaction among staff at tourist agencies;
3. determine the parameters of employee motivation at travel agencies and enable the possible influence on bigger productivity and business competitiveness; as well as
4. theoretically determine the correlation between the degree of satisfaction and level of education of participants at travel agencies.

The questionnaire contains precisely and clearly formulated questions, divided into three parts, with the responses given in the form of Likert scale (point 1 is complete disappointment and point 5 is full satisfaction). The first part dealt with the demographic structure of the sample. The second part of the questionnaire related to the basic parameters of employee satisfaction of staff in travel agencies in Novi Sad, whereas the third part of the questionnaire dealt with the parameters of motivation of employees in the workplace. All the collected data and analyses are processed in the SPSS package, version 17.0. Two main groups of statistical analysis were used: descriptive statistics (the method used to describe a group of respondents, i.e. survey sample, and the parameters such as frequency or median are obtained) and statistical conclusion method (a method of making certain conclusions and hypothesis testing). In statistical practice, there are two types of tests: parametric (data from interval scale which are normally distributed) and non-parametric tests (used for phenomena that cannot be measured quantitatively, but are presented by frequency and ranges).

On the basis of previously set goals and objectives, the main hypothesis of this research is:

H- Generally observing staff employed in travel agencies Novi Sad are mainly pleased with all offered segment or determinants that affect their business.

Sub-hypotheses are as follows:

h1 – communication between superiors and their subordinates is satisfactory
h2 – working space and business conditions meet the needs of employees
h3 – organization at work meet the expected criteria of employees
h4 – employees at travel agencies are paid enough although the position at the travel agency is not always the equivalent of knowledge and education of the employees
h5– employees at travel agencies in Novi Sad are overqualified for their positions
h6 – there are attitudes that employment at travel agencies is humiliating, without any signs of pride among employees. The employees at tourist agencies are not respected by their superiors, and also further education and promotion are not guaranteed.

Research results

Out of 150 questionnaires in total, 107 contained full answers and therefore analysed. As can be seen in Table 1, most employees in the survey are men (50.5%), whereas there are 49.5% women. Out of 107 respondents who were included in the analysis, 51.4% are aged between 30 and 49, and most of them were married (45.8%). As far as education level is concerned, there are 39.5% who have high education and 35.5% graduated from university. Then 46.7% have work experience lasting between five and ten years, with the average salary of 300 euros (50.5%), and the least have the salary above 600 euros (10.3%).

Table 1. Demographic data of the respondents

Item	*Frequency*	*Percent (%)*	*Item*	*Frequency*	*Percent (%)*
			Marital Status		
			Married		
				49	45,8
			Single		
				33	30,8
Sex	54	50,5	Divorced		
				25	23,4
Male	53	49,5	Total		
				107	100,0
Female	107	100,0	***Work***		
Total			***experience***		
Age	42	39,3	Until 5 years		
				35	32,7
18-29	55	51,4	5 to 10 years		
				50	46,7
30-49	10	9,3	10 to 20 years		
				20	18,7
50 and more	107	100,0	More then 20		
				2	1,9
Total			years		
Level of Education			Total		
				107	100,0
high school			***Monthly***		
higher school	23	21,5	***salaries***		
faculty	42	39,3	Up to 300 e		
				54	50,5
(PhD, MSc)	38	35,5	300 to 600 e		
				40	37,4
Total	4	3,7	600 and more		
				11	10,3
	107	100,0	Total		
				105	98,1
			Missing System		
				2	1,9
			Total		
				107	100,0

Source: research by authors.

Analyzing and processing the survey, which completely had a research character, led to the concrete and practical conclusions, proposals and guidelines about job satisfaction (Scott et al, 1985, Gajić et al, 2009). The results of the survey analysis will be included in the next few paragraphs.

The social atmosphere is an important factor for job satisfaction. Logically, the better working conditions and interpersonal relationships are the greater employee satisfaction. It is higher not only because they feel comfortable, but also because better working conditions provide better opportunity for improved job performance and success at work. The quality of relationships with associates is very important for job satisfaction (Grehart, 2005) as well as relationship between employees and their direct superior (Yee et al, 2008). Interpersonal relationships (the quality of relationships with associates) in tourist agencies in Novi Sad is at a very high level of communication with 39.3% satisfied, 35.5% is predominantly satisfied and 15% is very satisfied with the quality of relationships with associates (σ 0.884). Therefore, it can be concluded that the interpersonal relationships are, excluding some individual cases, at a very high level of communication. Likewise cooperation among employees is developed, because the percentage of those satisfied and those without complaints accounts for 50.5%, whereas there are only 5.6% dissatisfied (σ 0.742). The employees had the opportunity to express their attitude to the satisfaction with their superiors, with only 4.7% dissatisfied and 45.8% satisfied (σ 0.765). People are often dissatisfied with the poor working conditions, and the main reason for that is not the fact they personally find them unpleasant but because poor working conditions are an obstacle to achieving anticipated performance. Working conditions and adequate equipment for work meets the average criteria where 35.5% are satisfied, whereas only 2.8% are dissatisfied. (σ 0.831).The subjective satisfaction with the employer is associated with job satisfaction, salary, relationship with colleagues at work, increased security for staying in the workplace and reduced desire to work more for a higher salary (Chen, 2008). There are 29.9% (σ 0.756) respondents who stated that they are predominantly satisfied with safety at work; in other words, they positively commented on relationships and a sense of safety at work. Relationship between employees and their direct superior is on very high level: 50.5% of respondents were satisfied, and 36.4% predominantly satisfied (σ 0.765). About 43% are satisfied with well-defined rules and business procedures, and 48.6% were satisfied with work ethic, culture and similar values (σ 0.885). For conducted activities employees have more available time, which is seen in the results of the survey, where 20.6% stated they are mostly satisfied, while 55.1% of them were satisfied with the fixed-time basis. However, less satisfaction was expressed in terms of flexibility of taking annual leave (16.8% were mostly satisfied, whereas 11.2% were very dissatisfied). Nearly 27% were very satisfied with the reputation of the organization, while the monthly salary is a more sensitive issue, where 39.3% declared they are satisfied, whereas 14% said that they are very dissatisfied with their salary (σ 1.180). The level of education prescribed by the law for a career in a travel agency in the position of sales officer of tourist packages (the largest proportion of the participants worked in this position) is secondary school diploma, which leads to the conclusion that as many as 78.7% of the participants belong to a higher educational level than it is prescribed by the law for the given position, which supports the fact that employees at travel agencies in Novi Sad are overqualified for their positions, thus confirming the initial hypothesis of this research. If we compare the educational level of their revenues, it can be concluded that the most educated participants have the highest income. Mostly employees with higher education belong to the group of participants who earn more than 600 euro per month, which means that the level of education is proportionate to the amount of monthly income.

Table 2. Research survey data for primary determinants of employee satisfaction (N=107), (very dissatisfied, dissatisfied, predominantly satisfied, satisfied, very satisfied, total, standard deviation)

Item	Very dissatis.		Dissatisfied		Predomina. satisfied		Satisfied		Very satisfied		Total		Stan. Dev.
Frequency and percent	F	%	F	%	F	%	F	%	F	%	F	%	σ
The quality of relationships with associates	1	0,9	10	9,3	38	35,5	42	39,3	15	14,0	106	99,1	0,884
Well-defined rules and business procedures	3	2,8	7	6,5	29	27,1	46	43	22	20,6	-	-	0,960
Available working hours	-	-	-	-	22	20,6	62	57,9	22	20,6	106	99,1	0,647
Adequate equipment for work	-	-	3	2,8	28	26,2	41	38,3	35	32,7	-	-	0,841
Organization of work	1	0,9	1	0,9	36	33,6	54	50,5	14	13,1	106	99,1	0,765
Relationship between employees and their direct superior	1	0,9	6	5,6	39	36,4	54	50,5	7	6,5			0,742
Autonomy at work	1	0,9	13	12,1	25	23,4	53	49,5	13	12,1	105	98,1	0,893
The possibility to propose innovations	1	0,9	6	5,6	32	29,9	52	48,6	15	14,0	106	99,1	0,818
Safety at work	1	0,9	2	1,9	32	29,9	55	51,4	16	15,0	106	99,1	0,756
Company Reputation	1	0,9	1	0,9	23	21,5	53	49,5	29	27,1	-	-	0,783
Appropriateness of work	-	-	2	1,9	27	25,2	47	43,9	27	25,2	103	96,3	0,779
Employees earn	15	14,0	14	13,1	27	25,2	42	39,3	8	7,5	106	99,1	1,180
The flexible use of annual leave	12	11,2	12	11,2	18	16,8	49	45,8	16	15,0	-	-	1,206
The possibility of advancement and progress	3	2,8	8	7,5	30	28,0	51	47,7	15	14,0	-	-	0,917
Support from superiors	1	0,9	5	4,7	36	33,6	56	52,3	9	8,4	-	-	0,746
Expressing ability	1	0,9	4	3,7	41	38,3	43	40,2	17	15,9	106	99,1	0,825
Work creativity	2	1,9	6	5,6	18	16,8	59	55,1	21	19,6	106	99,1	0,867
Stimulation of the organization	8	7,5	17	15,9	20	18,7	45	42,1	17	15,9	-	-	1,158

Source: research by authors

Workers were more satisfied if they perceive that the reward system is fair and provides equal treatment to all employees. More is expected from the fair reward system than from the salary itself. It must be noted that the perceived fairness of the reward system is a more important factor than just salary (Karatepe et al, 2007). As far as their objective assessment of performance, 8.4% were very satisfied, whereas there were 25.2% (σ 0.779) satisfied with the purpose of work. The respondents at the travel agencies gave a positive opinion regarding autonomy in performing some tasks (49.5% satisfied, and only 12.1% dissatisfied) and the possibility to propose innovations to improve the efficiency of work, where 48.6% were satisfied and only 5.6% dissatisfied. Relatively positive answers are given for the choice of their own method to solve a problem – 43% satisfied (σ 0.929). From Table 2 it can be seen that the highest values of standard deviations were seen in the issue relating to the flexible use of annual leave (1.206), satisfaction with salaries (1.180) as well as stimulation by the organization (1.158). As tourism is an activity characterized by a marked seasonality, it is not surprising that the highest standard deviation was with the question referring to the flexible use of annual leave, but it is a problem is common for all the employees in the tourism industry, not only for employees at travel agencies. The answer to the question why the large discrepancies are in the questions relating to the satisfaction with salaries could be found in different responses of those holding managerial and non-managerial position (the equivalent is a salary), and in the length of employment and experience of the respondents. The high value of standard deviation in the analysis of responses to the question about satisfaction with stimulation by their organizations may be found in different methods and levels of incentives, which vary from agency to agency.

Table 3. The results of survey research employee satisfaction

Question	Yes		No		Total		Missing system		Total	
	freq.	%	freq.	%	freq	%	freq.	%	freq	%
Does the salary equivalent of knowledge and education of the employees?	47	43,9	60	56,1	107	100	-	-	107	100,0
Do you think that your job provides security for the future?	54	50,5	53	49,5	107	100	-	-	107	100,0
Does s job satisfaction associated with satisfaction in private life?	74	69,2	31	29,0	105	98,1	2	1,9	107	100,0
Are you proud of your work?	81	75,7%	24	22,4	105	98,1	2	1,9	107	100,0

Source: research by authors

The second part of the survey contained some questions to which employees could provide yes or no answers (Table 3). When asked whether the salary equivalent of knowledge and education of the employees, 43.9% responded positively and 56.1% of respondents believe that salary is not equivalent of their knowledge. The share of respondents who think that salary is equivalent to knowledge and education (43.9%) is much higher than expected, therefore it can be concluded that sub-hypotheses 4 is completely rejected. The employees had the opportunity to express their attitude about their future in this business. However, 54 respondents out of the total number said that their position provides them the safe future, whereas 53 of them declared that their future in this business is uncertain. From the above-mentioned we may conclude that almost about half of the respondents, regardless of their satisfaction with salary, interpersonal relationship and the basic parameters of motivation, still feel insecure about their employment. The reason can be found in the relatively unstable political and economic situation in Serbia (Gajic, 2011). This is further evidence supporting the fact of how external factors may affect employee satisfaction. When asked the question whether job satisfaction is connected with their satisfaction with private life, 69.2% replied affirmatively, whereas 29% provided a negative answer. Surprisingly, a large number of employees are proud of their job in the travel agency because the hypothesis of the research was that the position in tourism is often underrated and thus the employees are insufficiently respected by end users (potential tourists).

Conclusion

Human resources in tourism are one of the most important segments of the quality of the services provided. If a travel agency wants to function optimally and gain profit, it should have educated, motivated, and therefore satisfied staff, because the success of the company lies in their human resources. This also means that behaviour within the organization depends on the educational and cultural values of their employees. In this paper the authors dealt with the current issues of employee satisfaction at Novi Sad's travel agencies. The paper presents the data of the survey in a concise way conducted by the authors in 13 travel agencies in Novi Sad. Out of the 150 questionnaires that were distributed, 107 were analysed and on the basis of the data we obtained key answers to the questions about which factors the employees are most or least satisfied. The SPSS method was used in the data processing, and along with a combination of statistics and some secondary publications we got the confirmation of some hypotheses and sub-hypothesis. Analyzing and processing the survey, which completely had a research character, led to the concrete and practical conclusions, proposals and guidelines about job satisfaction in tourist agencies in Novi Sad. From the above-given it is concluded that the employees at travel agencies in Novi Sad are relatively satisfied with their job, interpersonal relationship and the level of salary; therefore, this study confirmed the initial hypothesis and sub-hypotheses. Surprisingly, some sub-hypotheses were rejected. It is widely known that the employees at travel agencies believe that their job is not equivalent to their education and knowledge, and that their job that does not provide them with a certain security and pride. The survey, however, led to completely different attitudes for all given segments. Namely, sub-hypotheses 4 and 6 were completely rejected. The assumptions are that motivational systems become inefficient, inflexible and outdated, and it is necessary to introduce a completely new system of motivations. As tourism is an activity characterized by a marked seasonality, it is not surprising that the highest standard deviation was with the question referring to the flexible use of annual leave, but it is a problem is common for all the employees in the tourism industry, not only for employees at travel agencies. The answer to the question why the large discrepancies are in the questions relating to the satisfaction with salaries could be found in different responses of those holding managerial and non-managerial position (the equivalent is a salary), and in the length of employment and experience of the respondents. The high value of standard deviation in the analysis of responses to the question about satisfaction with stimulation by their organizations may be found in different methods and levels of incentives, which vary from agency to agency. The actual results of the survey findings are of strategic and tactical importance for the holders of tourism policy at the regional and local level and are formulated to be applicable in the modern tourist practice.

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ZADOVOLJSTVO POSLOM MEĐU ZAPOSLENIMA U TURISTIČKIM AGENCIJAMA NOVOG SADA

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Rezime

S obzirom da se zadovoljni kadrovi u turističkim agencijama smatraju primarnim razvojnim resursima, utvrđivanje stepena zadovoljstva humanog kapitala predstavlja izuzetno važan segment procesa upravljanja turističkim preduzećima, što dalje povlači sa sobom uspeh i poziciju na konkurentnom turističkom tržištu. Rad se bavi aktuelnom problematikom u turističkoj delatnosti, a to je zadovoljstvo zaposlenih, a rezultiraće sintezom teorije i rezultata istraživanja o zadovoljstvu humanog kapitala u turizmu, kao faktoru uspeha ili postizanja veće profitabilnosti i konkurentnosti. Kao primaran cilj istraživanja bio je utvrditi trenutno stanje i stepen zadovoljstva zaposlenih kadrova. Osnovna metoda u ovom istraživanju jeste anketa slučajnog uzorka, te analiza rezultata dobijenih na osnovu prikupljenih podataka. Za obradu podataka korišten je SPSS program, verzija 17.0. Obuhvaćeno je 107 ispitanika, a rezulati do kojih se došlo primenom tj. upotrebom statističkih metoda i sekundarnih publikacija, potvrđuju određene hipoteze koje su postavljene u radu.

Ključne reči: *zadovoljstvo poslom, turističke agencije, Novi Sad*

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APPLICATION OF FACTOR ANALYSIS IN EVALUATION OF THE CONSULTING DEVELOPMENT IN SERBIA[1]

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Summary

The aim of this study is to determine the main factors of development consulting services in Serbia. The verification was done by a procedure, by which have been achieved relevant scientific conclusions – by data research in the field, where had been respected factor analysis criteria, according to which had been possible adequate conclusions and generalization. Namely, taking into consideration the results of empirical research, it can be concluded the following: Three the most important factors of consulting services development are: education and awareness, developmental projects and affirmation of market business. In regard to actual consulting trends in the countries of our region, as well as a level of consulting development in the EU countries, the market of consulting services in Serbia has not developed significantly in last period. The owners and managers of enterprises still do not feel a need for external services, by which they would resolve business problems.

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

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Introduction

The creation of business attractive enterprises initiates a need for consulting. Consultancy organizations enable companies to achieve their goals, solve business and management-related problems, identify and exploit new opportunities, improve their knowledge and put into practice the proposed changes [4]. Namely, consulting may be defined as a kind of professional support to managers analyzing and solving practical problems. It enables transfer of successful management system from one firm to another or from one organization to another [8]. A consultant is an expert who provides consulting services. His education and experience, in combination with realistic and complete informing of concrete situation, make it possible for him to offer support to enterprises in a proper way.

There is lack of knowledge in the field of business planning in the local economy, necessary for opening small and medium enterprises. The essence of necessary changes can be defined as a new entrepreneurial company which encourages taking over the risk and making new entrepreneurial knowledge. The consulting services represent professional assistance while opening the enterprise, but also in identification, diagnosis and overcoming the problems regarding various fields and aspects of business and management of the enterprise. Basically, it is a support to the enterprises to realize their goals, to solve the problems regarding business and management, to identify and use new possibilities and practical application of suggested changes, and through them, to increase their knowledge, so a training and education of managers and employees is one of the implicit services. However, the circumstances which the transition in Serbia has been pursued under, and a way for realizing the privatisation and other accompanying activities, awake a suspicion in developing consulting services in a logical sense, i.e. that it would be the same or similar to the one in the economies of surrounding countries. Anyway, in Serbia, at least occasionally, something did not go over the usual. In some its historical periods, Serbia has, evidently, followed some of its own logic, sometimes in favour, sometimes at its own expense. Something similar had happened also in recent history – regarding the transition, privatization, development of consulting market, too. In accordance to initiated economic reforms, the development of consultative services market is in direct dependence from the course of transition process and domestic enterprises restructuring [2].

Empirical research of the consulting supply

The verification was done by a procedure, by which have been achieved relevant scientific conclusions – by data research in the field, more concrete, by collecting adequate data (sample of 100 enterprises in Serbia), where had been respected factor analysis criteria, according to which had been possible adequate conclusions and generalization. The market survey was done by three techniques: 1) telephone survey, 2) direct interview and 3) electronically. One of the questions meant for the sampled consulting organizations was:

Specify the types of consulting services you offer.

Such question, asked directly, could provide full image of represented consulting services in Serbia, the supply which would be available to the enterprises. The replies of the surveyed consulting organizations could be sublimate illustrated in the following table:

Table 1. Represented supply of consulting services in Serbia

Sub-categories of consulting service line	%
OPERATIVE MANAGEMENT	
Business plans	9,00
Investment programs	4,00
Re-engineering	2,00
Operative services for establising the enterprise	2,00
Consulting in the field of quality system: ISO 9001: 2000, HACCP, 14000, 18000, TS 16949, 22000	4,00
Total Quality Menagement	2,00
Integrated management systems	1,00
Operative support to SME business	1,00
Environment protection	1,00
Influence evaluation on the environment	1,00
Waste management	1,00
Totally operative management	**28,00**
INFORMATION TECHNOLOGY	
IT consulting	2,00
Support in using information resources	2,00
Information systems and modelling	1,00
Totally information technology	**5,00**
CORPORATIVE STRATEGY	
Financial reports audit	3,00
Donations audit	1,00
Accountancy	3,00
Evaluation of capital and property value (not only for needs of the Agency for Privatization)	8,00
Privatization programs	8,00
Financial consulting	6,00
Due diligence analysis	3,00
Certificates on done investments	1,00
Re-capitalization	1,00
Financial consolidation of enterprise	1,00
Information on credits and state funds	2,00
Organizational changes and development	3,00
Restructuring programs of enterprise	2,00
Research of consumers' attitudes	1,00
Enterprise branding	2,00
Market positioning of products and services	2,00
Marketing and organization of fairs	1,00
Advices regarding competitive behaviour	1,00
Development strategy of some sectors	1,00
Totally corporative strategy	**50,00**

Sub-categories of consulting service line	%
HUMAN RESOUCES	
Business education and trainings	7,00
Training	2,00
Development of individuals and teams	1,00
Finding and selecting the personnel	1,00
Personnel management	1,00
Clients mentoring	1,00
Totally human resources	**13,00**
OUTSOURCING	
Web designing and programming	4,00
Totally outsourcing	**4,00**
TOTAL	**100,00**

As we can see, the highest supply of consulting services in Serbia is in the field of corporative strategy (50%) and operative management (28%) and can be interpreted by mutual will of consultants and clients to get the eligible results, as soon as possible, which seems, in a certain way, natural and logical. However, if this process has not have been followed by informatics and education – only temporary effect could be achieved, and therefore, spurious success. Exactly the supply of consulting houses in the field of informatics and education (although, according to answers to previously asked question, this area effects the most on consulting services development) is very modest (5%), just outsourcing is more modest (4%), so there can be concluded that there should plead for the consulting organizations to increase and improve their supply in this field. The data got in this way undoubtedly have showed that the supply of consulting services in Serbia is not quite compatible with the needs of enterprise. There is an absurd that the most significant influence on development of consulting services has informatics and education category, so follows the conclusion that the consulting organizations do not care about the development of consulting services in Serbia and they do not undertake basic measures which could lead to development. Owing to this abnormal conclusion, we can conclude that these data show immaturity of consulting market in Serbia, even that the consulting organizations use relative embarrassment of Serbian enterprises in view of invasion of needs for changes, needs for consulting services, so they offer those the most profitable services. Naturally, as a reason for this condition, could not be neglected neither mutual desire for quick displacement toward fundamental changes, or success, although it is all short-ranged. The state is, partly, redeemed with data got by empirical research. That is to say, on question:

How much is present, so called, process consulting in your work, which implies improvement of clients' capability to resolve independently their business problems, we got rather calming answers:

⇒ Significantly - 48,57%;
⇒ Occasionally - 37,14%;
⇒ Never - 14,29%.

This type of education will not significantly increase the demand for the consulting services, but will surely bring significant interest from investing into consulting.

Regulatory and institutional factors of consulting development in Serbia

Transition of economy of Serbia concerning more significant application of knowledge, inovations and new technologies – implies numerous reforms in sector of education, science, research-developmental institutions and consulting [1]. Under the influence of competition on the market, in order to achieve the highest possible profit, companies are forced to apply new knowledge, technologies and thus to produce new and cheaper products [6]. However, the owners and managers of enterprise still do not feel a need for consulting services, in order to solve business problems. Taking into consideration a level and quality of demand, the supply of consulting services did not achieve necessary level. In such conditions, donor support in previous period was significantly meant for assumptions affirmation for development of this market. Within the EU project "Non-financial support to SME sector development in Serbia", in period 2002-2004, was taken important actions on making and strengthening the training and consulting services in the Republic of Serbia. This project has realized 820 training programs for future entrepreneurs and owners of SME, through the republic/regional agencies network for SME development (small and medium enterprises and entrepreneurs), in regard to the references and suggestions of training needs analysis. In the last phase of this project was done identification of available local resources, capable to provide adequate training and consulting services in various fields (basic training for trainers was held and the process of accreditation of service provider was done). Taking into consideration underdevelopment of consulting and training services' market in the Republic of Serbia, especially out of Belgrade territory, within the project was realized a Service Support Scheme – SSS. The basic goals of the SSS, in which realization had participated 7 regional agencies/centres for SME support with service providers as producers, were: to provide approach to quality consulting services (the most often support in making business plan) and trainings according to popular (subsidized) prices to existing and potential entrepreneurs, as well as the realization of smaller regional projects important for SME development. The realization of the SSS has aimed also strengthening the role of regional SME agencies as catalyst of entrepreneurial development, as well as the development of consulting services market for SME in Serbia during the accession to the European Union. In the countries which have already accessed the EU, has been noticed three main trends: (1) convergence of economic and social system to the EU standards, (2) economic development and (3) development of consulting services sector. The comparative analysis of consulting market in the countries of Central and East Europe refers to a conclusion that there is important level of correlation between a growth rate of consulting market and growth rate of gross domestic product (GDP). In all countries with positive growth rate of GDP (from 3,7% to 8,1%) have been registered also positive growth rate of consulting market from 4% to 35% [3]. The average growth rate of consulting market in analyzed countries in 2004 was amounted 15,17%, while the average growth rate of GDP was 5,08%. Consequently, in these countries the consulting sector, according to the growth rate, leads in relation to a common economic development and, at the same time, it has a feedback reaction. None of progressive market economy can be imagined today without a top-level consulting. However, the institutional and infrastructural factors in Serbia are still »a bottleneck« of consulting services' market development.

Establishment of institutions for non-financial support to enterprises and entrepreneurs and development of consulting services

In West Europe countries, the consultative services had developed for decades backwards, so today are active numerous consultative organizations which differ one from another by organization, financing model and process of consulting. However, the consultative services market in Serbia is very atypical, with massive number of small consultative organizations and extremely small number of big companies [5]. In local public, the consulting services the most often imply help in making business plans, which use in applications for getting a credit, or orientation trainings for potential entrepreneurs. In initiating and developing their own business, the entrepreneurs need support, first of all, in form of non-financial support, in order their enterprises to mature and survive at the market. It reflects through the consulting services – providing information, consultations, mentoring, and training in various fields important for successful business. The entrepreneurs who start individual business mostly do not have experience in managing the enterprise and do not have any formal education in this field. In such conditions, the support in initial period can significantly increase their chances to succeed. In next period it is necessary to proceed with different forms of support to development of consulting services for sector of SME by public, private and NGO (non-government organizations) sector, in cooperation with donors. According to the traditional approach, the conduction of governmental support program in the field of non-financial support to SME sector development realizes through tied established regional and local agency. There was used direct government intervention, under subsidized prices or free for users, which, unfortunately, was not shown as long-term cost-effective solution. Practically, the services of non-financial support, organized in this way, are the most often extremely generalized, unadjusted to real needs and, generally, of poor quality, and restrain the possibility of local private supply development and the prices of services keep rising.

The modern approach to non-financial support to small and medium enterprises bases on the principle of a private local services' market establishment for business development, which comply with needs and solvent possibilities of small enterprises, in order to make long-term sustainable, market solution. The state interventions, in the form of subsidies on demand side, in *interim* period, use for implementation/privatization of tested programs, previously realized by the local agencies in public sector, by the private consultants and for increasing capacity of services' suppliers. On supply side are used grants and vouchers, which are shared to entrepreneurs to use them, according to their own needs, for covering some costs of the private consultants' services.

The role of the local development agencies moves gradually from providing concrete services to support in connecting entrepreneurs with the private suppliers of the services, improvement of supply, assortment and quality of services for development of business on specific territory and strengthening the consciousness of entrepreneurs on own needs and significance of these services. At the same time, it is unrealistic to expect that the whole spectrum of services for business development would be realized on the market principle, without the state intervention, while a part of services, primarily those assigned for beginners in business, are not enough profitable.

In regard to the factors condition, which effect to development of consulting services in Serbia, as well as experiences of countries which had gone through transition and surrounding countries, there had imposed an assumption on the most important factors: *Three the most significant factors of consulting services development in Serbia are: privatization, enlargement of capital and foreign investments.*

The research of consulting services market in Serbia, done in November 2008, brought us an acknowledgement about this field, through a question in a questionnaire: *Evaluate the factors according to their influence on development of consulting services in Serbia*.

Surveyed consulting organizations which act in Serbia explicitly emphasize that the biggest influence (31,14%) on development of consulting services in Serbia have those variables which make Factor 1, and which we could name Education and awareness. It points out that Serbian enterprises are insufficiently informed about the role and importance which the consulting services have, and personnel education is insufficient in that sense.

This observation clearly points out what should consulting organizations and agro complex, but also the government primarily focus on, because in this field everybody will have an interest from education and awareness improvement: the consulting organizations would be more engaged (more money, and therefore intensified development); agro complex would, using the consulting organizations' services, significantly accelerate its development and improve the performances; the government would get extra sources for funding the budget. More detailed insight of consulting services' development variables in Serbia requires an application of the factor analysis, which is given hereafter.

Statistic analysis of consulting services' development factors in Serbia

The research has encircled as many as possible characteristics, which reflect a successful work of one consulting organization or consulting team. Those characteristics were used in the questionnaire, in a way the subjects were asked to evaluate the value of each characteristic. The next step was a selection of a sample. The size and structure of the sample was good, in regard to total number of enterprises (population). Accordingly, there was ensured a statistical analysis, because the criteria for application of the factor analysis were within allowed limits [7]. The variables are questions in the questionnaire. Each variable has the value from 1 (minimal value) to 5 (maximal value).

Table 2. Factors of consulting services development in Serbia

PRIVATISATION OF ENTERPRISE	EU PROJECTS
Restructuring of enterprise	Managerial abilities
Market liberalization	Education of managers
Capital enlargement	Research-developmental activity of enterprise
Foreign investments	Structure of enterprise's ownership
Information technology	Activity of enterprise
Network of research centers and universities	Number of employees in enterpise
Agency for Development of Small and Medium Enterprises	Market participation of enterprise
Serbian Chamber of Commerce	Funding consulting services
Competition on consulting market	

The analysis of *correlation among variables* points out that correlation between each two variables is mostly meagre (under 0.5), so it is necessary to check analysis results through specific tests, by which would be tested if such variables can pass the factor analysis.

There is no value that indicates on strong correlation between the variables (higher or equal to 0.9), so it is necessary to check the table with significant levels of correlation. Accordingly, there was done, so called, *First test – significant levels of correlation*.[5]

In accordance to the requirement of more detailed factor analysis were done: Second test - Kaiser-Meyer-Olkin criteria and the Third test - Bartlett's test. There is noticeable that Kaiser's criteria give result 0.580, which represents an average value for evaluation of factor analysis application (there is no factors under 0.5).

The Bartlett's test studies a hypothesis that „There is no correlation between variables", and then follows the probability result that the hypothesis is valid in the row „Sig".

It means that the hypothesis is not valid with the lowest probability of 1-0.0001=0.9999=99.99% (to the fourth decimal of accuracy), which further means that there is satisfactory correlation between the variables for application of the factor analysis.

Table 3. Values of Kaiser-Meyer-Olkin criteria and Bartlett's test of sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.580
Bartlett's Test of Sphericity	Approx. Chi-Square	404.375
	Df	171
	Sig.	.000

The application of the factor analysis starts with table on the factors extracting and their participation in variance.

5 Determinant of this matrix is $1.64*10^{-5} = 0.0000164 \approx 0.00002$, which is more than permissible margin for using the factor analysis, which amounts 0.00001! This test showed that the factor analysis can be applied.

Table 4. Factors extracting and their participation in variance

Vari-ables	Initial characteristic values			Sum of quadrat content of extractive factors			Rotated sum of quadrat contents		
	Total	% in variance	cummulative %	Total	% in variance	cummulative %	% in variance	cummulative %	% in variance
1	7.460	31.136	31.136	5.787	30.459	30.459	3.714	19.547	19.547
2	3.274	13.666	44.802	2.505	13.184	43.643	2.784	14.655	34.202
3	2.833	11.826	56.628	2.329	12.258	55.901	2.565	13.501	47.703
4	1.869	7.799	64.426	1.444	7.597	63.499	1.922	10.114	57.817
5	1.546	6.452	70.879	1.180	6.210	69.709	1.788	9.412	67.229
6	1.442	6.018	76.897	1.177	6.195	75.904	1.648	8.675	75.904
7	1.123	4.686	81.583						
8	.973	4.062	85.644						
9	.796	3.322	88.966						
10	.588	2.455	91.421						
11	.513	2.140	93.561						
12	.458	1.910	95.471						
13	.297	1.238	96.709						
14	.227	.946	97.655						
15	.199	.829	98.485						
16	.149	.624	99.108						
17	.107	.448	99.557						
18	.078	.325	99.882						
19	.028	.118	100.000						

In other cases are used Scree-plot test. It is necessary to check communalities in order to determine adequate test for the factors segregation. However, the communalities will be used during the interpretation of got results.

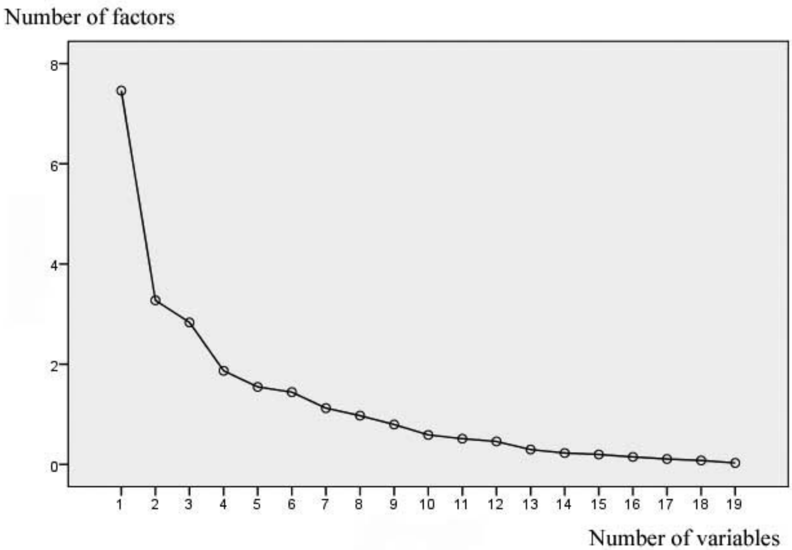
Table 5. Review of communalities

Factors	Initial communalities	Communalities after segregation
Privatization of enterprise	1.000	.600
Restructuring of enterprise	1.000	.638
Market liberalization	1.000	.828
Enlargement of capital	1.000	.607
Foreign investments	1.000	.846
Information technology	1.000	.828
Network of research centres and universities	1.000	.765
Agency for development of small and medium enterprises	1.000	.869
Serbian Chamber of Commerce	1.000	.846
Competitiveness at consulting market	1.000	.671
EU projects	1.000	.754
Managerial abilities	1.000	.786

Factors	Initial communalities	Communalities after segregation
Education of managers	1.000	.874
Research-developmental activity of enterprise	1.000	.693
Ownership structure of enterprise	1.000	.641
Activity of enterprise	1.000	.809
Number of employees in enterprise	1.000	.856
Market participation of enterprise	1.000	.830
Funding the consulting services	1.000	.682

The average value is higher than 0.7, so there is sufficient Kaiser's criteria for determination of factors, i.e. previous table. Just in case, the Scree-plot criteria can be done.

Picture 1. Scree-plot



The **Scree-plot** shows that there are six factors, as determined by a method of characteristic values, i.e. Kaiser's criteria. This chart points out to number of factors as the number of spots after which does not emerge, so called, "tail", i.e. so as a curve does not go into almost straight line. There are six spots (from left to right). If we observe the spots, we can see that it has slightly higher fall toward the seventh spot and then emerges almost straight line. Consequently, we can conclude that we extracted six factors. The next step is the table which provides the correlation between all variables and extracted factors. This table is not reliable for interpretation, so, based on it, we get, so called, rotated components matrix (i.e. participation of variables in segregated factors).

Table 6. Correlation of variables and segregated factors

	Factors					
Variables	**1**	**2**	**3**	**4**	**5**	**6**
Market liberalization	.742					
Research-developmental activity of enterprise	.718					
Education of managers	.693	-.527				
Foreign investments	.688				-.436	
Managerial abilities	.683	-.531				
EU projects	.664			-.506		
Serbian Chamber of Commerce	.653	.443				
Information technology	.649		-.607			
Network of research centres and universities	.619		-.517			
Enlargement of capital	.546		.503			
Market participation of enterprise		.671				
Ownership structure of enterprise		-.604				
Restructuring of enterprise			.620			
Privatization of enterprise			.614			
Agency for development of SME	.539	.440		-.618		
Number of employees in enterprise				.521		
Competitiveness at consulting market					.576	
Funding the consulting services						.617
Activity of enterprise	.499					.582

Table 7. Rotated matrixes

	Factors					
Variables	**1**	**2**	**3**	**4**	**5**	**6**
Managerial abilities	.835					
Network of research centres and universities	.760					
Education of managers	.751		.536			
Ownership structure of enterprise	.730					
Information technology	.627	.431	-.404			
Research-developmental activity of enterprise	.563		.491			
Agency for development of SME		.887				
EU projects		.811				
Market liberalization	.540	.570			.443	
Restructuring of enterprise			.720			
Privatization of enterprise			.719			
Enlargement of capital			.494		.445	
Activity of enterprise				.852		
Funding the consulting services				.808		
Number of employees in enterprise					.885	
Competitiveness at consulting market						.758
Market participation of enterprise					.551	.610
Serbian Chamber of Commerce		.499	.436			.509
Foreign investments	.464	.413				-.482

The results interpretation

The following was determined: factor 1 illustrates 31,14%, factor 2 illustrates 13,67%, factor 3 11,83%, factor 4 7,8%, factor 5 6,45% and factor 6 illustrates 6,02% of phenomenon we study (see the table on factors extracting). Totally, those six factors explain 75.9% of studied phenomenon. In table 30 we can see the variables which make those six factors. The assumption is that the variables which make the factor to be in correlation with it, which coefficient is higher than 0.6 (there can be used also 0.5).

- Factor 1 does: managerial abilities, network of research centres and universities, education of managers, ownership structure of enterprise, information technologies and research-developmental activity.
- Factor 2 does: Agency for development of SME, EU projects.
- Factor 3 does: Restructuring of enterprises, privatization of enterprises, market liberalization.
- Factor 4 does: Activity of enterprise, financing the consulting services.
- Factor 5 does: Number of employees in enterprise.
- Factor 6 does: Competitiveness at consulting market, market participation of enterprise.

The variables have been grouped in specific factors according to their nature, and that is something the factor analysis was used for. The first factor could be named Education and awareness. The second factor would be named Developmental projects. The third factor would be Affirmation of market business. The fourth factor is Business-financial sector. The fifth factor is Number of employees in enterprise. The sixth factor is Competitiveness at the market. The variables which make some factors can be added by bringing down criteria on 0.5 and then the review of each criterion would be more detailed. Taking into consideration the results of empirical research, it can be concluded the following: *Three the most important factors of consulting services development are: education and awareness, developmental projects and affirmation of market business*. Accordingly, this analysis denies the assertion presented by the hypothesis, highlighting also different factors by relevance for development of consulting services in Serbia.

Conclusion

The surveyed consulting organizations which work in Serbia, undoubtedly point out that the most important influence on development of consulting services in Serbia, have those variables which make Factor 1, and those we could call Education and awareness. It shows that Serbian enterprises are insufficiently informed on role and significance which consulting services have and, in that sense, the education of personnel is insufficient. This observation clearly indicates what should be focused on both consulting organizations and enterprises which use consulting, but also the state, because everybody will have interests from improving education and information in this field: the consulting organizations would get more jobs (and thereby more money, they would intensify their development); the enterprises will, by using consulting services, significantly accelerate their development and improve performances; the state will get more sources for financing the budget.

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PRIMENA FAKTORSKE ANALIZE U PROCENI RAZVOJA KONSALTINGA U SRBIJI

Branko Mihailović[6]*, Rajko Tepavac*[7]*, Maja Kovačević*[8]

Rezime

Cilj ovog rada je određivanje osnovnih faktora razvoja konsultantskih usluga u Srbiji. Provera je izvršena postupkom kojim se postižu za nauku relevantni zaključci – istraživanjem podataka na terenu, pri čemu su ispoštovani kriterijumi faktorske analize, na osnovu koje su mogući odgovarajući zaključci i generalizacije. Naime, imajuću u vidu rezultate empirijskog istraživanja, može se zaključiti sledeće: Tri najznačajnija faktora razvoja konsultantskih usluga su: obrazovanje i informisanost, razvojni projekti i afirmacija tržišnog poslovanja. S obzirom na aktuelne trendove konsaltinga u zemljama našeg regiona, kao i stepena ravoja konsaltinga u zemljama EU, tržište konsultantskih usluga u Srbiji nije se u značajnoj meri razvilo u proteklom periodu. Vlasnici i menadžeri preduzeća još uvek dovoljno ne osećaju potrebu za eksternim uslugama, kojima bi rešili poslovne probleme.

Ključne reči*: konsalting, faktori razvoja, obrazovanje i informisanost, afirmacija tržišnog poslovanja.*

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DEVELOPMENT PERSPECTIVES IN AGRICULTURE AND RURAL AREAS IN SERBIA IN THE EU INTEGRATION PROCESS

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Summary

The paper deals with two related issues that are important for Serbia's development: firstly, development prospects in agriculture and rural areas and, secondly, harmonization of rural development with the European integration process. The European Union market offers great export opportunities for the Serbian agriculture, the status of candidate country provide a number of benefits and support, but results will depend on success in improving two key determinants of competitiveness: productivity and quality.

The present situation in rural areas is a result of earlier industrialization and urbanization, on the one hand, and of the transition process on the other. Its main characteristics are: depopulation, ageing of rural population, unbalanced regional development, and income disparity.

Integral development of rural areas should be based on the following elements: multifunctional agriculture, diversification of economic activities in rural environment, rural and eco tourism, organic food production, small and medium-sized enterprises, and cooperation between small and medium producers. Such a development will lead to improved demographic, social, and income convergence.

Key words: *rural areas, agriculture, development, integration*

JEL: *F15, O13, Q01, R11*

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Introduction

Serbia's professional and political clique as well as a wide general public has long shared the idea of Serbia as being an agricultural country, i.e. they have strongly believed Serbia's greatest development prospects lie in agriculture. Is this view correct and sound or, perhaps, a result of de-industrialization and transition problems of the past two decades? If we keep in mind that the European integration process is ongoing and that the world is and will be facing problems of food and water scarcity, the question looks even more complex.

Depending on where we start from, it is possible to develop and make case for several opposing thesis. If we take a look at the current situation in agriculture, husbandry, and related activities and compare these to the European Union practices, we will register a high degree of backwardness in almost all aspects of production. "Dynamics of total agricultural production in Serbia in the last twenty years shows a marked cyclical instability, stagnation or very slow growth" (Milanović, Đorović, Stevanović, 2011: 322). From the perspective of potentials, the level of environment pollution, the speed of technological development, and availability of new knowledge, there are more reasons to be optimistic about the future.

At the moment there are about 4,800 villages in Serbia. An average age in most of them is around 60. Every fourth village in Serbia is disappearing. More than 200 villages have no population below 20 years of age. Since 1991 the number of farms has decreased by over 20%. Today there are about 40,000 empty houses across Serbia (and an equal number of emptied barns and pens). A half of these are in Vojvodina (Pejanović, Njegovan, 2009: 93). This statistics does not create optimism. It is obvious that a traditional way of working in rural areas is in decline for a long time. To have this trend reversed and existing resources exploited, it is necessary to develop and implement an integrated approach to rural development.

The paper explores several interrelated issues that should provide a clear answer about the development prospects of agriculture and rural areas of Serbia in the process of European integration. The first part offers basic characteristics of agriculture in the European Union, its condition, CAP, problems and perspectives, as well as the position of the candidate countries. The second part refers to the key directions to enhance the competitiveness of Serbian agriculture, and the use of the privileges of a candidate country. The third part represents the idea that agricultural development is an integral part of a strategy for sustainable development of rural areas.

Agriculture in the European Union and candidate countries

Since the very beginning of the integration, agriculture in the European Union has been one of the most important sectors. This was logical and expected as in the post-war Europe the most important task was to achieve self-sufficiency in food production, in addition to stabilization of coal and steel production. Another reason why agriculture was given the highest the priority lay in the balance of powers within the framework of the newly instituted European integration; France had the political supremacy and it has remained the most powerful defender of interests in the agricultural sector (Antevski, 2008: 88). For these reasons, the Common Agricultural Policy - CAP has played an important role for decades; initially it accounted for about 70% of the common budget, then for a long period about 50%, while according to the current EU budget projections by 2013 it accounts for about one third. “Today’s CAP reflects nearly half a century long changes in priorities” (Cvijanović, Simonović, Mihailović, 2011: 368). This is a common policy that has been most reformed, generally with no remarkable results because of the balance of conflicting national, sectoral, and group interests. It should be noted that apart from France, many other European Union members, old and new ones alike, have made use of considerable resources from the agricultural budget, upgrading agricultural activities to the highest degree possible. If we compare annual contributions of individual member states to the common budget with funds they have withdrawn from it, we will see that biggest donors have been biggest beneficiaries.

In a half a century long history of the European Union, agriculture and related activities have achieved remarkable results, both in terms of the scope and quality of production, application of scientific and technological knowledge, the level of exports, and preservation and development of rural areas, human, plant and animal health, and general environmental protection. All of this could have been achieved through strong protectionist measures against foreign competition and a variety of generous subsidies. The other side of the coin is a lack of international competitiveness of European agriculture – this is why numerous attempts at reforming the agricultural policy have been made. While it is true that other national agricultures are protected to some extent, it also seems correct to contend that protection of infant industries (agriculture or any other sector) makes sense if it is temporary and selective (Antevski, 2008: 17–18). Otherwise, it boils down to redistribution of common funds among certain interest groups in accordance with their current strength. According to some studies, the European Union market is not protected much more than other large markets, such as that of the United States. Nevertheless, these findings can be challenged only partially (Fontagné, Mayer, Zignago, 2005).

From the perspective of future European Union members (and with respect to development of their agricultural sectors), a large internal market ensures protection from third countries’ competition to some extent but sets before them huge requirements. First and foremost, they must be met as part of the process of admission to the membership, and they refer to harmonization of all production, phytosanitary, health, and environment protection standards. As for productivity, there are no formal requirements and national agricultures of these countries should recognize its improvement as their own interest, a condition without the fulfillment of which they cannot survive on the single European market. The fact that the European agriculture is not the world leader does not pose a mitigating circumstance – on joining the EU, they will face stiff competition reflected in high quality and productivity. In fact, future EU members should search for models to emulate and good practices to adopt at the global level. It goes without saying that such an activity is time-consuming.

The accession and the candidate period offer many chances for significantly improving the state of affairs in agriculture and enhancing rural development. The European Union has shown deep understanding and provided immense and comprehensive support through its policy of enlargement to east and southeast. Some new members take better advantage of these opportunities while others are not that efficient (the situation is similar with future members). However, it should be noted that accession requirements are almost identical for all countries; there is no discrimination. Whether the offered benefits will be reaped largely depends on the ability of national governments and economies. Effects are more positive the higher the level of understanding of the European integration process and the higher the degree of severity in its realization. Major problems countries in this group have in integrating into the European Union can generally be grouped under the following: immaturity and instability of young democracies, a still incomplete free market and its distortions, and, ultimately, incomplete transitional economic structures. Resolution of these problems and stabilization of the political and economic systems require a longer period than the transition one during which all countries experienced great changes. For these reasons, all these countries have a similar approach and the European Union is seen as the place of political and security stability, on the one hand, and as a source of capital in the European Funds, on the other. These two qualitative factors of integration are not debatable but it would be more correct and useful to view the European Union as a community of highly productive nations and companies that have reached the current level through several decades of hard and persistent work.

The European Union is not perfect but it is a rather beneficial environment for accelerated development of small open economies such as the Serbian and similar economies. The main prerequisite is to devise a clear development strategy harmonized with development objectives of the Union. The present and the future offer less protection for agricultural production than before, and declining levels of financial support. Still, it is substantial and sufficient although a low degree of comfort is provided to agricultural producers. Since the future of agricultural policy in the European Union is aimed at a higher level of compliance with harsh international competition, it will force future members to improve the competitiveness of their national agricultures. Such a development environment can be described as favorable.

The competitiveness of Serbia's agriculture and EU integration

Two basic conditions for the improvement of competitiveness of any sector including agriculture are productivity and quality. The degree of backwardness of Serbian producers is large but to rapidly narrow the gap is not unachievable.[2] This trend has long been evident

2 Only on 5% of arable land producers realize two sowings, primarily owing to good irrigation systems.

with a number of producers and manufacturers that use most modern methods (seed and planting materials, plant protection, irrigation, HACCP) and equipment. It is realistic to expect that this trend will be maintained and include ever more manufacturers. What can be regarded as a discouraging factor in the development of agriculture are still large and often unrealistic expectations of the state, on the one hand, and a lack of organization, on the other. The government policy can be objected on many grounds but it should also be appreciated and given credit to. Generally, this policy can be appraised as appropriate for the development period but deficient in funds. A good example of this policy that the government, in particular the Ministry of Agriculture, should be praised for is the recruitment of about 1,800 unemployed young agronomists throughout Serbia; the state would provide the salary of 400 EUR, cherishing a realistic expectation that at least a number of them will be employed in the local economy. The idea behind this government's initiative is to see young agronomists transfer their knowledge to local producers and thus help modernize production, making it closer to the world standards and raising its competitiveness. The greatest catch here is disorganization of producers themselves as no one else will do the job for them. A better situation in this regard is with buyers, manufacturers, and stockholders.

Serbia's progress in the integration process directly affects the expanding of development chances of agriculture, livestock, and fisheries (both in direct production and in the processing sector). The influence is multiple, and it is in the first place reflected in the harmonization of national legislation and standards with the European and their implementation, while the volume of financial assets withdrawn from accession funds on receiving the candidate status will be growing. Implementation of harmonized regulations and standards boosts the quality of the manufacturing process and the quality of products, makes them more compatible with market demands of the European Union, and facilitates the access to the European and other markets. A greater availability and amount of financial resources allow a relatively rapid modernization and equipment, application of the latest methods and tools, and adjustment of the production structure to the current and future demand. A direct outcome is the growth of quality and competitiveness in the long run.

Prospects for sustainable development of rural areas

Sustainable development was first officially defined in 1987, in the Brundtland Commission Report as "development that meets the needs of the present without compromising opportunities for future generations to meet their own needs" (Stojić-Karanović, Petrović, 2010: 97). If we shift our focus from environment to economy, we will infer that rural areas of Serbia have significant development potentials.

Agriculture has always been the main economic activity in rural areas, both in underdeveloped and developed countries. Serbia has no such natural or technological conditions as the ones large producing countries have, e.g. the U.S. or Argentina but within the European framework it can achieve remarkable output and export performance. Since agriculture long ceased to be the only the source of staple food products, in modern times it is necessary to establish a stable and sustainable system of multifunctional agriculture that yields far-reaching and long-term effects.

There are plenty of examples of a reasonable and successful business orientation. Some are encouraged by the state, while most are the result of a group or an individual initiative. For a decade or so Serbia has been developing eco-friendly food production.[3] “In Serbia, some forms of organic production take place on about 6000 ha, and there is about 9000 ha in the transition process, adding up to only 0.3% of the arable land” (Cvijanović, Dozet, Mićanović, 2010: 50). These products have found their place on the national market, while the export is still in its early days. Vojvodina already boasts efficient production of raspberries (a type that best adapts to the climate there), most of which are successfully exported to the European Union. Furthermore, in the European Union there is no major growing of cranberry (a highly appreciated product in all markets). Early attempts at its growing in the Šumadija area should be encouraged. Similarly, the area of 25 hectares in the territory of Bela Palanka, between Stara Planina Mt. and Suva Planina Mt., is planted with lavender. Owing to remarkable climate features of the area and the influence of airflows from the Aegean Sea, lavender grown here is of special quality (of higher quality than the Dalmatian or French lavender). Around 95% of fruit is exported, mainly to the EU market, and there are no problems with product marketing. At the moment the extraction of lavender oil is done in Leskovac but it is expected that investors will raise their capacities for extraction and expand plantations in the future. There are many examples of top production processes that can be likened to the European (both in terms of productivity and quality of goods). Although organic food accounts for only 1% of total world food market, we should bear in mind that organic food production in developed countries like the U.S., France, and Japan is growing at the rate of 20%. The fact that is more important for Serbian producers and exporters is that the German organic food market is growing by 10% annually (Roljević, Hamović, Sarić, 2009: 104).

One of the very promising elements of rural development is production of electricity from solar and eolian sources, and construction of mini hydropower plants. Although this type of electricity production in Serbia is almost non-existent and there are no pertinent regulations, reasons for its integration into the rural development policy are very serious: first, favorable climatic conditions; second, low costs of the operation and maintenance of facilities; third, environmental considerations, as these are two absolutely purest forms of production; fourth, a significant contribution to balanced regional development, and, fifth, economic gains. A modern wind turbine for producing electricity, for example, is able to fully supply about 300 households. Bearing in mind the costs of construction and maintenance, their advantage as an additional form of production is undisputed as they are an inexhaustible and environment friendly source of renewable energy of unparalleled quality. Since zones of winds and the number of sunny days in our area are long known, it

3 Significant assistance was once offered by Canadian associations, examining, locating and attesting unpolluted areas suitable for such production.

is not difficult to compile the necessary technical documentation for construction of solar and eolian mini power plants and accompanying systems. According to a study conducted in the eighties, there are about 1,500 locations in Serbia convenient for the construction of mini hydro power plants; the latest figures suggest there are about 850 of them. In any case, it is certain that their number is between 800 and 1,000, which is a significant potential in spite of low power of mini hydro power plants. During the eighties a number of mini hydro power plants in Serbia was built, a few of which still operate. It would be useful to bear in mind a complex economic potential of mini hydro power plants, as they are, as a rule, located in the hilly and mountainous areas, on clean and unpolluted waters, and in undeveloped areas. Apart from electricity supply, these spots might be conducive to fish farming and tourism. Some examples from Eastern Serbia confirm the viability of this approach that could contribute to balanced regional development.

Energy issues will undoubtedly force Serbia to develop these two types of production but it is much better to make them integral parts of the energy, regional, and rural policy. Such an approach is compatible with the policies of the European Union that can accordingly provide technical and financial support. However, the state should support this development with its development funds and in collaboration with local communities and, perhaps, regional traders of electricity. Namely, the state should extend loans for the purchase of equipment and grant subsidies to the percentage common in Europe. Europe already has considerable experience in this domain, so all we have to do is to use it, making only some modifications.

It is not difficult to see how successful countries promote the development of their rural areas and take care of them. They strive to enhance rural tourism, eco tourism and the like (Štrbac, Hamović, 2011). It is also not hard to see that a number of promising development rural areas in Serbia lack in rudimentary infrastructure such as roads, railways, water supply, sewerage, and even electricity. Therefore, depopulation of rural regions does not come as a surprise. Local communities cannot provide these conditions on their own. This is the point where the state should act and leave marketing activities to the market. In addition, disorganization and a lack of professional knowledge are apparent with a group of manufacturers, particularly when it comes to export activities. Surprisingly, our raspberry producers consistently shift the blame for their problems to owners of cold storages, they demand subsidies from the state, and so far their associations have not made complexes of cold storages and formed export services at their own expense. They don't sell their products in the best marketing period at highest prices and to markets where they can provide long-term and stable placement. However, the encouraging fact is that raspberry producers in early 2012 sold most of this year's yield in advance to the European Union (Austria). Partial justification for this situation can be found in difficulties that the state and the economy have grappled with for the past two decades but there is no justification for not addressing many of the lingering problems. It is certain that rural areas in Serbia have significant and complex development potentials whose exploitation would yield marked economic, regional, population, and cultural results.

Conclusions

Depending on the time and the country, different development strategies may be developed. Nowadays, at the time of information and communication and with the tertiary sector dominating the economy, whether agriculture can be the engine of growth? Should rural regions base their future development on agriculture?

It is unwise to underestimate agriculture as it is older than all the existing states and nations. Nor is it smart to lag behind modern technologies and industries. Agriculture is no longer what it once was, and that is a fact, therefore the basis for a variety of economic activities is much wider. Much of the knowledge and experience of others are available free of charge. With this in mind, we can contend that rural areas in Serbia have significant development potentials owing to its geographical, climatic, and natural features. This is a necessary but not a sufficient condition.

Potentials should be tapped into. An integral development of rural areas should be based on the following elements: multifunctional agriculture, diversification of economic activities in rural environment, rural and eco tourism, organic food production, small and medium-sized enterprises, and cooperation between small and medium producers. Such a development will lead to improved demographic, social, and income convergence.

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RAZVOJNE PERSPEKTIVE POLJOPRIVREDE I RURALNIH PODRUČJA U SRBIJI U PROCESU EU INTEGRACIJE

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Rezime

Rad obrađuje dva povezana pitanja važna za razvoj Srbije: prvo, perspektive razvoja poljoprivrede i ruralnih područja, i drugo, usklađivanje ruralnog razvoja sa evropskim integracionim procesom. Tržište Evropske unije pruža velike izvozne šanse za srpsku poljoprivredu, status zemlje kandidata brojne pogodnosti i podršku, ali će rezultati zavisiti od uspeha u poboljšanju dve ključne odrednice konkurentnosti: produktivnosti i kvaliteta.

Sadašnje stanje u ruralnim oblastima je rezultat prethodne industrijalizacije i urbanizacije, sa jedne strane, i tranzicionog procesa, sa druge. Njegova glavna obeležja su: depopulacija, starenje ruralnog stanovništva, neujednačen regionalni razvoj i divergencija u dohocima.

Integralni razvoj ruralnih područja treba da bude zasnovan na sledećim elementima: multifunkcionalnoj poljoprivredi, diversifikaciji ekonomskih aktivnosti u ruralnom okruženju, ruralnom i eko turizmu, organskoj proizvodnji hrane, malim i srednjim preduzećima, i kooperacijama malih i srednjih proizvođača. Takav razvoj bi vodio ka poboljšanju demografske, društvene i konvergencije u dohocima.

Ključne reči: *ruralna područja, poljoprivreda, razvoj, integracija*

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CONSUMER PROTECTION IN BULGARIA: EU CHALLENGES

Corina Ene[1]

Summary

Consumer protection represents today a key-concern for each modern economy, as it reflects its potential of providing well-being for citizens and of empowering them to act efficiently on the markets. In the European Union, consumer policy for 2007-2013 address several challenges, including those related to the extension of the EU, given the discrepancies between Member States.

This paper aims to underscore challenges that Bulgaria is facing today in the European context, based on relevant data resulting from surveys and reports. It also suggests several steps to be undertaken in the pursuit of better consumer protection at national level.

Key words: *consumer protection, consumer policy, Bulgaria, challenge*

JEL: *D18*

Introduction

European Union (EU) consumer policy for 2007-2013 is considered as a "relatively young EU policy" with "an ambitious agenda" [4], aiming to refocus European regulation towards citizens oriented outcomes, to re-connect with its citizens by also taking into consideration present specific new challenges arising form 2004 and 2007 enlargements. Consumer policy's scope includes managing these changes and improving the functioning of the internal market, addressing market failures, insuring proper access to goods and services and empowering consumers to make rational choices.

Yet, the rights and obligations included in the EU consumer policy generated *difficulties* in the adoption of consumer protection rules in the new Member States as this approach was less rooted into consumers, enforcement bodies and businesses' behavior.

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Situated in the eastern Balkans, Bulgaria experienced a difficult transition to a market economy, and struggled to enhance low standards of living after the end of Communist rule in 1991, dealing with both unemployment and inflation situations.

Although Bulgaria was not invited to join the EU in 2004, it signed the accession treaty in April 2005 and joined the EU in *January 2007*. Yet, the entry requirements were still *tough*, since a series of reports showed that Bulgarian government had failed to fight against corruption and organized crime. As a consequence, EU announced in 2008 that it was suspending aid worth hundreds of millions of Euros. Subsequently, in 2010, the EU urged that Bulgaria take urgent action to address these issues, and by the end of the year France and Germany announced that they would prevent Bulgaria from joining the Schengen passport-free zone until "irreversible progress" in this field has been accomplished.

In this context, the issue of consumer protection in Bulgaria proves to be *actual* and *significant*, since, every year, a great number of goods in the Bulgarian market are identified as potentially dangerous, as the Commission for Consumer Protection in Bulgaria enunciated on the occasion of March 15 (World Consumer Rights Day) in 2012. However, Bulgarian citizens are gradually becoming more acquainted with their rights and interests as consumers, in a market directed by harmonized regulations with the EU acquis.

Consumer Protection Framework in Bulgaria

In any economic space, consumer protection framework consists of the *institutional* framework (institutions, public authorities, organizations and other stakeholders) and *consumer policy* framework (enforcement of general and specific legislation with impact on consumer protection).

In November 2010, the European Commission (Directorate General Health and Consumer Protection) has put up a country profile for Bulgaria [1]; we are presenting below several essential elements depicted in this report, aiming to build up a schematic image of this country's consumer protection framework.

Consumer policy institutions

In Bulgaria, the ministry charged with responsibilities regarding consumer policy is the *Ministry of Economy, Energy and Tourism*. Being in charge with carrying out various national policies (e.g. trade; tourism, innovation and privatization; economic and industrial policies), its aim is to deliver an effective functioning market while promoting and defending consumer's rights and interests.

This ministry also draws up *the national consumer policy* (based on consumers interests), afferent legislation, and coordinates its enforcement, including the cooperation between administrative authorities (including consultation with consumers organizations) having competencies in the field of consumer protection.

The ministry works to ensure that Bulgarian consumers become effective “actors” on the market, having the necessary the skills, knowledge and information so that they make rational buying decisions and have access to appropriate redress mechanisms if needed. The ministry’s activity includes the implementation of its own Strategy for Consumer Protection for the period 2010 -2013.

Other *relevant public authorities* with the Ministry of Economy, Energy and Tourism are mentioned below:

Consumer Policy Unit (CPU) plays a key-role in achieving the ministry’s goals in the field of consumer protection, being responsible for the concrete formulation of consumer policy (regarding the whole set of consumers rights: safety, economic interests etc.). The CPU is in charge with specific *initiatives* in support of consumers, such as:

- modernizing existing regulatory framework for consumer protection and release regulation proposals;
- supporting to the ministry in implementing the consumer policy and elaborating medium-term strategies for its development;
- lobbying for consumer interests including in all relevant government actions;
- ensuring the accurate functioning of advice and redress systems;
- sustaining the development of independent consumer organizations and carrying out an efficient dialogue;
- administering the allocated State budget for the support and development of consumer services and consumer NGO’s;
- establishing information and education activities designated to raise consumers’ awareness about their legitimate rights.

In the same time, the CPU aims to promote high standards of consumer protection, ensuring efficient integration of consumer interests into other national policies. It also coordinates the National Council for Consumer Protection activity and selects relevant issues for investigation by the Commission for Consumer Protection.

The Commission for Consumer Protection (CCP) is the main enforcement authority having a wide range of statutory powers and duties, recently extended according to legislation under the Law on Consumer Protection and the Law on Consumer Credit. Thus, the CCP is responsible for the enforcement of consumer legislation (including general product safety and consumers economic interests’ protection), being competent to monitor compliance with consumer protection legislation, to issue specific regulations and procedures for the case of law violation and to coordinate other competent bodies on enforcement of consumer legislation. CCP’s most relevant *powers* include:

- issuing regulations acts establishing violation of consumer protection legislation;
- examining consumer complaints concerning violation of their rights and unfair contract terms;
- controlling price indicating, performing test shopping, inspect business documents;

- prohibit (banning, withdrawing) or limit the marketing of goods and services, especially of those posing risks to consumer's health and safety;
- supervise law enforcement in the matter of general product safety and unfair commercial practices;
- adopting necessary measures in case of legislation infringement;
- initiating court actions for the protection of collective interests of consumers.

The CCP responsibilities cover several key-areas, correlating with general and specific regulations in the field of consumer protection. The CCP is also responsible for the enforcement of the Regulation 2006/2004/EC of the European Parliament and of the Council of 27 October 2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws and of the Directive 2001/95/EC on General Product Safety. The CCP also acts as RAPEX national contact point, sending and reacting to notifications for dangerous products.

At local level, there are *Consumer Protection Units* functioning as *local authorities*, competent both in the field of enforcing the Law on Consumer Protection (with regard to price indication, product labeling, consumer claims settlement) and in providing information and advice to consumers.

In terms of consumer protection legislation, several *public agencies* are in charge with specific areas of consumer protection; the most relevant are:

- the Ministry of Agriculture and Food; responsible for agricultural policy, food and feed safety, functioning as Codex Alimentarius and RASFF (EU Rapid Alert System for Food and Feed) Contact Point and performing risk assessment, risk communication and risk management [10];
- the Ministry of Health; responsible with health policy, food legislation implementation, food safety and the harmonization of legislation with European provisions;
- other agencies: "Bulgarian Accreditation Service" Executive Agency, Bulgarian Institute for Standardization, General Directorate "Market Surveillance" with the Agency on Metrological and Technical Surveillance, the Commission for the Protection of Competition, Commission for the Regulation of Communications, Ministry of Justice, Custom Agency, Bulgarian Food Safety Agency (the public authority responsible for food and feed safety throughout the food chain [10], established in 2011).

National consumer organizations are also relevant institution in this field, including consumer associations acting at both national and regional/local level.

A. At national level

The Federation of Consumers in Bulgaria (FCB) is the most relevant not-for-profit consumer association in Bulgaria. Founded in 1990, the FCB has 23 regional units and more than 12,000 members and it has been a member of Consumer International (CI) from 1991. Its main activities include: protection of consumers rights, solving consumer complaints, proposals for the elaboration of new legislation in the field of public utilities; acting in court and out-of-court for the collective consumers interests protection; lobbying in favor of consumer interests; public information campaigns; consumer representation within consultative bodies.

Bulgarian National Association "Active Consumers" (BNA, formerly Bulgarian National Consumers Association) was established in 1998 and has been operating under the new name since 2009, having as main goals to protect Bulgarian consumers' rights and interests by providing reliable information, education, representation, legal advice, lobbying for and proposing consumer legislation improvement, raising public awareness on consumer protection related issues. Current campaigns include exposing misleading labeling on organic food products, education on young consumers nutrition, Internet safety, and financial services. The BNA is in charge with publication of brochures, books and a consumer monthly magazine ("Consumer"). In 2010, the BNA sustained a nationwide information campaign on consumer rights.

Independent Union of Consumers in Bulgaria (IUCB) is an organization that develops programs and projects aiming at protection of health, safety and economic interests of the consumers by encouraging their right to information, education and civil representation. The IUCB participates in the activity of conciliation commissions, advisory and working bodies at national and regional level concerning consumer protection issues.

B. At regional/local level

A number of *consumer protection associations* having similar objectives (consumers and business representatives' information, education and training, consumer policy development) are acting at regional/local level: Bulgarian Consumer's Academy (BCA), National Association for Consumer Information and Advices of Citizens (NACIAC), Union of insured persons (UIB), National League - Consumers of Services, Regional Union of Consumers - "Vidin 98".

Other not-for-profit, non-governmental consumer associations dealing with consumer protection - related issues include: Consumer Centre for Information and Research and Association "Consumer Help".

Bulgaria's consumer protection framework also comprises a *consultative body* to the Ministry of Economy, Energy and Tourism - *the National Council for Consumer Protection* (NCCP). Set up in 2000, it consists of representatives of different government agencies and consumer associations aiming at strengthening consumer representation. The NCCP' most relevant objective is to right balance between businesses and consumers by promoting the conclusion of agreements between consumers' and traders' associations and to advise the ministry on elaborating and implementing an effective consumer policy.

Also, in 2005 a *Council for Coordination and Exchange of Information between the Market Surveillance* was put in place in order to establish a mechanism for better interaction between different enforcement agencies carrying out market surveillance activities. Its activity is complemented with the work of several *implementing agencies* such as: Commission for Consumer Protection (having a coordinating role), the National Centre of Public Health Protection with the Ministry of Health, the Directorate "Nature Protection" within the Ministry of Environment and Water, the Custom's Agency, Bulgarian Drug Agency, the State Agency for Metrological and Technical Surveillance, the Executive Agency Plant Variety Testing, Approbation and Seed Control, the National Police Service, the National Veterinary Medical Service.

Other stakeholders involved in the consumer protection framework in Bulgaria refer to relevant *media* for the distribution of consumer information. The most important ones are the television, the radio and the print media (various newspapers, e.g. he monthly consumer newsletter published by BNA). Also, on the web site of the CCP, consumer information can be accessed in Bulgarian language.

An important type of institutions are those involved in dispute settlement (redress bodies), both in and out-of-court. Several entities (such as CCP, BNCA, UIB, National League - Consumers of Services, Regional Union of Consumers - "Vidin 98", National League - Consumers of Services, Association "Consumer Help", Federation of Consumers in Bulgaria) are qualified to initiate actions in court against practices that violate consumers collective interests.

According to the Law on Consumer Protection, out-of-court consumer dispute settlement framework rely on a national system of 24 *conciliation commission* that support consumers seeking to resolve their disputes with traders and suppliers through an alternative dispute resolution (ADR) scheme, managed by the CCP.

Besides, acting as an advocate for human rights and defender of public interest, *Office of the Bulgarian Ombudsman* function as an independent constitutional body and may act by serving consumers in specific issues.

An important pole regarding consumer cross-border issues is the *European Consumer Centre* (ECC) in Bulgaria, functioning as a part of the ECC-Network across the EU countries, Iceland and Norway and carrying out various activities for supporting consumers. Created in 2008, it has become a relevant institution, especially after a series of promotional activities and is designated mainly to provide information for consumers about the Internal Market opportunities and both EU and national regulations. It collaborates with ECC in other countries and gives advice and support to consumers in case of cross-border disputes, helping them to effectively use ADR schemes. Over last year, most complaints referred to airline companies and online shopping.

Consumer policies

As mentioned before, consumer protection framework relies upon a set of regulations transposing EU acquis in the field of consumer protection legislation. Consumer protection legislation in Bulgaria consists of numerous vertical and horizontal *regulations*, of which we mention the most relevant:

- Law on Consumer Protection (issued in 2005, last amended and entered into force in 2010, resulting from implementing EU Directives al national level); this law is addressing issues related to control of unfair terms in consumer contracts, control of unfair commercial practices, product liability, distance selling contracts, consumer guarantees and claims, timeshare, the protection of collective interests of consumers, price indication, general product safety, product labeling, consumers associations. It aims to ensure the protection of *basic rights of the consumers*, namely:
    - the right to information concerning goods and services;
    - the right to legal defense against risks of acquiring goods and services, which could endanger life, health and their property or their economic interests;
    - the right to compensation for damages caused by defective goods;
    - the right to redress procedures for disputes settlement;
- Law on Tourism (last amended in 2010), aiming mainly to provide protection for the users of tourist products/packages and to establish the rights and the obligations of consumers in this field;
- Law on Consumer Credit (promulgated, amended and in force since 2010);
- Law on Tobacco and Tobacco products (last amended and supplemented in 2009, regarding labeling and presentation of tobacco products);
- Law on e-Commerce;
- Law on Distance Selling of Financial Services (issued in 2006, last amended in 2009, effective since 2010); provides security for consumers using distance financial services;
- Rules of Procedure of the Commission on Consumer Protection;
- Rules of Procedure for the work of conciliation commissions;
- Ordinance on the procedure for the provision of information to consumers and for the price indication of the service repair of electrical appliances;
- Ordinance on the procedure for the provision of information on products and services which present risks for consumers and on the procedure for the cooperation between manufacturers, distributors and service providers and controlling authorities;
- Ordinance on products imitating foodstuffs;
- Ordinance on the terms and procedure for withdrawal and recall of dangerous products, the destruction thereof and for compensation of consumers;
- Ordinance on the terms and procedure for the provision by the State of financial resources to consumer associations;
- Ordinance for safety lighters;
- Regulation on the requirements on safety with regards to magnetic toys.

Other *regulations* having impact on consumers protection include: Law on Foods; Law on Technical Requirements to Products; Law on Wine and Spirit; Law on Health; Law on the Protection of Competition; Law on National Standardization; Law on Bank deposit guarantee; Ordinance on labeling and names of textile products; Ordinance on labeling of the household electrical appliances concerning the power efficiency and other sources; Ordinance on labeling of the type of materials used in the main parts of shoes; Ordinance on labeling of products made from crystal glasses; Ordinance on the requirements of cosmetic products; Regulation on the prohibition of placing on the market of product containing dimethyl fumarate.

Consumer Protection in Bulgaria – attitudes, issues and challenges

Ensuring effective consumer protection in Bulgaria remains a sensitive and problematic goal, since, in spite of the consumer policy framework functioning, many consumers still feel insecure and discontent due to numerous situations of consumer rights infringement. In the last years, several surveys showed that Bulgarian consumers face difficulties in asserting their rights and interests in a complex economic environment, which requires more focus on efficient approaches in this field.

For example, a survey conducted by the “Bulgaria for Citizens” Association (recently founded by former EU commissioner for consumer affairs Meglena Kuneva) in March 2012 revealed that nearly half of Bulgarians complain that their consumer rights have been violated in the past year and that they are not familiar with the laws and mechanisms protecting their rights. Most cases of infringement emerged from trade, food and mobile phone operators sectors [2].

Undoubtedly, insufficient consumer protection is closely correlated with reduced purchase power many of Bulgarian citizens. A Eurostat report in 2009 stresses that in Bulgaria, salaries from paid employment are generally the main *source of income* for most households, whereas social transfers remain the main source of income among households with lower incomes. In the first half of 2008, Bulgaria had the *lowest minimum wage* per month (€113) compared €1,570 in Luxembourg [5]. On the other hand, there was no net saving in Bulgaria, as expenses were merely equal to incomes.

Also, the report mention that countries situated at the geographical extremities of Europe tended to report much lower rates of *cross-border purchases* (9 % of consumers in Bulgaria, in 2008). Regarding mean consumption expenditure per household in 2005, Bulgaria provided the *lowest values* for several *sectors*, including food & non-alcoholic beverages, clothing & footwear, household textiles, purchase of vehicles, recreation & culture, secondary education, financial services. Similarly, Bulgaria ranked the last when it comes to the *structure of consumption expenditure for households* in 2005 for *sectors* such as: clothing & footwear, furnishings, household equipment & maintenance, transport, recreation & culture, postal services, personal care but still the first for housing, water, electricity, gas & other fuels.

A recent Euro-barometer survey conducted in 2008 reveals that less than 5 % of Bulgarian consumers stated that *ethical considerations* were among the three most important aspects that influence their choice of buying [5], which underlines the lesser significance that Bulgarians show regarding this kind of issues.

Besides, of the Member States that joined the EU since 2004, Bulgaria reported by far the lowest *levels than the EU-27 average* for the proportion of consumers agreeing that their rights were respected by sellers/providers, only one in five respondents agreeing their rights were respected by sellers/providers in 2008.

In a 2008 survey on consumer satisfaction, Bulgaria was placed *well below* the other Member States for the number of consumers that were of the opinion that clothing and footwear retailers would replace, repair, reduce the price or give them their money back if they had bought defective goods, which indicates an insufficient acknowledgment of consumers' rights [5].

In 2011, the results form EU market monitoring survey, based on the Market Performance Indicator (MPI, measuring key aspects of consumer experience), revealed that *five service markets rank much higher in Bulgaria than in the EU*: bank accounts, private life insurances, house and garden services, Internet services and TV subscriptions. Also, a *positive trend* appear more visible among product markets, where scores have increased for entertainment goods, large household appliances, house and garden products, package holidays, clothing and footwear, cultural services, vehicle rentals, and second hand cars [3].

An EU report on consumer empowerment published in 2011 underlines key-aspects about consumer's subjective feelings regarding their empowerment (a. their feelings of confidence as consumers, b. the extent to which they feel knowledgeable and c. the level of protection they perceived themselves to have as consumers). The *results* show that Bulgarian citizens face *difficulties* in their capacity as consumers [9]:

- 64% of the respondents do not feel *confident* as consumers;
- 72% of the respondents do not feel *knowledgeable* as consumers;
- 81% of the respondents feel *unprotected* as consumers.

In the same time, Bulgaria has the lowest numbers of interviewees expressing confidence in all three areas.

Consumers' capacity to make informed decisions requires also *understanding of packaging and labeling information*. Bulgarian consumers' awareness and knowledge of consumer logos is *limited*, as 56% of Bulgarians did not know the meaning of any of the displayed logos during the field study.

In the same time, Bulgaria is among the countries with lowest *awareness of EU legislation* in general amongst the respondents and with *lowest levels of seeking redress* [9].

The European Commission analytical report Flash Euro-barometer 299, published in March 2011 treating the issue of consumer protection in cross-border trade shows that *distance shopping* was less common for consumers in Bulgaria (found at the bottom of the country ranking also in 2008 and 2009), revealing data that suggest the *lowest involvement in distance selling* [6]:

- overall level of distance shopping: 19%;
- 9% of Bulgarian consumers had conducted Internet purchases from national sellers and 3% from sellers or providers in other EU countries;
- 4%-5% of Bulgarian consumers had ordered goods or services by telephone;
- mail order was the least frequently in Cyprus and Bulgaria (7%-8%).

Other significant *attitudes* identified in the same study are presented below:

- only 10% of Bulgarian consumers stated that they felt more confident when buying from suppliers in other countries than in their own country;
- 28% of Bulgarian consumers responded to an advertisement or offer that turned out to be misleading or deceptive;
- 62% of Bulgarian consumers disagreed that it was easy to resolve disputes with sellers or providers through an arbitration, mediation or conciliation body;
- roughly one in two of Bulgarian consumers expressed distrust in the public authorities protection of their consumer rights;
- Bulgaria yielded the lowest proportion of consumers (35%) who agreed that they trusted independent consumer organizations to protect their rights as consumers;
- only 34% of Bulgarian consumers considered that sellers and providers in their country respected consumers' rights;
- less than a third of Bulgarian consumers agreed that they felt adequately protected by existing consumer protection;
- less than a tenth of Bulgarian consumers thought that essentially all non-food products currently on the market in their country were safe, while more than a quarter of respondents considered that a significant number of such products were unsafe;
- consumers in Bulgaria were the most likely to think that that a significant number of food products marketed in their country were unsafe;
- less than a fifth of respondents said that the environmental impact of products (or services) had influenced their purchasing decisions.

In 2009, EU launched a consumer information campaign in Bulgaria using the slogan "*In the European Union you have consumer rights. Use your rights*", aiming at raising awareness of EU consumer rights amongst Bulgarians and promoting Bulgarian National Association "Active Consumers" as a focal point of information, reference and guidance for consumers. The campaign's most important *objective* was to encourage Bulgarian consumers to become more informed and assertive, approaching and promoting issues related to consumer rights in case of faulty products, bank services and package holidays using media as TV, web and print advertising, public and media relations activities.

Meglena Kuneva, the first EU Commissioner with a specific portfolio on consumer affairs and the first Bulgarian Commissioner (2007-2010), underlined that *companies*, regardless of their size, should become *consumer friendly* and *should adhere to best practices* – which may turn out to be rather a competitive advantage than a costly approach.

Yet, a survey following this information campaign proved that campaign awareness was somewhat low, as only 43% of Bulgarian consumers said they had seen or heard messages about consumer rights in the weeks prior to the survey, while 56% had not [7]. Nevertheless, consumers who acknowledged the campaign received well its messages, considering information as useful, easy to remember, easy to understand and convincing.

Unfortunately, data showed, similarly to the previous survey wave, that the large majority of Bulgarian consumers are skeptical about the level of consumer protection and of the efficiency of the legal system in the field of consumer protection in their country, compared to other EU Member States.

Subsequently, the next survey wave (based on December 2010 data) highlighted several specific notes on Bulgarian consumers behavior and acknowledgement on consumer issues, showing that 72% of respondents thought consumers in Bulgaria were *less protected than consumers elsewhere in the EU*. In addition, 86% of the interviewees were negative when assessing whether Bulgarian sellers respected consumer rights and 79% of the respondents thought that the Bulgarian justice system was not efficient in punishing businesses that misled or cheated their customers [8].

Another problematic aspect in Bulgaria is represented by the *need for proper consumer protection in the financial services sector*, as the use of consumer financial services has been increasing in Bulgaria and also did the number of consumers' complaints about the financial institutions practices [12]. A recent report addressing the consumer protection and financial literacy in emerging markets [11] underlined several *issues* that consumer face in Bulgaria, including the need of adequate institutional framework for financial consumer protection, the need to protect personal data, the need for complete, accurate, comprehensible information, for financial education and also for access to efficient mechanisms of redress [12].

The study stresses that in order to ensure financial consumer protection in Bulgaria, there are some specific *suggestions* and *recommendations* to take into consideration [11]:

- financial institutions should be required to apply fair and adequate practices when selling and advertising financial products and services to consumers. The report mentions that financial institutions personnel "are unable to explain to customers their financial products and if consumers had disputes over entries in credit register, correction of errors was difficult at best";
- consumers should be entitled to make a choice regarding the provider of any financial product (as, for example, auto dealers prevent consumers from freely choosing the liability insurance provider);

- o statistics on consumer complaints should be publicly available and used to establish the financial sector trends and to determine future improvements in the consumer protection framework (revision to legislation or institutions);
- o as consumers in the EU new member states tend not to pursue complaints, there is a need to establish efficient dispute resolution mechanisms, as mediation and conciliation committees don't address the issue of imbalance of power and information between a financial institution and a consumer. Besides, the financial institution can avoid responding to any consumer complaint simply by refusing to attend any session of the relevant conciliation committee.

In this respect, a World Bank report published in 2009 highlighted that financial consumer protection represents a necessity as it improves efficiency of financial intermediation, and indirectly reduces risks to financial stability [12].

Conclusions

In the EU, consumer protection is gaining increasing importance and Bulgaria followed this trend by putting in place the necessary consumer protection legislation and institutions.

Due to the gap between Bulgaria and other Member States (because of Bulgaria being a relatively young Member State), this country faces obvious challenges and constraints transposed into limited consumers empowerment and skeptical attitudes revealed by last years' EU studies and reports' main findings.

Therefore Bulgarian consumers need a strengthened consumer protection framework for all sectors (including financial sector), better access to relevant information sources about consumer rights, better knowledge about institutions, organizations and associations, better implementing of the existing legislation, improved regulation and practices.

A greater attention should be devoted to vulnerable consumers (especially to those less educated, old, living alone, retired, internet non-users etc.) as they are more prone to be affected by consumers rights infringement and reduced access to means of redress.

Only if and when this framework become more pragmatic and effective, being able to empower consumers, Bulgarian citizens could become more self-confident and assertive about their rights as consumers. Nevertheless, meanwhile they should focus on acquiring better consumer skills, on becoming more knowledgeable and on making their voice heard, to exert the necessary pressure so that the system provides real protection.

To this end, Bulgaria needs efficient cooperation and exchange of information with EU countries concerning application of the consumer protection legislation to help guarantee observance of consumers' rights, which could result in increasing their trust in the domestic market.

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HOW TO MAKE AGRICULTURE PRODUCTION IN PROTECTIVE AREAS PROFITABLE? - PROJECT IDEA ON THE EXAMPLE OF REPUBLIC OF CROATIA -

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Summary

Agriculture has a significant impact on many economic activities. Its development is very important for every economy. Modern lifestyles as well as the increasing recognition of the value of sustainable development had influenced organic farming which importance has risen on the market as a significant and sustainable in the long-run. The subject of this paper is farming in protected areas in the Republic of Croatia. The same is achieved by conducted empirical research on shopping centres in Istria (primary research) and specific systematization and analysis of data from secondary sources. This has also proven the fundamental hypothesis that in the long run the agricultural situation in the Republic of Croatia is unsustainable due to the fact that too small and fragmented farms with inadequate institutional structure cannot be competitive and survive on the market. The goal of the paper was achieved by presenting proposals and arguments to improve the conceptual design of the present state in Croatia through the OTN Company, with special emphasis on production in protected areas.

Key words: *agricultural production in protected areas, project management, Organic Trade Network, Republic of Croatia.*

JEL: *M11, M21, Q13, L22*

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Introduction

Agriculture is very important for every country. It has significant influence on other economic activities, as on food-processing industry, economy, tourism, and etc. It is important because of the food population quality and quantity, and also because of the employment status of the population and foreign-trade balance. It makes part of the rural area, it is important for ecological balance, environmental protection and for keeping cultural and other traditional values. For those reasons countries are giving financial incentives to agricultural production. This is also something the European Union does. From its own beginnings, the Common agricultural policy (CAP) was one of the most important items in EU in the EU budget. In 1985 the share of agriculture in the EU budget was 72,8% (*Kandžija Andrijanić, Ljubić, 2002*). The EU gives around 55 billion Euros a year on the common agricultural policy, as the most significant policy or 40% of the EU budget (*EnterEurope, 2011*). Hill and others (1996) emphasize that European Union "paid" big attention in rural development directed toward agriculture through directing most of financial flows into that sector. But, nowadays reforms are being performed through regional and cohesion funds (*Bojnec, 2007*).

Economy of agriculture is not connected only with production issues but also with equal fortune distribution issues among various society levels, with special accent on payment composition effects, land, credit, marketing methods, comparative workers life standards in the country and in the city. It is also connected with relative chances of income accumulation of various population levels and relative welfare of farmers. It is connected with farmers' issues in a manner of choosing what and how to produce, what to sell and how to sell in order to insure the highest net farmers' profit, and in the best interests of the community (*Taylor and Taylor, 1952*). Growth and agricultural development assume investments and technology. Combining them it is possible to accomplish high productivity. For example, in the last 20 years growth of state investment into agriculture in east and south Asia gave fast agriculture growth and advancement in achieving Millennium Development Goals (*Bage, 2006*). Regardless of the point that in the past century the world moved away from any type of investments into agriculture, because of the low returns, which are result of technology advancement and integrated markets, those notions were abandoned in the very beginning of this century. Especially the significant contribution is the World Bank Report 2008 where is stated that growth in agricultural sector proportionally contributes to poverty reduction more than the growth in any other sector.

Because of the changes in behaviour and the point that increasing importance was being placed on the recognition of high quality values, healthy and ecologically grown foods, organic agriculture becomes highly valued. In the recent years, the interest for **organic agriculture** in the EU countries significantly grew, as organic food become part of everyday food. Organic production is based on biologic control and destroying pests. Use of insecticides is forbidden since apart from damaging the environment, they negatively influence the useful organisms (parasites and pest predators, bees, earthworms, and etc.). It also makes and resistance on insecticides pollutes ground and water (*Jošt, 2000*). „*Every year hundreds of thousands of people die because of random poisoning by agricultural chemicals*“ *says Roy C. Alimoane,* manager Mindanao Baptist Life Centre (MBRLC) Foundation, Inc. (*Henrylito, 2009*). Organic agriculture supports the rules of sustainable development, which makes the base of today's economy. Agriculture must be based on economic justification, sociable justice and environmental sustainability (*Pinto and Guedes, 2006*). Regarding the Republic of Croatia and its recognition of the values of organic agriculture, it can be said that this process is still slow, behind the Europe and the world, but it can be seen the easy growth of demand toward the products. For sure, the reasons for this should be looked for as on the offer side so as on the demand side since the prices of organic food are still very high. Therefore they are not in the same level with the current possibilities of Croatian consumers.

The subject of this paper is agricultural production in protective areas in Republic of Croatia. **The purpose** is to give a picture of agricultural sector state in Republic of Croatia, and **the aim** is to present and give arguments for the idea of improving nowadays state in Croatian agriculture with special accent on production in protected areas.

It begins from **fundamental hypothesis** that in the Republic of Croatia *state in agriculture is unsustainable because of the fact that too small and parted agricultural economies, with inappropriate institutional organization cannot become competitive, fight and stay on the market.*

Therefore, **authors suggest** quality project management that assumes company establishment for providing service for promotion and distribution of products from greenhouse production. Also, they should follow the realisation of defined project aligned with the basic rules of quality project management.

Agricultural production in Republic of Croatia

Agriculture responds to ISICs (International Standard Industrial Classification[4]) divisions 1-5 and includes forestry, hunting, fishing as and crops cultivation and cattle production. Before providing the retrospective of situation in Croatian agriculture, authors provide a short review on agricultural grounds state and rural population in the World.

According to the World Bank data, the share of agricultural area in total earth surface in 2008 was 37,7%. Agricultural soil refers on the soil part that is arable under permanent crops, and also under permanent pastures. Middle East and North Africa, followed by Europe and Central Asia, with respect to other areas in the world have the smallest share of agricultural areas in total surfaces, less than 30%. Even 54,6% of total surface

4 International Standard Industrial Classification is composition of economy datas classification of United nations available on>http>//unstats.un.org/unsd/cr/registry/regcst.asp?cl=2

in South Asia goes to agricultural soil. In 2006, there was 22% of agricultural land in the Republic of Croatia, in 2007 the share was even lower - 21,5%, while in 2008 the share went up to 23% of total agricultural soil (*World Bank Indicators, 2011*).

From one side the condition of agricultural lands can be considered, and from the other side it is necessary to see the share of rural population so that the picture could be fuller. Total share of rural population in total world population in year 2009 was 50%.

European area, country members of OECD and Latin America and Caribbean Islands have the smallest rural population with regard to other areas, while in the Sub-Sahara Africa 63% of population make part of rural population. Sub-Saharan Africa is also an area where the larger numbers of the poorest people live, besides South and East Asia and Pacific Islands. Regarding Republic of Croatia, in 2006, 2007 and 2008, the total rural population was 43% while in 2009 and 2010 the number claimed to 42% (*World bank, 2011*). In economically developed areas, rural population makes minority while from the other side in those undeveloped and less developed areas makes bigger share in total population.[5]

Croatia has favourable agro-climatic conditions that enable various agricultural productions. Because of the favourable and varied climatic conditions, relief and soil, on relatively narrow geographical ground, large number of agricultural cultures successfully grow. It has big potential for production of agricultural cultures from grains and industrial plants to grapes for wine and Mediterranean fruits and vegetables (Ministry of agriculture, fishing and rural development, 2009.). In Croatia, added value from agriculture was 5% of GDP in the year of 2006 and 2007. In 2008 the added value was 6%, while in year 2009 it reached 7% of BDP. Added value presents net output sector after adding all outputs and subtraction of intermediary outputs. It is calculated without refusal of the amount of made property depreciation or impoverished and degraded natural resources (World Bank national accounts data; OECD national Accounts data files). In year 2006, in Croatia 14,2% of total number of employees was employed in agriculture, while in 2007 that share was reduced to 12.8% (*World bank, 2011*). Arable ground includes soil defined by FAO as one under temporary crop (double crop areas can be counted just once), temporary lawn mowers or for grazing, vegetable gardens and temporary fallow land. Abandoned lands as result of breeding movement are off. In 2006, there was 15,7% of arable land, in the Republic of Croatia. In 2007 something lower -15.2% while in 2008, it was 15,4% of arable land (World bank, 2011.). The following chart shows Croatian import and export of agricultural and food products from 2000 to 2010.

5 Jelić, S., Jovanović, T. (2011): *Rural population and poverty*, Economics of Agriculture, Special issue, pp. 179, Institute of agricultural economics, Belgrade

Chart 1. Display of foreign-trade exchange of agricultural and food products by years

Year	Import mil. USD	Export mil. USD	Difference mil. USD
2000	687	406	-281
2001	845	470	-375
2002	1.000	558	-442
2003	1.256	768	-488
2004	1.455	740	-714
2005	1.616	920	-696
2006	1.848	1.190	-658
2008	2.150	1.313	-837
2008	2.625	1.399	-1.226
2009	2.239	1.360	-879
2010	2.168	1.355	-813
Index 2009/2008	85	97	72
Index 2010/2009	97	100	92

Source: Country Institute for Statistics of Republic of Croatia, 2011

It is visible that in the last 10 years the import of agricultural and food products was always larger than export, and the last 50 years were marked with fall trend of import and export of all agricultural products regarding total import/export (*Obadić, 2010*). The agricultural import-export ratio in 2006 was 65% while the same indicators for total economy were around 48%. Croatia is net food and processed fruits and vegetables importer, where even 70% of domestic consumption of processed vegetables and 27% of processed fruits are compensated with import (*Government of Croatia, 2008*).

Agricultural policy in the Republic of Croatia is implemented by National program for agriculture and rural areas that suggest that the agricultural production must satisfy total needs of domestic population (sc.AD) and accomplish export surpluses. With that, the production must be doubled and come to the level of cca. 4 billion USD by year (*Obadić, 2010*).

Ecological production grows very fast. Europe has an important role in this. Countries such as Italy, Spain, and Germany have more than 40% organic fields all together. In Croatia that kind of production is less present. According to GfK data from 2009, in Croatia there are some more than 700 domestic manufacturers with eco-certificate (on cca. ten thousand ha). Shopping centres in Croatia are foreign origin that mostly sells foreign, imported products (*Sertić et al. 2011*). Final entrance of Croatia in EU would contribute to larger share/role of foreign (agricultural) products in total offer. Authors, to confirm what kind of ratio between foreign and domestic products is, made a concrete research in the well known shopping centres that do business all over Croatia. The following ones are presented: Billa, Kaufland and Lidl as foreign multinational companies, then Puljanka, Konzum and Plodine as Croatian companies. The comparison is made. The results are presented in Chart 2.

Chart 2. The Countries of origin of chosen vegetables and fruits that are offered in shopping Centres in Croatia

Vegetables /fruits	Billa	Kaufland	Lidl	Konzum	Plodine	Puljanka
Bananas	Ecuador	Ecuador	Ecuador	Ecuador	Ecuador	-
Red onion	Netherland	Croatia	Netherland	Austria, Netherland	Austria, Netherland	Croatia
Garlic	China	China	China	china	China	Croatia
Grapes	South Africa	Argentina, Netherland	South Africa	South Africa	South Africa	-
Apples	Croatia	Croatia, Italy	Croatia, Italy	Croatia	Croatia, Slovenia	Croatia
Strawberry	Spain	Italy	Greece	Spain	Spain	-
Potato	Croatia	Egypt, Croatia	Egypt, Croatia	Croatia	Croatia, Netherland	Croatia
White cabbage	Croatia	Croatia	Croatia	Croatia	Italy	Croatia
Mandarin	Spain	-	-	-	-	-
Olives	Croatia	Greece, Croatia	Spain	Croatia	Croatia, Greece	Croatia
Carrots	Netherland	Croatia, Netherland	Bosnia and Herzegovina	Croatia, Netherland	Croatia	Croatia
Pepper	Morocco	Spain, Turkey	Netherland	Italy	Italy, Turkey	-
Tomatoes	Spain	Croatia, Turkey	Turkey	Turkey	Spain	Croatia
Cristal cabbage	Croatia	Croatia	Croatia	Croatia	Croatia	Croatia
Plums	South Africa	Greece, Croatia	USA	Croatia	Serbia	-

Source: author research

It can be clearly seen from the above table that only shopping centre Puljanka, with headquarters in Pula offers specified kinds of vegetables and fruits of Croatian origin. All others mostly offer imported products.

Consumption of fertilizers (100 grams by ha of arable area) is measure of plant food amount by unit of arable area. Fertilizers include nitrogen, potassium carbonate and phosphate fertilizer (including ground phosphate rock). Traditional nutrients – vegetable and animal fertilizers – are not included. In the Republic of Croatia, in 2006, the consumption was 293,1, in 2007 it was 314,1 whilst in 2008 it was 387,6 (*World bank, 2011*).

Agriculture in Croatia is in big problems. Productivity and even profitability in that sector is very low. That is the consequence of very low investments of own capital. Return deadline of invested capital is very long but farmers know very little about foreign investments. Technology is old and not sufficiently mechanized. Croatia is very often facing the migration of young people into urban areas what causes depopulation as well as the lack of education and professional improvement in rural areas. Not just educational, but the age structure of farmers is devastating. Production structure is bad – prevails corn production (*Tadić, 2010*), and market is unsolved. Production is done unprofessionally and with great environmental pollution where the basics of production – soil fertility is actually destroyed. Trade balance is getting worse and debt and insolvency are enlarged (*Tadić, 2010*). It is necessary to emphasize the stormy protests of Croatian farmers who asked for state incentive. While Ministry for agriculture, fishing and water management emphasizes that **incentives are given just to the farmers who did not *"made a mistake"* with nature, environment, animals welfare, vegetable health, people and stock during production** (*Znaor, 2009*). In the array of problems, two stand out as the biggest and they show that the current state is more than serious. Those are: (**1**) Parted agricultural farms and (**2**) Inappropriate institutional organization. In structure of agricultural farms small agricultural (family) farms are prevailing where 70% of agricultural production is done. Therefore, agricultural farms are too small and parted (partition is growing more with the inheritance issue). From totally 190 000 registered farms, 63% of them have less than 3 ha (*Croatian Agriculture Chamber, 2010*). Average property of agricultural home in Republic of Croatia is just 2,6 ha. Just something more than 1% of agricultural homes have property larger than 20 ha while agricultural factories, in average, have 168 ha of land.

For example, EU has an average farm size of 18 ha whilst the USA's average farm size is 180 ha. They are quite ahead from Republic of Croatia. (*Gelo, R.. and Gelo, T., 2007*).

Regarding Croatian agricultural policy, the most important is the reform of the agricultural policy due to Croatian inclusion into World Trade Organization by the end of year 2000 (reduction of custom protection for 50%). Till then Croatia was isolated from European and World market in agricultural spheres. Today, in the Republic of Croatia 4 models of agricultural support are used (*Gelo, R. and Gelo, T., 2007*): (**1**) *Model of production stimulation* – direct support directed on production in commercial farms, (**2**) *Model of income support* - it is not related with production but directed on smaller and elderly economy with the aim of ensuring an adequate level of income, (**3**) *Model of capital investments* - directed on commercial farms through co-financing investments in agricultural sector and (**4**) *Model of rural development* - preservation and development of rural areas, culture and traditional values of rural means. The lack of an appropriate institutional organisation which would be connecting farmers is evident, high part of mix (unspecialized) farms, small share in state budget regarding other countries (specially EU countries that extract from joint budget, while every country separately supports agricultural production with some kind of subventions) is evident (*Obadić, 2010*). Subventions level for agriculture gradually became reduced in developed countries, but it is still higher than in Croatia (1,2:0,9% BDP), (*Obadić, 2010*).

It is very difficult to accomplish agriculture products competitiveness. At the end this brings to very low prices. Looking at mentioned issues it is easy to conclude that Croatian agriculture sector is uncompetitive. Because of above mentioned issues it is necessary to make some steps so as to make the domestic manufacturers (mostly small agricultural farms that are the most important in agricultural products production) accept new technologies and in that manner secure bigger yield and bigger profitability of their own vegetable production. Through continuous education process it is necessary to give domestic manufacturers new knowledge regarding the most modern manufacturer technologies of vegetables (greenhouses production) so they could achieve competitiveness and capability to respond to requests of domestic and foreign market.[6] Beside that, considering that Republic of Croatia has big potentials for production in protected areas, the same thing should be supported. In the next chapter the accent is given exactly on production of agricultural cultures in protected areas.

Characteristics of agricultural products production in protected areas

Two basic types of protected areas where crops can be produced exist. These are: **1) greenhouses and 2) glasshouses.**

Greenhouse is special form of multiyear or permanent protected area which, by its own shape, size and equipment in total is adjusted for vegetable and flower breeding. It provides creation and very qualitative control of climatic, food and other conditions necessary to vegetable and flower culture cultivation. Greenhouses provide breeding and qualitative vegetable and flower harvest during all year. They provide a few times bigger yield regarding production on open. Thus, they represent the most intensive form of production (*Parađiković and Kraljičak, 2008*).

Glasshouse is protected area for whose covering composition is used glass. Glass misses the light and keeps warmth, but it is also and the most expensive investment. Special attention is dedicated to the place or better said construction site where the object would be built. For its building it is necessary to have building permit (*Parađiković and Kraljičak, 2008*).

The main reason why the greenhouses and glasshouses had to be used in greater amount is much bigger yield unlike when the production in open. Chart 3 shows difference between yields of some crops in traditional manner in comparison with yields in protected areas – specifically in the greenhouse. It is visible that the greater yield is in the greenhouse (almost 2-3 times bigger).

6 Djekić, S., Jovanović, S. (2010): *Regional aspects of consequences of world economic crisis in agricultural sector, Economics of* Agriculture, Institute of agricultural economics, Special issue, pp. 102, Belgrade

Chart 3. Difference in yields between production in open and production in greenhouse

Culture	Production in open	Greenhouse
Pepper	4kg/m2	10-12 kg/m2
Tomato	10 kg/m2	25-30 kg/m2
Green salad	1.5 kg/m2	4-5 kg/m2

Source: http://edasplast.com/cms/index.php?.yields-in-greenhouse-production
http://edaplast.com/cms/ondex.php?prinosi-u-plastenickoj–proizvodnji

Then, product quality is better because of the reduced biological cycle. Thus, fruits are more tasty, nicely shape, coloured and of good health condition. Because of the controlled conditions it is not necessary to use so much pesticides and herbicides and other chemicals. It means that it is much easier to accomplish organic production and it is much more useful for bigger production competitively. Production time is not limited on just few months in the year, but it is used during all year long. And also it is very important to use domestic resources: domestic work force, own land and beside all of that, the developing domestic production is developing.

According to economists and agronomists, Croatia has big potentials for vegetable production in protected areas, but because of all previously mentioned issues (mostly because of insufficient knowledge about new technologies and ways of financing, land fragmentation and etc.) Croatia is not using (*Parađiković and Kraljičak, 2008*) its potential. In the total structure of agricultural production, products production in protected areas account for just 3% (*Parađiković and Kraljičak, 2008*).

In 2010, the total agricultural area under greenhouses/glasshouses in the Republic of Croatia was 475,29ha (Agency for payments in agriculture, fishing and rural development, Register of agricultural holdings, 2011). It must be mentioned that in the context of greenhouse and glasshouse production it is very hard to be in touch with manufacturers of agricultural products in protected areas –a register of the named manufacturers does not exist. If there is any interest from third sides for marketing of those products, big problem is how to find them. Therefore, their profit cannot be determined. It means they are very difficult to deal with. Also, manufacturers are not connected, or better said, there are no associations of manufacturers from protected areas that would potentially insure better conditions for manufacturers' performance on the market. Agriculture in the world and in the Republic of Croatia is also faced with big problems that climate change is causing. This is one more reason that gives advantage for production in greenhouses and glasshouses over the production in the open.

In the chapter that follows, the suggestion of project idea with aim of empowerment of Croatian farmers in protected areas is provided.

Suggestions of production development in protected areas – organic trade network as project idea

Considering previously mentioned problems that are present in Croatian agriculture, apropos agricultural products production in protected areas, we ask a question how that complex problem could be solved. In the continuance authors explain their own suggestions and possibilities of roof company that should direct its business toward creating ties between present, mostly unsatisfied condition in production sphere under protected area and possible better and more qualitative business and production in protected areas.

Therefore, authors suggest formation of the company „Organic Trade Nestwok“ (or OTN) that would offer services of promotion and distribution of products of greenhouse and glasshouse production. Company would be working as „roof institution“ that would be connected with all manufacturers of organic products under protected areas. Company would put an accent on sustainable agriculture or agriculture as part of sustainable development. Therefore, ground and natural resources must be in the same or better condition for future generations than they were before. Sustainable agriculture use ecologically acceptable agro-technical measures. This is what would make the basis of the company. OTN would connect itself with manufacturers that produce exclusively organic products. Ecologic production (organic, biologic) is special composition of sustainable agriculture and forestry that include growing plants and animals, food production, raw materials and natural fibres and processing of primary products. Production implies all ecologically, economically and socially justified production and technological methods. It focuses on the best use of soil fertility and water availability, natural properties of plants, animals and landscape, then yield and resistance of plants with natural forces and laws and prescribed use of fertilizers, plant protection and animal by international adopted norms and principles (*Business forum, 2011*). It is also important to mention that trade with ecological food products is one of the fastest growing category in food sector. OTN would be connected with manufacturers which would maximally reduce use of chemical implantable fertilizers, pesticides and protection. There are many reasons why manufacturers of agricultural products in protective areas should perform on the market within the association. First of all it is the impossibility to make an individual and continual delivery of the asked product amount, breakdown of the cost of delivery, then creation of unique brand that would secure a certain image and recognition. **Company vision** would be to become leading distributer of organic agricultural products under protected areas in Croatia and the region, and the **mission** would be to collect and connect agricultural manufactures in protective areas that are doing with organic production exclusively as well as the improvement of their production promotion as their supply. The primary activity of the company would be service outsourcing for the manufacturers of organic agricultural products from greenhouse and glasshouse production. Manufacturers of organic agricultural products would give bigger part of their activities (that are better explained in details in company aims) to OTN. **OTN aims** would contribute to target realisation of agricultural policy that was defined by Croatian Agriculture Chamber as to the Action Plan for Development of ecological agriculture in Republic of Croatia for period from 2011-2016 brought by Ministry of agriculture, fishing and rural development (*Ministry of agriculture, fishing and rural development, 2011*). The following would be the OTN aims: (1) gathering of agricultural manufacturers that do organic production of agricultural products and hold them in protected areas, (2) Creating register of those manufacturers, (3) Permanent market research so it would be easier to determine demands for organic products. Based on that, it will be decided what would be produced and where (how much of something should be produced and are there some potentials for export for some of the cultures), (4) counselling and education of farmers regarding modern production technologies, about conditions on the market (firstly regarding demand for some specific agricultural products) – very important segment considering on insufficient farmers education, (5) Branding products considering on space of protected area by individual manufacturer, it is very difficult to create recognizable brand of one manufacturer, therefore the focus is on one brand for all manufacturers, (6) Product promotion, (7) Collecting financial means from foreign sources (for OTN and Croatian farmers that make products under protected areas), (8) Products placement (and solving the issue of stocks), (9) taking necessary activities for getting certificate of meeting standards on organic agricultural standards according to the provisions of the Law of ecology production for agriculture and food products (standard „good agricultural practice“ whose certificate understate quality, healthy safe product that is manufactured on sustainable manner), (10) reducing prices of organic agricultural products through enlargement of products amounts and accomplishment of advantages that the economy of scale offers, (11) Stirring sustainable agriculture and social responsibility.

Considering the size of the project accordingly big investments will be necessary. Bellow, the possible sources of financing are mentioned: (1) support program of Ministry of Economy – it is related with award of grants for small and medium enterprises (in April 2011 the max amount of mentioned means was 570 000 Kunas) (*Barkum, 2011*), (2) two part pricing- farmers would be paying a certain symbolic fix price to OTN for the inclusion into register of their production and for using OTN services that are in the same time the company aims, (3) application for mans from pre-accession funds of EU (apropos EU funds) – incentives for sustainable agriculture exceed the subsidies for conventional manufacture of agricultural products.

Then, it is necessary to know how to manage the brand. It is very important to develop a product brand. It is often experienced by protective name and/or with sign awarded to some product, factory, service, procedure, concept, etc. Brand is consisting from name and/or sign brand, and also other elements as the activities that manufacturers give to some product, service or idea to inform the market about their uniqueness or relation toward other competitive products (*Vranešević, 2007*). Considering that, there are very few manufacturers with brands in protected areas in relation to big manufacturers. Thus, it is not appropriate that each manufacturer to brand its own product. OTN suggest just one brand. Roof brand is brand that is used for marking various different products that are dedicated for different markets or targeted segments. The aim is to develop OTN products and make them recognizable to the consumers to put the OTN products in relation to competition, and to take a certain place according to other marks and values.

There are so many buyers and they can be diversified according to lots of segmentation criteria. Basic market classification understates market of commercial consumption and final consumption. Distribution flow can be seen on Display 1.

Display 1. Distribution flow

Manufacturers of organic agricultural products in protective areas

↓

ORGANIC TRADE NETWORK

↓

Market (B2B, B2C)

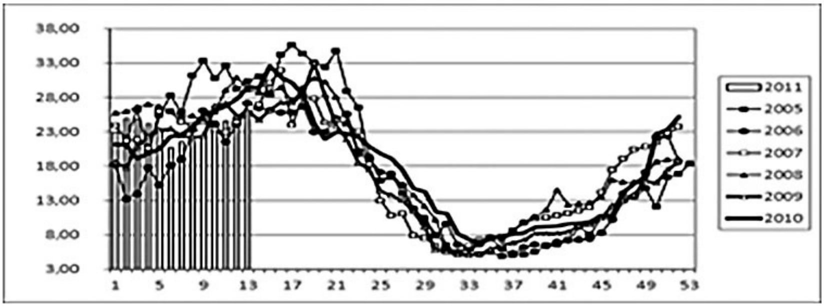
Source: done by authors

First, OTN should focus on the market for business demand (B2B). Basic question that is present here is:*" On which industries that buy this product we should focus on?"* Bearing in mind it is about market for business demand, it means that it is about smaller quantity of larger buyers that are more concentrated geographically (*Kolter, 2006*). Therefore, the products should be bought from OTN with intention to manufacture products and services (in this case ready meals in restaurants), or with intention to be resell with certain profit (shopping centres). Business buyers on which OTN is focused (restaurants, shopping centres) should be buying from OTN, not directly from manufacturer. It is necessary to see the competition too, but in this case, the direct competition does not exist in Croatia since the company as OTN was never established. First of all, OTN should be focused on big shopping centres that offer mostly foreign goods, followed b restaurants. OTN would look for the opportunity in hotel chains, then in other objects that would, especially during tourist season, offer Croatian products to foreign guests. Shopping centres concentration imposes the offer concentration as well. The destiny of many others, especially of small manufacturers, mostly depends of centres readiness to put their products on shelves of their points of sale.

In the beginning OTN products should be sold to shopping centres that offer retail prices in Croatia. Considering that shopping centres mostly offer lower quality and proportionally lower prices, OTN would be offering products of higher quality and prices, but the price difference would not be so high since the manufacturers offering is much larger. Therefore, all advantages of the economy of scale would be used and this will ultimately bring to reducing retail price product.

In shopping centres, availability of some cultures and their price largely depend on the seasonality of certain vegetables types. Graph in the continuance compares prices movement of peppers in retail sale (taken as picturesque example).

Display 2. Average retail prices by weeks in kn/kg for specified group of vegetables-peppers:



Source: Price trend: Fruits and vegetables, Market informative composition in agriculture, 2011, www.tisup.mps.hr

Restaurants, apropos hotels and cafés that would include in its menus meals made from organic products from OTN, would be representing very significant market since the products made in Croatia could be offered directly to guests through tourism. Hence, this is the aim of Croatian government – to enlarge consumption of domestic products.

Final consumers – if the shopping centres would be the target group, together with hotels and restaurants, it would be necessary to take care about final consumers since ultimately they will try OTN products. Besides that, OTN would form its own retail centres and in that manner distribute its own products. From healthy and nutritive reasons, because of the taste, the most often organic products are bought. On the basis of data from GfK-Centre for market research Ltd, it is concluded that momentary buyers of health and organic food are those with high or higher professional qualifications, even 64%, and their age group is from 25 to 44 years. According to the questionnaire/poll, there are just a few regular and often buyers of ecologically manufactured food (around 10%). The reason is the bigger price of those products (*GfK, 2009*). Croatian ecological products are even 100% more expensive since the offer is still too small in relation to demand, while in EU countries they are 30 to 50% more expensive (*Petković, 2010*). Therefore, the OTN could offer its products with much lower prices from other ecological products in Croatia.

When it is spoken about companies' development, first step would be connection with manufacturers. From many other ways to be in contact with manufacturers we suggest direct contact. Problems are very complex, the project is very demanding and therefore it is necessary to build trust into OTN. So the most appropriate communication is face to face. It would be possible to explain to manufacturers the ways how to solve their problems related with production and the connection between manufacturers and OTN would be shown. The accent would be on manufacturer's benefits. In the later phase, company should be established on the regional level (i.e. on Istria area with residence in Pula) which could be connected with local target market (shopping centres and hotels) and places their products. Further branches can be established in regional centres that can do the same job as the first branch. Through some longer time, establishing its own retail nets and then access to the foreign market could also be planned.

Company would connect more stakeholders – farmers, local community (employers, distributers), government and non-governmental groups (through giving support to the company), shopping centres, hotels and restaurants, then academy community (including into project educational agronomists and economists).

To place and promote products of local economists – manufacturers, Organic Trade Network would be connecting with manufacturers of organic agricultural products in protective areas. Use of local community can be seen in creating bigger possibilities for employment in the company – agronomists, economists, lawyers, etc. Shopping centres, hotels and restaurants offering domestic, organic agricultural products could benefit through differentiation from competition. Academic community should be included into the entire project in the way where the company employs young educational professionals (agronomists, economists). The financial support for the project could be expected from the government and non-government communities and their benefits would understate bigger consumption of domestic products and export reducing.

Conclusion

Republic of Croatia has 4.417 million of residents, on the total area of 56.538 km^2. Total BDP accomplished in year 2010 was 334.564 millions of Kunas (in current prices), apropos 45.917 millions of Euros (in current prices). BDP per capita was 10.396 Euros, and in year 2010 BDP fell on 1,2 % compared to 2009. Average rate of inflation in 2010 was 1,1%. Export of the goods and services in 2010 (as BDP in %) was 28,3% while the export was 38,4%. Foreign debt is 101,1% of BDP and public debt is 41,2% (*HNB, 2011*).

The growth in agricultural sector proportionally brings to reduction in poverty rate more than the growth in any other sector shows clearly the importance of investment into agriculture for one country (*According to World Bank report from 2008*). Republic of Croatia has considerable agro-climatic conditions that provide production of wide spectrum of agricultural products but being aware of the numerous problems, that potential stays unused. Hence, Croatia is a net importer of agricultural products. Sustainable agricultural manufacture and organic agricultural products define the future agricultural movement and that is something emphasized and supported by big international organisations and integrations. This is also something final consumers recognize as well.

The point of this paper was to show the conditions in the agricultural sector in Republic of Croatia. This is achieved through the empirical research done on the sample of shopping centres in Istria (primary research) and direct systematization and analyzing of data from secondary sources. This has proved the fundamental hypothesis authors started from assuming that agricultural *conditions in the Republic of Croatia are unsustainable in the long-run because of the fact that small and parted agricultural economies, with inappropriate institutional organisation, cannot become competitive, and cannot fight and survive on the market.*

The aim of this paper has been achieved through presentation and argumentation of the idea of the possible improvement of the current situation in Croatian agricultural sector through OTN Company. The special accent was put on production in protected areas.

All year long consumers do not have the availability of all types of vegetables and the prices of the same are mostly different regarding the season of some of the culture. Response on price volatility is not in punishing or blocking market, but in their better use, better said through continuing vegetable manufacturing during all year long that the production in protective areas (with multiply higher corps regarding the production in open spaces) provides. Based on the review of conditions in the agricultural sector in Republic of Croatia and on possibilities of production in protective areas, gave their recommendations and emphasized the importance of the recognition of this sector as well as difficulties that it is confronted with. At the beginning, authors make a difference between two basic problems – partition of agricultural economies and inexistence of appropriate institutional frame. Taking into account the above, they suggested the establishment of the company Organic Trade Network that would function as the roof institution that connects manufacturers in protective areas with the market and final users.

With vision explanation, mission and company aims, authors explained the manner of company's business. Finally, by accomplishing OTN aims, many problems could be solved. This would bring to a better productivity of agriculture in Croatia. Consequently, the sustainable agriculture that respects social, ecological and economical targets is the only possible way of the long-term agricultural production in the best interest of all stakeholders.

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Review article

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THE INFLUENCE OF BUSINESS INFORMATION SYSTEMS ON SERBIAN COMPANIES' BUSINESS PERFORMANCES

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Summary

Industrial era has been replaced with the information era of development. Under such influences of surroundings, all the companies have been forced to introduce information systems in their organizations in order to be competitive. Since Serbia technologically tags along the developed part of Europe and bearing in mind that adjusting to changes is the condition of success, this paper aims at answering the question: how many companies in Serbia have an information system, when and how was it introduced and which fields of business were integrated in that way? We came to the conclusion that all the interviewed business subjects use the information system to a greater or lesser extent and mostly for the needs of accounting, sales and supply and that in most cases all fields of business were integrated into a unique IS, which led to the notable savings in business.

Key words: *organization, integration, IS classes, planning, implementation.*

JEL: *O32*

Introduction

What one gains from installing ERP is reflected a great deal in the effects which are difficult to quantify. To that purpose, we have conducted research based on the sample of 73 companies of all sizes, from micro to the big ones, registered and operating on the territory of the following municipalities: Macva region, Vojvodina and Belgrade.

All significant elements that can possibly help the research on the influence of business information systems on the companies' performances have been comprised. The results have been shown in the form of tables and explained on the basis of logical conclusions.

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Research method - A survey has been used in this research, as the most frequent research method in practice. The method is based on questioning business subjects through direct contact in companies, i.e. in the realistic environment. While choosing the companies, we made sure to include companies of all sizes. The type of research is a stratified sample, homogenous data having been obtained out of the non-structured mass and processed as such. The following methods were also applied: analyses, abstractions, syntheses and logical concluding. Quantitive method, which is mostly based on sciences such as statistics and mathematics, was used for data processing. The data were obtained through personal research. The software **Microsoft Office Excel** was used for calculating and making graphs.

The aim of the paper is to indicate the significance of software solution application in all segments of organization with a special reference to Serbian companies. Our aim was also to realize the impact of integrated management systems on creating the conditions for faster and better growth and development of companies. The mere search for new developmental possibilities was conditioned by new civilization trends which carry big changes with them. Consequently, we wanted to find out exactly that: to what extent are our companies adjusted to the existing changes and ready for the new ones, since the adjustment to changes is the condition of success.

Sources - The demonstration of the elements of organization is mostly based on the book *The Structuring of Organizations*. The part which refers to the emphasis of the significance of integrated management systems is based on the source *Surprising Facts about Implementing ERP* and *Business Information Systems*. The rest of the sources also had an important role and contributed to the paper, and the research conducted by the authors is especially important. To the authors' knowledge, similar research was never before conducted in Serbia, so there is no possibility of comparing the results.

The influence and support of information technologies to certain parts of organization

The deterioration of the conditions of business dealings in Serbian companies during the crisis was mostly influenced by external factors or external factors joined with internal ones. The most influential external factors are the deterioration of business conditions and the reduction of purchase power in entire economy, whereas the most important internal factors are mistakes in management.[4]

The role of information technology in a company makes a business system able to react quickly and adequately on the influences from the surroundings. A company with a well-structured information technology can react efficiently and change its relation towards the surroundings promptly, when a reason to do so appears. Observing Minzberg's organizational structure defined in late 1980s, the following conclusion can be drawn:

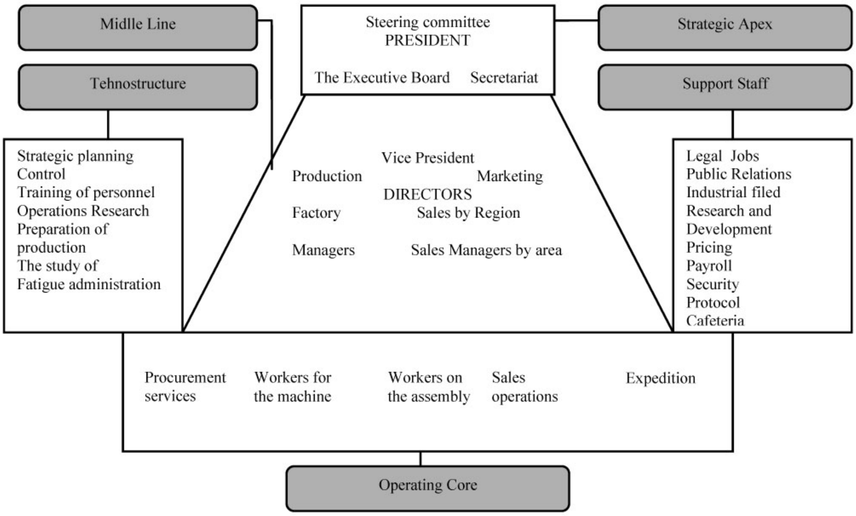
4 Vojnović, B., Cvijanović, D., Veselinović, P. (2011): *Istraživanje uticaja krize na poslovanje domaćih preduzeća*, Ekonomika poljoprivrede, Institut za ekonomiku poljoprivrede, str. 749.

generally, organizational structure established at that time is acceptable today provided it has a good information technology support.

If we analyze the activities of almost every business function, we can notice that 90% of all activities in the majority of business functions come down to collecting, processing and analyzing certain data.[5]

The process of performance measurement enables the company to identify economic resources that it has at its disposal, to realize what the key factors that influence its performances are, and to find the best flow of action.[6]

Figure 1. Basic parts of organization



Source: Minzberg, H. (1979): *Tree Structuring of Organizations*, p. 20-23.

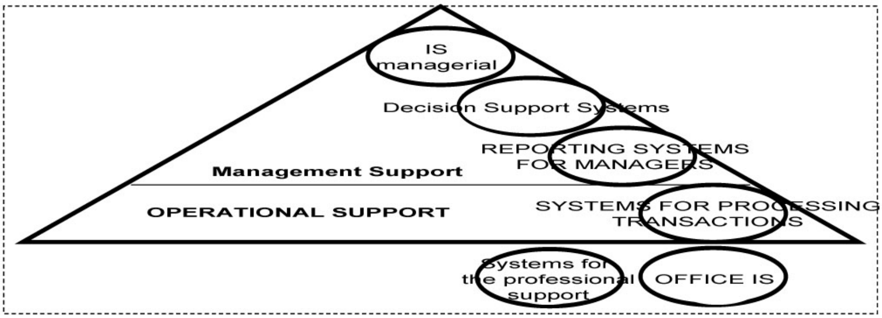
According to professor Joković[7] the basic categories of IS in companies can be grouped into three categories: IS for intellectual work support; IS for operative support; IS for management support.

5 Minić, T., Ilić, O. (2011): *Planiranje i analiza procesa proizvodnje pomoću integralnog informacionog sistema,* Industrija 1/2011, Ekonomski institut, Beograd, str. 186.

6 Bešlić I., Bešlić D. (2010): *Merenje performansi u proizvodnom preduzeću kao izvor konkurentske prednosti*, Ekonomika poljoprivrede, br. 2, IEP, Beograd, str. 314.

7 Jokanović, D. (2001): *Poslovni informacioni sistemi,* Megatrend, Beograd, p. 6.

Figure 2. IS classes



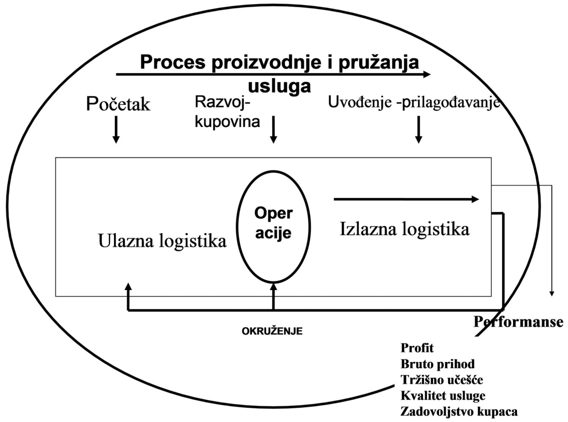
Source: Jokanović, D. (2001): *Poslovni informacioni sistemi,* Megatrend, Beograd, p. 6.

IS for professional support mainly refer to clerical information systems and systems for professional support (lawyer, clerical and similar work). *Operative support IS* is mainly used for the operative support during transaction processing. Information technologies have a significant application in the following fields: information systems for the management of finances, information systems for the management of work processes in the company (e.g. production), internet and intranet technology, applications of diverse digital technologies in business organizing and in company management. *IS for management support* consists of the using of information systems as a help tool during reporting and making decisions.

Information systems for business and other organizational systems can be introduced by developing one's own information system or by purchasing a suitable software program. Both ways have their advantages and disadvantages. The advantage of the developing one's own information system is that the generated program can be not only used by the company but also sold to other companies, but the disadvantage is the loss of time necessary for developing an IS. Purchasing a suitable software program saves time, but that too has its price.[8]

8 Vojnović, B. (2011): *Osnovi upravljanja*, NBS, Beograd, str. 166.

Figure 3. The model of IS and company interaction



Source: Jokanović, D. (2001): *Poslovni informacioni sistemi,* Megatrend, Beograd, p. 4.

IS application leads to the improvement in the following: profit, enlarged income, market participation increase, quality and other business performances. In addition to all this, an adaptive subsystem is essential in order to remove unpredictable mistakes (see figure 3).

Multidimensionality of business information system and its harmony with the ever more complex system of business operating are necessary for maintaining and, possibly, the acceleration of production technology progress and exploitation. In fact, general progress of material world i.e. the ever higher level of entire material and non-material processes are the essential originators of the development of all human and scientific activities, and even the originators of business information system and organization science development.[9]

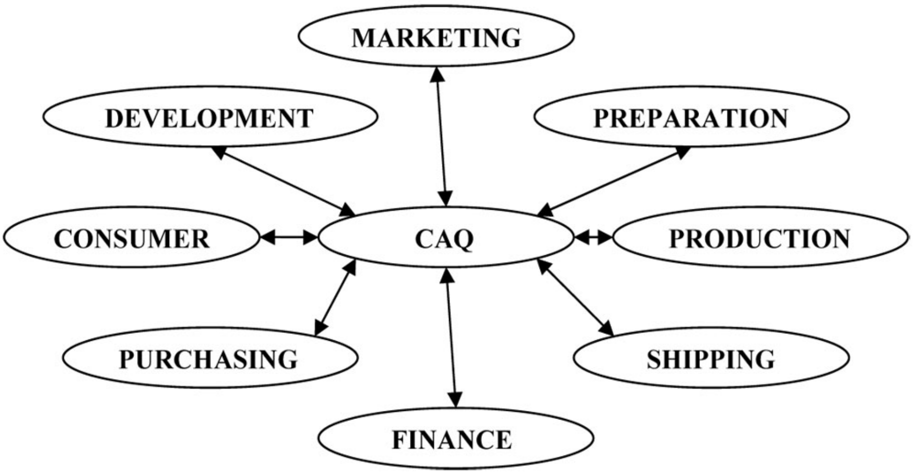
Computer aided quality assurance (CAQ)

Familiarizing oneself with the basic and new quality tools may lead one to the conclusion that they assist in the analysis, anticipation and problem solving processes which may have appeared during the planning phase, designing phase or any other process tied to the production, service of the firm, or the like. Their help is significant, but often slow. The basic quality tools become automated in that way since the information systems continually follow each process and are naturally designated in such a way that they may be analyzed. CAQ (Computer Aided Quality) is the planning and executing of the process, related to the quality system which supports information technology in the firm. CAQ enables the tying in of the following elements: manufacture, sales, terms of agreement, quality tools, manufacture warrantee and complaints. CAQ may integrate:

9 Lazić, J., Cvijanović, J., Zeremski, A. (2009): *Infrastrukturna podrška QMS*, Industrija 3/2009, Ekonomski institut, Beograd, p.44.

- QFM-Quality Function Deployment (house of quality),
- FMEA- Failure Module and Effects Analysis,
- Inter-analysis,
- Tracking of stock,
- Evaluating value of results obtained via analysis,
- Defining area of quality systems,
- Examining instruments for experimentation,
- Lifetime guarantee of manufacture,
- Quality system, documentation, control and improvement, etc.

Picture 1. The CAQ system and its relationship with the remaining



Source: Werner, B. (2001): *Dasgrosse Handbuch Producktion*, Verlag Modeme Industrie, München.

The system for planning business resources

Management information systems are an organized collection of components for collecting, transferring, storing and processing data with the objective of providing information necessary for a certain action. Companies need the information in order to support the basic occupational activities and the process of management. The majority of contemporary information systems are formed on the grounds of information technology and telecommunications. IS consists of five basic components: hardware, software, data and information, employees and procedures.

One of the most meaningful characteristics in the business data field in the last 5 to 10 years is the appearance and rapid economic growth in sales of the so-called ERP software solutions (Enterprise Resource Planning).

The systems for business planning resources (Enterprise Planning Systems) represent software solutions which cover all business aspects. In the beginning, these solutions encompassed only a segment of production management and were recognized under the name of MRP (Manufacturing Resource Planning or Materials Requirements

Planning). Other business processes were later granted support so that today the ERP packages support financial accounting, expense tracking, register transactions, investment management, quality management, project systems, sales, business staffing and individual industrial solutions which develop in order to meet the needs of specific activities.

One must have in mind that the acronym, "ERP" instantly asserts to the conclusion that what is being referred to here is software for the utilization and planning of business resources which is entirely incorrect. This may best be understood by examining the contents of any kind of ERP package (SAP, Oracle, People Soft Baan…). These all contain modules which cover individual business processes. They actually have to do with the realization of the concept of integrated information systems in use, so consequently this software solution is better observed in that context.[10]

Recently, some other terms are being used along with the ERP term which includes for example, enterprise applications, enterprise systems, enterprise management systems and all in the context of one general term: business-critical applications or mission-critical applications. They are utilized in IT (information technology) literature and practice with the designated goal of computer support for basic business functions and processes.

Some additional applications such as CRM have been developed as elements of ERP solutions. The systemization of customer relations (Customer Relationship Management) and BI - Decision Support (Business Intelligence) are installed as an extension of standard ERP packages.

The Basic characteristic of ERP systems lies in the covering of the electronic adaptation of data of all business processes, combined with the efficient management of data (minimal redundancy). The software is developed according to a modular principle of the following basic divisions of functionality of business systems for business processes: purchasing, sales, production, human resources, financing, accounting, and so forth.

Advantages and Disadvantages of ERP systems

Basic advantages which ERP systems offer are based on:

- Efficient production management and material flow.
- The opportunity for the integration of several manufacturing locations from the aspect of data application.
- Efficient management of consumer-supplier relations.
- Support from all aspects of a firm's accounting systems.

10 Spasojević, S., Šutuljić, B. (2008): *Integrisani poslovni informacioni sistemi*, Međunarodni naučno-stručni skup „Energetske tehnologije 2008", 23-24 maj, Vrnjačka Banja, Srbija, E-Zbornik, ET-43.

- Support of more efficient financial management.
- Elimination of redundant operations and data.
- Localized software versions, not only in view of language but in the sense of legal solutions.
- Efficient system reporting on all levels of management and so forth.

Disadvantages include:

- Expensive and lengthy process of implementation.
- Maintenance and upgrade of software which also carry high overhead
- Business systems which depend entirely on one IT provider

Methods of Implementation of the ERP system

Generally speaking, two approaches exist for the application of ERP solutions. The first is the development of its own solution and the second assumes the purchasing of the standard solution. The decision regarding the solution of choice must be made by keeping the following facts in mind:[11]

- A high level of risk exists regarding the success of the project. Self-developed projects in most cases are not concurrent within the firm because they aren't given the proper attention and they have no functional support.
- All of the expenses of self-development are not evaluated while experience dictates that expenses are up to 2.5 times greater than the sum of expenses for the implementation of standard solutions.
- The time for implementation completion is never final. During the course of development new moments are "uncovered", i.e., variations of the existing process and so forth.
- Maintenance of the developed information systems often depends on a small number of individuals, who as a rule are extremely pre-occupied with everyday operation activities, while the reliability of support depends on their physical presence in the firm.

Implementation of standard ERP solutions

Two most recognized approaches in the implementation of standard ERP solutions include[12]: "In-house" implementation and ASP (Application Service Provider) model, i.e., renting of the ERP from the side of the so-called ASP provider.

Other options exist – depending on the individual ERP providers.

When discussing the "in-house" approaches two models generally coincide:

11 Ibidem.

12 Werner, B. (2001): *Dasgrosse Handbuch Producktion*, Verlag Modeme Industrie, München.

The first is the familiar higher level adaptability of the ERP solution and encompasses all modules (business processes) all at once. The project is more expensive, lasts longer, but the advantage of this approach is that the solution "tailors" itself to the needs of the firm.

The other is related to the implementation without virtually any need for adaptability of the ERP package. The basic advantage of this approach is that the implementation is shorter and less expensive, while the basic disadvantage of this approach is its lack of flexibility and the possible disparity of the modules in relation to the needs of the firm.

The ASP model implementation components may be rented in their entirety from the side of the provider-firms involved in the so-called application hosting. Contemporary communication technologies enable such solutions while in essence the firm that desires to install the ERP system eliminates "worries" regarding the installation, implementation, maintenance, upgrade-BL, and hiring of ERP staffing, and leaves this to the ASP. The cost of this type of arrangement is usually based on the client's monthly salary. Other options exist here as well. For example, it is possible to install complete hardware and software with ASP while it's also possible to keep the hardware "in-house" and offer the entire task of software maintenance to ASP. This approach like the other approach has advantages and disadvantages. The basis advantage is in the overall reduced cost of the installation of the ERP system, while the primary disadvantage is that the entire firm's data lies in the framework of the other firm. Of course, all questions and details related to this type of implementation are regulated through individual contracts.

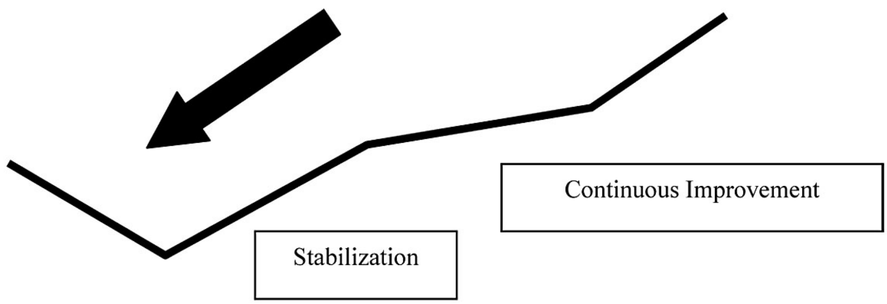
It's necessary to let it be known that an application exists which alludes to the previous creation of the BPR (Business Process Reengineering) studies. It's important for the firm to analyze the existing processes well (so-called, "as-is" status) and afterwards to create a new plan of business processes (status "to be"), and only afterwards to work on the implementation of software solutions. This application justifies the fact that the implementation of the ERP software solution isn't exclusively a software project. It's actually a project which deeply effects the reorganization of the business process. That is, it's about the business event. Unfortunately experience has shown that in a great number of cases this particular type of BPR project involves the same kind of expenses while the implementation of the ERP system has no relation to the results of the project. Training with the ERP system has an extremely significant role and it all boils down to the type of explanation:" this field shows this, this button does this." What used to be routinely understood as training is now considered worthless. One example would be: how to label the capability of the understanding of the fundamental flow of data through the processes themselves. In the attempt to release the meaning of a new understanding of the work surroundings, a distinction must be drawn between education and training, as education demands greater attention. Research shows that companies easily fall into the trap of forcing training programs which are too software oriented. In this way the fact is that the ERP systems operate with the entire set of business processes. The meaning of traditional training ideas often deceives careless individuals because the relationship between training, changes in administration and adequate personnel become apparent. A great number of experts agree that serious difficulties which appear in the ERP implementation process aren't systematic. "We are rarely witnesses to the situation when the ERP system alone- the actual software-makes mistakes"- This is how we arrive to the most important requirement which is training.

Problems in implementation of the ERP system

The implementation of the ERP system represents quite a complex assignment. It also has to do with extremely expensive projects because the implementation does not include only the installation of the hardware and software but the significance of the aspects of adaptability of software solutions, new staff, adequate LAN and WAN infrastructure, user training, and so on. Moreover, for this reason, the management of this project is of the utmost importance for the firm, while on the other hand, the firm may experience undesirable consequences which may even result in bankruptcy. In the second half of the 1990's the number of successful implementations increased and the basic reasons for that are as follows: new methods of implementation, new tools, and a greater number of qualified staff, better preparations and so forth.

According to the study, "Surprising Facts about Implementing ERP" (J. W. Ross)[13] five phases exist which are involved in the analysis of the ERP project and process implementation as the following picture demonstrates: Design, Implementation, Stabilization, Continuous Improvements and Transformation.

Picture 2. Implementation Process of the ERP Systems



Source: Promotional Material of the B4B firm from Novi Sad "Basic information about the SAP system"

Particular emphasis must be placed on the decline in performance of the system in the so-called post- implementation period. The graphics are based upon the experiences of a number of firms-subjects who were involved in the ERP implementations and who first-hand, noted the decline in performance of the system following its implementation,

13 Ross J. W. (1996): *Surprising Facts About Implementing ERP*, Englewood Cliffs, New Jersey.

almost by the book. According to the results of the study in some firms the decline lasted a few weeks while in others 12 months.

Anticipated business promotions as a result of the adaption of the ERP solution

Integration - The ERP System in itself must offer the entire integration of all business processes and transactions in such a manner that it ensures absolute consistency and precision of data. With that in mind, it's possible to recognize three forms of integration:[14]

- **Process integration**, **data and organizational elements-** simultaneous satisfaction of functional, financial and management principals through a common data base are ensured,
- **Application Integration-** single entry of all data which reflects on all the areas where it is necessary drastically decreases the possibility of errors prior to entry while they are quite frequent at multi-level data entry. In this way, entire data consistency for all users in the system is insured.
- **Technical integration-** the three-layered architectural system (data base, application levels, user interface) ensures that each transaction which is realized in the ERP system immediately ensures the accuracy of the data base while the changes are immediately apparent in the system reports.

All transactions in the system, like their reflections on relevant parts of the system separate in real time. This type of integration significantly promotes the quality of the arrival of business decisions since consistent and relevant data is at the disposal of managers at all levels. The data is selected according to the needs of individual organizational entities and levels through the utilization of various organizational elements of reporting. Data may be pulled from other systems in the system as well for the sake of reporting and controlling. Integrated IS also take precedence due to the fact that regardless of the kind of module system they are or the kind of organizational whole they belong, the users have identical interface which results in the reduction of time and cost of training in the cases where employees change positions.

The nature of the system is such that it insures the reconciliation of reports regardless of which segment of the business system it comes. The integrity of the business information systems insures the daily accuracy of information which is the basic pre-requisite for accurate and virtual reporting of all levels of leadership structures. One must not individually debouch the meaning of the mentioned support of the system prior to arriving to both strategic as well as operative decisions.

14 Spasojević, S., Šutuljić, B. (2008): *Integrisani poslovni informacioni sistemi*, Međunarodni naučno-stručni skup „Energetske tehnologije 2008", 23-24 maj, Vrnjačka Banja, Srbija, E-Zbornik, ET-43.

As a result of its complete technological, organizational and functional organizational ERP solutions, its implementation means the standardization of the business process and the flow of documentation.

Insight into the correct business data consequently carries the opportunity for more precise and effective business planning. The planning is conducted in several versions while constructed plans may be analyzed and revised. The ERP business IS assumes the entire integration of the business process through the logistic chain which includes: purchasing, warehousing, manufacturing, maintenance, quality management, sales and subscriptions. The business processes in their entirety are integrated with the financial business aspects. Transactions are regulated through the material, management, financial accounting, investment management, and basic resources. The third group is functionality. It is also entirely integrated into one system and may be found in the domain of business management resources, payroll accounts, appointments and fees.[15]

***Flexibility* -** Standard ERP solutions assume that the best solutions have been installed in them from the international business practices which may be recognized during the course of the previous project implementation.

The system may be adapted to the business firm's needs at the time of installation in so much as the firm finds the business processes to have been adequately installed. On the other hand, the firm also has the opportunity to analyze standard solutions offered by the system as well as the utilization of those solutions which have proven to be the best during the uncovering of business processes. The option exists in all (segments) of system modules. During the course of the implementation it's not necessary to install all of the modules at the same time, even though in most cases they are in the contents of the purchased licenses of the system. The firm may appropriate the sequence and dynamics of the implementation in compliance with its developmental, organizational needs, and capabilities.

This way what is achieved is that the system adapts to the needs of the firm and not the other way around. In so much as developed surroundings are present and delivered alongside the system, the system enables the adaptability of the screen, the processing and the reports according to the needs of their users. Although an entire array of previously defined forms and reports exist in the system itself the system permits and creates reports which those who utilize it require every day for the purpose of making business decisions.

***The possibility of the installation of new modules*[16] -** Business information system solutions according to the "informational islands" principle still exist in a great number of firms, i.e., applications created according to the needs of individual organizational wholes. Except for the fact that that kind of application has a significant disadvantage

15 Ibidem.

16 http://www.sap.com/westbalkans/

in the non-existent contacts between individual contacts, it's often the cast that the system does not cover all business processes of the firm. The ERP solutions integrally cover all business processes of the firm in all organizational entities of the firm with its integrated functionalities. Thereby the admission process which is more and more emphasized and preferred in the creation of efficient and functional organizations is entirely fulfilled. The integrity of the business process in the exclusive IS enables other, more precise and universal planning as well. Since we are referring to the system which functions in real time, the consequences of planning may also be kept track of in the same manner.

Openness (The opportunity for implementation in stages) - Every implementation of the ERP solutions is the collaborative effort of the implementer and the firm in which the system is being implemented. The degree to which internal resources of the firm become engaged depends on various elements that may be greater or smaller due to the reason that the implementation of the system itself may be approached in several ways, of which two of the most critical have been mentioned:

1. Big Bang - the simultaneous implementation of all anticipated modules and functionalities. In this way, an entirely integrated system along with all of the advantages it offers may be obtained in a shorter period of time. Also, not just any connection should be made with the already existing applications which would function parallel to the ERP solutions. In the first place, this admission requires organizational maturity of the firm as well as significant engagement of the firm's resources.
2. Stages of implementation- the stages of functionality of a certain confirmed order. In this way the need to engage the firm's resources is smaller while it's even possible to adjust the purchase of hardware accessories according to one's needs.

Authorization - It's possible to adapt the ERP solution to the work process and to the needs of certain users which is quite significant in the cases where certain data need to be secured for certain users or in the case when the user completes only a certain number of business transactions in the system. Different levels of authorization in addition to the adaptability of certain screens (with the elimination of all that is unnecessary) for certain users may be achieved with the simple utilization of the system. Authorization also ensures that certain levels of management have access to only the information relevant to the execution of business solutions. In some cases the possibility of the authorization of certain facts is of conclusive importance for business (protection of business secrets and business data). The authorization and standardization of business processes (sometimes supported through workflow functionality) enables irregular business conduct. Should they indeed occur, they may be relatively easily uncovered since the system provides evidence of the user, the object, and the time of each transaction.

Workflow - ERP solutions ensures the tools for the unfolding of the business process-Business Workflow. This tool ties the information from the business process with the individual employees in such a way that it signals the need to execute individual activities on the basis of parts of the process already executed. Responsible communication between business functions of the system initiates unfolding of the business process.

Modules of the ERP system[17]

The ERP system is a modular system which assumes that its parts may be combined and extended according to its needs. The manufacturers of the ERP system make various combinations of these modules while a great number of them take the following module as their base: Sales and distribution of SD; Material management MM; Product planning PP; Quality management QM; Unit maintenance PM; Human resources HR; Financial accounting FI; Controlling CD; Basic instruments AM; Projects PS; Work Flow WF; Industrial Solutions IS.

The research on the influence of integrated business is to the business performances of Serbian companies

In this research, the data collected through the survey about the application of information systems and their influence on the operating of companies in Serbia. About 100 companies have been surveyed, but only the results obtained from 73 business subjects, where the survey has been conducted in a valid way, have been taken into account. The survey have been carried out by teachers and associates of Agricultural College with the help of students and within the school subject called Strategic Business Planning, which is realized on the second year of the fundamental/ bachelor studies of management.

17 http://www.sap.com/westbalkans/

Table 1. Answers to questions from the survey

<table>
<tr><th colspan="4">The division of the company - the Republican Bureau of Statistics (%)</th></tr>
<tr><td>Micro 0-9</td><td colspan="2">14</td><td>19</td></tr>
<tr><td>Some 10 - 49</td><td colspan="2">28</td><td>38</td></tr>
<tr><td>Medium 50 - 249</td><td colspan="2">13</td><td>18</td></tr>
<tr><td>Great 250 and more</td><td colspan="2">18</td><td>25</td></tr>
<tr><td colspan="4">The activity that deals with company?</td></tr>
<tr><td>Production</td><td colspan="2">20</td><td>27</td></tr>
<tr><td>Service</td><td colspan="2">43</td><td>59</td></tr>
<tr><td>Mixed</td><td colspan="2">10</td><td>14</td></tr>
<tr><td colspan="4">Whether a company has an information system?</td></tr>
<tr><td>Yes</td><td colspan="2">73</td><td>100</td></tr>
<tr><td>Not</td><td colspan="2">-</td><td>-</td></tr>
<tr><td colspan="4">When you introduce an information system in business?</td></tr>
<tr><td>In the last year of business</td><td colspan="2">12</td><td>16</td></tr>
<tr><td>In the last 2-3 years</td><td colspan="2">16</td><td>22</td></tr>
<tr><td>Earlier</td><td colspan="2">45</td><td>62</td></tr>
<tr><td colspan="4">Information System are introduced?</td></tr>
<tr><td>Independent</td><td colspan="2">21</td><td>29</td></tr>
<tr><td>With the help of specialized companies for the introduction of IS</td><td colspan="2">52</td><td>71</td></tr>
<tr><td colspan="4">How long did the period of introduction?</td></tr>
<tr><td>1-6 months</td><td colspan="2">50</td><td>69</td></tr>
<tr><td>6 - 12 months</td><td colspan="2">12</td><td>16</td></tr>
<tr><td>More than 12 months</td><td colspan="2">11</td><td>15</td></tr>
<tr><td colspan="4">Have you had organized training with employees to use new software and new computer equipment? (see Table 2)</td></tr>
<tr><td colspan="4">What software (software) solutions are used?</td></tr>
<tr><td>SAP</td><td colspan="2">13</td><td>22</td></tr>
<tr><td>Oracle</td><td colspan="2">14</td><td>23</td></tr>
<tr><td>Sage</td><td colspan="2">2</td><td>3</td></tr>
<tr><td>Microsoft Business Solutions</td><td colspan="2">29</td><td>49</td></tr>
<tr><td>PeopleSoft</td><td colspan="2">2</td><td>3</td></tr>
<tr><td>Something else</td><td colspan="2"></td><td>-</td></tr>
<tr><td>Some local solutions - please specify</td><td>MAG
LUNA
AB SOFT
FOX PRO
MY SAL
VISUAL
AMADEUS
BIT-THS</td><td>3
1
2
3
1
1
1
1</td><td></td></tr>
<tr><td colspan="4">Do you have softer?</td></tr>
<tr><td>Bought</td><td colspan="2">60</td><td>82</td></tr>
<tr><td>Rents it</td><td colspan="2">10</td><td>14</td></tr>
<tr><td>Something else</td><td colspan="2">3</td><td>4</td></tr>
</table>

Source: the research

Table 2. Organization of training for the use of IS

Have you organized training with employees to use new software and new computer equipment?			
	Number of months	Number of companies	Total company
Yes, with the help of specialized companies for training	1 2 3 6	14 9 13 4	**40**
Yes, our own resources	1 2 3 6	9 2 3 1	**15**
Not			**18**

Source: the research

Table 3. The coverage area of operations

What areas of your business software you cover?	
	Number of points [1]
Production	33
Procurement	50
Sale	57
Marketing	34
Quality Management	23
Accounting	56
Human Resources	34
Something else	15

Source: the research

Table 4. Software links field operations

Have you integrated the software (link) and that certain area?	
Area ↔ Area	**Number of points**
Sale ↔ Accounting	10
Procurement ↔ Accounting	6
Maintenance ↔ Production	5
Procurement ↔ Wrehouse Operations	13
Sale ↔ Wrehouse Operations	9
Sale ↔ Bookkeeping	5
Production ↔ Sale	12
Production ↔ Warehouse	13
Integrated into all business areas into a single IS	33

Source: the research

Table 5. The savings from the implementation of IS

Are you due to the introduction of IS made some improvements in business?		
	Saves	**Score**
If yes - what are the areas	quality of production	2
	efficiency	3
	quality of service	3
	procurement	17
	finance	4
	controls	2
	logs	2
	production	7
	sales	25
	accounting	10
	marketing	11
	imports	2
	human Resources	6
	bookkeeping	2
We did not	2	

Source: the research

Table 6. Saving resources by applying IS

What are the savings achieved as a percentage of these resources?		
Resource	**Number of companies**	**% savings**
Manpower	8	5
	15	10
	11	15
	9	20
	1	25
	7	30
	1	35
	3	40
	1	45
	2	50
Time	2	5
	12	10
	7	15
	4	20
	2	25
	12	30
	5	40
	3	45
	8	50
	1	60
	1	80
Money	9	5
	20	10
	6	15
	5	20
	7	30
	3	40
	1	60

Source: the research

Conclusion

It can be concluded that the application of software solutions in Serbian companies is significant and has an influence on the increase of competitiveness in those organizations that introduced them. In this way, integrated management systems create conditions for faster and better development. In the end, the results confirm the readiness for changes and indicate that those Serbian companies that have adjusted to a new information era realize better business results.

Observing the survey results in domestic companies within the context of IS application, the following conclusion can be drawn: 38% of small and 25% of large companies was surveyed. Regarding to the occupational activities that they deal with, the number of service activity companies was the biggest (59%), followed by production companies (27%). Of all surveyed companies, 62% of them have the information system that was introduced more than three years ago. Over two thirds of subjects introduced IS with the help of specialized firms and approximately the same number declared that the period needed for IS introduction had been shorter than six months. The most popular software solution in one half of companies was Microsoft Business Solutions, while the other half uses other programs. In accordance with the expectations, 82% of companies bought the software and only 14% of companies rent it. The training for using new programs and equipment was organized for employees in 55 companies, 40 of which used the help of specialized training firms and 15 of which relied on their own resources. The fields of business operating which were mostly covered are: accounting, sales and purchase, while production only comes sixth, which sounds logical taking into regard that the majority of surveyed companies had service activities as their main occupation. As for software, the most integrated fields, viewed individually, are: purchase and warehouse business, production and warehouse, production and sales, production and accounting. However, most commonly, all fields of business operating are integrated into one unique system, which is an indicator of indisputable positive influence of IS on all elements of organization structure. By introducing IS, the most important savings were realized in the sales and purchase sector, followed by marketing and accounting. The savings resulting from the application of IS in business are related to the work labour, time and money resources. Depending on a company and its size, the percentage of savings regarding work labour is between 5% and 50%. The results of the research in the field of time saving are even more intensively expressed. It was found out that their range is from 5% to incredible 80%. This shows that the application of IS, especially in big business systems, becomes a factor indispensable to business practices. Money saving, as a result of IS application, ranges from 5% to 60%, which also seems logical, since previous results indicate work labour and time savings.

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UTICAJ INTEGRISANIH POSLOVNIH INFORMACIONIH SISTEMA NA POSLOVNE PERFORMANSE SRPSKIH PREDUZEĆA

Saša Spasojević[18]*, Boško Vojnović*[19]*, Aleksandra Nikolić*[20]

Rezime

Industrijsku eru zamenila je informatička era razvoja. Pod takvim uticajima okruženja sve kompanije su bile prinuđene da uvedu informacione sisteme u svoju organizaciju u cilju stvaranja konkurentske prednosti. S obzirom da je Srbija u tehnološkom zaostatku za razvijenim delom Evrope, a da je prilagođavanje promenama uslov uspešnosti, ovim radom pokušavamo da dođemo do odgovora: koliko preduzeća u Srbiji ima informacioni sistem, kada i kako su ga uveli i koje oblasti poslovanja su povezali – integrisali? Došli smo do zaključka da svi anketirani subjekti u manjoj ili većoj meri koriste informacioni sistem i to uglavnom za potrebe računovodstva, prodaje i nabavke i da su u najvećoj meri integrisali sve oblasti poslovanja u jedan jedinstven IS, kao i da su uštede u poslovanju po osnovu toga evidentne.

Ključne reči: *organizacija, integrisanje, klase IS, planiranje, implementacija*

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SERBIA – ZONE OF POVERTY AND SOCIAL EXCLUSION

Petar Veselinović[1]***, Vladimir Mićić***[2]***, Dalibor Miletić***[3]

Summary

A fall in the population's living standard and the growth of poverty in Serbia are, first of all, the consequence of a significant decrease in the economic activity. The problem of poverty and social exclusion is additionally intensified and made bigger by the world economic crisis influence. The subject of the paper is the analysis of the current situation, which is crucially significant for solving the stated problems, i.e. suppressing negative phenomena which are the cause of poverty and social exclusion. The paper is aimed at gaining an insight into basic causes responsible for poverty in Serbia as the basis for the determination of necessary measures and activities for problem solving. The poverty indicators used in the analysis are the poverty rate, poverty depth and severity. Solving poverty problems is the priority task Serbia has to deal with on its way to integrate into the EU and it requires reaching new strategies for reducing poverty as well as its efficient implementation.

Key words*: poverty, social exclusion, poverty indicators, social protection, Serbia*

JEL: *I30, I32*

Introduction

Poverty is a problem which a large number of countries are faced with, irrespective of the level of their development. After the Second World War, in the time period of an intensive economic and social development, the issue of poverty was only sporadically present. Poverty was not much talked about in developed European countries, either, because it was considered to be practically eradicated; nor was it talked about in the countries of the so-called real-socialism, where, by definition, there could be no poverty at all. That issue was marginalized and various euphemisms were used for poverty.

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In the last decade of XX century, attention was drawn to different forms of poverty, especially amongst social and ethnic groups. In that time period, the issue of poverty became a subject matter of interest in countries in transition and in Serbia as well.

In the time when the World Economic Crisis is dictating who will have three, two, one, and who will have no meal at all during the day, poverty is a problem which must be looked in the eye. Daily information from which we learn that yet another family are queuing for a warm meal in community kitchens, that there is yet another unemployed person in the labor market and that one person more died from bitter cold – warns us that poverty is out there, around us. Yet, data about the number of the unemployed, the poor and the hungry show us how big the problem is.

On Serbia's territory, there are over 750,000 unemployed people, and the number of the poor has been increasing since the second half of the year 2008. We should bear in mind the fact that official data about the number of the poor are not always valid and, most frequently, do not correspond with data which EU has. Rural areas are specially affected by poverty, and differences are deepening between rural and urban areas. In that sense, much more attention should be paid to this problem; we should jointly work at all levels and provide a stronger institutional support for reducing poverty and social exclusion.

Methodological aspect of observing poverty in Serbia

To measure poverty, countries use the poverty line which corresponds with the level of their development, their social norms and values. When poverty is assessed at the world level, the opted-for poverty line must be the same for all countries and is expressed in a shared unit of measure.

For a long time, the World Bank was using two international lines of poverty – the lower one, at the level of 1 USD, and the higher one at the level of 2 USD per person per day. Recently, the line of extreme poverty has been lifted from 1 to the level of 1.25 USD daily, which corresponds with the standards of the poorest countries in the world. The line of 2 USD daily is still applicable for regions and countries with mid-level revenue[4].

As a natural and simple measure of poverty, there is the number of the poor (*head count* – HC) or the share of the poor in the overall population of a country, termed as the coefficient of poverty (*head count ratio* – HCR). Simultaneously, the number of the poor is determined by the number of individuals (i) whose income is less than the poverty line ($y < p$).

Put it this way: y-the income (or spending) which an i individual has in his or her society (i=1,2,...n), p–the poverty line, n–the total population and m–an average income. The coefficient of poverty:

4 World Bank, Development Economics Research Group (2010): *Living Standards Measurement Study,* Washington, available at: http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:22510787~pagePK:64165401~piPK:64165026~theSitePK:469382,00.html

$$HCR = \frac{HC}{n}$$

Although they are simple and easy to calculate, the mentioned parameters have certain shortcomings. First, they do not provide us with information about to what extent individual incomes lag behind the poverty line. Besides, there are no visible differences in incomes among the poor.

To gain an insight into the depth of poverty, the measure of the deterioration of the average income (or spending) from the poverty line is used. When the average income (spending) of an individual is divided by the average revenue (spending) of a society, it results in the coefficient (rate) of the poverty gap (*poverty gap ratio* – PGR), where p is the poverty line, y_i is the revenue, n is the total population number, and m is the average revenue:

$$PGR = \frac{\sum_{y_{i<p}} (p - y_i)}{n \cdot m}$$

This measure shows how big the poverty gap i.e. income deficit is compared to resources which can be used to eliminate it. Actually, this coefficient does not measure poverty as such, either, but it measures resources needed for its eradication.

While measuring poverty in Serbia, the absolute poverty line is used, representing the spending necessary for satisfying minimal living needs. The poverty line consists of: 1) the line of food – spending necessary for satisfying the basic needs for food (the line of extreme poverty), and 2) other household expenditures (clothes and footwear, hygiene, education, healthcare, transport).

So, the total poverty line is defined in two steps. It is determined as an overall spending of a household, whose spending on food corresponds with the minimal consumer basket. The poor are those whose spending is below the defined national absolute poverty line. That line differs from one country to another depending on the structure of the consumer basket. In order to make an international comparison, it is converted into American dollars of the same purchase power.

The most frequently used poverty indicators in Serbia are: 1) poverty index (coefficient or rate) – (PO), 2) poverty depth (gap) – (P1) and 3) poverty severity – (P2)[5].

Since the year 2002, poverty in Serbia has been measured and analyzed on the basis of data generated from carrying out The Living Standard Survey (LSS). Until the year 2001, there had been no official poverty line; however, the minimal consumer basket was defined, and it referred to a four-member household, and, actually, represented the poverty line[6].

5 Bogićević, B., Krstić, G., Mijatović, B. (2002): *Siromaštvo u Srbiji i reforma državne pomoći siromašnima*, Centar za liberalno-demokratske studije, Beograd, p. 20.

6 Ibid, p. 13.

The first LSS (2002-2003), professionally assisted by the World Bank, enabled the preparation of the Strategy for Poverty Reduction in the year 2003. The continuity of poverty measuring was enabled thanks to the preparation of the second LSS in the year 2007. That enabled the monitoring of poverty phenomena in Serbia.

Since the year 2007, poverty statistics in Serbia have been based on data generated from The Household Spending Survey (HSS). Starting from the COICOP classification[7], the household spending is defined as the sum of expenditures for food and other current expenditures, which include purchased products, own production and gifts. The HSS provides *the* crucially needed continuity in monitoring data related to poverty. It will have been effective until the adoption of the Survey of Incomes and Living Conditions (SILC), which is applied in the EU member countries.

However, there are methodological differences between the HSS and the LSS with respect to data collection. With the HSS, data on spending relate to the whole year, whereas with the LSS, they only relate to one month (June). The HSS does not contain data about the assessment of the value of the rent for owners of an apartment or house, nor does it contain data about the assessment of the services of using permanent consumer goods, for the reason of a lack of needed data.

Spending defined in that manner is deflated by the regional indices for the food price generated from the HSS. In that way, the higher spending of a household is exclusively the result of spending on bigger quantities or on more quality products, not the result of higher prices. Since data about spending are collected at the household level, the total spending is distributed among the members of the household by using the OECD Equivalence Scale, where the head of the household is given weight 1, each adult member of the household (14-year-olds and older) weight 0.7, and children (under 14 years old) weight 0.5[8].

The value of the absolute poverty line in Serbia (defined in the year 2006) is calculated via the application of an appropriate annual index of consumer prices. The poverty profile describes who the poor are, according to characteristics such as the place of residence of the household (the location and region), the status which the head of the household and the household members have in the labor market, and the demographic structure of the household (sex, age, household size, number of children).

To gain an insight into poverty, a Social Map was made in mid-2011, merging data provided by 130 Centers for Social Work, Republican Agency for Statistics of Serbia (SORS), National Service for Employment, and Pension and Disability Insurance Fund. That enabled the latest data about the trends of the poverty and social exclusion of Serbia's population.

7 Republički zavod za statistiku (2011): *Siromaštvo u Republici Srbiji, 2008–2010,* Beograd, p. 2.

8 Ibid, p. 2.

One of Serbia's important goals in the process of joining the EU is its active participation in the European process of social inclusion, which requires the development and improvement of the methodology for monitoring an individual's and social groups' inclusion. This means a gradual transition from the poverty monitoring framework to the social inclusion monitoring framework according to the EU methodology which does not only monitor poverty but both poverty and social exclusion, simultaneously observing relative poverty measured by incomes not by consumption. From the moment of obtaining the status of the EU membership candidate country, Serbia must adopt the *Joint Inclusion Memorandum*, which will improve the present policies which only partly deal with issues of social inclusion and develop a strategic framework that will take into consideration the whole specter of exclusion[9].

The social exclusion monitoring methodology ensures the comparability of the basic indicators of the condition of social inclusion with the EU member countries, those that are in the EU accession process and neighbor countries; however, it indicates the specificities of the social inclusion problem in Serbia. For that purpose, the poverty risk rate can be used to show the share of individuals whose revenue, according to the consumer unit, is less than 60% of the national revenue median per consumer unit in the total population[10].

Poverty and social exclusion

The time period between the two World Wars, on the territory of this country of ours, the terms "indigent" and "socially weak" were used instead of "poor". In 1922, the Law on the Protection of the Indigent was brought, comprising the principle of public protection, i.e. "taking care of all old persons who, because of their age and feebleness, cannot make their own living on their own funds at all, nor have anyone to take care of them, but are not included in the Law on the Disabled"[11].

In the postwar time period, M. Radovanović also dealt with the phenomenon of poverty and pauperism. He highlighted the key determinants of poverty: class inequality in the society and individuals' unequal share in the distribution of social wealth. According to him, pauperism is connected with miserable lodging conditions, poor educational, a deteriorated health condition and an individual's bad market position[12].

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9 Vlada Republike Srbije, Tim za socijalno uključivanje i smanjenje siromaštva i Republički zavod za statistiku (2011): *Praćenje socijalne uključenosti u Srbiji - pregled i trenutno stanje socijalne uključenosti u Srbiji na osnovu praćenja evropskih i nacionalnih pokazatelja*, Beograd, available at: http://www.inkluzija.gov.rs/wp-content/uploads/2010/05/Pregled-stanja-socijalne-ukljucenosti-u-Srbiji-maj-2010.pdf, pp. 4-5

10 Ibid, p. 17.

11 Zelenović-Lakićević, M. (1987): *Socijalna ugroženost*, Institut za socijalnu politiku, Beograd, pp.7-8.

12 Ibid, p. 10.

Some authors, M. Živković among them, used the term “socialist poverty”, which was not acceptable because poverty in socialism did not have a mass character, nor did it represent a permanent social phenomenon[13]. The adequate expression for poverty in the then Yugoslav professional literature was “social insecurity”.

The definition of poverty broadly used in Serbia today reads: “Poverty is rather a dimensional phenomenon which, apart from insufficient incomes for satisfying the basic living needs, understands as well aspects related to human rights such as the impossibility of employment, inappropriate lodging conditions and an inadequate approach to social protection, healthcare, educational and communal services”[14].

The concept of social exclusion i.e. a contemporary approach to poverty overlaps with a wider understanding of poverty. Not only does it mean material or pecuniary poverty but it also means social, cultural, political and other forms of poverty, i.e. it represents a process weakening the tie between an individual and his or her community. Those ties can be economic, political, socio-cultural or spatial. The more features that exclude an individual, the more vulnerable he or she becomes.

Table 1. Poverty and Social Exclusion

	Poverty	**Social exclusion**
Aspect	Individual	Society
Characteristics	Single dimensionality	Multidimensionality
Perspectives	Static process-condition	Dynamic process
Basic concept	Low incomes as a form of inequality	Limited social participation
Dimensions of inequality	Vertical and distributive	Polarized (outside-inside) and participative
Indicators	Income-based (material)	Economic, social, cultural, political (non-material)

Source: Bohnke, P. (2001): Nothing Left to Lose? Poverty and Social Exclusion in Comparison Empirical Evidence on Germany, Research Unit “Social Structure and Social Reporting”, Social Science Research Center Berlin (WZB), p. 11, available at: http://skylla.wz-berlin.de/pdf/2001/iii01-402.pdf and Šućur, Z. (2004): Socijalna isključenost: pojam, pristupi i operacionalizacija, Revija za sociologiju, Hrvatsko sociološko društvo, Vol. 35, br. 1-2, 2004, pp. 45-60, Zagreb, available at: http://hrcak.srce.hr/index.php?show=toc&id_broj=1380

13 Ibid, p. 11.

14 Vlada Republike Srbije (2003): *Strategija za smanjenje siromaštva u Srbiji,* Beograd, p. 6. available at: http://www.mos.gov.rs/sites/default/files/down/siromastvorezime.pdf

Social exclusion is mostly used when threatened social groups are investigated, such as children, young people, the old, the unemployed, the disabled or Roma people[15]. In the European Social Charter, the notion of social exclusion appeared for the first time in the year 1989. In 1996, the EU introduces "The right of protection from poverty and social exclusion". Table 1 accounts for the key differences between poverty (more narrowly understood) and social exclusion.

The basic characteristics of poverty in Serbia

The fall of Serbia's population's living standards and the growth of poverty in Serbia in the last decade of XX century are the result of a big decrease in the economic activity. In the year 2000, the gross domestic product (GDP), both in total and per capita, was half the level of the one achieved around the end of the 1980's. Such a fall in the economic activity is the consequence of the general political and economic crisis.

The hyperinflation in the year 1993 contributed to impoverishment and the expansion of the grey economy, which became a way out for a significant part of the population to survive. Hard economic and social conditions were additionally made more difficult when a huge number of refugees and displaced people came. The living standard of one part of the population was influenced by the impossibility of using the right to incomes and private properties in the republics of the Former Yugoslavia. The population needing more social aid was increasing, and the state's economic possibilities of providing social aid were becoming fewer.

The most important cause of increasing poverty was the fall in income per capita and the growth of inequality in the distribution of incomes in the last decade of XX century and the first decade of XXI century. In the last decade of XX century, official unemployment increased, as well as the covered one, because the number of the employed was decreasing more slowly than was the dramatic fall in the economic activity. Until the end of that time period, covered unemployment reached the level of around one-third of total unemployment. Such a condition in the labor market had as a consequence a fall of real salaries and delays in their payment.

Economic crimes and corruption which is still present in Serbia also represent one of the significant causes of poverty. The World Economic Crisis of the year 2008 can also be marked as a cause of the increase in poverty.

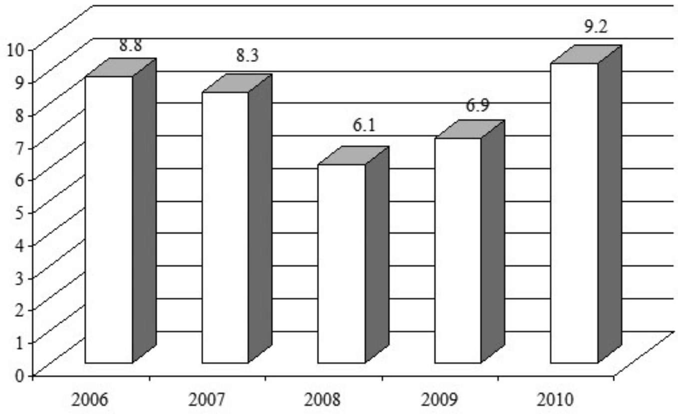
Since the year 2002, Serbia has been carrying out the LSS according to an internationally acknowledged methodology, and, in that way, data about poverty have been generated. The total poverty line for a four-member household defined in a standard manner was 222 USD per month, i.e. 72 USD per consumer unit per month. The surveys carried out in the

15 Vlada Republike Srbije (2012): *Socijalno uključivanje i smanjenje siromaštva, Ka većoj socijalnoj uključenosti u Republici Srbiji na putu evropskih integracija*, Beograd, available at: http://www.inkluzija.gov.rs/?p=10075

years 2002 and 2003 accounted for the fact that around one million people lived below the absolute poverty line, in other words 14% of the population were poor.

Since the year 2007, the HSS has been used. Having in view this method of analysis, the time period between 2006 and 2010, when we monitor the poverty rate, can be divided into two stages (Chart 1). Stage I relates to the time period from 2006 to 2008, when the poverty rates were showing a falling trend, i.e. when the rate of the poor was reduced from 8.8% to 6.1%. Stage II followed – the poverty rate grew to be 9.2% in 2010, and the poor population's spending, according to the consumer unit, was on average lower than the poverty line, which was 8,544 dinars monthly.

Chart 1. The poverty rate in Serbia



Source: Republički zavod za statistiku (2011): Siromaštvo u Republici Srbiji, 2008–2010, Beograd, pp. 1-4 and Vlada Republike Srbije (2011): Prvi nacionalni izveštaj o socijalnom uključivanju i smanjenju siromaštva u Republici Srbiji – Uloga lokalnih samouprava, Beograd, available at: http://www.sindikat.rs/download/Nacrt-izvestaja-o-socijalnom-ukljucivanju.pdf, p. 77.

During the year 2006, poverty depth (gap) and severity were not high. In 2007 and 2008, the decreasing trend continued, so poverty depth was 3.1%, i.e. to 2.5%. Poverty severity was 1.9% in the year 2007, i.e. 0.8% in the year 2008. The increase in poverty depth and severity in 2009 and 2010 shed light on other dimensions of this problem as well. At least 700,000 people in Serbia live on the edge of mere subsistence, but only one-third of them receive some sort of social aid.

The number of the poor who cannot satisfy their basic needs, either, increased especially in 2010, and below the poverty line, there are over 353,000 people. Even 42,279 single households, which, for the most part, belong to rural areas, live their lives below the poverty line. If we add to that 50,000 those who eat in Kitchens for the Homeless and Hungry, as well as 58,000 extremely poor who receive food and hygienic packages, then these three groups of the population make one whole town of 150,000 citizens[16].

The situation here is also additionally aggravated by the fact that 95,000 unemployed people above the age of 55 are close to the poverty line, too, and, at the same time, there are 21,353 of those no longer entitled to compensation in money from the agency, thus being potential users of the social protection system[17].

In Serbia, he who is not rich is poor because the so-called middle class has practically vanished. In support of this allegation, we can also mention the fact that Serbia consumes 43.4 kilograms of meat per capita per annum, whereas in European countries, 85 kilograms are consumed. Pensioners with the lowest incomes are a specially threatened group of the population (Table 2).

Table 2. The number of pensioners with the lowest income (in RSD)

Agriculturalists		Self-employment		Employed	
Amount	**Number**	**Amount**	**Number**	**Amount**	**Number**
Up to 5,000	3,971	Up to 12,077	8,309	Up to 12,077	136,998
5,000 – 6,000	1,092	12,077	2,136	12,077	86,548
6,000 – 7,000	23,640	12,077 – 14,457	7,660	12,077 – 14,457	108,848
7,000 – 9,321	3,771	14,457 – 16,866	5,144	14,457 – 16,866	119,632
9,321 – 9,495	177,503	16,866 – 19,276	5,331	16,866 – 19,276	142,551
9,495 – 13,410	6,583	-	-	-	-

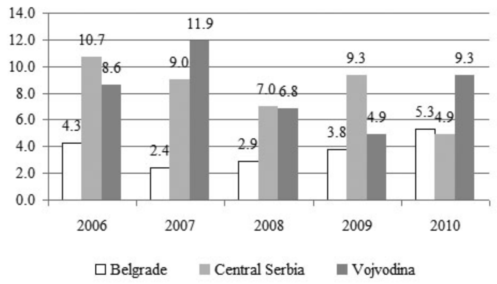
Source: Vlada Republike Srbije (2011): Prvi nacionalni izveštaj o socijalnom uključivanju i smanjenju siromaštva u Republici Srbiji – Uloga lokalnih samouprava, Beograd, available at: http://www.sindikat.rs/download/Nacrt-izvestaja-o-socijalnom-ukljucivanju.pdf, p. 188-189.

As far as the regional spreading of poverty in Serbia is concerned, between the years 2006 and 2009, the largest number of the poor was in Central Serbia and Vojvodina, and the smallest number of them was in Belgrade. In the year 2010, there was a significant increase in poor population observed by region and in Serbia as a whole, due to the consequences of the World Economic Crisis (Chart 2).

16 Ministarstvo rada i socijalne politike (2011): *Socijalni profil opština u Republici Srbiji*, Beograd, available at: http://www.minrzs.gov.rs/cms/sr/pocetna/293

17 Republički zavod za statistiku (2011): *Anketa o radnoj snazi, 2010*, Beograd, pp. 83-84.

Chart 2. Percentage of the poor in Serbia by region

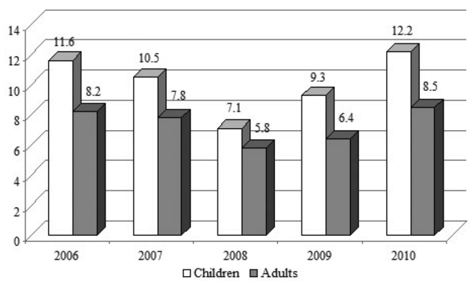


Source: Republički zavod za statistiku (2011): Siromaštvo u Republici Srbiji, 2008–2010, Beograd, pp. 1-4 and Vlada Republike Srbije (2011): Prvi nacionalni izveštaj o socijalnom uključivanju i smanjenju siromaštva u Republici Srbiji – Uloga lokalnih samouprava, Beograd, available at: http://www.sindikat.rs/download/Nacrt-izvestaja-o-socijalnom-ukljucivanju.pdf, p. 185.

On the basis of the demonstrated data, a conclusion we can reach is that, in the observed time period, there was a reduction in poverty in certain regions, first of all in Central Serbia and Vojvodina. The reduction in poverty in Central Serbia from 9% to 4.9% in the years 2007 and 2010, respectively, was the consequence of change in the manner of the calculation of poverty in Serbia.

A big problem Serbia is being faced with is the poverty of children and the young. Even 11.6% of children were poor in 2006. A partial recovery in this population was recorded in the time period from 2007 to 2009, when the percentage of poor children fell to 7.1% in the year 2008; however, in the year 2010, it significantly increased to 12.2%. When it concerns adult population, we can notice a slight fall from the year 2006 to 2009, only to record another increase in the percentage of adult poor population to 8.5% in the year 2010 (Chart 3).

Chart 3. Percentage of poor children and adults in Serbia

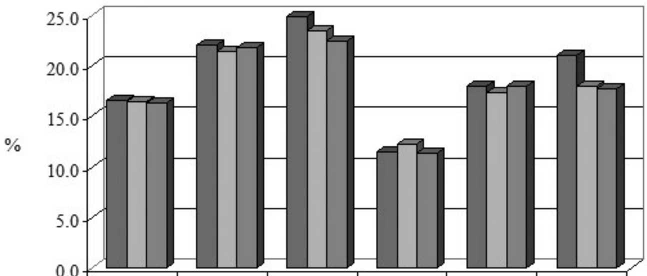


Source: Republički zavod za statistiku (2011): Siromaštvo u Republici Srbiji, 2008–2010, Beograd, pp. 1-4 and Vlada Republike Srbije (2011): Prvi nacionalni izveštaj o socijalnom uključivanju i smanjenju siromaštva u Republici Srbiji – Uloga lokalnih samouprava, Beograd, available at: http://www.sindikat.rs/download/Nacrt-izvestaja-o-socijalnom-ukljucivanju.pdf, p. 186-187.

When poverty classified according to the type of community in Serbia is in question, it is clearly evident that there is a domination of poor citizens in rural areas, which in the year 2010 reaches 13.6%, whereas the percentage of the poor in urban areas is significantly smaller, around 5%. It is very hard, if not the hardest, for refugees and displaced persons. Although there are no valid and precise data about the poverty of these groups, it is estimated that the poverty of refugees and the displaced is twice as big as the one of the rest of the population. It is also interesting that almost one half (49.2%) of Roma population in Serbia are poor, and that even 6.4% are extremely poor[18].

As we can see in Chart 4, the poverty risk rate in Serbia had a falling trend in the time period 2007-2009. It was somewhat higher in comparison with the EU-27, where it was about 16.4%. In comparison with neighbor countries, Serbia's risk rate is higher than in Slovenia, similar to the one in Croatia and lower than the ones in Bulgaria and Romania, the last two being countries with the highest risk rates. However, we should not forget that differences in the financial poverty risk rate do not reflect differences at the level of the development of the observed member countries; it is, however, important that the poverty depth, i.e. how far from the poverty line poor citizens' incomes are, should be taken into consideration.

Chart 4. At-risk-of-poverty rate



	EU - 27	Bulgaria	Romania	Slovenia	Croatia	Serbia
2007	16.5	22.0	24.8	11.5	18.0	21.0
2008	16.4	21.4	23.4	12.3	17.3	17.9
2009	16.3	21.8	22.4	11.3	17.9	17.7

Source: Eurostat, Statistics Database, Income distribution and monetary poverty, available at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_li02&lang=en and Vlada Republike Srbije (2011): Prvi nacionalni izveštaj o socijalnom uključivanju i smanjenju siromaštva u Republici Srbiji – Uloga lokalnih samouprava, Beograd, available at: http://www.sindikat.rs/download/Nacrt-izvestaja-o-socijalnom-ukljucivanju.pdf, p. 186-187.

18 Republički zavod za statistiku (2011): *Siromaštvo u Republici Srbiji, 2008–2010,* Beograd, p. 2

Conclusion

The problem of poverty and social exclusion is certainly one of the biggest problems not only in the contemporary world but in Serbia as well. No single progress can be negligent of famine and misery of the man at the beginning of XXI century. That contradiction is something that makes the world less understandable and nice. On the one hand, there are individuals drinking champagnes worth several thousand dollars, while on the other hand, there are groups of people with plastic buckets and dishes in their hands, queuing for one or two ladles of food. Pictures like these should make some influential people ask themselves: how to overcome this?

The problem is in that influence and power go hand in hand, so those who can solve this problem have no time for that because they are in a rush for their first, fifth or tenth million. However, one cannot say that the state does not wish to, at least, minimalize this problem, because the population of a country creates its image.

Observed through the prism of indicators and figures, neglecting the hungry one, poverty and social exclusion in Serbia are increasing. The world economic crisis has directly provoked a fall in macroeconomic aggregates and the deterioration of the key economic indicators. Negative tendencies are followed by poverty growth. Until the very first signs of the crisis, poverty had been a problem whose solving was vaguely seen in the near future. This problem was being solved quite successfully, and year after year, the state prided itself on having fewer and fewer poor people. However, we should be very cautious when using official data because official statistical data of the number of the poor most frequently did not correspond with and were always less than the EU data. Was it because research and surveys were carried out insufficiently well, or because of an immoderate wish to be better and more successful in the EU eyes, yet the state often published unrealistic data.

The poverty reduction strategy had certain results; however, it is not applicable in the newly created conditions, when the economic crisis has hit the Serbian economy with full force, which is confirmed by the poverty rate growth figures. Solving the poverty problem in Serbia requires that all activists in the society should take part in bringing a new poverty reduction strategy and its efficient implementation. The process of reducing poverty and social exclusion will not be an easy and quick one in the period to come; it will take time and financial resources as well. Today, Serbia cannot take pride in allocating significant funds intended for ordinary people to suffer less from the consequences of the economic crisis.

Among other things, the development of partner relations between the Government, the profit sector, non-government organizations, the media, representatives of local self-governments and all citizens is crucially significant. The education of threatened and marginalized social groups and their inclusion in decision-making processes regarding life issues would also have an influence on gaining a more comprehensive insight into the status of these categories of the population and offering them adequate aid.

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SRBIJA - ZONA SIROMAŠTVA I SOCIJALNE ISKLJUČENOSTI

Petar Veselinović[19], Vladimir Mićić[20], Dalibor Miletić[21]

Rezime

Smanjenje životnog standarda stanovništva i rast siromaštva u Srbiji, u poslednjoj deceniji, pre svega, posledica su značajnog smanjenja ekonomske aktivnosti. Problem siromaštva i socijalne isključenosti dodatno je zaoštren uticajem globalne ekonomske krize. Analiza stanja od presudnog je značaja za rešavanje ovog problema, odnosno suzbijanje negativnih pojava koje su uzrok siromaštva. Rešavanje problema siromaštva, kako na nacionalnom tako i na regionalnom nivou, prioritetan je zadatak na putu integracije Srbije u EU. U najširem smislu, cilj ovog rada je sagledavanje osnovnih uzroka koji su odgovorni za siromaštvo u regionima Srbije, kao osnove za utvrđivanje neophodnih mera i aktivnosti za rešavanje pomenutog problema.

Ključne reči: *siromaštvo, socijalna isključenost, pokazatelji siromaštva, socijalna zaštita, Srbija.*

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ECONOMIC VALUE OF BIODIVERSITY AS A PRODUCTION RESOURCE

George Zheliazkov[1], Darina Zaimova[2]

Summary

In the last few years the interest towards sustainable development issues and management of biodiversity has rapidly reached global dimensions and undergone changes with meaty character. One of the main reasons for this is the changed proportion between economic purposes and interests; the wider span of ecological priorities; and preserving breeds, which represent society interest and have potential for market demand.

The goal of the present study is twofold: to utilize conceptual framework of the business related to biodiversity preserving; and to analyze the economic value and market effect of biodiversity as a production resource. A special attention is given to the balance between economic and market growth, and the system of financial stimuli for those economic subjects whose economic activity and private consumption implies the two sustainability criteria: ecology and social equity.

Key words: *sustainable development, biodiversity, agriculture, economic value*

JEL: *Q51, Q57, Q58*

Introduction

Integrating biodiversity in the process of development and implementing European policies and strategies emerges as an important priority considering the benefits which biodiversity and ecosystem services provide for the different economic sectors, and especially for the agriculture. This process presupposes defining the main reasons for biodiversity loss: intensification of systems' productivity, overexploitation of natural resources, dissemination of invasive alien species and pollution. Estimating economic value of biodiversity appears as an important factor in the process of consolidating

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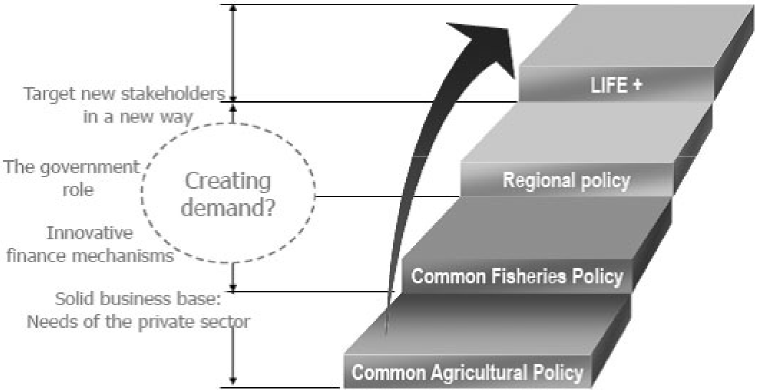
political and economic decisions. The substantial role of biodiversity as an important determinant for social and economic stability, society well-fare and poverty reduction, and for adaptation towards climate changes, has received acknowledgement in a study provided by the European Commission on the different aspects of liability regime for damage to biodiversity or natural resources (European Environment Agency (EEA), 2008). The document aims to answer three inter-related questions: how to define 'significant' damage to natural resources and decide on the 'minimum level of restoration'; how, and to what extent, monetary valuation techniques can be used to estimate the economic value of damage to natural resources; and how, and to what extent, cost-benefit analysis can be used to choose between restoration options. Later on, the European Economic and Social Committee (EESC) focused on another emerging threat, related to the increasing interest towards economic aspect of biodiversity: "*The fact that the EU has not achieved its biodiversity objective is not attributable either to a lack of understanding of what needs to be done or to a lack of willingness on the part of civil society to take the necessary steps. Basically it is because the world of politics places short-term economic interests above the long-term effects of ecosystem services. The fact that our economic system is unsustainable, based on overuse of natural resources, is also reflected in biodiversity".* (COM (2010) 4 final (2011/C 48/26)

European policy has appointed the challenge of halting the loss of biodiversity and preservation of ecosystem services as a priority. Nevertheless the literature and analysis available deal more often with the pollution and emission's related policies, rather that with biodiversity conservation (Policymix, Issue 2/2011). Thus the main criticism towards strategic measures undertaken is that the interventions in agriculture and forestry are carefully considered and reflected, but at the same time the role of sectors with direct negative impact on biological diversity, such as transport and territorial infrastructure is underestimated and often omitted.

Apparently studying economic value of biodiversity appears as fruitful field of research, and also quite challenging in view of the various factors which should be taken into account. Collective decisions are needed to evaluate the status of biodiversity loss, and to define the most cost-effective ways of ecosystem protection. At first place, economic methods can estimate the value of biodiversity so that comparison of the relative importance of different ecosystems can be based on the cost of protecting or restoring them. Secondly, economic analysis offers insights into the specific causes and potential solutions to some of the reasons why biodiversity loss occurs.

As one of the most significant constraints appears biodiversity management, especially at regional and local level (Figure 1). This concerns the capacity for regulation, planning and budgeting, linkages with the civil society, and participation of private organizations in providing services.

Figure 1. The changing dimensions of biological resources



The present paper focuses on the methodological approaches and specific problems related to economic value of biological resources and its effect on the activity in the agricultural sector. It is organized in three parts of which in the first one is dedicated to the changed perspectives of the business strategies and impact in compliance to the European strategies for 2020. The second part analyzes the relationship between the agriculture and biodiversity, in particular agro-biodiversity and multifunctionality of the agricultural sector. Basing on these two concepts is built the role of the sector in planning, preserving and maintaining biodiversity. The third part deals with the effect and contributions of genetic diversity on market dynamics and production increase in stock-breeding. In the last part is formalized the impact of the genetic diversity on the ecological goals, defined at regional and global level.

New perspectives in doing business in the context of biodiversity preserving

Being a major stakeholder, the business sector has always been an integral part of the solution of biodiversity loss through corporate social responsibility initiatives, direct investments to specific biodiversity programs, and other support mechanisms. Principles of sustainable business behavior and activity were formally defined in the UN Global Contract (UNGC) at the World Economic Forum in 1999. In practice, this contract sets forth 10 principles in four thematic areas: human rights, labor standards, environment and anticorruption. Later on in the definition of corporate social responsibility given by the World Bank, business has attained importance and is committed directly to *"… sustainable economic development working with employees, their families, the local community, and society at large to improve their quality of life, in ways that are both good for business and good for development."*(Jørgensen, Pruzan-Jørgensen, Jungk and A. Cramer, 2003) This responsibility is revealed as a sustainable process that brings balance both to economic growth and stability, and development of society and environmental protection.

One of the most clear and explicit definitions of corporate social responsibility has been proposed by the European Commission as *"a concept whereby companies integrate* *social and environmental concerns in their business operations and their interaction with their stakeholders on a voluntary basis. Being socially responsible means not only to fulfill legitimate expectations, but to go beyond compliance and investing more in human capital, environment and relations with stakeholder*s"[3] In the past several years the so-called socially responsible investments were developed in the financial sector. They should be included in the investment and business plans of the organizations, among other objectives and activities. The "socially responsible funds" which allocate funds at the advantage of companies that are committed to sustainable development is an example of one of the common forms.

What actually constitutes the business and its corporate social responsibility in the context of biodiversity? In terms of environment, actions intend to make it clear to companies the effect of their business on environment and calls for reducing the adverse impacts and protecting of environment through the introduction and management of clean production processes. Thus, the idea of "sustainable development", as well as the use of renewable energy sources is advanced. Certainly, one of the main questions is whether it is profitable for the business to be environmentally responsible? And why in practice should take care of developing areas, which in most cases are subject to significant government involvement and regulation. Although until presently no research has been conducted to identify purely financial benefits from the application of similar activities, such actions lead to improvement in production process, reduction of industrial and commercial risks which entail the realization of better profits. On the other hand, the introduction of transparent relationships with customers, local community, and also the study of new products or processes is leading to the enhancement of the business potential and learning of new strategic skills.

Developing business and market-based instruments (MBI) has been increasingly perceived as a powerful mean of bringing the biodiversity problems into the process of economic decision-making. These biodiversity businesses, as defined by a 2008 IUCN report entitled Building Biodiversity are *"commercial enterprises that generate profits via activities which conserve biodiversity, use biological resources sustainably and share the benefits arising from this use equitably"*. To incorporate business into the implementation of the Convention of Biological diversity, the new goals for 2020 include the need for dialogue between business representatives and other stakeholders at national, regional and international levels and the engagement of: *"... wider efforts to promote business engagement in the achievement of the three objectives of the Convention and its new Strategic Plan, such as the Business and Biodiversity Initiative initiated at the ninth meeting of the Conference of the Parties, and the Jakarta Charter, as a step to highlight their commitment to the three objectives of the Convention on Biological Diversity"*[4]

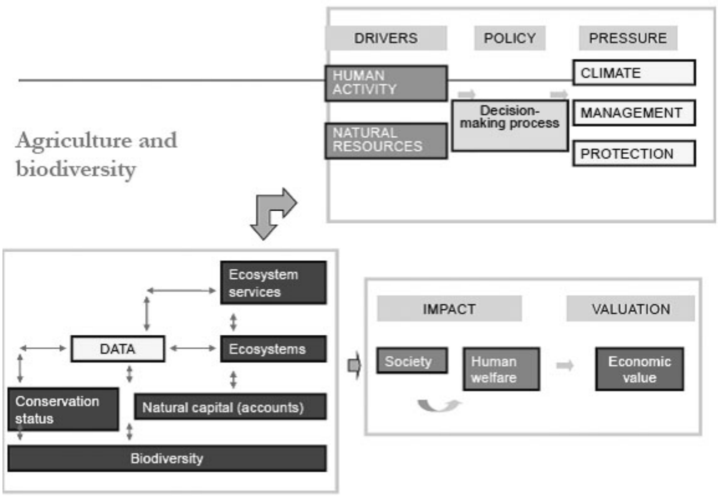
3 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, A renewed EU strategy 2011-14 for Corporate Social Responsibility, Brussels, 25.10.2011 COM(2011) 681 final

4 COP 10 Decision X/21: Business engagement

Assessment of biodiversity and sustainability of the agricultural sector

Questions related to the concept of sustainable development could be differentiated within three categories: changes in the economic situation, changes in the social status and dynamics of society, and changes of ecological status. Although these three categories have been periodically analyzed and represented by considerable statistical data and indices, these traditional measures do not allow for studying the relationships and interdependence between society, economics and environment. Agriculture plays an interesting and quite often contradictive role in the process of planning for sustainable development. The low levels of income per capita corroborate the necessity to increase productivity in the sector in order to consequently improve living standard of the people in rural areas and to maintain the food supply for urban areas, resources for food industry and export production. These contributions of agricultural sector to the common economic development urge for an elaborated political program and strategies to stimulate the agricultural producers to improve their productivity through implementation of environmental friendly practices and technologies (Figure 2).

Figure 2. Relationship between agricultural sector and biodiversity



From micro-economic perspective the higher the levels of income per capita are, the lower are the costs for supplying of provisions as a relative share and the demand is consequently redistributed towards products with non-nutritious character. While productivity at farm level increases, the increase trends in the relative share of agricultural production usually remains lower than the increase in the rest economic activities. As a result the role of the agricultural sector in macroeconomic aspect decreases and this process is accelerated with the introduction of new production technologies. In general the response of agriculture towards the changes in the policy measures are based on the supply analysis. Increasing the level of income and living standard depends on the level of efficiency and the final product. There is a direct relationship between income and final product per capita. In particular, the final product and the income are the two sides of one coin. The final product is the value of goods produced and services provided, measured by the price paid by buyers. Income is the profit for people (including entrepreneurial bonus), which provides resources for sale of the final product. This income should also be comparable to the price of the final product or service. To improve the living standard (income) it is necessary to determine how to produce more of what is more useful for the consumers. Economic progress is dependent on the growth of the real product - no improvement of income and living standards can be effected without it.

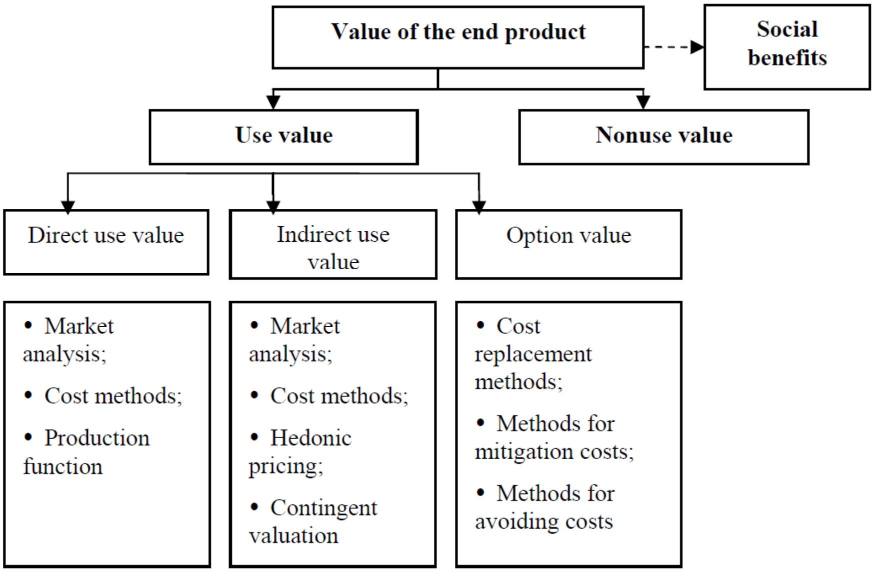
In comparison to the most economic sectors, the agricultural one develops within considerable uncertainty related to the global climate system and ecosystems. This peculiarity corroborates the necessity of correcting measures and policies, which are expected to decrease the negative interrelations in respect to the sustainability criteria. It is assumed that the costs of preserving biodiversity and ecosystems are considerably lower than the costs related to their restoring which considered on time could produce significant benefits, not only environmental but also economical (TEEB).

Global statistical data is also imposing in respect to the potential benefits of preserving and prevention biodiversity loss. For example conserving forests is expected to avoid greenhouse gas emissions worth $ 3,7 trillion; halving the deforestation rates by 2030 would reduce global greenhouse gas emissions by 1,5 to 2,7 Gt CO_2 per year, and therefore avoiding climate damages estimated to more than $ 3,7 trillion in NPV terms. This figure is not representative for the co-benefits of forest ecosystems (Eliasch, 2008). The wider impact of these possible results is indisputable considering that 2,6 per cent of the working force in Europe owe its employment on the base of natural resources, and 16,6 per cent of the European work places are indirectly related to nature. The global business investments related to biodiversity are estimated between 2 and 6 trillion dollars up to 2050. Apparently biological diversity has the potential to contribute to establishing new work places and business initiatives, generating future economic benefits.

Therefore it is logically to identify the assessment indicators of biodiversity and ecosystems, and practically to implement and utilize them into methodological approaches. Considering the significance of the agricultural sustainability as the key element of the theory for sustainable development, the experts in the field have generalized that these indicators should integrate and reflect the following criteria – general political background, conceptual formulation, appropriate level of generalization, efficiency, analytical demonstration and technical applicability, and easier interpretation. This way the economic value of biodiversity could be usefully integrated within the policy-making process and consolidated in the business decisions by representing the full costs and benefits of the ecosystem services, rather than just these costs or values that are released in the market.

A variety of economic valuation methods have been developed in the recent years, stressing on the fact that the valuation is best applied for assessing consequences of the changes resulting from alternative management options, rather than for the total value of ecosystems estimation (Figure 3). In the most cases these studies generally focus just on a few services provided by the ecosystems. Nevertheless the valuation method chosen, the first step is to identify the changes in the ecosystem services, even when it is not possible or necessary to monetize these changes. It is also necessary to define when and where these changes will take place (Hoffmann, 2011).

Figure 3. Methods for assessing biodiversity



Source: Hoffmann, 2011

Defining the economic value could be helpful to achieve more efficient use of natural resources. The logic of organizing production process in the agriculture follows that any change in technical characteristics (production methods, new rotation schemes, non-production elements at farm level) directly results from changes in the environment. This bilateral relationship could also highlight the costs of achieving environmental targets and further identifying more efficient means of delivering ecosystem services. Economic value of biodiversity and ecosystem is also connected to the practical implementation of working mechanisms, which can integrate the value of ecosystems and the market and pricing signals in the decision-making process. The growing interest to conserve and preserve environment, combined with consumers' demand for healthier food and wellness has changed the market place. In this case the appropriate mechanisms to biodiversity valuation and regulation may include payments for ecosystem services, reforming environment subsidies, tax break for conservation, creating new markets for sustainably produced goods and ecosystem services.

Estimating the value of ecosystem services could also define their economic efficiency. However, prices for natural assets and ecosystem services are not always necessary to be calculated in order to establish market-based schemes. Major biodiversity assets, such as: mountains, forests, rivers and lakes are either directly owned or controlled by government. This way the process follows the logic that since there is no market for biodiversity, there is no fixed price for its consumption and this resource is not taken into account in the companies' accountancy. This is a matter of various considerations and choices, based on wide range of variables, such as equal access to natural resources and economic efficiency. The main challenge sustains in estimating whether the final decisions regarding biodiversity are efficient, effective, solidary and culturally acceptable at the same time.

Dynamic and trends of biodiversity markets

Green products and services represent a new market opportunity. Global sales of organic food and drink have recently been increasing by over $5 billion per year, reaching $ 46 billion in 2007 (Organic monitor, 2009). The global market for eco-labeled fish products grew by over 50 per cent between 2008 and 2009 (MSC, 2009); and ecotourism is the fastest-growing area of the tourism industry with an estimated increase of global spending of 20 per cent annually (TIES, 2006). The annual loss of ecosystem services is appraised up to 50 billion euros, as in 2050 the generated loss will be equal to 7 per cent of the annual consumption.

The new markets for production and services related to biodiversity and ecosystems already have emerged – the so called business opportunities of biodiversity. The potential for development of the biodiversity concept sustains in the opportunity to balance between its commercialization (i.e. market differentiation, generating incomes, and alternative services) and the sustainability of the ecosystems. One of the main suppositions is that it is necessary to distinguish between regulated and voluntary markets for the biodiversity and ecosystem products. The main factors which would simplify this process are summarized in the Table 1.

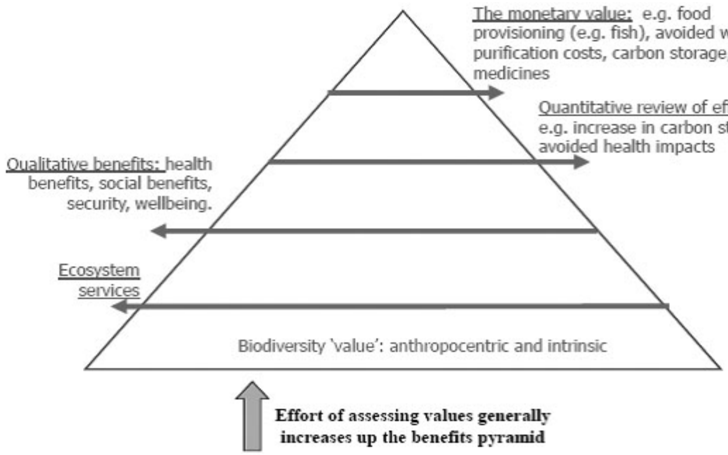
Table 1. Development factors for biodiversity markets and products

Financial	Legal	Market
Risk level of actives Clearly defined accountancy Investment activity Competitiveness Entrepreneurship premium Integrated approach among ecosystem, business development, and financial expertise	Property rights Assessment of investments in the sphere of genetic diversity Assessment standards and methods Fiscal preferences Legal framework for energy and climate борси	Classifying of actives Process for approval of projects Low level of transaction costs Systems for monitoring and control Creating data base and information system Role of mediators

Source: Zheliazkov, Zaimova (2012).

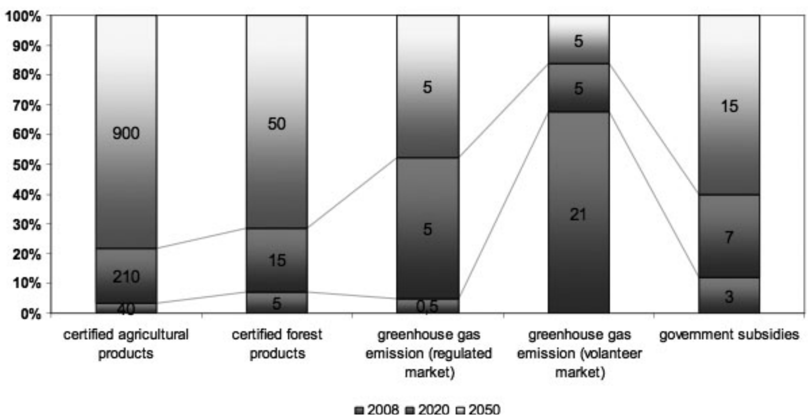
Economic justification of business activities related to biodiversity goes beyond the traditional framework of market price factors and accountancy (Figure 4). In fact, biodiversity is perceived as a community resource which is available and assessable for all economic agents excluding the risk that one or a group of them could embezzle monopoly right for its usage. Nevertheless the potential of business to conserve and preserve biodiversity and restore ecosystems depends on how biodiversity assets are managed. Consumption of biodiversity remains regulated by the public institutions, which are supposed to balance the interests of the economic agents.

Figure 4. Biodiversity value pyramid



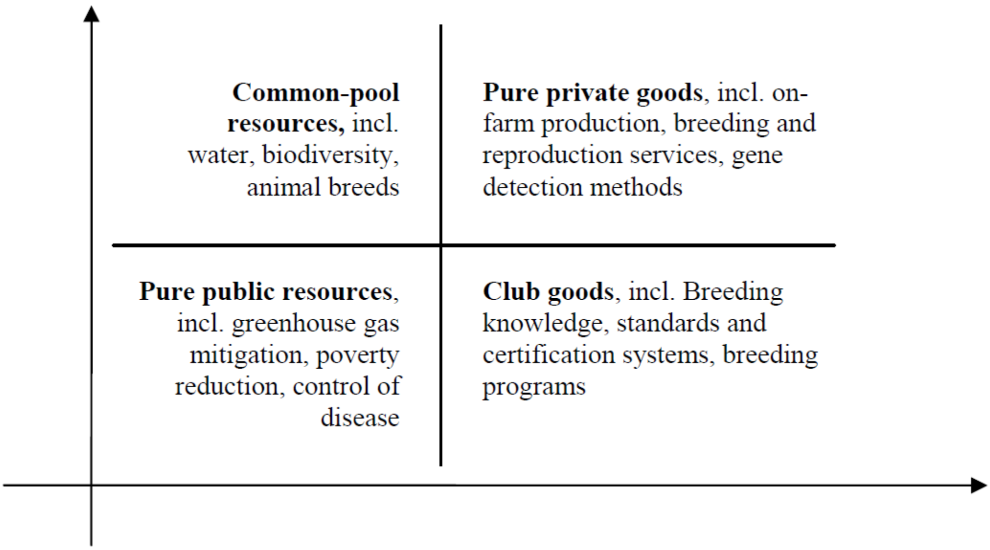
In the last years the number of the companies which profit directly or indirectly from biodiversity and ecosystems has increased significantly, as well as the interest towards management, marketing and risk management in this specific sphere (Graph 1).

Graph 1. Market share of biodiversity and ecosystems



In a structured hierarchy from local up to national systems, despite the independence in their functioning, the management decisions are interrelated which is essential for their sustainability and rationality in distribution of natural resources. In global aspect, sustainable development includes maintaining of global ecosystems and ensuring human well-being. In practice this affects world natural resources, including decrease of greenhouse emissions, preserving biodiversity, poverty reduction, and control of diseases (Figure 5).

Figure 5. Public and private products from genetic diversity



Livestock dominates in the most production systems (MEA, 2005). It provides 43 per cent of the agricultural product in global terms with future projections of significant increase (FAO, 2010). Traditional livestock systems contribute to the livelihoods of 70 per cent of the world's rural poor. Apparently the focus on the sustainable use of livestock genetic resources is an issue which guarantees a wide range of services and products, and strictly depends on continued use of breed genetic diversity. Genetic diversity has always been defined as a dynamic quantity – global statistics signifies that genetic diversity in intensive livestock-breeding decreases with rapid trends, while specialization and harmonizing effects from globalization increase significantly (CBD, 2010). The general statistic data represents disturbing facts regarding the current state of this resource. For example, 676 or 8 per cent of the breeds are extinct of which 7 are trans-boundary breeds. Going further – 1677 breeds are defined as being at risk, of which 21 per cent of all local, 24 per cent of all regional, and 11 per cent of all trans-boundary breeds (Hoffmann, 2011).

Table 2. Total number and risk status of the local and trans-boundary breeds

	Local breeds	**Regional breeds**	**Trans-boundary breeds**	**Total**
Risk				
Critical level	511	33	19	**563**
Critical level (managed)	73	-	-	**73**
Endangered	678	84	36	**798**
Endangered (managed)	243			**243**
Extinct	669	7	-	**676**
Without risk	2101	282	431	**2814**
Not defined risk status	2747	84	77	**2908**
Total	**7022**	**490**	**563**	**8075**

Source: DAD-IS, 2010

Due to the human activity and management, preserving genetic diversity in livestock breeding indisputably is related to its sustainable use in production systems. Its usage under efficiency levels sustains bigger threat to genetic resources for agricultural products than their over-utilization. This is the main difference with the management of natural biodiversity. Considering genetic diversity, its use value significantly exceeds its option value, which suggests that the major benefits stem from the current or potential value and therefore provide more incentives for preserving (Drucker, 2005).

According to FAO, between 1980 and 2009 the global meat product has risen on average at 3,7 per cent per year, milk at 1,7 per cent, and eggs at 5,0 per cent. This is mainly because of the increase of the number of the animals in the stock than productivity increase. 79 per cent of the global poultry meat, 73 per cent of eggs and 63 per cent of pork meat is produced in the industrial systems. The general trend shows that genetic improvements contribute to increase of productivity between 50 per cent (Shook, 2006) and 80 per cent (Havenstein et al., 2003), as in the countries with market-oriented breeding programs the end product per animal significantly leaves behind the world average statistics. In poultry, majority of genetic material is supplied by less than five global corporations, and the similar trends are observed in pig and dairy breeding.

Concluding remarks

The role and urgent necessity to keep the balance between the nature and human activity have been acknowledged as a priority in the Strategy of biodiversity 2020 of the European Union. One of the leading goals of this strategic document is pointed as dealing with the negative results from biodiversity loss and ecosystem degradation, and considering measures for their restoration.

Sustainable development is attainable through commitment and interaction of government policy, civil society and business. Over the recent years, business has come to realize that its own success and survival depends not only on the traditional key factors, such as: quality, customers, innovation, but also on its acknowledgement of obligations and contribution to conserving and sustainably using biodiversity as a vital part of development and nature conservation.

The major forthcoming issues relate to mechanisms for regulation and interaction between regional structures and industry; the balance between the goals for sustainable development at national and corporate level; definition of the industry role in realizing the national strategy for sustainable development, and last but not least creation of a clear mechanism for monitoring and control at national and corporate level.

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Professional paper

Economics of Agriculture 2/2012
UDC: 338.48-44(1-22)(497.11Suva planina)

SUVA PLANINA AS DEVELOPMENT AREA OF RURAL TOURISM

Novica Ranđelović[1], Vidoje Stefanović[2], Nedžad Azemović[3]

Summary

In this paper, an attempt was made to emphasize the importance of the phenomenon of rural tourism once again providing the example of the Suva Planina (The Suva Mountain) since rural tourism is increasingly attracting the attention of potential tourists because they see in it the compensation of what they lose in big agglomerations. The Suva Planina has many attributes to develop this type of tourism and thus to enrich the tourist offer of city of Niš and its environment. The aim is to prove that the Suva Planina mountain area may be an important factor in the development of rural tourism. In proving the hypothesis that the initial development of rural tourism should be accelerated as soon as possible, we used inductive-deductive method and the method of comparison and description. Measures are proposed in order to achieve faster development of rural tourism in this region.

Key words: *rural tourism, economic valorization, development, Suva planina.*

JEL: *R00, Q01*

Introduction

The main objective of this paper is to consider the possibility of Suva Mountain in the development of rural tourism in this region, since there exists certain assumptions. In addition, the authors started from the hypothesis that rural tourism in this region is just beginning to develop, but to be expected in the future, its rapid development, which will launch this destination high on the tourist map of Serbia. In their paper the authors have used the inductive-deductive method, and methods of analysis, comparison and description.

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Rural tourism is one of the motivational forms of tourist circulation and represents tourist business in rural areas. The village is anthropogenic tourist motif, mainly ambiance with emphasized recreational and curiosity attributes. Recreational attribute is primarily expressed by the very atmosphere, because the village is characterized by preserved nature, the absence of pollution and large green areas. Beside recreational attribute of tourist attraction derives from the possibility of including tourist in some rural activities such as: livestock pasture management, harvesting fruit, forestation etc. Tourist attraction of the village to a large extent depends on the attractiveness of other motives (which is less attractive other motives, to the attractiveness of the village as a higher motive, and vice versa), (Roberts, 2001, p. 47).

Rural tourism typically represents the extra vacation and usually lasts between three and maximum of 10 days. It has a seasonal character, with the peak season in spring (Marsh - May) and autumn (September - October). Tourist who decide for this type of tourism, are generally highly educated, aged 40 to 50 years old and live in urban areas.

Main goal of paper is to introspect possibilities of Suva Mountain in development of rural tourism, as for that there are certain assumptions.

World and Serbia - in the same direction, the divergence between

Thirty years ago, rural tourism was the only additional activity within developed tourism. However, nowadays this kind of tourism has a more significant role in its development. The rate of growth of tourist demand in rural areas, in the last 20 years, is deployed by region as follows: Europe 52%, Africa 8.1%, 4.1% Middle East, South Asia 9.4%, South East Asia and Pacific 10.8%, 5.4% North America and other parts of the world 4.3%. Study of shorter trips of the European population in the mid-nineties, came to conclusion that 19% of tourist used the circular tours, 10% travelled to the mountains outside the skiing season, and 9% travelled for leisure and recreation in rural areas. All these point to the exceptional direction of European population towards these destinations (*Stefanović*, 2012, p. 48). The market trends in world are going in benefits of village tourism that affirms World Tourist Organization (WTO).

Republic of Serbia has outstanding possibilities for development of rural tourism. Those possibilities come out of preserved and unpolluted nature, clean and unpolluted air and unspoiled rivers, with rich flora and fauna, and preserved traditional way of life. Those benefits are particularly interesting in the hilly and mountainous areas, which give tourists open possibilities for practicing many activities like: cycling, hiking, mountain climbing, organized field trips, etc. There is also a possibility of engaging of tourists in agricultural works (farming, fruit harvesting, livestock pasture) if the tourists show interest for those activities (*Jovičić*, 2002, p. 145).

In order to provide better results and to develop in appropriate ways in the rural tourism, a strategy of its development should be made. The key questions and principles of strategic development of rural tourism can be divided into three major categories:

- ✓ Social aspects, which include incitement of contacts between rural and city populations well as motivation of rural population.
- ✓ Environmental aspects, which include the deepening of awareness on the biological, spiritual and physical values of nature and necessity of preserving the rural environment.
- ✓ Economical aspects include the possibilities to realize additional revenues for local and regional economic development, and reversing the process of depopulation and the revival of abandoned rural communities.

The strategy for rural tourism should include long-term, medium-and short-term goals in developing of this type of tourism. Long term goals include the development of the international acceptance of the Charter for rural tourism, then establishing the basic guidelines for future development, identifying potential users and potential tourist region, initiating the necessary research, to identify areas suitable for rural tourism development, etc. (*Stanković*, 2000, p. 46). Medium-term objectives refer to identifying the special rules for landscaping, identification of possible adverse effects of tourism, in order to stop them, urban, architectural and economic integration of tourism, land use, etc. Short-term development goals refer to the organization of animation in rural tourist areas, encouraging creative initiatives by local people, presentation and sale of local handicraft and agricultural products, etc (*Štetić*, 2003, p. 45).

Prospects of development of rural tourism

In addition to categorization and standardization of services, development of rural tourism includes investments in infrastructure (roads, telecommunication), and the preservation of the village from attacks of civilization. It is important to educate rural households and hosts who wish to engage in these activities (*Gajić*, 2010). In this regard it is important to engage local tourism and non-governmental organizations, and all other interested parties. It is necessary to organize lectures, collect literature through which the village hosts primarily to indicate the economic viability of rural tourism. And then it is necessary to familiarize them with all standards and other requirements necessary to create quality tourism (*Stanković, Ćirković*, 2003, p. 67).

In order the rural areas could be involved in tourism is not only necessary the equipment and facilities, but also because people prepared for the reception of guests. Local people must have the desire, ability and opportunity to provide service and to meet the expectations of tourists. In addition to courtesy and quality of services, local people must know the needs of tourists, in order to meet tourists adequately. That is why there is need for education of rural people for development of tourism. The main areas to be studied are: the nature and the environment, sustainable development and rural tourism, psychology and sociology of human behaviour, quality of service, food, customs and culture, etc (*Page*, 1997, p. 34).

When a certain level of development is reached, it is necessary to make efforts to organize additional activities for attracting tourists, such as organized trips, exhibitions, variety shows, events, etc. It is also necessary that the rural tourism product should have adequate sales channels. Actually unorganized, uncontrolled development should be overcome and an organized sale should be provided, which will greatly contribute to plants matching supply and demand. In global terms, tourism demand is now more sophisticated, more flexible and selective in relation to different elements of tourism supply (quality, price, etc.), (*Čomić*, 2003, p. 78). Therefore, striving to offer become more personalized should contribute to the further development of rural tourism.

Development of rural tourism in Serbia doesn't have a long tradition and it has not reached its potential. One of the main reasons for this situation is that he has never been accompanied by adequate stimulus. Therefore it is necessary to significantly engage the government and other relevant entities in order to apply three necessary measures which can be classified into four categories:

1. Economical (giving financial support to rural households)
2. Infrastructural (building roads, infrastructure of postal network, electrical and communal network)
3. Organizational (activation of local and republic authorities)
4. Educational (education and informing of local residents)

To achieve this it is necessary to engage not only the rural population, but also other sectors of the economy - transport, construction industry, food industry etc. Particularly in this regard a significant share of agriculture should be included. In this case, tourism and agriculture are closely linked, a common basis for the village. Opportunities for development are high due to the fact that today there is an increasingly popular trend of environmental protection and healthy nutrition. All in all, with planned and meaningful activities, rural tourism in conjunction with other economic activities could bring the country significant economic benefits. Even according to some data, Serbia is ranked among the 20 most attractive destinations in the world (*Čomić*, 2001, p. 66).

How does it look like at the Suva Mountain

The development of rural tourism in the area of Suva Mountain deals with "Tourist Organization of Niš". This Tourism Organization was established in 1995. as a service, whose main activity is production of the development and promotion of tourism in the area of Niš and Niška Banja. These activities include the organization of information and propaganda activities, and promotion of tourist offer of Niš and Niška Banja at fairs and markets at home and abroad. As such, this organization mediates the accommodation of tourists in rural households. In addition to these organizations, the development and promotion of rural tourism is concerned and the Tourist Organization Gadžin Han, which operates in the S. O. Gadžin Han, and organization of the same or similar type of Bela Palanka and Babušnica (*Petrović*, 1998, p. 44).

Facts of rural tourism at the Suva Mountain

Rural Tourism Suva Mountain is at a very low level of development. If the village of Suva Mountain would become a real tourist motives, being able to attract the tourist clientele, it is necessary to build adequate transportation infrastructure and to secure supply chains. Also, one of the most important prerequisite is to educate the rural population for this type of tourism in order to prevent migration and demographic trends of aging population. In addition it is essential to spread awareness about the necessity of environmental protection, which is the basis for tourism development in this case (*Simonović*, 1995, p. 342).

First of all, it is necessary to identify the villages which have enough potential to attract the tourists. A commission should be formed that would give certificates to rural households interested in this kind of tourism. These households must meet the requirements in terms of training, arrangement of accommodation, hygiene, etc. It's pretty discouraging fact that the tourism organization of Niš registered only one household (in the village of Bancarevo) which deals with acceptance of tourists while the tourism organization of Gadžin Han does not have any registered rural tourist households. These organizations should call for tender for the classification and to initiate the development of rural tourism. And when a larger number of households involved in tourism, it is necessary to exercise constant control and quality of tourism services.

The potential for development of rural tourism

As mentioned before, there is a wide range of waste potential that could be used in order to activate the tourism product Suva Planina. Most important ones are emphasized as follows:

1. Location of the Suva Planina at the crossroads linking East and West, Europe and Asia. The immediate vicinity of the international European road E-80, this position makes it extremely convenient because passengers in transit constitute a potential tourist clientele. Certainly the vicinity of Niš, as well as a large urban centre, largely determines the position of Suva Planina convenience.
2. Existence of utilities and other infrastructure in most villages is an important prerequisite for development of tourism potential.
3. The existing material base of tourism and receptive accommodation facilities, which can be used more intensively.
4. The possibility of building new as well as expansion and renovation of existing infrastructure facilities necessary for the activation of intense tourism. While this does not including only accommodation facilities (houses and flats), but also the tourist facilities needed for the development of sports and recreational tourism (skiing, hiking, etc.), the transport infrastructure, catering and other facilities.
5. The natural values such as the preserved nature, favourable climate, rivers, springs, wells, rich fauna and flora, specific landforms such as cliffs, etc. Grounds are not only rural but also many other forms of tourism.
6. The rich cultural heritage represented by numerous monuments, monasteries, churches, and the customs, traditions, crafts, architecture, is also one of the important potential. It is important to emphasize that this category is not nearly the value used for the purpose of tourism presentation.
7. Settlements that are for centuries there with a rich culture and tradition, and the population should be involved as a main carrier of tourism development.

Prospects for development of rural tourism

There are numerous ways and opportunities to lead the development of tourism, if not as high, at least to an acceptable level (*Ševarlić*, 2011). Taking into account its potential, there is a great possibility of the formation of numerous tourist attractions. Tourist offer of Suva Planina, first would involve stationary excursion tourism and the possibilities for practicing winter sports. It is certain that the existing facilities for skiing and other sports and recreational activities are not sufficient. Therefore, the existing ski trails should be upgraded and forests cut down for training and building of new trails on the site Bojanine Vode (Bojanine Water). And beside this, other appropriate places should be found where ski trails could be built.

In urban areas, smaller hotels or similar facilities should be built where the tourists in the winter season would be accommodated. These accommodation facilities should be built in traditional architectural style, being not detrimental to the appearance and physiognomy of the village (*Simonović*, 1982, p. 145). The best and most economical solution would be to renovate existing facilities and adapt for this purpose. Every hotel should, in addition to the housing, should also have additional facilities that would complement tourist stay (swimming pools, gyms, sports fields, etc.). Also, the hotel "Trem" in Donji Dušnik, the only existing object of that type, should be trained and open for guests. This hotel would be particularly suitable for the accommodation of student excursions and other major groups (*Stamenković*, 2001, p. 67).

Interested owners of rural households could also be involved in tourism. The rooms and apartments in rural households should be equipped in accordance with the criteria of categorization, but in an authentic, country-style, so that tourists come in contact with the rich culture and tradition.

Surely, in order to make this mountain area profitable, it should be made attractive and appealing to tourists during the other seasons. The tourist stay during other seasons could be completed with the whole range of recreational activities. Considering the existence of numerous, attractive locations, a special attention should be paid to the organization of excursions. Visit to Jelašničko gorge, climbing to the tops of some of the Suva Planina, or visiting Vetenaško or Divljansko monasteries, are only some of the possibilities. In terms of excursion tourism development, it is important that certain locations should be equipped for short stay visitors (benches, tables, gazebos, waste disposal sites, etc.). Providing a simple and good communication with the localities is also important.

The rich fauna and the existence of hunting ground of the "Suva Planina", is an excellent prerequisite for the development of tourism. If we take into account the fact that the hunting is a very expensive activity, it means that this type of tourism appears as a significant source of revenue.

In creating of tourism product local lifestyles should be presented through various events and activities. Thus, for example, various agricultural activities could be organized involving the participation of tourists (picking fruit, cultivation of the land, etc). Through various events tourists can be introduced local customs, folklore, folk costumes, etc. Particular attention should be focused on events that have already reached a certain stage of development, as is the case with winter ascent of Trem. The need to invest resources and efforts to this event every year rises to a higher level, because the only way they can attract more participants and gain more importance.

Another in a series of opportunities for tourism development is a combination of rural tourism Suva Planina with health and health resort tourism Niška Banja and tourism city of Niš. The point is that rarely takes place in the world in such a short distance from major urbanized whole, there are clean and preserved natural areas. Thus, for example Jelašnička Gorge as a unique natural attraction located just 30 minutes drive from the city of Nis.

Obstacles in the development of rural tourism

As we can talk about many opportunities for the initiation and development of rural *tourism Suva Planina, there is also a series of obstacles and constraints. Some of the* most important are:

1. Lack of adequate tourism infrastructure starting from the tourist accommodation capacity of equipment. Capacity to accommodate not only scarce, but have very low quality. The same applies to other tourist and catering facilities.
2. Poor transport infrastructure, particularly in terms of local road traffic. It has already been noted that some of the most important routes out of function due to damage; such is the case with the local road to the village of Gornja Studena leading to the site Bojanine Vode.
3. Lack of awareness and education of rural people on all aspects of tourism development, so that even where there are attempts to activate the tourist, they are not conducted in accordance with the categorization.
4. Lack of concern about preserving the environment and natural resources, and their ruination and pollution (in this sense a very good example is the painting of forests on Suva Planina).
5. Ruination of cultural monuments and other objects of great importance for tourism Activation.
6. Lack of adequate human resources for tourism development, as well as legislation in this field.
7. Insufficient use of modern technologies in agriculture, but also in other sectors.
8. The processes of depopulation and aging of rural populations, the extinction of traditional crafts, poverty and economic backwardness.

Capacity for development of rural tourism

As one of the highest mountains of southern Serbia, Suva Planina has been and remains a favourite destination for hikers and nature lovers. That's why it was built on a number of mountain huts in the mid last century. Such is the case for example with hiking on the plateau home plates, which was built back in 1932. Among mountain lodges that are equipped for the admission of tourists and mountaineers which are still functional four of them can be singled out "Studenac", "Ploče", "Čika Dane" and "Čelin Kamen".

Mountain lodges are generally intended to be for accommodation of mountaineers, hikers and recreational athletes who engage in various activities on Suva Planina. However, accommodation is not the only purpose of these facilities. They often organize socializing before or after climbing to the peaks of some mountains, including the preparation of traditional foods and drinks. Even though the accommodation is at a lower level of quality, these places provide intimacy and they are always eagerly visited.

One can mention the children's recreation centre "Divljana", located on the slopes of the Suva Planina near the Divljane village, 6 km from the main road Niš - Sofia. The restaurant worth to mention is the ethnic tavern *"Kod Brke"* in the Jelašnica village. Inn is on the way to Bojanine Vode and within the last few years it has been very popular among the citizens of Niš.

Workers hotel "Trem" (Category B) was completed in 1979. The Hotel offers 80 beds in single, double and triple rooms. There was a restaurant with 150 seats indoors and 60 seats in the hotel garden.

In the whole wide area of Suva planina, there are only two households with rooms and apartments for the reception of guests. Only one is registered. Both of these villages belong to the Municipality of Niška Banja, while in other municipalities, there is no registered household engaged in tourism and accommodation of guests.

The household of Ranđelović Nikodija is in Bancarevo which is the only registered domestic tourism facility not only in the Municipality of Niška Banja, but on the whole Suva planina. The household offers 15 beds in double rooms. In addition to rooms with private bathroom, there are two double rooms with shared bathroom. The rooms are arranged in three different objects, mostly of recent construction. The rooms are equipped with a kitchen stove, TV, computer, mini library. Heating is electric or based on solid fuel. The yard is spacious, decorated and available for guests staying in this household.

The household of Živković Dragiša located in Donji November offers fully equipped one-bed apartment. The apartment includes the bathroom and a kitchen, separate entrance, and guests can use the garden. The apartment has a TV, and the heating is on electricity. This apartment offers its services within its offer of mountain lodge "Celin Kamen" (*Popović*, 2001, p. 23).

In some villages of Suva Planina there can be seen the expansion of cottage settlements. Built cottages, as well as those that will be built can successfully be adapted for the reception of guests, although the stay in them is considered a form of tourism. It is particularly suitable for development of tourism, taking into account the fact that the potential tourist clientele come mainly from nearby, large cities. This trend can best be seen in the Prosek village (*Mitić*, 2006, p. 8).

Conclusion

Through the analysis of natural and manmade values Suva Mountains can come to the conclusion that this area is very suitable for the development of rural tourism. Many villages are still un-spoilt by the onslaught of urbanization. They have preserved the traditional way of life and work, and as such they represent a kind of tourist value. Tourist sites, climate, natural curiosities, and rich cultural heritage - these are all resources that could be used in the formation of the tourism product.

However, despite all the opportunities it is generally difficult to speak about the development of tourism and economic effects. Besides the lack of adequate tourism facilities and infrastructure, in conversation with the residents of villages, I even came to the conclusion that perhaps the biggest obstacle to tourism development disinterest in this type of activity. Most of the rural population is older and does not understand how to facilitate tourism development (*Vujović*, 2011). While younger and more educated people leave the village going bigger to cities. Even in cases where there is interest, there is lack for of financial base and support of state and local communities.

This implies that it is primarily necessary to develop awareness and educate local residents for tourism development. Professional staff should also be trained, as the main bearers of development. At the same time there is a need to study the needs of target markets and potential tourist clientele, in order to obtain the data required to create the quality tourism offer. Tourism should be developed adhering to the principles of sustainable development and in collaboration with the tourism companies and organizations both at local and national level. Only under such conditions, tourism will become a factor in the development of rural settlements and lead to economic prosperity.

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SUVA PLANINA KAO PROSTOR RAZVOJA SEOSKOG TURIZMA

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Rezime

U radu je načinjen pokušaj da se još jednom podvuče fenomen i značaj seoskog turizma na primeru Suve Planine, jer seoski turizam sve više zaokuplja pažnju potencijalnih turista, koji u njemu vide kompenzaciju onog što gube u velikim aglomeracijama. Suva Planina ima mnoge atribute da razvije ovu vrstu turizma i time obogati turističku ponudu Niša i okoline. Cilj rada je dokazati da prostor Suve planine može biti važan faktor razvoja seoskog turizma. U dokazivanju hipoteze da početni razvoj seoskog turizma treba što pre ubrzati korišćeni su induktivno-deudktivni metod i metode kompracije i deskripcije. Predložene su i mere kako da se ostvari brži razvoj seoskog turizma na ovim prostorima.

Ključne reči: *seoski turizam, ekonomska valorizacija, razvoj, Suva planina.*

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IN MEMORIAM

Akademik Prof. dr Branko Bajčetić

Gospođo Vesna, ćerko profesora Bajčetića, voljeni dedini unuci Predraže i Vlatko, omiljeni praunuče Aleksa, uvažene njegove snahe, poštovani zete Mladene, draga rodbino, cenjeni profesori, studenti, poštovaoci lika i dela prof. dr Branka Bajčetića.

Iako ne možemo birati ni mesto ni vreme zaustavljanja kazaljki na našem biološkom časovniku, ipak je sedmomajski dan, iako, hrabro, energično, izdržljivo i istrajno, zaustavio otkucaje ljudskog pleminitog srca prof. dr Branka Bajčetića.

Tog dana sudbinsko sečivo je bilo jače i pokosilo je njegove napore i želje za ozdravljenjem i umeće lekarske ekipe koja je u tome pružala pomoć.

Sedmi majski dan je sudbinskom silom učinio da za navek klone njegova glava koja je mislila roditeljski, drugarski, prijateljski, rodbinski i profesorski, onako kako dolikuje visokom intelektualcu i čovekoljupcu.

Ništa u ovom životu nije stalnije od smrti i ona je vernija od života jer nikoga ne napušta, a uradila je to i sa prof. Bajčetićem.

Ona je za navek sklopila njegove oči koje su do poslednjeg trenutka isijavale toplinom pogleda i iskrenim razumevanjem, za navek je prekinula njegov glas, smeh, govor i razgovor, za navek je zaustavila njegov korak kojim je žurio da na vreme stigne u slušaonicu i amfiteatar, da stane pred njegove studente, da stigne na savetovanja, simpozijume, kongrese i studijske boravke, da uradi planirano i obećano, i iznad svega da dođe svojoj kući u toplinu svog porodičnog gnezda.

Za navek je sudbina prekrstila njegove ruke vredne i radne, kojima je grlio svoju ćerku Vesnu, svoje unuke Predraga i Vlatka i najumiljatijeg praunuka Aleksu, ruke koje su nas pozdravljale, kojima je ubirao plodove svog rada, kojima je ispisivao formule, pravila, hipoteze, ulivajući tako znanje svojim studentima, magistrantima i doktorantima i za navek je zaćutalo njegovo srce u kome je bilo širine za svoju porodicu, rodstvo, bratstvo, prijatelje, kolege i nada za sve, za njegove studente.

Smrt je grubo ime i odredila je gde će da zaseče i nanese bol i tugu njegovoj porodici i rodbini i nama koji smo radili sa njim.

Njeni udari su polomili njegov stas i intelektualnu snagu kojom je dostojanstveno i časno nosio životni teret.

Sve profesorove godine, a bilo ih je 91, ispunjene su životnim teretom, radom ali i radošću, jer je na svom životnom putu stekao porodicu, rodstvo, bratstvo, prijatelje, drugove, kolege i poznanike.

Gajio je dobro prema ljudima, bez obzira da li su mu rod ili pomozi Bog, iako su samo poznanici ili slučajčni prolaznici.

U životu je mnogo više davao nego što je uzimao. Radovao se iskreno radostima drugih, a svoju radost je tiho ispoljavao.

Bio je dragi prijatelj za iskreno druženje i prijateljstvo, imao je gospodsko držanje i bio je uvaženi i visoko cenjeni profesor Beogradskog univerziteta. Oličenje je čvrstine, velike radne energije, postojanosti i pravičnosti.

Nosio je u sebi i sa sobom čvrstinu bilećkog, bosansko-hercegovačkog kraja u kome je ponikao 27. oktobra na Petkovdan, 1920. godine, baš u njegovom selu Mirilovići.

Po uspehu odličan sarajevski gimnazijalac, upisao je i završio Poljoprivredno-šumarski fakultet u Beogradu 1949. godine.

Učesnik je NOR-a 1944. godine.

Iskazao je svoje profesorsko umeće u srednjim poljoprivrednim školama u Prištini, Valjevu i Bijeljini. Vrednoća njegovih ruku ispoljila se i na radnim akcijama Brčko-Banovići i Šamac-Sarajevo.

Radoznalost i nemir za naukom nisu ga ni trenutka napuštali, pa je titulu doktora poljoprivrednih nauka stekao 1959. godine na Poljoprivrednom fakultetu u Sarajevu. Na istom fakultetu iskazao je svoje znanje i pedagoško umeće na radnom mestu u zvanju asistenta, docenta, vanrednog i redovnog profesora.

Nemir naučnog radnika ga je odveo na specijalizacije i studijske boravke u Austriju, Švajcarsku, Holandijiu, Nemačku, Bugarsku, Norvešku, Englesku, Francusku, Čekohoslovačku, SSSR i SAD.

Direktor Oglednog dobra Butmir, šef Zavoda za organizaciju poljoprivrednih gazdinstava i ekonomiku poljoprivrede, šef Katedre za ekonomiku poljoprivrede, predsednik Saveta fakulteta, direktor Instituta za ekonomiku poljoprivrede i prehrambene industrije, dekan Fakulteta, savetnik za biološke nauke u Republičkom Savetu, član Komisije za visoko školstvo SR BiH, su samo neke od dužnosti koje je savesno i vrlo uspešno obavljao.

Pored nabrojanih dužnosti koje je obavljao na fakultetu u Sarajevu, dolaskom na Poljoprivredni fakultet, Univerziteta u Beogradu, kao profesor za predmet Organizacija poljoprivrednog preduzeća, postao je i dekan ovog Fakulteta, predsednik Saveta Instituta za organizaciju i ekonomiku poljoprivrede i prehrambene industrije, kao i predsednik Zajednice poljprivrednih fakulteta i viših poljoprivrednih škola Jugoslavije.

Član je Akademije nauka i umetnosti SR Bosne i Hercegovine.

Učestvovao je sa naučnim radovima na brojnim naučnim skupovima u zemlji i inostranstvu.

Odlikovan je Medaljom za hrabrost (1945), Ordenom rada sa zlatnim vencem (1967) i Ordenom zasluga za narod sa srebrnim zracima (1973).

Iskazao je upečatljiv naučni doprinos u oblasti planinskog gazdovanja i u organizaciji i ekonomici poljoprivrednih gazdinstava. Jednom rečju, dao je veliki naučni doprinos u oblasti agroekonomskih nauka i visokoškolskom obrazovanju, što je pokazao svojim brojnim radovima i objavljenim udžbenicima.

Govorio je nemački, francuski, ruski i engleski jezik.

Prema problemima koje tretiraju, njegovi naučno-istraživački radovi se mogu grupisati u pet grupa: Naučni radovi (Planinsko gazdovanje; Ekonomika govedarstva; Ekonomika ovčarstva; Organizacija proizvodnje krmnog bilja; Organizacija i ekonomika poljoprivredenih gazdinstava), Stručni radovi, Objavljeni referati, Udžbenici i Važnije studije.

Naučno-istraživačku aktivnost je započeo u oblasti planinskog gazdovanja. Radovima iz ove oblasti pripada i njegova doktorska disertacija „Planinako gazdovanje Donje Hercegovine". Ekonomskom analizom originalnih rezultata istraživanja u doktorskoj disertaciji doprineo je shvatanju oranizacionog jedinstva planinskih objekata i poljoprivrednih gazdinstava. Zatim je sistematizovao i razjasnio svrhu povezivanja mediteranskih poljoprivrednih gazdinstava sa planinama i najzad razradio metode utvrđivanja ekonomske međuzavisnosti planinskih objekata i gazdinstava. Na osnovu podataka dobijenih višegodišnjim eksperimentalnim radom doprineo je razjašnjavanju uticaja lokalnih faktora na rezultate proizvodnje.

Radio je na proučavanju specifičnih organizaciono-ekonomskih uslova i rezultata proizvodnje na društvenim gazdinstvima planinskog reona. U tim radovima posebno je razjašnjen uticaj specifične strukture faktora proizvodnje na ekonomske rezultate planinskih gazdinstava.

Više radova odnose se na utvrđivanje organizaciono-tehnoloških rešenja u podeli pojedinih faza proizvodnje mesa između planinskih i ravničarskih (dolinskih) preduzeća. U ovim radovima objasnio je ekonomske implikacije različitih vidova podele rada u govedarskoj proizvodnji među navedenim preduzećima, odnosno njihovim delovima.

Takođe je zapažena studija čijom je izradom rukovodio a u kojoj je izneta i obrazložena koncepcija i mogućnost razvoja društveno-organizacione poljoprivrede planinskog reona SFRJ, sa težištem na podeli rada između planinskih i dolinskih gazdinstava, sa razrađenim rešenjima za pojedine subregione.

U industrijskoj organizaciji proizvodnje goveđeg mesa važno mesto zauzimaju nerešeni problemi racionalizacije rada. Jedna od prepreka za uvođenje potpune mehanizacije i automatizacije u velikim aglomeracijama životinja, predstavlja raznovrsnost strukturnih elemenata obroka (suva i sočna kabasta hraniva i koncentrati). Tim autora koji je sa dr Bajčetićem obrađivao ekonomske aspekte problema, proučavao je fiziološko stanje životinja, količinu i kvalitet proizvoda i ekonomsku celishodnost utvrđenih rešenja u kojima se nalaze i raznovrsne strukturne komponente obroka.

Proučavajući bioekonomsku prirodu zamene prirodnog mleka zamenjivačem mleka, razradio je ekonomiku različitih postupaka ishrane podmlatka goveda u raznim periodima razvitka, od priploda do godine dana uzrasta.

Kao rukovodilac tima istraživača i obrađivača ekonomskog dela radova doprineo je poznavanju organizaciono-ekonomskih uslova i rezultata u tovu jagnjadi. Ovi rezultati istraživanja zasnivaju se na višegodišnjim ogledima. Praksa je dobila nova saznanja u različitim varijantama organizacije mesa u ovčarstvu. Rezultati istraživanja saopšteni su i na simpozijumu za ovčarstvo balkanskih zemalja u Bugarskoj. Ekonomika ovčarstva razmatrana je u više stručnih radova i referata.

Kao rukovodilac tima i obrađivač više priloga u kompleksnim radovima, doprineo je sistematizaciji uslova koji opredeljuju izbor različitih organizacionih oblika u praksi društvenih gazdinstava, i dao doprinos organizaciji funkcija u poljoprivrednim preduzećima.

Bio je profesor visokog i širokog formata, mentor i član komisija mnogobrojnih diplomskih radova, magistarskih i doktorskih teza i član komisija za izbor u nastavno-naučna zvanja. Držao se visoko profesionalno i vrlo odgovorno vodeći računa o ugledu profesije kojoj pripada. Časno je kroz život nosio svoj krst.

U radu je od drugih tražio mnogo, ali nikada više nego od sebe. Pokazivao je kako se treba odnositi prema životnim iskušenjima i opstajati u teškoćama. Nije robovao izrečenim istinama, već je stalno proučavao, analizirao i proveravao. Istina je za njega bila ono što se može proverom dokazati i kritikovati razumom.

Ugradio je u naš Institut i Fakultet svoju životnu intelektualnu snagu i doprineo njihovom razvoju i imenu unapređujući i produbljujući agroekonomsku struku i nauku.

Odlazak sa scene vrsnog naučnog stvaraoca, visoko cenjenog profesora i čoveka punog ljudskosti je prevelik gubitak za naš Institut i Fakultet.

Visoka zahvalnost profesoru za veliku naučnu, profesorsku i ljudsku ozbiljnost koju je nosio u sebi i ispoljavao je prema nama. Neizmerna zahvalnost za sadržajne savete, brojne susrete, za častan razgovor i iskreno izgovorene reči, za nesebičnu brigu iskazanu prema studentima i saradnicima i za puno ljudsko pokriće. Ostavio je dela po kojima ćemo ga dugo pamtiti i poštovati sećanje na njegov lik.

Umiranje nije kazna nego zakon Božji, a život umrlih je u pamćenju nas živih. Profesor je otišao tamo da nas sačeka, gde ćemo jednog dana svi doći.

Profesore Bajčetiću, počivajte u miru večne tišine, neka Vam srce i duh budu spokojni, neizmerno Vam hvala i neka je milost Božja sa Vama.

Prof. dr Dragić Živković
Poljoprivredni fakultet Beograd

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