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## **Editorial**

This issue, as the previous one, begins with a contribution in the field of international economics but skillfully combines the apparatus of monetary and fiscal policy. Because of its multidisciplinary nature, the paper entitled *The Process of Convergence Process in EMU 12* by the authors Olgica Bošković, Svetlana Popović and Nikola Njegovan is selected to open this issue of *Economic Themes*. Moreover, according to the scientific methodology it applies, this paper is singled out amongst the published papers in the issue.

Two papers with related and extremely provocative issues follow. The *Impact of National Culture on Organization Learning and Knowledge Management* by Nebojša Janićijević belongs to the order of those papers whose complex concepts are skillfully interrelated, thus expanding the area of our understanding the interaction between business organizations and the environment. Human resource management is the fundamental field the next paper belongs to. The paper entitled *Challenges of the International Business Communication and Implication for Human Resource Management Function* by Biljana Đorđević and Maja Ivanović-Đukić is characterized by a slightly narrow focus. The paper emphasizes the importance of intercultural communication competence in the international business environment. The paper is characterized by a very meticulous review of business-practice centered research that can provoke the interest for its issue beyond the academic reading public.

The paper entitled *Inflation Targeting: Determinants, Preconditions and Effects* by Milivoje Davidović, Marina Grubor and Husein Mehmedović is a competent analysis of international experience in the application of this monetary strategy. Comprehensive and carefully selected reference literature makes the paper a useful guide to an intriguing field of monetary theory and policy, which often lack final findings.

The paper entitled *Foreign Trade of Mexico and Cooperation with Serbia* by Miloš Todorović and Valentina Milosavljević represents a well made case study in which the authors analyze economic dynamics, trends and structure of foreign trade relations of this Latin American state. A special attention in the paper is dedicated to foreign trade relations with this state and Serbia, which should make the paper interesting to the domestic reading public.

The group of papers that follow belong to the thematic field of accounting, audit and business management. The paper entitled *Quality Control and Public Oversight of External Audit* by Ljiljana Bonić and Milica Đorđević represents a competent analysis of society's response to the issue of audit statements'

reliability. Being a review of good practice, the paper provides useful guidelines for states that want to face this problem. The conduct in the audit process is examined in the next paper entitled *Audit Procedures for Disclosure of Errors and Fraud in Financial Statements* by Silvia Kostova. The two papers complement each other because they both provide the objective and competent audit but with a slight difference-the former dealing with the role of a wider social environment under control of the audit profession and the latter with the ranges of the profession. Tatjana Stevanović's paper entitled *Business Budget - a Tool for Implementation Companies' Strategic Goals* points out the importance of business budget in the implementation of strategic aims and efficient operating activity performance.

The subject of the next paper deals with more and more important issue of sustainable development. The paper entitled *Strengthening Institutional Capacity for Effective Management of WEEE – Challenge for Sustainable Development of Countries in the Process of European Integration* by Sonja Jovanović, Bojan Krstić and Vesna Janković Milić completes the analysis of institutional solutions for managing electronic waste in the EU and the states on its periphery.

The final contribution to this issue is the paper entitled *Organic Food as a Promising Product in Serbia* by Svetislav Milenković and Jelena Tasić. Organic agriculture has become more and more interesting research field and according to the authors' analysis an agricultural branch where Serbia can build competitiveness for its export offering.

Editor-in-Chief

Prof. dr. Srđan Marinković

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## CONVERGENCE PROCESS IN EMU 12

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**Abstract:** Analysis of fiscal discipline and convergence in EMU is important for several reasons. Empirical studies have confirmed the connection between fiscal policy and national macroeconomic performance. Fatas and Mihov showed that governments that use aggressive fiscal policy, create significant macroeconomic instability, reflected in higher output volatility. Fiscal convergence stimulates the convergence of economic cycles because it eliminates specific fiscal shocks. Considering that both Maastricht convergence criteria and the Stability and Growth Pact require fiscal discipline before joining EMU, their goal is to bring the countries that are joining the EU, closer to the optimal currency area. Convergence criteria require from the future members to have similar economic policies and to stimulate a more balanced growth and development. That way, the fiscal discipline and the stronger correlation of economic cycles will better prepare the candidate countries for the single currency. Fiscal discipline also affects the financial markets. Differences between national fiscal policies may slow down the integration of financial markets, because different national fiscal positions could mean different sovereign debt risk premiums, depending on the anticipated budget deficit and public debt.

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**Key words:** optimal currency area, convergence, test of hypotheses with panel data, testing for individual and time effects.

### 1. Introduction

European integration is a political project which includes the process of economic and financial integration. Monetary integration was a gradual process

that started after a relatively long period, as a continuation of the European economic integration. The events of the '90s have revealed the problems with efforts to establish the impossible trinity. Namely, it's impossible to have an independent monetary policy, fixed exchange rates and free movement of goods and capital, all at the same time. This is why the monetary union is a natural extension of the single market. The solution to the impossible trinity is in the introduction of the common currency, meaning that the members' exchange rates are irrevocably fixed, in giving up the autonomous monetary policy, which will be transferred to the supranational level and the single market. Euro exchange rate is flexible against other currencies and there is a high degree of autonomy of the European Central Bank regarding monetary policy.

That is the solution from the Delors' report which, in a way, has a protective role - ensuring the stability of exchange rates, which is an additional incentive to strengthen the trading between member states. Not even highly dependent exchange rates could've imposed sufficient monetary discipline, i.e. not even the amended version of the Exchange Rate Mechanism could have yielded good results. The single market couldn't have realised its maximum potential without the single currency. Having a single currency means having a greater transparency of prices, eliminating the currency risks, lowering the transaction costs and increasing the benefits for all member states. Member states had, except for the anchor country, already lost control over their monetary policy due to the mandatory membership in the Exchange Rate Mechanism. This is how member states can participate in the decision making process in relation to the monetary policy.

The introduction of euro triggered a debate on the endogenous effects of monetary integration. A "new" theory of optimum currency areas – or endogeneity approach - emerged. According to De Grauwe and Mongelli (2004), creating a monetary union may increase the degree of economic integration of member states through trade integration, financial integration, greater symmetry of shocks and greater flexibility of goods and labor markets. Endogeneity approach represents a dynamic improvement of early static theory of optimum currency areas. While the old theory compares the costs and benefits using selected indicators over a certain period of time, the new theory analyzes changes generated by the monetary union. While the former focuses on the issue of identifying countries ready to join a monetary union, the focus of the new approach is shifted towards the question of what is happening within the monetary union, and whether and how quickly are the countries that joined the monetary union moving towards an optimum currency area.

Optimum currency area is an optimal geographical region for an irrevocably fixed single or multiple currencies. A theory of optimum currency areas has identified criteria that a given country or group of countries must meet in order for the accession to the monetary union to bring them long-term net benefits.

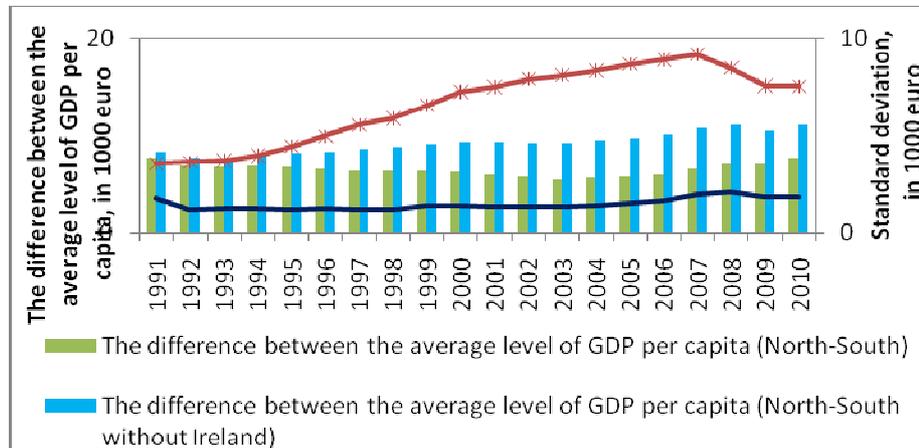
The most important ones (Mundell 1961, 664) relate to the lack of major shock asymmetry, high degree of labor mobility, wage flexibility as well as centralized fiscal policy. States that formed a monetary union in 1999 did not meet those requirements. Labor mobility was limited and language differences made it difficult to find employment in other countries. Wage and price flexibility was low and there were large differences in labor market institutions that affected wage and price movements, even in the event of identical shocks. The strong role of labor unions and very high degree of labor protection was present in certain countries, causing a decrease of the demand for new workers. Fiscal policy remained decentralized.

In practice, criteria suggested by the economic theory were modified. Five Maastricht criteria are different from those defined by Mundell in his analysis. They include convergence of inflation rates, interest rates, deficits, public debt and exchange rate stability. Since these requirements are not consistent with the ones defined by the theory of optimum currency areas – moreover, they weren't fully met prior to the creation of a monetary union - there was a reasonable doubt whether common currency is a good long-term solution for the member countries of the European Monetary Union. Therefore, at the moment of its creation, the EMU was not an optimum currency area. However, the view that monetary union environment would contribute to greater integration of the member states prevailed, primarily through the growth of intra-trade and greater financial integration.

Contrary to expectations, there was no convergence of economic performance of EMU members. Instead, a process of polarization (divergence) of economic results took place between the two groups of countries – the peripheral or Southern countries and the centre or the wealthier countries, mostly from Northern Europe. The EMU is not a homogenous area as a result of that process, and a common monetary policy doesn't fully suit it and can have varied effects on macroeconomic results of individual countries. The debt crisis has accentuated these weaknesses and shown that major changes in the Monetary Union design are needed, as well as that in its present form it doesn't have long term sustainability. To create and implement reform, one has to understand the differences between the two groups of countries that are at the core of the current crisis.

## **2. Convergences of Economic Performances in EMU 12**

One of the EMU's goals is to have a more even regional development. That means the convergence of development levels between member states. The most common indicator of the countries development level is the gross domestic product per capita. Had that process been realizing, standard deviations and coefficients of variation for GDP per capita would've been decreasing over time. Graf 1 shows the lack of the real convergence process:

**Figure 1. Real convergence, GDP per capita (in Euros, 2005=100)**

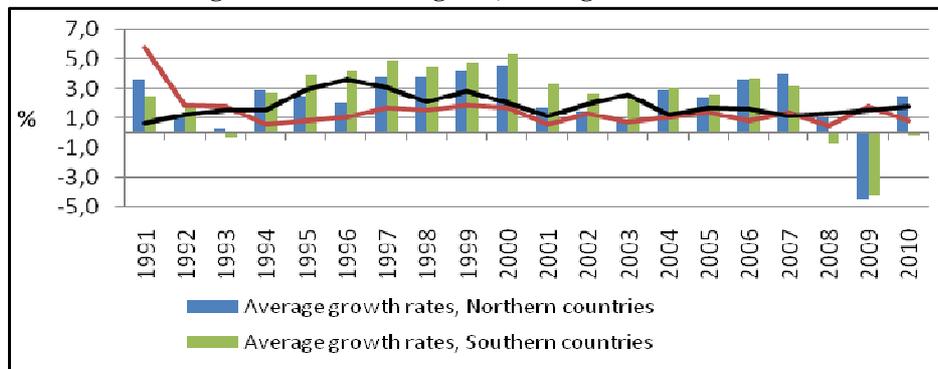
Source: Calculation based on Eurostat data, European Commission

Until 2003, the achieved development levels, measured by average GDP per capita<sup>1</sup>, were slowly converging. After 2003, the trend of continuous and significant increase in disparity started. For the Northern countries in the two decades, the standard deviations of average GDP per capita have mostly been steady, except during the crisis. This means that the convergence of development levels hasn't been achieved for this group of countries either, although the initial differences were smaller than for the Southern countries, the divergence did not occur. Contrary to the aforementioned, the Southern countries had larger differences in development levels that have been significantly increasing over time. Ireland, whose performance is closer to that of the Northern countries, is at the forefront of this group, while Portugal, whose GDP, on average, is half of Ireland's GDP, is at the rear. Ireland is the only country that started going through the convergence process upon joining the EMU. If we exclude Ireland from the calculation, we can see that the differences between North and South have been constantly increasing<sup>2</sup>. This means that during the last decade there was a divergence in development levels between these two groups of countries.

Until 2007 the Southern countries had, on average, higher growth rates. They were hit harder by the crisis, hence, the negative growth since 2008. Northern countries have previously formed sufficient capacity to exit the crisis faster, and only in 2009 had a decline in economic activity, and already in the following year managed a positive average growth rate.

<sup>1</sup>Average GDP per capita for Northern countries minus average GDP per capita for Southern countries

<sup>2</sup>Average GDP per capita for Northern countries minus average GDP per capita for Southern countries/out Ireland

**Figure 2 Real Convergence, Average Growth Rates**

Source: Calculation based on AMECO database, European Commission, Economic and Financial Affairs, [http://ec.europa.eu/economy\\_finance](http://ec.europa.eu/economy_finance) (Last Update 10 November 2011)

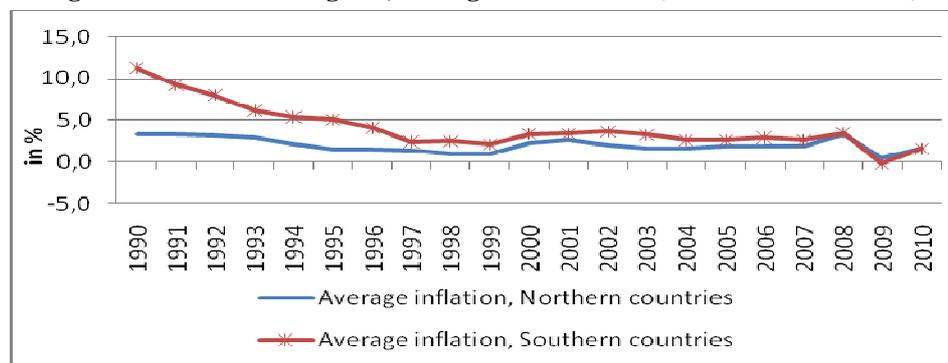
The value of standard deviation is lower in the Northern countries than in the Southern countries, i.e. they generate growth rates that, on average, differ less. (Coefficient of variation for the Northern countries in the observed period, is 5,5% and for the Southern countries it's 31,5% or 21,4% without Ireland). Since the start of the EMU, both groups of countries have shown mild convergence tendencies, but the crisis resulted in divergent movements across the Southern countries. Although the growth rate of the leading economies of the euro area were lower compared to the small open economies, the catching up process with the developed states did not happen, except in the case of the Ireland.

The observed countries have a single currency and a single monetary policy, so convergence of growth rates and highly connected economic cycles are needed to achieve satisfactory results. Countries with smaller growth rates will be better suited with a softer monetary policy that can stimulate borrowing, demand and economic activity with lower interest rates. A stimulating monetary policy isn't appropriate for countries with above average growth rates. It will stimulate demand and may lead to excessive fluctuation and inflation. Nominal interest rates in the EMU countries are at a similar level, therefore, higher inflation in individual countries shall result in lower real interest rates. This can initiate a new economic cycle and lead to divergence of EMU countries and increase in rates of inflation as well as cause the differences in its levels to last longer. Considering that the European Central Bank has high credibility, the pressures from the demand may not fully affect the prices, and a speculative bubble may start to appear in certain markets – most of all the real estate market and the securities market, as was the case with Spain and Ireland. Bursting of the bubbles may cause a large scale economic crisis. A more severe monetary policy, that will prevent excessive fluctuation, big hikes in demand and inflation, is better suited for countries with high growth rates. This kind of monetary policy may, however, have serious consequences for the countries

with low growth rates, because it can cause deflation. Of course, monetary policy on the EMU level cannot be tailored to individual countries, because there are no instruments to do that, so instead it's tailored to the Union average. This means that it won't fully be suited for the fast growing countries or the countries whose growth is beneath the Union average.

The main objective of the ECB is price stability, defined as the rate of inflation in the euro zone, below, but close to 2% over medium term. The ECB cannot focus on the rate of inflation in individual EMU member country because there are no instruments that could be adapted to variations in the rate of inflation among members. The ECB has been quite successful in the realization of its goal in the past, also achieving a high level of inflation rate convergence among the member states. However, inflation differentials in the euro zone are still persisting. In large currency areas, there are often differences in the inflation rate levels. They can be the result of the macroeconomic adjustment process to asymmetric shocks, which cannot be completed via the exchange rate when labor mobility is low. Such inflation differentials have a relatively short duration and do not cause major disruptions. However, the causes may be of different nature when they lead to serious divergent movements.

**Figure 3 Nominal Convergence, Average Inflation Rate (Consumer Price Index)**

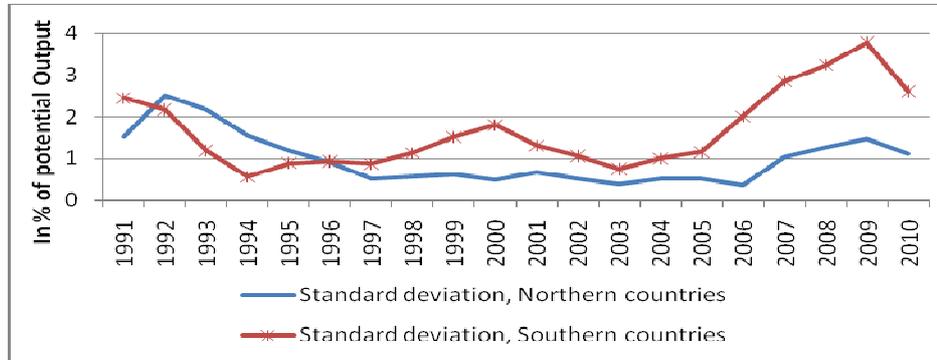


Source: Calculation based on the World Economic Outlook database from September 2011, International Monetary Fund

The difference in inflation rates among EMU member countries significantly decreased and was stabilized at a very low level after 1980. The largest decline was recorded in the period preceding the creation of the EMU as a result of the efforts made by the countries in order to satisfy the Maastricht criteria set. The European Central Bank has brought stability, independence and credibility previously unseen in certain member states. During the 1980s, many countries had problems with high inflation (countries such as Greece, Portugal, Italy, Ireland and Spain). On the other hand, the greatest monetary stability was seen in Germany and the countries "connected" to it-the Netherlands and

Austria. Almost all of the observed countries have successfully completed the process of disinflation in the 1990s. Greece had the most problems with inflation in this period, and to a considerably lesser extent Portugal, Spain and Italy. These differences have shrunk in the coming decade with the beginning of a common monetary policy (no country exceeded 4% inflation rate). On the other hand, one of the Maastricht criteria is that the inflation rate must be no more than 1.5 percentage points above the average rate of the three EU member states with the lowest inflation over the previous year. It is evident that this criterion is not respected even within the EMU, which causes problems in the formulation of a unique monetary policy. Greece had the least success in containing inflation, despite satisfying the Maastricht criteria before entering the EMU. Thereafter, the rate of inflation begins to rise and reaches a critical level in 2010. Spain was above the permitted level until the outbreak of the crisis which has restrained inflation. In the first half of this period, Ireland exceeded the allowed inflation rate, achieving stabilization immediately afterwards in 2004, but the crisis has affected the emergence of deflation. Germany's inflation rate was below average in the same period. Although there was a significant reduction of inflation during the observed period, when measured by the consumer price index, with the exception of the year 2009 inflation remained at a much higher level in Southern than in Northern countries. The rapid rise in unit labor costs (which is not accompanied by a corresponding increase in productivity) is an additional problem, making the South suffer from declining competitiveness comparing to the North. As a result, these countries have a large current account deficit on average, while the North realizes surpluses.

Real GDP growth rates and its standard deviations (coefficients of variation) represent the general, synthetic indicator of difference and compatibility between economic cycles of the relevant countries. Besides this, we need the information on whether the convergence of growth rates is the result of the long-term trend of these rates, or the actual convergence of economic cycles, or both. One of the main factors of success of the monetary union, according to the optimal currency area theory, is the correlation between the economic cycles. If economic cycles of EMU member states have high correlation, a similar response by the monetary policy will be needed in case of various shocks and the consequences of asymmetric shocks will start to decrease. Synchronization of economic cycles in Euro zone countries can be observed through changes in output gap that illustrate the cyclical component of the GDP. Output gap is the difference between the actual and the potential GDP. When GDP is increasing at a rate slower than the long-term trend, the output gap shall be bigger and negative. When the growth rate is increasing above the long term trend, output gap shall be positive. If the differences in the size of the output gap are getting larger between the observed countries, then they are at different stages of an economic cycle. Vice versa, if the differences are getting smaller, their economic cycles are converging.

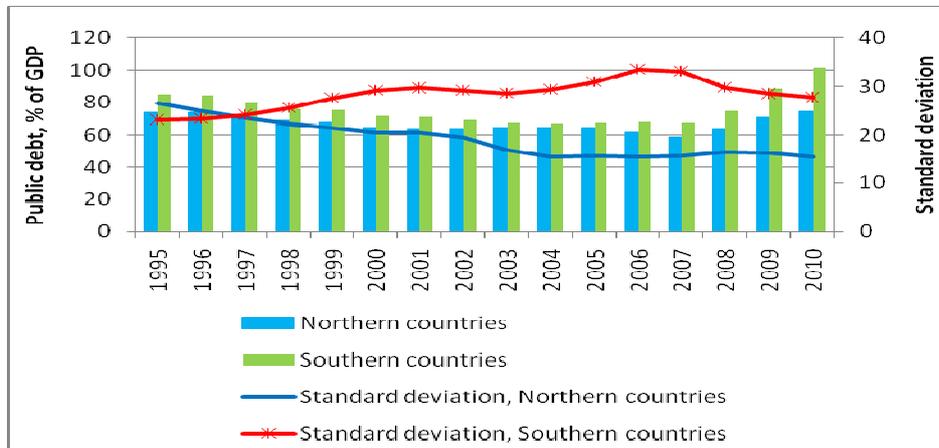
**Figure 4 Real Convergence, Output Gap Volatility Measured with Standard Deviation**

Source: Calculation based on World Economic Outlook database from September 2011, International Monetary Fund

Standard deviations of the output gap are smaller in the Northern countries, their economic cycles are more in synch and they had a convergence trend until 2007. Higher levels of standard deviation of the output gap and its strong growth in the Southern countries from 2003 mean that the differences in economic cycles are getting bigger. This is creating problems for the implementation of the ECB monetary policy which is being implemented in the entire EMU and seems less and less suited for the Southern countries.

Inadequate public finance policy can cause inflation which leads to real exchange rate appreciation and loss of competitiveness. Therefore, some authors argue that countries that have not previously achieved a high and sustainable level of fiscal convergence shouldn't even adopt the euro (Onorante 2006). Fiscal discipline of monetary union member states reduces externalities for monetary policy and lowers the tendency towards large government spending. Lower budget deficits will mean lower interest rates and lower inflation. Given the significant spillovers between member states fiscal policies through interest rate channel of the monetary transmission mechanism, if one country is pursuing expansionary fiscal policy, it will increase its interest spread and the general level of interest rates in the currency union. In addition, the ability of central banks to maintain the targeted level of inflation is lower in a monetary union than in the case of independent states. Reducing the budget deficit will mean a reduction of inflationary pressure and facilitate the achievement of monetary stability for the central bank.

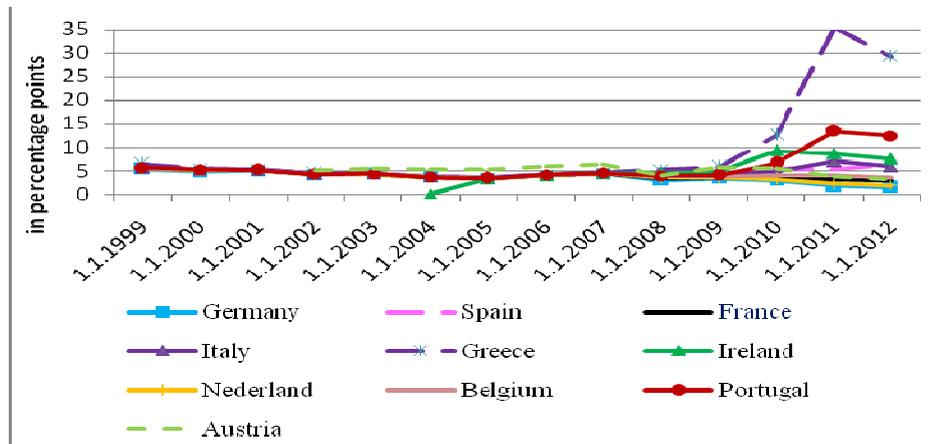
There is a noticeable divergence between two observed groups of EMU countries even when it comes to fiscal policy. Northern countries have a lower level of public debt on average and tend to converge while the South is characterized by higher public debt and the constant increase of disparity. The Southern countries, on average, have higher budget deficits than more developed members of the EMU.

**Figure 5 Fiscal Convergence, Public Debt, % of GDP**

Source: Calculations based on World Economic Outlook database from September 2011, International Monetary Fund

According to Arghyroy and Kontonikas (2011) before the crisis, markets didn't value macroeconomic factors and international risk appropriately, but these factors were now accentuated during the crisis. Since the beginning of the EMU, the highest degree of convergence has been achieved in the government bonds market where the spreads have significantly reduced and member states interest rates on ten-year bonds have converged. However, this convergence enabled the lack of fiscal discipline in Greece and Portugal, and influenced the creation of speculative bubbles in Spain and Ireland. Lacks of market discipline in these countries has led to the delay of necessary structural reforms and have caused the divergence of wage and productivity growth which has resulted in a significant loss of competitiveness and economic divergence between the North and South.

The debt crisis started in Greece, on November 2009 as a result of adverse expectations on the market, due to significant worsening of the country's macroeconomic performance. From there it spread to other EMU members, first of all Portugal, Ireland and Spain. According to Arghyroy and Kontonikas' hypothesis on trade convergence, the markets started valuing only the best case scenario – full convergence, even though macroeconomic performance of the Southern member states kept getting worse. The expected market pressure on undisciplined member states, as well as the effective monitoring of macroeconomic performances, was absent. The result was the pronounced economic divergence and change in market behaviour. Perception of risk started changing, the market started valuing macroeconomic performance and punishing the existing imbalances. That's why a major spread convergence isn't expected in the future, as long as there are significant macroeconomic imbalances within EMU.

**Figure 6 Sovereign Debt Spread**

Source: Reuters

Prior to joining the EMU, all the troubled countries have had high spreads on government bonds with the maturity of 10 years compared to Germany. That was the result of market expectations about inflation, and depreciation of exchange rates. The market therefore penalized irresponsible fiscal policy through higher premiums for inflation and currency risk.

### 3. Testing for Individual and Time Effects for Chosen Indices

Graphical representation of dispersion measures for the observed economic variables over time is suggesting the existence of a positive or negative trend. However, before making conclusions about the existence of convergence or divergence, statistical tests of time series convergence are required. They provide us with a higher level of confidence in the conclusion.

Statistical analysis of disparity in EMU countries was performed on 240 panel data (12 countries, 20 years). Not only will the data enable the analysis of structure and dynamics, but the analysis of changes in structure over time as well. The observed elements shall include 12 member states of the European Monetary Union (EMU 12) in the period from 1991 to 2010. The countries that joined the EMU later were not included, because of the small time series data. Due to the short time span, the convergence process cannot be analysed in these countries, i.e. it's impossible to draw valid conclusions from small time series data. 12 EMU countries shall include the existing members without Cyprus, Slovenia, Slovakia, Malta and Estonia. The following indicators were used: GDP per capita, GDP growth rates, output gap, consumer price index, nominal unit labour costs, current account balance, public debt, budget deficit and sovereign debt spread.

Disparities between the observed countries were previously analysed on selected indicators, using descriptive statistics. All indicators showed differences between the two groups of EMU member states – Northern and Southern, and their tendency to increase and change over time. Significance of these differences and changes over time shall be investigated heretofore, using relevant F tests for individual and time effects on panel data. Calculations were performed in SPSS software.

Information panel is a combination of data-sectional and time series data of a large number of observations of the same unit at different times. When there are insufficiently long time series of observations or number of units, the classic evaluating technique cannot be used. This is a way to avoid the problem of choosing a representative period. Besides, the greater variability and higher efficiency rating, carries the less likelihood of multicollinearity. The two-dimension structure enables simultaneous analysis of changes in the structure over time (individual and time effects). Test of individual effects is used for testing the significance of differences between individual averages (average of the selected indicators for the entire period 1991- or 1999-2010 by country). The test of time effects is used for testing differences between time averages (average of the selected indicators for all countries analyzed by years).

Disparities between the observed countries were previously analysed on selected indicators, using descriptive statistics. All indicators showed differences between the two groups of EMU member states – Northern and Southern, and their tendency to increase and change over time. Significance of these differences and changes over time shall be investigated heretofore, using relevant F tests for individual and time effects on panel data. Calculations were performed in SPSS software.

**Table 1 GDP at 2005 Market Prices Per Capita**

a. Results of testing for individual effects, Northern countries 1991-2010.

Method	df	Value	Probability
Anova F-statistic	(6;133)	122.9363	0

b. Results of testing for time effects, Northern countries 1991-2010.

Method	df	Value	Probability
Anova F-statistic	(19;120)	0.752957	0.7568

c. Results of testing for time effects, Southern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(19;80)	0.803343	0.6967

d. Results of testing for individual effects, Southern countries 1991-2010.

Method	df	Value	Probability
Anova F-statistic	(4;95)	64.02256	0

Source: Calculations based on Eurostat data, European Commission, [http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database) on 28.1.2012

Testing for individual effects means to test for the significance of differences between individual averages (average of a chosen indicator for the whole period from 1991-2010 for selected countries). Testing results (segment a.) show that there are statistically significant differences between the observed countries (Austria, Germany, Holland, France, Belgium, Finland and Luxembourg) in the observed period, on the GDP per capita level. This is indicated by the value of F statistic = 122.9363, which is significant at the 5% significance level (p-value = 0.0000 < 0.05). Testing for time effects means to test for differences between time averages (of a chosen indicator in observed countries by year). This test shows that the variation in averages for Northern countries (segment b.), year after year, has no statistical significance. Value of F statistic is insignificant at the 5% significance level: F=0.752957 (p-value = 0.7568 > 0.05). When considering the Southern countries, we can conclude that, based on the results of testing for time effects (segment c.), variation in averages, year after year, on the GDP per capita level, has no statistical significance. Value of F statistic is insignificant at the 1% significance level: F=0.803343 (p-value = 0.6967). Results of testing for individual effects (segment d) show that there are statistically significant differences in the period from 1991-2010 between the observed countries. Value of F statistic is significant at the 1% significance level: F=64.02256 (p-value = 0.0000).

**Table 2 Output Gap, Northern European countries**

a. Results of testing for time effects, Northern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(19;100)	9.837621	0

b. Results of testing for individual effects, Northern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(5;114)	1.972637	0.088

Source: Calculations based on the World Economic Outlook database, September 2011, International Monetary Fund

Results of testing for time effects show that the variation in averages of the Northern countries' output gap, year after year, is statistically significant (observed countries: Austria, Germany, Holland, France, Belgium, Finland). Value of F statistic is significant at the 5% significance level: F=9.837621 (p-value = 0.0000 < 0.05). Based on the results of testing for individual effects, we can conclude that in the period between 1991 and 2010 there are no statistically significant differences between the observed countries in output gap. This is indicated by the value of F statistic, which is insignificant at the 5% significance level: F=1.972637 (p-value = 0.0880 > 0.05).

Results of testing for time effects show that the variation in average inflation for Northern countries, year after year, is statistically significant (observed countries: Austria, Germany, Holland, France, Belgium, Finland and Luxembourg). Value of F statistic is significant at the 5% significance level:  $F=10.85404$  ( $p\text{-value} = 0.0000 < 0.05$ ). Based on testing for individual effects we can conclude that in the period from 1991-2010 there are no statistically significant differences between the observed countries with inflation. Value of the F statistic is insignificant at the 5% significance level:  $F=0.612874$  ( $p\text{-value} = 0.7197 > 0.05$ ). For Southern countries the results of testing for time effects show that the variation in inflation averages of all the Southern countries, year after year, is statistically significant. This is indicated by the value of F statistic, which is significant at the 1% significance level:  $F=3.729274$  ( $p\text{-value} = 0.0000$ ). Results of testing for individual effects show that in the period from 1991-2010 there are statistically significant differences between the observed countries with inflation. Value of F statistic ( $F=5.665977$ ) is significant at the 1% significance level: ( $p\text{-value} = 0.0004$ ).

**Table 3 Consumer Price Index**

a. Results of testing for time effects, Northern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(19;120)	10.85404	0

b. Results of testing for individual effects, Northern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(6;133)	0.612874	0.7197

c. Results of testing for time effects, Southern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(19;80)	3.729274	0

d. Results of testing for individual effects, Southern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(4;95)	5.665977	0.0004

*Source:* Calculations based on World Economic Outlook database, September 2011, International Monetary Fund

**Table 4 Public Debt as % GDP**

a. Results of testing for time effects, Northern &amp; Southern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(19;196)	0.626747	0.8833

b. Results of testing for individual effects, Northern &amp; Southern countries 1991-2010

Method	df	Value	Probability
Anova F-statistic	(10;205)	67.9376	0

*Source:* Calculations based on World Economic Outlook database, International Monetary Fund, September 2011

Results of testing for time effects show that the variation in average public debt for Northern & Southern countries, year after year, is not statistically significant (observed countries: Austria, Germany, Holland, France, Belgium, Finland, Spain, Portugal, Ireland, Greece and Italy). This is indicated by the value of F statistic ( $F=0.626747$ ), which is insignificant at the 5% significance level: ( $p\text{-value} = 0.8833 > 0.05$ ). Based on the results of testing for individual effects from 1991-2010 we can conclude that there are statistically significant differences between the observed countries with public debt. Value of the F statistic ( $F=67.93760$ ) is significant at the 5% significance level: ( $p\text{-value} = 0.0000 < 0.05$ ).

### **Conclusion**

The lack of a common fiscal policy is often considered as a major error in the design of the EMU. The inability to conduct an autonomous monetary policy and exchange rate policy limits the response of member states to various shocks, such as recessions. Not all countries will be affected in the same way, which is why the unemployment rate will vary. Common monetary policy will not suit everyone. It can further exacerbate the problem of high unemployment and low output in certain countries and the problem of excessive demand, overheating and inflation in others. The common currency may weaken market signals that would otherwise provide a timely warning of an excessive public debt.

Inflation differentials have been present since the beginning of the EMU and they represent permanent phenomena for some of the members, above others - Greece, Portugal and Spain. Constant real appreciation of the foreign exchange rate means the loss of competitiveness for these countries, which can cause, together with high domestic demand financed by loans – both private and public, a more permanent budget deficit and the balance of payments deficit. This is not a sustainable situation and these countries are facing long term financing problems. During the period when the market valued the country risks equally for all EMU members, they were borrowing with lower interest rates. However, the markets now focus on the budget deficits and public debt and require a higher premium due to the poorer credit capacity. This is how the risk of national currency devaluation, that existed before they joined the EMU, was replaced with the risk of the lowering of the national bonds credit rating. Empirical analysis doesn't point to a trend of decreasing inflation differentials in the future; on the contrary the financial crisis caused the divergence between EMU members. High level of heterogeneity of the labour market, financial markets and levels of inflation, shall decrease the effectiveness of a common monetary policy. Other reasons to worry about inflation differentials are the absence of an adequate adjustment mechanism (Mandel's mechanism), low migration and labour mobility, insufficient pay flexibility, absence of a strong single federal fiscal system as an amendment to the common monetary policy.

If there is the adjustment mechanism through labor and capital mobility, price and wage flexibility, the benefits will outbalance the costs of joining the monetary union (reduced transaction costs, eliminated currency risk) even if there is no centralized fiscal policy. However, the increase of economic imbalances between the North and South indicates that the adjustment mechanism within the EMU doesn't work. Labor mobility and price flexibility are low and only limited fiscal transfers exist. That was not enough to prevent the increase of permanent trade imbalances and the emergence of the sovereign debt crisis.

Both short-term and long-term measures are needed to solve the current crisis. Short-term measures are needed to solve the acute problem of illiquidity as well as to sustain the trust of the financial markets. In the long run, serious reforms are needed – structural reforms of countries that will increase their competitiveness, enable budget consolidation and high sustainable growth, as well as institutional reforms at the EMU level. Individual EMU members are responsible for resolving their long-term public debt problems. Southern countries have to implement a restrictive fiscal policy, increase their competitiveness and achieve higher growth rates. They should also lower the interest on sovereign debt. To increase competitiveness they will need an increase in productivity and a slower pay and price growth, in comparison to the Northern countries. Credible and consistent reform programs are necessary to restore the market trust and lower the interest on sovereign debt. Boost in competitiveness together with fiscal consolidation will enable the lowering of the current account deficit and thereby the disbalance within EMU.

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## PROCES KONVERGENCIJE U EMU 12

**Apstrakt:** Analiza fiskalne discipline i konvergencije u Evropskoj monetarnoj uniji važna je iz nekoliko razloga. Empirijske studije su potvrdile vezu između fiskalne politike i makroekonomskih performansi zemlje. Fatas i Mihov pokazuju da vlade koje koriste agresivnu fiskalnu politiku kreiraju značajnu makroekonomsku nestabilnost koja se ogleda u većoj volatilnosti autputa. Fiskalna konvergencija podstiče konvergenciju privrednih ciklusa jer eliminiše specifične fiskalne šokove. S obzirom da i kriterijumi konvergencije iz Mastroihta i Pakt za stabilnost i rast zahtevaju fiskalnu disciplinu pre ulaska u monetarnu uniju, njihov cilj je da približe zemlje koje uđu u EU optimalnom valutnom području. Kriterijumi konvergencije zahtevaju od budućih članica da vode sličnu ekonomsku politiku i podstiču balansiraniji rast i razvoj. Na taj način će fiskalna disciplina i jača korelacija privrednih ciklusa bolje pripremiti zemlje kandidate za zajedničku valutu. Fiskalna disciplina utiče i na finansijska tržišta. Razlike u nacionalnoj fiskalnoj politici mogu da uspore integraciju finansijskih tržišta jer različite fiskalne pozicije država mogu da znače različite premije za rizik na suvereni dug, zavisno od očekivanog budžetskog deficita i javnog duga.

**Ključne reči:** optimalno valutno područje, konvergencija, testiranje hipoteza panel podataka, test individualnih i vremenskih efekata.



## THE IMPACT OF NATIONAL CULTURE ON ORGANIZATIONAL LEARNING AND KNOWLEDGE MANAGEMENT

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**Abstract:** The paper studies the influence of national culture on organizations' preferences regarding selection amongst forms of organizational knowledge and character of organizational learning processes. Hypotheses are developed on the influences that the national cultures' values, such as individualism–collectivism and masculinity–femininity, have on preferences regarding the selection between explicit and tacit knowledge in an organization, as well as the influences on preferences regarding the selection among four types of organizational learning: socialization, internalization, externalization, or combination. Hypotheses are also developed on influences that individualism–collectivism and masculinity–femininity have on knowledge transfer between organizations from different national cultures.

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### Introduction

Influence of national culture on organizational learning and knowledge management has become an emerging subject of cross-cultural management research during recent years. The subject emerged for two reasons. First, the concept of organizational learning and knowledge management became an increasingly important topic in general management. This is augmented by the fact that knowledge management was proclaimed to be the only source of sustainable competitive advantage in contemporary post-industrial and knowledge-based economies. (Hammel, Prahalad, 1984). Investing in knowledge, information and intangible assets in general is becoming more important in practice than investing in tangible assets (Reinhardt et al., 2003).

On the other hand, the process of globalization has led business to be usually run in multicultural contexts. Due to this fact, knowledge about differences between national cultures is becoming increasingly important for successful organization management (Hofstede, 2002). These two processes combined result in a great interest for processes of creating and using knowledge in a multicultural context. Multinational companies and alliances as forms of interorganizational integration are particularly responsible for the popularity of this topic (Lervik, 2008; Muthusamy, White, 2005). The influence of national culture on organizational learning and knowledge management was first detected in multinational companies during their attempts to implement the head office's knowledge within the subsidiaries. It was then observed that various factors can stimulate or obstruct this process, and the difference between national cultures of the creators of organizational knowledge and national cultures of its users is among the most important ones. Similar problems also emerged within business alliances. In addition to knowledge transfer, it has been observed that national culture, through its values, also has an influence on preferences regarding types and forms of organizational knowledge, as well as regarding the nature of organizational learning processes. It has been discovered that different cultures have different approaches to the very process of creation of organizational knowledge and its usage. Hence, to this day, throughout the research of national cultures' influence on organizational learning and knowledge management, two large topics have been differentiated: 1. the influence of national culture on forms of organizational knowledge and on the organizational learning process; 2. the influence of national culture on knowledge transfer: creating, disseminating, absorbing, and using knowledge in a cross-cultural context.

This paper sets out to develop hypotheses on causality between, on the one hand, various dimensions of national culture, and, on the other, forms and types of organizational learning and knowledge. The paper is of exploratory nature and will result in generating hypotheses suitable for further empirical investigation. It is based on certain earlier ideas (Bhagat, McDevitt, McDevitt, 2009) about influences that some of Hofstede's dimensions of national cultures (Hofstede, 2001) have on forms and processes of creation of organizational knowledge (Nonaka, Toyama, Byosiere, 2003; Nonaka, 1991). Those ideas are further developed, deepened and articulated in order to create hypotheses on relations of certain characteristics of national cultures and certain forms and processes of creating organizational knowledge. The paper is structured as follows. First, the dimension of national cultures, as identified by Hofstede (Hofstede, 1980, 2001), will be introduced. Then, organizational learning and knowledge will be defined and its forms and processes of its creation will be presented as identified by Nonaka (Nonaka, Toyama, Byosiere, 2003; Nonaka, 1991). Finally, the hypotheses on correlation of given dimensions of national

culture with given types of organizational knowledge and organizational learning processes will be developed in the conclusion. The influence of dimensions of national culture on knowledge transfer in multicultural context will also be analyzed, and appropriate hypotheses will be developed.

### **Dimensions of National Cultures**

National culture is here understood as “...*mental programming: the pattern of thoughts, feelings and actions which every individual adopts in childhood and applies throughout the entire lifetime*” (Hofstede, 2001, 25). In order to deal with its influence on organizational learning and knowledge, we must identify the substantial components of national cultures that distinguish one from another. Those components are the dimensions of national cultures, usually subjected to research by the authors from the field of cross-cultural management. Dimensions of national culture form the basic assumptions and values that constitute the culture’s substance, define its specific nature and distinguish it from others. The framework for studying and understanding dimensions of national cultures, as well as their first classification, is provided by Kluckhohn and Strodtbeck (1961). According to their notion, the basic assumptions and values that comprise dimensions of national cultures are, in fact, the answers to fundamental questions that every society faces. There are, in fact, a limited number of basic issues that every community has to resolve if it strives to endure and function as a social group. For example, every social group has to resolve the issues of power and status in terms of their distribution within the group in a certain way. Moreover, every social group must solve the issue of individual-collective relation. Those are the fundamental issues relevant for every social group in any given period, without whose resolution the group cannot survive as a community. In other words, all societies in the world are, at any time, faced with a limited set of similar or identical questions and issues to resolve. On the other hand, the number of existing solutions to said issues is also limited. The problem of distribution of power can, for example, be solved through one of two basic modes: hierarchical and egalitarian. While the former model implies uneven distribution of power within the society, the latter implies a balanced one. The question of individual-collective relation is also answered through one of two fundamental modes: individualism and collectivism. The former implies predominance of individual interests over the collective while the latter implies the opposite. All the alternative solutions to the fundamental problems are always present in every society. However, all societies prefer some alternatives over others during certain periods; that is, advantage is sometimes given to some alternatives over the others. Preferred variants of solving fundamental questions societies face develop into dimensions of their national cultures. These dimensions create their national cultures and figure as a *diferentia specifica* in relation to other societies.

Several authors have identified the fundamental dimensions of national cultures (Schwartz, 1992; Trompenaars, 1993; Hall, Hall, 1990; Javidan et al., 2006). The most prominent among these dimensions of national cultures were defined in Gert Hofstede's famous research (Hofstede, 1980, 2001). They are the ones usually used when effects of national culture on management are researched, possibly because Hofstede had them quantified. From their description, it can clearly be seen that their essence lies in solving the fundamental questions of society. Hofstede identified and described four fundamental dimensions, according to which national cultures worldwide can be differentiated. These dimensions are bipolar; therefore, every national culture can be positioned within a continuum between two extremes of a dimension. Owing to this methodology, Hofstede was able to quantify the position of every national culture within each dimension. Every national culture is given an index regarding its position within each cultural dimension.

The dimensions of national culture constitute the basic values and assumptions shared by members of a national community about vital problems every society faces. Society resolves the questions of authority and social inequality by accepting a premise about power distance. The question of individual-collective relation is resolved in locating the national culture at a specific position on a continuum between two extremes: individualism–collectivism. Social implications of male and female find its reflection in the dimension of national culture called masculinity–femininity. Hence, in this dimension, every national culture assumes a position as a culture of either masculine or feminine predominant values. Finally, the manner in which a society reacts to uncertainties, changes, differences and conflicts is formulated as the level of its uncertainty avoidance, as a dimension of national culture.

Power distance indicates the level in which society accepts the fact that power found in institutions and organizations is distributed unequally (Hofstede, 2002, 2001). In other words, power distance outlines the level in which members of a society consider the uneven distribution of power as a common and expected fact, so in that society it is consequently possible for very powerful groups and individuals to coexist with individuals who have no power whatsoever. Power distance reveals the manner in which a society has solved the problem of distribution of power and prestige, varying between egalitarianism (small power distance) and high level of authoritarianism (large power distance). Power distance reveals not only the position of those in power but also of those forced to obedience. High power distance indicates that unequal distribution of power in a society and its organizations is considered normal and natural, and as something that should not or could not be changed, in both groups. Unequal distribution of power in the society is considered the only possible and natural state of affairs and a prerequisite for a functional

society and its organizations. Authoritarian mindset prevails in high power distance societies, so their level of authoritarianism is notably high.

Uncertainty avoidance indicates the level of endangerment felt by the members of a society in uncertain, unclear and variable conditions. Uncertainty avoidance signifies the manner in which society deals with fundamental issues of changes, uncertainty and the unknown. Two extreme answers can be given. Some societies treat changes, uncertainty and the unknown as a threat, and avoid these conditions whenever possible. Other societies embrace changes, uncertainties and the unknown as an opportunity. In national cultures with low uncertainty avoidance, the level of tolerance to uncertainty, changes, risks and ambiguity is relatively high. Differences are accepted and people's curiosity, along with their willingness to try something new, is relatively high. National cultures with high uncertainty avoidance do not like changes, new things, differences, risks and uncertainties. These cultures value stability, order, familiarity, repetition, simplicity. Therefore, formalization and standardization are preferred, as well as hierarchy, which are meant to ensure stability and order in the society.

Individualism–collectivism answers the fundamental question that every society must deal with: the individual–collective relation. The crucial difference between individualism and collectivism concerns placing of the responsibility for one's own destiny. Individualism considers every individual responsible for himself and his family. Conversely, collectivism – in a family, an organization and society in general alike – considers the collective responsible for its every individual. In collectivism, individuals believe they have the right to expect the collective to take care of them. In return, they owe complete loyalty to the collective and its leader. In individualism, an individual assumes himself/herself responsible for his/her own destiny, and does not see the collective as obliged to him/her. Individualist cultures base their identity on the individual, while collectivist cultures base theirs on the social system or the collective. Individualism implies loose social structure, within which every man cares for himself, and consequently, social ties are not very strong and families are often very small or nuclear. Collectivism is characterized by strong social structure with very intensive social relations, and it implies that individuals are expected to care not only about themselves, but about other members of the collective, too. In such cultures, families are commonly of the extended type.

Masculinity–femininity dimension of national culture reveals society's attitude toward doing and being. Cultures with prevailing masculinity value action, accomplishment, results, determination and aggressiveness. Since these values are often perceived as "masculine", cultures in which they dominate are called masculine national cultures. These are the "doing cultures" in which someone's value is measured by his/her ability to earn money and his material prosperity. Caring for others is not this culture's priority. Feminine national

cultures are those comprised of prevailing values such as relationships, quality of life, balance and harmony. Since these values are often perceived as “feminine”, cultures in which they dominate are called feminine national cultures. These cultures prefer harmonious relations and connections with natural and social environment.

### **Organizational Learning and Knowledge Management**

Organizational learning and knowledge management are related and connected, though not identical, concepts (Child, 2005). Both concern the same process, but with somewhat different approaches. In this sense, these two concepts constitute two representations of the same process or two sides of the same coin. Both are focused on the process of acquiring, dissemination and application of organizational knowledge. However, while the concept of organizational learning has behavioral and descriptive character, the concept of knowledge management has managerial and prescriptive character. Organizational learning is focused on discovering, analyzing and describing the process through which organizational knowledge is created and used. This process is considered as rather spontaneous. Special attention is paid to behavioral aspects of the process: motivations, actions and interactions of members of the organization as participants in the process. Knowledge management is focused on prescribing or modeling the process of creating, spreading and using knowledge in an organization. Special attention is paid to managerial actions required to enable, support or accelerate knowledge creation in an organization. The process is seen as planned and consciously led. Analysis of influences of national culture concerns both the organizational learning process and knowledge management, so these two terms will be used simultaneously.

Organizational learning and knowledge management result in changes in cognitive structures and in behavior of members of an organization, which enables an increase in organization’s capacity to adapt to its surrounding (McGill, Slocum, 1994). This means that the process of organizational learning has two basic components: cognitive and behavioral. Learning process implies changes in mental schemes, actions and behaviors of organization’s members. Through learning, people do not only modify their own knowledge, but they also change their behavior. Mere change of cognitive structures, which implies a change in organization’s members’ mindset, is not sufficient to conclude that organizational learning took place. For positive consequences concerning the organization to occur, it is necessary that changes in awareness induce changes in behavior.

Similar dichotomy exists regarding the nature of organizational learning and knowledge management process (Easterby-Smith, Araujo, 1999). One group of authors emphasizes its technical side: processing of information. These authors see organizational learning primarily as the process of gathering, processing,

memorizing, sharing and using information. Others stress social character of the organizational learning process. In contrast with individual learning, organizational learning always implies some sort of social interaction between members of the organization. But due to that very interaction, organizational learning is able to create knowledge that no individual member of the organization has.

The purpose of organizational learning and knowledge management is to extend the potential behavioral repertoire of organization's members as individuals and of the entire organization as a collective (Child, 2005). Organization thus develops capabilities it did not have before, particularly those that enable it to become more competitive in the market. Since learning a new behavior usually requires unlearning the previous ones, in some cases, instead of adding new modes of behavior, the existing ones are changed. This concept of organizational learning is similar to organizational routines perspective (Starbuck, Hedberg, 2003). In fact, organizational learning can be seen as the process of developing and applying new rules and routines in an organization. Acquiring new knowledge, or learning, improves the repertoire of routines available to the organization in its response to changes in the environment.

The overview of relevant researches indicates that the process of organizational learning and knowledge management has three basic stages: knowledge acquisition, dissemination and application (Zheng, Yang, McLean, 2010). Knowledge can be acquired from internal and external resources (Pawlowsky, Forslin, Reinhardt, 2003). Employees or members of an organization constitute resources of its internal knowledge; such knowledge can be either preexisting or new. Members of the organization have individual knowledge that can become a resource for organizational knowledge, but only if said knowledge is recognized, identified, articulated, systematized, formalized and disseminated through the organization. Organization's or its management's inability to recognize, articulate and disseminate, individual knowledge through the organization is an obstacle to transforming preexisting individual into organizational knowledge. Organization members' new knowledge concerns their creations, ideas and innovations made in processes or products. Barrier for activating this resource of organizational knowledge often lies in the members' insufficient motivation to innovate, which is a consequence of an inadequate reward system, management style or organizational culture. External knowledge resources can be very diverse and include the educational system, the market, the competition, the media, etc. Organization's absorptive capacity or its capacity to discover, adopt and implement external knowledge is a very important factor for activation of external resources (Volberda, Foss, Lyles, 2010). The second phase of organizational learning and knowledge management is stabilization and dissemination of knowledge. Knowledge stabilization is performed through processes of systematization, formalization and

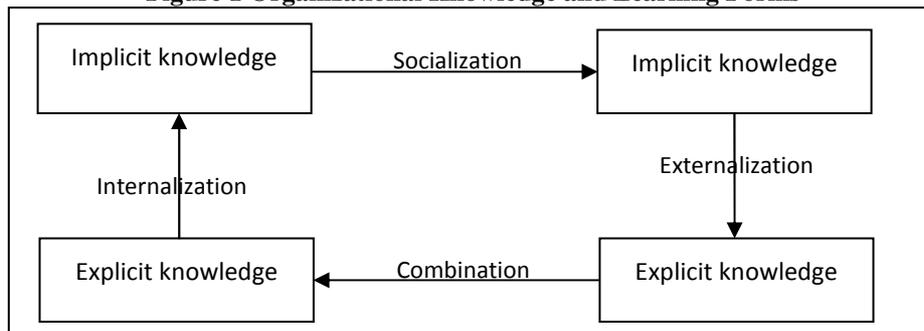
institutionalization of knowledge and its memorization. Knowledge can be enlarged during the process, since new knowledge can be obtained through combination and integration of the existing knowledge (Freiling, Fichtner, 2010). Diffusion is an important process for organizational learning and knowledge management, since organizational knowledge becomes relevant only if it is available either to all or to the majority of the organization's members. Knowledge is transformed from individual to organizational exactly through articulation and diffusion. The last phase in the process of organizational learning is implementation of knowledge in order to improve organizational processes and products. There is not much sense in having organizational knowledge without implementing it. Implementation or application of organizational knowledge is manifested through changed and improved behaviors of the organization's members, their decisions, actions or interactions. Increased level of ability to respond to the demands from the environment and increased competitive advantage should result from this change.

Two basic forms of knowledge are objective, open, tangible or explicit knowledge and subjective, hidden, implicit, intangible or tacit knowledge. Explicit knowledge is expressed in formal and systematic language and can be used in form of facts, scientific formulas, specifications, manuals and such. Explicit knowledge is context-free and as such can be easily transferred, memorized and transformed. Tacit knowledge is deeply personalized and hard to formalize. As Polanyi puts it: "We are able to know more than we are able to tell" (Nonaka, 1991). The difference is precisely in implicit knowledge, which contains intuition, guesses, ideas and knowledge not expressible but applicable. That is why this knowledge is deeply rooted in our activities, routines, ideas and values. Implicit knowledge always depends on the context in which it is created, and it is not easily transferred and memorized. Hidden knowledge contains both cognitive and technical elements. Technical elements of implicit knowledge include informal and elusive skills and know-how. Cognitive elements of implicit knowledge involve mental models that are specific for an individual and that enable him/her to understand the world in a certain way. From these models stem the skills that constitute the technical part of implicit knowledge. Articulation of implicit knowledge is, in fact, the crucial way of creating new knowledge in an organization.

According to Nonaka, the process of organizational learning is actually the process of transforming individual knowledge into organizational one. The basis for this process is in conversion of two main types of human knowledge, explicit and tacit, into one another (Nonaka, 1991). Since there are two kinds of knowledge in an organization, conversions from one type into another can result in four forms of knowledge creation: socialization, externalization, combination and internalization.

The first type of creating organizational knowledge is socialization, which implies the process of converting tacit knowledge into tacit knowledge. Through this process, the implicit, hidden or subjective knowledge is transferred from one member of an organization to another. The transfer of knowledge from master to apprentice constitutes a typical example. Very often, the master does not explain what he/she is doing to his/her apprentice; he/she does not transfer the knowledge explicitly, but through the process of social interaction, observation and imitation, apprentice absorbs his/her master's knowledge. Any sharing of experience within the process of social interaction is actually the process of transferring implicit knowledge from one individual to another. Therefore, the situation in which the management, in the course of the process of solving certain problems, discusses a market situation with the sales management constitutes an example of socialization. Socialization as form of organizational learning implies very close and intensive interactions between individuals in organizations.

**Figure 1 Organizational Knowledge and Learning Forms**



Source: Adapted from Nonaka I., Toyama R., Byosiere P. (2003)

A Theory of Knowledge Creation. In: M. Dierkes, A.A. Berthoin, J. Child, I. Nonaka, eds. *Handbook of Organizational Learning & Knowledge*, Oxford: Oxford University Press.

Externalization is conversion of tacit, subjective into objective, explicit knowledge. This way, the knowledge which lies in minds and hands of the individuals can be turned into a common good of the organization. The tacit knowledge is, then, being articulated through the externalization process, or, in other words, from internal, it becomes external. It is not always an easy process, because there are no guarantees that some master or a professional, having extensive tacit knowledge, will also have the will and capacity to articulate it and form it into explicit knowledge. Articulation requires abilities different from those required for learning, hence a top footballer often makes a bad coach, and a good scientist – a bad teacher. Models, metaphors and analogies are efficient means of articulating tacit knowledge. The process of externalization takes place when, for example, a group of experienced industrial designers using models, metaphors and analogies, through dialogue, writes a manual or a set of rules for successful industrial design.

Combination is a form of conversion of individual into organizational knowledge in which elements of explicit and objective knowledge integrate into wholes that are more developed, systematical and complex than their individual parts. Reconfiguration of preexistent knowledge along with its combination, sorting, categorization and systematization can create new knowledge. A form of combination of explicit knowledge is performed when a company's strategic plan is operationalized by making operational plans for particular divisions or sectors. Also, when a professor writes a textbook, he/she combines preexistent knowledge and thus creates new knowledge. After the process of combination, explicit knowledge usually becomes more widespread and more accessible to employees, as well as clearer, more systematic and more convenient to use.

Internalization is a form of knowledge conversion in which explicit knowledge becomes tacit by employees and managers applying the elements of explicitly formulated knowledge in their daily activities. The basic form of internalization is learning by doing. Through its practical application, employees and managers adopt explicit knowledge as their own and incorporate it into their own mental schemes and routines. That way, this knowledge gradually becomes a part of employees' implicit knowledge, and enters their subconscious. It must be emphasized that internalization can be performed not only by applying explicit knowledge in a real workplace situation, but also by employees' experiments and practices. Training and teaching of employees can provide context in which explicit knowledge is acquired and then transformed into tacit. Through this process, knowledge is enriched and expanded so that new tacit knowledge is being produced and, again, articulated as explicit, so the circle of knowledge and organizational learning conversion is completed.

### **Influence of National Culture on Preferences Regarding the Choice of Organizational Knowledge and Learning Type**

The basic premise of this paper is that national culture, through its assumptions and values, influences organization's preferences regarding selection of organizational knowledge types and organizational learning processes forms. Therefore, dimensions of national culture can influence organizations to prefer one of the two types of organizational knowledge – explicit or tacit. Also, national culture influences the preferences regarding selection of suitable forms of organizational learning: socialization, externalization, combination, internalization. The paper starts from Bhagat's and his associates' basic ideas which are further developed and articulated (Bhagat, McDevitt, McDevitt, 2009). According to Bhagat and his associates, dimensions of national culture that influence preferences regarding choice of organizational knowledge are: individualism–collectivism and masculinity–femininity (Bhagat, McDevitt, McDevitt, 2009).

Individualism implies loose social structure and a lower degree of social interactions. People highly appreciate independence and autonomy and consider themselves responsible for their own wellbeing. Individual identity is derived from personal qualities, values and competence, not from collective identity. Attitude towards the collective is rational, transactional and calculative, and people consider themselves independent from the collective they belong to. Individual results, achievements and rationality are valued, and information according to which the decisions are made is mostly context-free. In individualist culture, society is seen as a frame for unrestrained exchange of ideas, knowledge, emotions and goods between free individuals. This is why people in individualist cultures prefer creating and using context-free, formalized and public information that can be freely exchanged with other individuals who need it. For all these reasons, people in individualist cultures prefer explicit forms of knowledge. Tacit knowledge implies relations that are too close and interactions that are too intensive to be suitable for individualist values. Explicit knowledge is a form of knowledge suitable for individual creation, exchange and usage, since it does not involve the obligation of sharing mutual emotions, values and ideas of a collective. Individualist cultures prefer types of organizational learning that include explicit knowledge: externalization and combination. With combination, the existing explicit knowledge is being combined into new explicit knowledge, while externalization means that existent tacit knowledge is being transformed into explicit knowledge. Combination and externalization are preferred forms not only for creation, but for diffusion and absorption of organizational knowledge as well. Therefore, in organizations situated in individualist cultures, the dominant form of organizational knowledge is explicit knowledge, and dominant forms of creation, diffusion and absorption of such organizational knowledge are combination and externalization.

Collectivist cultures imply far closer and more intensive relations between social group members than individualist cultures. People base their identity on the collective they belong to, and feel highly loyal to the collective. In return, when they need support and protection, they expect it from their social group. Individual's attitude towards the collective is emotional, not rational. Harmony in a group, consensual decision-making and teamwork are valued. People are differentiated as in-group and out-group members. In that type of culture, people prefer creating and using organizational knowledge that involves close connections and intensive interactions between members of an organization – and that is precisely what tacit knowledge is like. In a collectivist culture, the identity of a social group, made by creating its specific culture, is very important. This identity constitutes a specific context, the only one in which knowledge can be created and used. That is the reason why organizational knowledge in collectivist cultures has to be context-dependent. By its context-dependence, tacit knowledge

emphasizes the importance of collective identity, so highly valued in collectivist cultures. This is what makes it a suitable and preferred form of knowledge in organizations functioning within collectivist cultures.

Organizations in collectivist cultures prefer forms of organizational learning that involve conversion of tacit knowledge: socialization and internalization. Tacit knowledge lies in routines, practices, work modes and other organizationally specific competences. It is therefore not a surprise that members of collectivist cultures prefer this type of knowledge, since routines, practices and work modes are developed within a collective and as a consequence of its social interactions. Implicit knowledge is transferred from one member of a collective to another by socialization exactly through close relationships that usually also imply the emotional component also. Tacit knowledge, transferred from one member of the collective to another, carries the collective identity as an important part of the context. That is why socialization actually consolidates the collective spirit and increases the sense of belonging to a social group. Socialization is therefore the most suitable form of creating organizational knowledge. Internalization implies internalizing of explicit knowledge; that is, providing it with a certain contextual meaning. Throughout the process of internalization, organizational knowledge ceases to be context-free and, as such, the property of any group or individual. Through a combination of contextual elements and knowledge, which occurs in the internalization process, knowledge becomes the property of a particular, specific social group. So, it becomes a part of its collective identity, and thereby strengthens the social cohesion of a group and its identity. That is the reason this form of learning is also acceptable for members of collectivist cultures. Therefore, tacit knowledge is preferred in collectivist cultures, along with socialization and internalization as forms of creating, diffusing and absorbing of organizational knowledge.

Based on the described influences of individualism–collectivism, as a dimension of national culture, on forms of organizational knowledge and organizational learning, we may postulate the following two hypotheses:

*H<sub>1</sub>: In individualist cultures, the preferred form of organizational knowledge is explicit knowledge, and the preferred forms of organizational learning are externalization and combination.*

*H<sub>2</sub>: In collectivist cultures, the preferred form of organizational learning is tacit knowledge, and the preferred forms of organizational learning are socialization and internalization.*

Masculinity in national culture implies determination, aggressiveness, promptitude, force and efficiency. Doing, success, power, control, achievement and gaining of material goods are highly appreciated. In organizations belonging to masculine cultures, people are task-oriented and prefer accomplishing those tasks through work or within formal organizational component, and not within

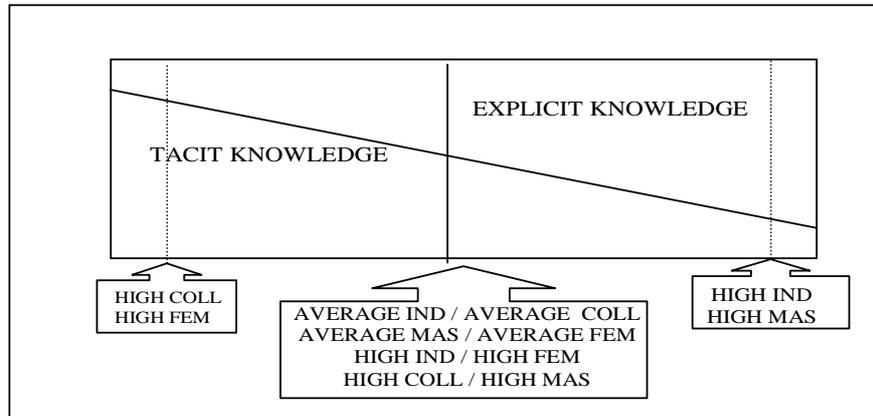
social and informal component. In national cultures with masculine values, people therefore prefer explicit knowledge. This type of knowledge is formalized, not limited by context and it is therefore suitable for use in work or, in other words, within formal organizational component. Since they are task-oriented, members of masculine cultures highly appreciate knowledge that helps them accomplish their goals within business organizational component. They are not very interested in the social component of an organization, and do not value context-dependent knowledge - and that is the way implicit knowledge is. Masculine cultures also favor the forms of organizational learning that imply conversion of explicit knowledge: externalization and combination.

Contrary to masculine cultures, national cultures with feminine values highly value relationships, harmony and balance. In those cultures, success is measured by acceptance by a collective and by good relations between members of a society, and not by material prosperity. Members of feminine cultures are focused on maintaining the balance between private life and career, on harmony within the collective and sense of content among members of an organization. They are focused on people, not on tasks. Therefore, people in organizations from feminine cultures tend to accomplish their goals and tasks by operating within social and informal organizational component. That is exactly why, in feminine cultures, members of an organization will prefer tacit knowledge. This knowledge is deeply rooted in context and cannot be used without joining a social group and accepting its values. This suits feminine cultures in which success is evaluated by contextually predetermined criteria. Also, in feminine cultures, members of organizations prefer forms of organizational learning that involve conversion of tacit knowledge: socialization and internalization. Socialization as a form of organizational learning implies developing of close connections of members in a collective, which is in accordance with efforts of people in feminine cultures to achieve harmony. Internalization, on the other hand, suits feminine cultures since knowledge, as the basis of harmonious relations in a collective, is created through that process. Based on the described influences of masculinity – femininity dimension of national culture on forms of organizational knowledge and organizational learning, we can make two hypotheses:

*H<sub>3</sub>: In cultures with masculine values, the preferred form of organizational knowledge is explicit knowledge, and the preferred forms of organizational learning are externalization and combination.*

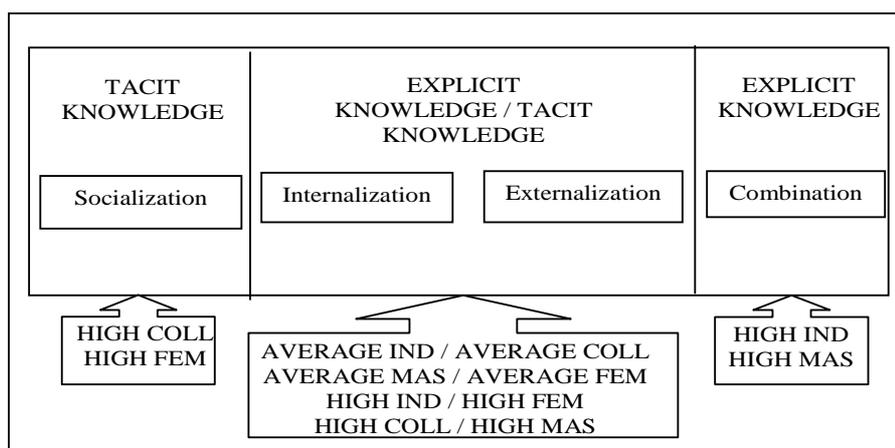
*H<sub>4</sub>: In cultures with feminine values, the preferred form of organizational knowledge is tacit knowledge, and the preferred forms of organizational learning are socialization and internalization.*

Hypotheses on influences of dimensions of national cultures on forms of organizational knowledge formulated above can be represented by the following diagram:

**Figure 2 Influence of National Culture on Forms of Organizational Knowledge**

From the description of influences of individual–collective and masculine–feminine values on forms of organizational knowledge shown in the figure above, it can be concluded that explicit knowledge will be the preferred form of organizational knowledge in cultures with a high level of individualism and the presence of masculine values. It is also clear that tacit knowledge will be preferred form of organizational knowledge in cultures with a high level of collectivism and the presence of feminine values. Finally, in cultures with medium level of individualism or collectivism, as well as in cultures which combine individualism with feminine values and collectivism with masculine values, explicit and tacit knowledge are equally preferred.

Based on the previously set hypotheses on the relation between national culture and forms of organizational learning, we can make the following diagram:

**Figure 3 Influence of National Culture on Forms of Organizational Learning**

From the description of influences of individual–collective and masculine–feminine values on forms of organizational knowledge presented in the figure above, it can be concluded that socialization will be the preferred form of organizational learning in cultures with a high level of collectivism and presence of feminine values. We can also conclude that combination will be the preferred form of organizational learning in cultures with a high level of individualism and presence of masculine values. Finally, in cultures with medium levels of individualism and collectivism, such as in cultures which combine individualism with femininity and collectivism with masculinity, the preferred forms of organizational learning will be internalization and externalization.

### **Influence of National Culture on Inter-Organizational Knowledge Transfer**

The research of knowledge transfer, another major subject that concerns influence of national culture on organizational learning and knowledge management, was started because of problems of multinational companies and business alliances (Lervik, 2008; Muthusamy, White, 2005). In multinational companies, knowledge transfer is always present to some extent, and usually flows in the direction from the head office to its subsidiaries in other countries. Since subsidiaries of multinational companies are by definition situated in other countries and in different cultures, the following question arises: “Can differences between the national culture originating the knowledge and the national culture adopting and using said knowledge obstruct or stimulate its transfer?” Subsidiaries are often caught “between a rock and a hard place”. Head office is pressuring subsidiaries to implement methods and practices that had been created by it and then imposed as a standard for the entire company, and on the other hand, subsidiaries are under pressure from the side of the local context to apply methods and practices common to the local cultural and institutional context. So, for multinational companies, the following question always arises: “To what extent can practices developed from organizational knowledge of the head office, and transferred to subsidiaries, be forced upon them, and to what extent can subsidiaries be allowed to ground their practices in local knowledge created in the local context?” Naturally, there are numerous other factors that influence knowledge transfer, such as institutional, technological and traditional (Lervik, 2008). However, national culture has emerged as a particularly important factor, not only for the transferring process itself, but also for recipient organization’s ability to adopt and use the knowledge. On the other hand, there are business alliances, an inter-organizational form of connecting several independent companies, in which knowledge transfer is also usually practiced. In fact, the only – or, at least, the most important – reason for an alliance sometimes lies in organizational

learning and knowledge transfer themselves. The same problems of creating and using knowledge in cross-cultural context can equally be found in alliances and multinational companies, but in alliances they are even more complicated, since the companies are independent.

Although the research on influence of national culture on knowledge transfer can be divided into four perspectives (Lervik, 2008; Almeida, Grant, Phene, 2002), here we shall focus on those that treat national cultures of knowledge source and knowledge receiver as external factors influencing motivation and ability or capacity to provide and receive knowledge. According to this perspective, a national culture can increase the chances of a successful knowledge transfer only if dimensions of giving and receiving cultures match. The reason lies in the fact that knowledge is never free of meaning and it always contains value orientations. Any information transferred from one organization and country to another has a value connotation. When these connotations within objective information are compatible or correspond to one another, giving and receiving of knowledge becomes more efficient. When they differ, knowledge transfer is more complicated and less efficient.

Building arguments on previously developed hypotheses on influences of individualism–collectivism and masculine–feminine values concerning forms of organizational knowledge and organizational learning, we can now develop the hypotheses on influences of those dimensions of national culture on knowledge transfer. We may assume that knowledge transfer would be facilitated if national cultures of knowledge provider and its receiver corresponded in these two dimensions. If both cultures are individualist and masculine, both will prefer explicit form of knowledge and externalization and combination as forms of organizational learning. In that case, the organization that creates and provides knowledge tends to transfer it in a form in which it has created it and believes it to be the most effective – explicit knowledge. It tends to transfer it in a culturally acceptable way for a receiving organization, and through combination and externalization. Therefore, organization will then shape the knowledge in models, formulas, documented studies, patents, guidelines, standards and other forms of formalized knowledge. Organizations in individualist and masculine cultures will try to transfer such shaped knowledge through formalized methods, too. If the other organization is set in an individualist and masculine culture, it will prefer to receive knowledge from the providing organization in an explicit form and through combination and externalization. Due to provider's and receiver's corresponding preferences regarding forms of knowledge and types of organizational learning, knowledge transfer between two organizations in individualist and masculine cultures will be efficient. Thus we may hypothesize:

*H<sub>5</sub>: When both organizations, the knowledge provider and the knowledge receiver are situated in individualist and masculine cultures, knowledge transfer will be facilitated and performed predominantly by transfer of explicit knowledge through the processes of externalization and combination.*

Situation is similar with organizations in collectivist and feminine national cultures. In such cases, the organization providing knowledge prefers tacit form of knowledge. It creates the knowledge in tacit form and is accordingly able to transfer only that form of knowledge. Tacit form of knowledge implies that it is developed and found in practices and routines, in organizational culture, tradition and “that’s how we do things around here” syndrome. Little of that knowledge is usually formalized and published. Organizations providing knowledge thus prefer socialization and internalization as forms of organizational learning or knowledge transfer. Organizations providing knowledge tend to transfer it in tacit form, and through intensive contacts, cooperation, discussions and mutual understanding. Organizations that receive the knowledge, likewise situated in collectivist and feminine cultures, also prefer receiving of knowledge in tacit form. Managers and employees of these organizations consider tacit knowledge the most important, and are interested mostly in absorbing and using that sort of knowledge. The preferred forms of learning in these types of organizations are socialization and internalization. Knowledge is most efficiently absorbed through cooperation, by working on joint projects, building trust and with everyday contacts. Since organizations that create and provide knowledge, also coming from a collectivist and femininity culture, offer knowledge in tacit form and through socialization and internalization, organizations that are receiving that knowledge will be very efficient in its absorbing. Therefore, when both organizations are situated in collectivist and feminine cultures, knowledge transfer will be efficient. Based on these findings, we can formulate the following hypothesis:

*H<sub>6</sub>: When both organizations, the knowledge provider and the knowledge receiver are situated in collectivist and feminine cultures, knowledge transfer will be facilitated and performed predominantly by transfer of tacit knowledge through the processes of socialization and internalization.*

Knowledge transfer is difficult and inefficient when the organization providing knowledge and the organization receiving it are from different national cultures. When the organization that is creating and providing knowledge comes from an individualist and masculine, and the organization receiving it comes from a collectivist and feminine culture, problems in knowledge transfer can be expected. The organization creating and providing knowledge will tend to create and transfer it in form of explicit knowledge. On the other hand, the organization receiving the knowledge will appreciate tacit knowledge more and will prefer to absorb it in such form. The organization

providing knowledge will tend to transfer it through articulation and combination, while organization receiving it will want to adopt it through the processes of socialization and internalization. This will undoubtedly cause problems, misunderstandings and failures in both transfer and absorption of knowledge. The same thing, only reversed, takes place when the organization that creates and provides knowledge comes from a collectivist and feminine culture and the organization that receives it comes from a masculine and individualist culture. In that case, the organization that creates knowledge usually does it in tacit form and tends to transfer it as such, while organizations receiving and absorbing it expect explicit knowledge. Organizations that provide knowledge transfer the knowledge through socialization and internalization, while organizations that receive the knowledge prefer it to be the result of externalization and combination as methods of organizational learning. Again, as in the case when the organization providing knowledge comes from collectivist and feminine culture, and organization receiving it comes from individualist and masculine culture, transfer of knowledge will be inefficient. Therefore, we can formulate the following hypothesis:

*H<sub>7</sub>: When one organization is situated in an individualist and masculine culture and the other in a collectivist and feminine culture, knowledge transfer will be difficult due to different preferences between the participating organizations regarding forms of knowledge and processes of organizational learning.*

The described situations in the process of knowledge transfer may be summarized as in following table:

**Table 1 Influence of Individualism–Collectivism and Masculine–Feminine Values in National Culture on Organizational Knowledge Transfer**

Culture of organization providing knowledge Culture of organization receiving knowledge	Individualism, masculine values	Collectivism, feminine values
Individualism, masculine values	Creating, providing and absorbing explicit knowledge through articulation and combination	Creating, providing and absorbing tacit knowledge through socialization and internalization / absorbing explicit knowledge through articulation and combination
Collectivism, feminine values	Creating and providing explicit knowledge through articulation and combination / absorbing tacit knowledge through socialization and internalization	Creating, providing and absorbing tacit knowledge through socialization and internalization

## **Conclusions and Implications for Further Research**

National culture is one of the major factors that influence organizations' preferences in terms of choices between forms of organizational knowledge and methods of its creation. It is also a very important factor for determining the probability of successful knowledge transfer between organizations in a multicultural context. This means that, in different national cultures, organizations will prefer different forms of organizational knowledge and processes of organizational learning. If their preferences regarding forms of organizational knowledge and the nature of the organizational learning process match, knowledge transfer between the organizations will be facilitated and its success will be more probable. If, however, their preferences toward the types of organizational knowledge and the nature of the organizational learning process differ, knowledge transfer will encounter difficulties and will have less chance of success.

Dimensions of national cultures that are particularly relevant for organizational learning and knowledge are those of individualism – collectivism and masculinity – femininity. These dimensions determine the preferences regarding selection between explicit and tacit knowledge as the dominant form of organizational knowledge. These dimensions also determine the preferences regarding types of organizational learning, between externalization and combination on one side, and socialization and internalization on the other. Studies have shown that it is reasonable to assume that individualism and masculine values within national culture imply preference in favor of explicit knowledge and externalization and combination as forms of organizational learning. Collectivism and feminine values in national culture imply preference toward tacit knowledge along with socialization and internalization as forms of organizational learning. Knowledge transfer between organizations in national cultures with individualist and masculine values, as well as between organizations in national cultures with collectivist and feminine values, will be facilitated and efficient. Knowledge transfer between an organization from an individualist and masculine national culture and an organization from a collectivist and feminine national culture will be difficult and inefficient.

Hypotheses developed in this paper have significant implications in both theory and practice. Theoretical implications concern the need of further empirical research, so that given hypotheses on relations between national culture and organizational learning and knowledge can be verified or rejected. Moreover, it is necessary to examine the role of other dimensions of national cultures in shaping preferences in organizational learning and knowledge. That equally refers to other two dimensions identified by Hofstede (2000) – power distance and uncertainty avoidance, as well as to cultural dimensions identified by other authors (Schwartz, 1992; Trompenaars, 1994; Hall, Hall, 1990). Also, this study

shows it would be worth the effort to examine the influence of national culture on other forms of organizational learning and knowledge (Argyris, Schon, 1978).

Practical implications of this paper are twofold. Firstly, they concern the managers' need to customize policies and practices of organizational learning in accordance with the national culture in which they are located. Secondly, it is necessary for managers to approach knowledge transfer with more attention and care when transfer is performed between organizations operating in completely different national cultures.

Limitations of this paper are significant. The first and biggest limitation lies in its exploratory character. This paper is an articulation and conceptualization of causal relations between dimensions of national cultures and forms of organizational knowledge and learning. Absence of empirical verification of hypotheses developed here prevents further generalizations of important conclusions that we made in this study. This paper's limitation also lies in the fact that it explores only two dimensions of national cultures in terms of one of several classifications of these dimensions, whereas other classifications, along with dimensions of national cultures they recognize, are not included. Also, the study included only one classification of forms of organizational learning and knowledge, while it neglected other classifications that can be found in literature. (Nevis, Di Bella, Gould, 1995). Finally, a limitation of the paper also lies in the fact that it does not include an analysis of a possible moderating effect that factors such as institutional context have on the relation between national culture and organizational learning (Lervik, 2008).

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## **UTICAJ NACIONALNE KULTURE NA ORGANIZACIONO UČENJE I UPRAVLJANJE ZNANJEM**

**Apstrakt:** U radu se istražuje uticaj nacionalne kulture na preferencije organizacija u pogledu izbora oblika organizacionog znanja i karaktera procesa organizacionog učenja. Razvijaju se hipoteze o uticaju vrednosti individualizma – kolektivizma i „muških“ – „ženskih“ vrednosti u nacionalnoj kulturi na preferencije u pogledu izbora između eksplicitnog i implicitnog znanja u organizaciji, kao i na preferencije u pogledu izbora između četiri vrste organizacionog učenja: socijalizacije, internalizacije, eksternalizacije i kombinacije. Takođe, razvijaju se hipoteze o uticaju individualizma – kolektivizma i „muških“ – „ženskih“ vrednosti na transfer znanja između organizacija u različitim nacionalnim kulturama.

**Ključne reči:** nacionalna kultura, organizaciono učenje, upravljanje znanjem



## CHALLENGES OF THE INTERNATIONAL BUSINESS COMMUNICATION AND IMPLICATION FOR HUMAN RESOURCE MANAGEMENT FUNCTION

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**Abstract:** This paper deals with the challenges of the international business communication arising from the fact that this process often requires the use of a second language, and because the participants in this process may have different styles of verbal and nonverbal communication. Different styles of communication of business partners have their basis primarily in various cultures to which they belong. These differences, however, can significantly impede the process of communication, and even jeopardize effective decision-making. Knowing that fact, this paper suggests that the employees included in this process should possess the specific form of competence – intercultural communication competence. This form of competency reflects the ability to communicate effectively regardless of linguistic and cultural differences. Necessity that the employees included in international business possess cross-cultural communication competencies at the same time imposes a function of human resource management specific tasks. First, in order to make an adequate choice of the employees who will be included in international business activities the proper criteria for their selection should be defined, and second, in the case of need the preparation, i.e. training should be organized in order to increase the present level of employees' cross-cultural communication competencies.

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**Keywords:** international business communication, intercultural communication competence, selection, training, human resource management function.

## 1. Introduction

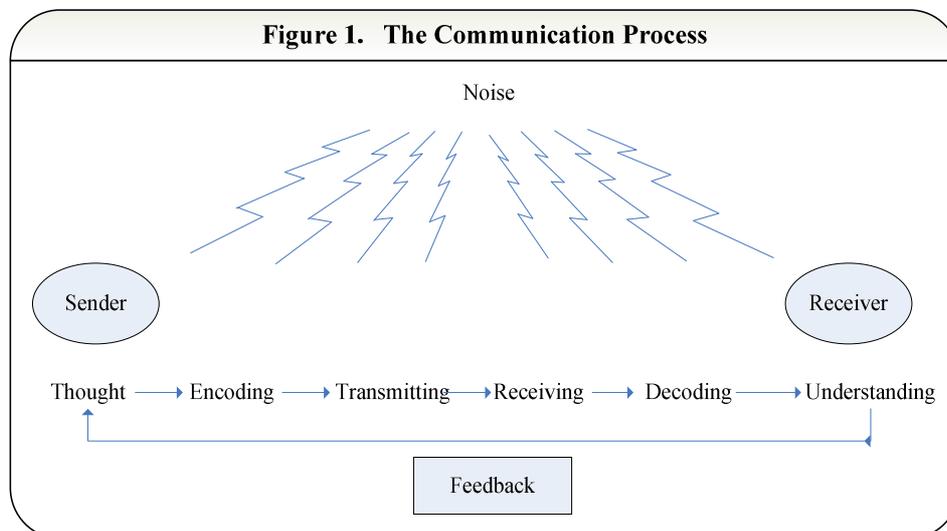
Involving organizations at the international business scene, except the fact that this situation generates the opportunity to earn significant returns from access to cheaper raw materials, cheaper labor, tax incentives, expansion of sales markets etc., generates many challenges. These challenges are connected to the fact that by turning out to the international market organization's representatives meet with business partners who come from different economic, legal and social environments which may cause different way of thinking and pattern of behavior. However, one of the key challenges of the international business is related to the very *communication* with foreign business partners. This challenge arises not only because of the need that in this situation one has to use non-native language, but also because of different cultural backgrounds the business partners come. Belonging to different cultures can cause different styles of verbal or nonverbal communication that can be interpreted differently by the members of the communication process. Consequently, this situation can slow down the process of making business decisions and, finally, negatively affects the implementation of international labor tasks. It is therefore important that employees who are engaged in these activities of the enterprise possess specific form of competencies which is in literature called *intercultural communication competence*.

The importance of having intercultural communication competence as one of the key prerequisites for the successful realization of international assignments, at the same time creates for the human resource management function a requirement that in order to adequately select the representatives of organization, formulates appropriate selection criteria. In addition, if it's necessary, this function has to organize adequate preparation, i.e. training for the employees in order to develop this form of competencies. One of the approaches which attract more and more attention is the approach that is based on the development of the employees' *cultural intelligence*.

Having this in mind, the goal of this paper firstly is to point out the key challenges of international business communication generated by the need to use a second language, as well as by the diversity of communication styles of the participants in this process. In addition, the aim of this paper is to emphasize the importance of proper selection and preparation of employees as important preconditions of effective communication with foreign business partners and successful implementation of international assignments. The initial assumption is that the selection of adequate staff and developing their intercultural communication competence can enhance international business communication. In terms of methodology, the authors of the study will try, based on theoretical sources and experience the world's best practice, to consider such object and purpose of the paper and prove the assumption from which they started in this research.

## 2. The Challenges of International Business Communication

Communication is commonly defined as a process in which thoughts and ideas are transferred from one person to another (Francis, Gold 2005). As known, this process starts when sender expresses his/her thoughts in the form that he/she considers that the recipient will properly understand. When a message is transformed into the desired format (coding), it transmits from the sender to the recipient in a variety of ways: by voice, e-mail, memos and the like. After that, recipient decodes the message and interprets the meaning of the symbols which sender used to express his/her thoughts. The basic assumption that the information transmitted is properly understood is that the sender and recipient have a common grounding (Clark, Brennan 1991). This grounding can form various elements, such as education, experience, background, values, attitudes etc. However, in the process of transferring information can be deformed under the influence of various factors. They are in the literature generally referred to as *noise* which can be caused by different sources: different frames of observation, giving a different meaning to the words in the message, the delay of information, beautification and tailoring of information, loss of confidence in sender, etc. (Simic, 2010), but also the real noise in the environment, as well as the technological problems (Francesco, Gold, 2005). Described communication process is shown in Figure 1.



Source: Francesco, M. A. and A. G. Gold (2005) *International Organizational Behavior*, New Jersey: Perason Pretince Hall, p. 70

When we speak about *international* business communication it is, naturally, the communication that takes place between members of different countries. As they usually belong to different cultures, this type of communication in

literature commonly is called intercultural communication. Due to the fact that the participants in this process belong to different cultures, it is possible that the message the sender has sent (verbal or nonverbal) is decoded incorrectly, or distorted or misinterpreted. This can lead to various misunderstandings between participants in this process, which makes this form of communication far more complex than communication between members of the same country.

In international business communication except the mentioned problem may arise many other problems. First of all, a very serious problem can create a second language used by one or both parties in the communication process. Thus, the use of a second language may impede proper coding messages by sender or create problems in decoding the message by the recipient, or create problems in sending feedback.

### ***2.1. The Use of Language in International Business Communication***

As it has been pointed out, one of the challenges in international business communication is using a second language in communication. It is estimated that worldwide there are between 5,000 and 7,000 different languages (Gibbs, 2002) although there are opinions that this number is about 10,000 (Thomas, 2008). Language diversity imposes an important topic in cross-cultural communication, and that is finding a common language for communication. That means that at least one participant in this process will be forced to use nonnative language.

Experience tells us that the English language is a very common option in international business communication. However, because the English language has many forms, individuals who are involved in international business communication must be prepared for forms that may deviate from standard English (British) language.

Using another, non-native language in international business communication may for the participants in this process create other implications (Thomas, 2008):

- *first*, the use of another language creates cognitive effort. The fact is that this kind of communication requires a person using another language much more effort, and its long-term use can be exhausting;
- *second*, speaking fluent second language can create belief that a person is very competent in other areas too, which may not be the case;
- *third*, a person who in business communication speaks native language can on the lower linguistic competence of the respondent replied by simplifying own terms. This, on the one hand can improve the communication between the participants by reducing the unnecessary

content, but on the other, simplification of expressions can be characterized as ingratiating, which may be negatively assessed.

Problems with linguistic nature have another dimension. Because of the language differences, companies which put their products on the international market must take into account whether the name of their product or the entire brand is acceptable in other countries. In this sense, the example of the *Chevrolet* is very illustrative since this company in Puerto Rico faced with very poor sale of the car model called "Nova" because the terms "no va" in the local language means "does not go" (Ricks, 1983).

## ***2.2. Styles of Verbal and Nonverbal Communication Caused by Cultural Differences***

The challenges of international business communication can be attributed to the different styles of verbal communication, too. These differences have their main base in different cultures from which the participants in this process come from, but the much greater influence on this process has the national culture than, for example, the organizational culture. Hofstede with co-authors (1990) explains that in a way that people enter the organization only after their nationally based values, attitudes and beliefs have been developed, and organizational norms of behavior and values are subsequently learned through socialization in the workplace (Hofstede et al. 1990). Therefore, for the way of thinking, behavior, and thus the communication in international context of critical influence is primarily national culture.

Although many authors give their analysis of the basic dimensions by which national cultures differ, in the literature when it comes to this topic is almost unavoidable Hofstede's classification of national culture dimensions. Basic dimensions on which national cultures differ according to this author are: individualism/collectivism, power distance, risk avoidance, male vs. feminine values (Hofstede, 1980), and later added a fifth dimension - long term vs. short-term orientation (Hofstede, 1991), and the sixth - indulgence vs. restraint (Hofstede et al. 2010). Knowledge of these dimensions creates the basis for the behavior, way of thinking and communication of foreign business partners to be better understand and thus to avoid many misunderstandings.

Hall (1976), a mainstay for different styles of communication at the international level also sees in cultures, where the crucial difference is that whether it is the culture of low or high context (Hall, 1976). For high-context cultures is characteristic that they are very stable, cohesive, that is slow to change, and that people rely heavily on tradition, history, status, etc. Consequently, the messages that are sent to the respondents in this culture contain a small number of words, because they are expected to understand what is not spoken and to "read between the lines." The main reason why people in

this culture with few words can convey a complex message is that "most of the information is either in the physical context or internalized in the person" (Hall, 1976, p. 91).

In contrast, in low-context cultures messages are only transmitted by words, while the influence of context almost completely excluded. Therefore, the messages to be adequately conveyed communication in this culture must be direct, precise, opened and there should not be place for assumptions. Hall (1976) in this regard indicates that in the low-context cultures, information that is transmitting must be complete in order to compensate what is missing in the context of (internal or external). Which countries have the high context culture and low context culture is shown in Table 1.

**Table 1 Cultures of High and Low Context**

<b>High-Context Cultures</b>
Japan
Arab countries
Greece
Spain
Italy
England
France
North America
The Scandinavian countries
German-speaking countries
<b>Low-Context Culture</b>

Source: Hall, E., Hall, M. (1990) *Understanding cultural differences: Germans, French and Americans*, Yarmouth: Intercultural Press.

Since the participants in international business communication may belong to different national cultures, with different characteristics, Gudykunst and Ting Toomey have identified four different styles of verbal communication. These are: direct vs. indirect, detailed vs. concise, personal vs. contextual and instrumental vs. affective style of communication (Gudykunst, Ting-Toomey 1988).

a) *Direct* and *indirect* communication style differs in the degree of explicitness of the verbal messages. In *direct style* sender is trying to convey his/her true feelings or views through the appropriate choice of words, while in the *indirect style* sender chooses words to conceal his/her true feelings or attitudes. Direct communication style is characteristic of the individualistic

cultures while the indirect style is characteristic of the collectivistic cultures<sup>1</sup>. For example, in the U.S. it is common for an individual to openly express his/her disagreement by explicitly using the term "no" or the phrase "I can not do that", while in Japan, for example, the phrases "it is possible" or "this is basically interesting" are common although someone has a negative opinion.

b) Communication styles can be *detailed (elaborative)* or *concise (brief)*, too. *Detailed style* of communication characterizes rich and meaningful communication that, besides presenting facts, contains other elements, such as descriptions, frequent repetition, metaphors, etc. It is believed that this style is used by people from Arab countries. In contrast, in a *concise style* of communication quantity of used words is much smaller. This style of communication is used in the Far East (China, Japan, Thailand etc.). Between these two styles of communication, which are located on the opposite sides of the continuum, there is another style that is marked as *precise style (style exacting)*. *Precise communication style* is the style where the emphasis is on the use of a small number of precise words to convey messages. This style of communication is fostered, for example, in England, Germany and Sweden. In these countries, the use of too many words is considered to be an overstatement or exaggeration, and too few words can lead to confusion and ambiguity.

c) *Personal style* of communication is the style where the emphasis is on the people who are participants in the communication process, rather than on relationship between them. In *contextual style* of communication message content is such that it emphasizes the relationship between the roles of the participants in this process. Some of the countries where personal style of communication is using are the USA, Australia, Denmark and Switzerland, while the contextual style is used in Japan, India, Ghana and other countries with collectivist cultures.

d) *Instrumental communication style* is the style where the sender uses a goal-oriented vocabulary motivated by the intention to realize his/her ideas, and where even "persuading" of the recipient is not excluded. In contrast, in *affective style* vocabulary of the sender is process-oriented and takes into account the reactions of the message recipient (if he/she feel comfortable and the like). The first style is common in the individualistic cultures (U.S., Denmark, Switzerland), while the other is common for collectivist cultures.

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<sup>1</sup> As it is known *collectivism/individualism* are the categories that show the level of cohesion between people of one society, i.e. whether people prefer to work independently or prefer to work in groups (Hofstede, 1984). Individualistic cultures (U.S., UK, France, Germany), among the others, characterizes the fact that individuals are free to express their own opinions and consequently they prefer direct communication style. In contrast, in cultures that are characterized by collectivism (Japan, Mexico, Greece and Serbia) individuals are trying to comply with group norms and harmonize their views with those of other group members. Therefore, in the process of communication they chose words which conceal their personal views and feelings and prefer indirect communication style.

As cultural differences may influence the verbal communication between participants from different countries, they can also influence how to use silence. In the collectivist cultures, silence is seen as a way to provide better control of the communication flow and emphasizes the message that is transmitted, while in individualistic cultures speech has more value. How the use of pauses (silence) has different meanings in different cultures can be seen in the following example. The Japanese negotiators in the international business communicating practice long periods of silence in order to control the process of communication. On the other hand, individuals who come from Western countries consider pauses in the conversation as a lack of understanding by the recipient, and usually try to give further information or go to the next topic of conversation (Graham, 1985).

Besides the fact that in intercultural communication verbal communication styles could be different, different could be the nonverbal communication styles, too. By nonverbal communication, as well as by the verbal, the message is sending from the sender to the recipient but not by talk, but by facial expressions, gestures, tone of voice, use of space, body movements, etc. Some studies have shown that even 70% of communication between people who speak the same language is nonverbal (Nollen, 1984). However, there is a belief that in intercultural communication reliance on nonverbal component of communication is even more, because this is a way to add meaning to verbal message that is perhaps more difficult to understand because of the language barriers.

Nonverbal communication in international business is more complex than nonverbal communication between members of a country. This can be summarized as follows: the same nonverbal behavior can have different meanings in different cultures, and different nonverbal behavior can have the same meaning in different countries. Thus, for example, in most European countries nodding means that the agreement is reached, while in Bulgaria, for example, the same meaning is when the head turns from side to side.

Other forms of nonverbal communication receive special meaning in international business communication, too. Although studies have shown that basic emotions such as joy, sadness and surprise express in a similar manner in culturally different countries, there are differences *when* and *why* these emotions express. For example, in countries with low power distance<sup>2</sup> people

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<sup>2</sup> *Power distance* indicates the extent to which the unequal distribution of power in society is acceptable. Large power distance indicates that there is a strong dependence of the subordinates' relation to the superiors so they are not willing to contradict to them and to deny their views even if their views are incorrect. This dimension of culture is typical for Japan, Greece, Turkey, Mexico, Malaysia, the countries of the Western Balkans, etc.). In contrast, in countries that are characterized by low power distance subordinates feel free to contradict superiors. This dimension of culture is typical for the culture of Switzerland, Germany, Austria, UK, USA, Scandinavia, etc.

feel uncomfortable, and may be even angry, when someone emphasizes the differences in the status of people, while in countries with high power distance this is quite acceptable. Example with a smile is even more obvious. One study found that the participants who come from the USA and Japan believed that smiling face is more friendly and sociable than non-smiling. However, the same study found that the reasons for smiling in these countries may be different: in Japan smile can be used to hide the frustration, sadness, or anger, while in the U.S. and most other countries smile is used when it comes to positive feelings. Due to these differences, the Japanese and Chinese are generally very mysterious to other nations (Morbach, 1982).

One of the forms of nonverbal behavior that is important for international business communication is the use of space and which physical distance between the participants is considered as appropriate. Theorists believe that people in colder climate regions favored greater physical distance in the communication than people from warmer areas. Therefore, there is the opinion that people in South America, Southern and Eastern Europe and the Far East, favored closer distance communication, as opposed to people in Asia, North Europe and North America who prefer longer distances. It is believed that these behaviors are closely related to whether the culture to which somebody belongs is with high frequency of contacts (*high-contact culture*) or it is a culture with lower frequency of contacts (*low-contact culture*). In the first type of culture people are considered as interpersonal colder and more task-oriented and that the interpersonal contact are less important for them, while in the second type of culture people are warmer and interpersonally closer (Gudykunst, Ting-Toomey 1998). When we are speaking of America, it is considered that in this country, participants in communication use one of the four zones. Very close friends may use intimate zone, which has a distance of 46 cm, for business situation or for giving instructions participants use zone of 46 cm to 1.22 m. For most business situations Americans use social zone, which ranges from 1.22 m to 3.66 m. Public area is one that is used for formal situations which are not common, for example, such as making a speech, and it is above 3.66 (Francesco, Gold 2005).

Relation to *time* is also conditioned by the culture of the country from which the business partners come. For example in the so-called *monochromic* cultures such as Germany relation to time is very strict. In this country a delay of only a few minutes and is considered as an insult. On the other hand, in the so-called *polychrome* cultures, such as for example in Ecuador, the delay to the meeting of fifteen or twenty minutes is still considered as an "arrival on time" (Gudykunst, Ting-Toomey 1998). Table 2 summarizes the results of a survey regarding the differences in verbal and nonverbal communication between members of the three cultures during the negotiation process.

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**Table 2 Behavior during the Negotiation Process**

Tactics	Some Individual Tactics as a Percentage of Total Tactics		
	Japanese	Americans	Brazilians
Promises	7	8	3
Threats	4	4	2
Recommendation	7	4	5
Warning	2	1	1
Self-disclosure	34	36	39
Questions	20	20	22
Commands	8	6	14
	Occurrences in a 30-Minute Bargaining Session		
How many times they used the word "no" in 30 min.	5,7	9	83,4
Periods of silence for 10 seconds or more	5,5	3,5	0
Overlaps (interruptions in conversation)	12,6	10,3	28,6
Physical contact	0	0	4,7

Source: adapted according to J. Graham L. (1985) „The influence of culture on the process of business negotiations: An exploratory study”, *Journal of International Business Studies*, 16.

Because of these differences Hall (1990) points out that for the employees involved in intercultural communication it is important that in addition of knowledge of the official language of a country, its history, system, etc., it is important that they have knowledge of nonverbal language of the specific country, too. This may enable to avoid many misunderstandings in communication, and at the same time to save money and time (Hall, 1990 IX).

### 3. Intercultural Communication Competence Components

Because of the differences in styles of verbal and nonverbal communication between the employees who are involved in international business organizations and come from different cultures they should as an important dimension of their

human capital possesses *intercultural communication competence*. This type of competence actually involves a set of skills that are necessary for effective communication and interaction with people who are linguistically and culturally different (Alvino, 2005).

Since the intercultural communication competence is the complex category in theory there are numerous attempts to identify its key components. Some authors believe that this form of the employees' competence includes communication skills, relational skills, as well as the certain personal characteristics such as, for example, curiosity (Black, Gregesen 2000). Other authors believe that this form of the employees' competence includes knowledge of other cultures and languages, as well as certain behavioral skills, such as empathy, charisma, the ability to manage anxiety and uncertainty, etc. (Gudykunst, 1998).

One of the most known models that describe components of the intercultural communication competence is formulated by Matveev and Nelson (2004). Although their model is related to intercultural communication within international teams, intercultural communication competence components in this model are the basis for understanding the key elements of intercultural communication competence in general. Key components of intercultural communication competence, except willingness for teamwork, in their model are the following (Matveev, Nelson 2004):

- a) interpersonal skills,
- b) cultural empathy and
- c) tolerance of cultural ambiguity.

a) Individuals who possess interpersonal skills as an integral element of the intercultural communication competence generally characterize willingness to accept differences in communication styles between people from different cultures, then, they characterize flexibility in resolving misunderstanding and, in general, these are individuals who feel comfortable when communicate with members of other nations. The key assumptions for existence of such skills are the attitudes of the individual which are not ethnocentric colored. In the case of ethnocentrism individuals believe that their way of thinking and behavior, as members of a particular culture, is the only proper and morally correct. As a result, individuals who have ethnocentric orientation express no flexibility and do not have the ability to give explanations for behavior that demonstrate peoples from other cultures which has establishment in culture to which they belong.

b) *Cultural empathy* is also an important component of intercultural communication competence. It is believed that the cultural empathy is the most important psychological predisposition for effective intercultural communication. Because empathy can essentially be cognitive and emotional, it

is important to point out that for the intercultural communication competence of employees the greater importance has cognitive empathy. It assumes the ability to think the way the other person thinks (Abbe, Gulick, Herman 2007). In addition, cultural cognitive empathy allows employees to recognize and give meaning to certain cultural paradoxes. Also, it provides the ability to recognize when cultural factors are crucial for shaping one's behavior, and when it comes from personal or situational factors. Consequently, individuals who possess this kind of empathy differences in business partners' approaches in decision-making or work do not see as something bad, but as something that is different from their way of thinking and working.

Development of cultural empathy as an integral part of intercultural competence requires continuous learning and enriching the knowledge base of other cultures. Significant limitation, however, may represent some incorrect generalizations or stereotypes that are associated with a particular culture.

c) *Tolerance cultural ambiguity* in the model that is created by Matveev and Nelson (2004) is also an important component of intercultural competence of communication. It reflects the willingness and ability of the individual to deal with the cultural unknowns, to demonstrate patience and to accept cultural differences.

Dealing with the problem of intercultural communication competence, Young Kim (1991) has also offered a useful theoretical framework for understanding this form of the employees' competence. She indicated that this type of competence consists of three dimensions. These are: (a) cognitive, (b) affective, and (c) behavioral dimensions (Kim, 1991). Cognitive dimension of intercultural competence refers to the individual interpretative mechanisms or the structures by which is assigning the meanings to the messages that are received, affective dimension refers to individual motivation, while behavioral dimension refers to an individual's ability to be flexible and resourceful in applying cognitive and affective skills. Knowing these facts, in order the intercultural communication to be successful, first it necessary to understand differences in communication caused by different cultures, then, there is a need for possessing the ability to overcome such differences and barriers and, finally, there should be desire to use these skills in practice (Rundstorm, 2005). These dimensions in some way "cover" all components of intercultural communication competence offered by other authors.

#### **4. Importance of the Adequate Selection of the Employees for the Effective International Business Communication**

Presented challenges of the international business communication and the need that employees have to possess intercultural communication competence impose human resources function certain tasks in the selection of the employees to who the international tasks will be assigned.

In most cases, as the primary criterion for selection of the employees who will be included in international business is using their technical competence, i.e. their professional expertise. However, since the intercultural communication competencies are very important, besides mentioned criteria in organizations are used many others criteria that are closely associated with this form of competence: language skills, interpersonal skills, communication skills, cultural sensitivity, etc. According to the results of various studies, Franke and Nicholson (2002) offered the following table that presents the most common criteria for selection of the employees who will be assigned international tasks (Table 3).

**Table 3 Overview of the Most Common Selection Criteria of the Employees for the Purposes of the Organization’ International Business Activities and their Ranking**

Europe (Brewster, 1991)		Scandinavia (Björkmann, Gertsen 1993)		Great Britain (Arthur, Bennett 1995)	
Selection Criteria	Rank	Selection Criteria	Rank	Selection Criteria	Rank
Technical expertise	1	Technical and professional qualities	1	Expertise / technical skills	1
Language	2	Past performance	2	Interpersonal skills	2
Family support	2	Motivation	3	Personality traits	3
Managerial potential	3	Managerial Potential	4	Intelligence	4
Knowledge organization’s systems	4	Independence	5	Previous performance	5
Experience	5	Communication Skills	6	Managerial skills	6
Marital Status	5	Knowledge of languages	7	Cultural sensitivity	7
Medical status	6	Ambition and commitment	8	Flexibility	8
Independence	6	Flexibility	9	Knowledge of languages	9
Motivation	6	Adaptability of the family	10	Previous international experience	10
Ages	6				

Source: Franke, J. and N. Nicholson (2002) “Who Shall We Send? Cultural and Other Influences on the Rating of Selection Criteria for Expatriate Assignments”, *International Journal of Cross Cultural Management*, 2 (1), p. 22.

When it comes to selection's methods of the employees who will be assigned international assignments, practice shows that for these purposes organizations generally use standard methods. The basic requirement for the selection methods is that they should be in line with the selection criteria, i.e. they should adequately evaluate characteristics of the employees that are relevant for their choice.

**Table 4 Selection Methods of the Employees for the Purposes of International Engaging**

Criterion	Interview	Standardised tests	Assessment centers	Biography data	Probation	References
Technical skills	+	+		+	+	+
Communication skills	+		+			+
Cultural empathy and tolerance	+	+	+			
Tolerance toward differences	+		+			
Language skills	+	+	+	+		+
Flexibility to adapt to new situations	+		+			+
Motivation	+			+		
Commitment	+					

Source: Black, J., Gregersen, H. and M. Mendenhall (1992) *Global assignments*, San Francisco: Jossey-Bass. (quoted in Jakšić, M. (2010) *Međunarodni menadžment ljudskih resursa*, Beograd: Čigoja štampa, p. 61).

According to the presented table, it could be concluded that when it comes to the evaluation of the intercultural communication competence of the employees the interview is almost irreplaceable method of selection. However, there are other methods such as testing candidates through appropriate tests or assessing them in assessment centers, also have its prominent place. This is partly caused by the fact that the interview is always associated with lower or higher dose of subjectivity in the conclusion. On the other hand, some methods are imposed because of their nature. Thus, there is a belief that assessment

centers will be increasingly used for the selection of employees for the purposes of international business because they allow simulation various events that have emphasized intercultural dimension and therefore provide adequate assessment of their behavior in intercultural situations.

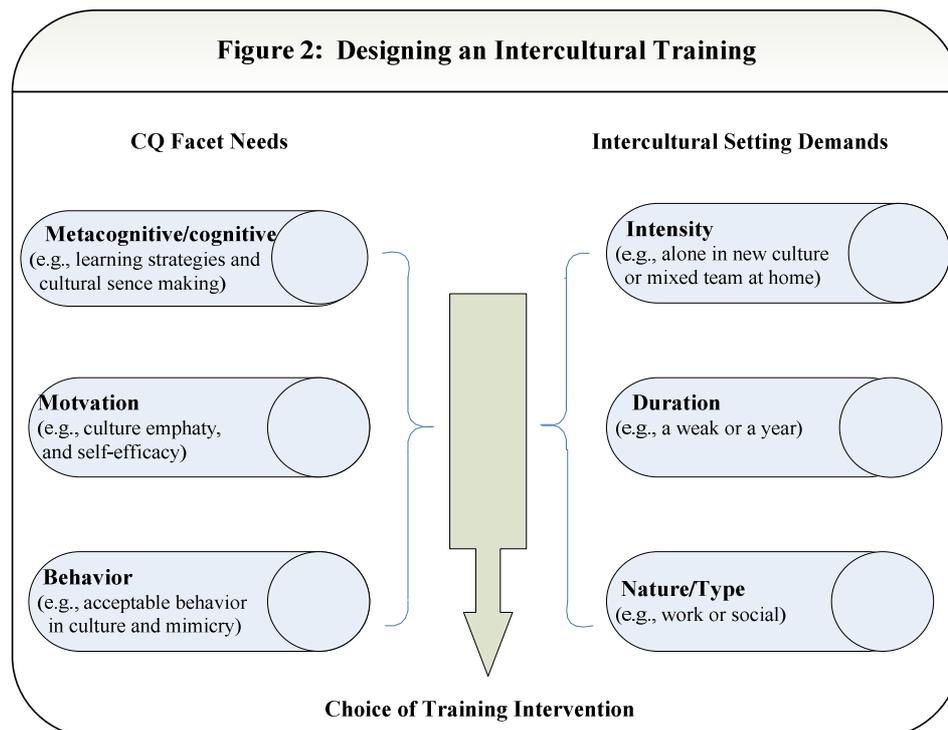
### **5. Training of the Employees for the Purpose of Development Intercultural Communication Competences**

In order to increase the intercultural communication competences of the employees and provide successful implementation of the international labor tasks, it is desirable that organizations organize training of the employees who will be engaged in these activities of the company.

Experience suggests that the area of training of the employees for the purposes of international engaging intensively develops, and therefore more and more new methods and approaches that have been proposed. In designing of such programs significant progress has been made since there are fewer training programs which are based only on informing employees about the specific culture from which business partners come and that there are more and more training programs which assume the active participation of the trainees themselves. Besides that, traditional training methods which are based only on the provision of specific knowledge about a particular country are inadequate from different reasons, too. The fact is that due to dynamic business conditions company representatives stay shorter in one destination, and specific knowledge about a particular country becomes less relevant. Also, globalization implies that teams have multicultural composition which also supports the notion that the knowledge of one country is no longer sufficient. Besides that, the lack of the traditional training programs is the fact that their starting point was the assumption that all trainees need the same knowledge.

The basic starting point that should be taken into account when designing effective training program for international engagement according to Earley and Peterson (2004) is that training programs should take into account the intensity of interaction with people of other cultures, the duration of international engagement, and the nature of the assignment. They also add that training programs should take into account the specific needs of the trainees themselves according to their strengths and weaknesses (Early, Peterson 2004). It is necessary because all participants do not necessary have equal initial knowledge about the culture of a country, the same level of interpersonal skills or that they are all familiar with the language of business partners. Accordingly, training programs, whenever is possible, should be specifically designed for each participant individually.

One possible approach to organizing training programs for the employees involved in the international activities of the company which takes into account all the above-mentioned principles of effective training programs, is offered precisely by Early and Peterson (2004) (Figure 2). Their model is based on the development of the *cultural intelligence* which assumes the ability to establish effective relationships with members of different cultures (Earley, Peterson 2004). Since this form of intelligence is the basis of all interactions that have emphasized intercultural component, this approach could be used for designing training programs that provide development of the intercultural communication competence, too. This is because the cultural intelligence among others things reflects "a person's capability of developing entirely novel behavior (e.g. speech sound, gestures, etc.) if required" (Earley, Peterson 2004). Cultural intelligence, on the other hand, has its foundation in the general concept of intelligence and presents a portfolio of three distinct segments: metacognition/cognition, motivation and behavior (Earley, 2003).



Source: Earley, P. C. and S. R. Peterson (2004) „The Elusive Cultural Chameleon: Cultural Intelligence as a New Approach to Intercultural Training for the Global Manager“, *Academy of Management Learning and Education*, 3 (1), p. 110.

The basic idea underlying the model of training that is offered by the mentioned authors is that prior to the training program starts, it is necessary to

identify strengths and weaknesses of the trainees as well get to know the nature of other relevant factors (degree of interaction with people from other cultures, lasting their stay in a foreign environment, etc.). Therefore, if it is determined that the candidate should develop cognitive and metacognitive aspects of his/her cultural intelligence, then the appropriate training program is one which provide generalization of knowledge of the employee, as well the introspection of learning itself. The point is that the participants do not need only specific information about a specific country. They should be prepared for new situations that the training program did not anticipate. Therefore, it is necessary to organize training which will prepare employees for inductive reasoning and finding new strategies of behavior in new circumstances. In this regard it is important "learning about learning" (which leads to the development of the cognitive aspect of cultural intelligence).

Training methods that contribute to the motivational aspect of cultural intelligence at its core should have a value orientation. The intention of such a training program for the employees is to develop empathy for other cultures. However, the limitation may be that the introduction of the cultural norms of other country can develop empathy for her, but that does not mean that it will result in effective communication and behavior in a foreign environment. To overcome this limitation it is recommended that training programs should provide development of self-efficacy, and to contribute to the growth of self-confidence that trainees can effectively cooperate and communicate with members of other cultures. For this purpose it is useful to consider training programs where participant will be exposed to a series of short, simple, but controlled situation which involve cultural component.

When there is a need to develop a behavioral dimension of cultural intelligence, the authors suggest a dramatic approach in organizing trainings that include role-playing, simulations, etc. Role play as a method of training in this context is very useful because it encourages the use physical, emotional, sensory and cognitive processes. It also contributes to the development of self-confidence when interacting with people belonging to different cultures. Simulations are also very useful because they allow employees better preparation for the real situation in which they can be.

Since the dimensions of cultural intelligence are interconnected, Early and Peterson (2004) in the final believe that training programs should be such as to enable the simultaneous development of all its aspects, because it is a way to achieve the greatest synergistic effect. In other words, the positive effects of the training will be multiplied and result in simultaneous development of all dimensions of the cultural intelligence (Earley, Peterson 2004). At the same time, development of cultural intelligence will provide development of basic components of the intercultural communication competence especially in a way they are seen by Kim (1991) as cognitive, motivational and behavioral.

## Conclusion

The paper points out that one of the biggest challenges of international business is the effective communication with foreign business partners. It is an integral part of any form of cooperation with them: during negotiating process and during a stay in a foreign environment. In this paper we underlined that the complexity of international business communication stems from the fact that in this process often at least one party is forced to use nonnative language. In addition, in the process of communication could be used different styles of communication that have their basis in the culture to which one belongs. This can lead to misunderstandings between participants since the same verbal or nonverbal signals can be interpreted differently. How all this together could have a negative impact on the successful implementation of the international assignments, there is an imperative that employees who are involved in such activities possess specific form of competence - intercultural communication competence.

The paper also points out that the need of having such competencies creates for the human resource management function a new and specific tasks. This function is expected to formulate appropriate selection criteria which will provide selection of the competent candidates. In this regard, it is necessary to formulate criteria related to language skills, interpersonal skills, communication skills, cultural sensitivity, etc. In addition, in order to develop this type of competence it can organize training programs. One of the approaches advocated in this paper is training that contributes to the development of cultural intelligence of the employees because it is the foundation of all successful interactions which have emphasized cultural dimensions. Therefore, cultural intelligence is important when it comes to development of the international business communication, too.

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## IZAZOVI MEĐUNARODNOG POSLOVNOG KOMUNICIRANJA I IMPLIKACIJE ZA MENADŽMENT LJUDSKIH RESURSA

**Apstrakt:** U radu se govori o izazovima međunarodnog poslovnog komuniciranja koji proističu iz činjenice što ovaj proces često zahteva upotrebu nematernjeg jezika, kao i zbog toga što učesnici u ovom procesu mogu ispoljavati različite stilove verbalne i neverbalne komunikacije. Različiti stilovi komunikacije poslovnih partnera svoje utemeljenje imaju prevashodno u kulturama kojima pripadaju. Te razlike mogu u značajnoj mjeri da otežaju proces komunikacije, pa čak i da ugroze donošenje efektivnih poslovnih odluka. Imajući to u vidu, u radu se ukazuje da se kao pretpostavka uspješne međunarodne poslovne komunikacije nameće potreba da zaposleni koji su uključeni u ovaj proces posедуju specifičan oblik kompetentnosti – interkulturalnu komunikacionu kompetentnost. Ovaj oblik kompetentnosti odražava sposobnost da se efektivno komunicira bez obzira na kulturološke razlike između sagovornika. Neophodnost posjedovanja interkulturalne komunikacione kompetentnosti istovremeno nameće funkciji menadžmenta ljudskih resursa specifične zadatke. Prvo, u cilju adekvatnog izbora zaposlenih za potrebe međunarodnog poslovanja treba da definiše odgovarajuće kriterijume selekcije, i drugo, da u slučaju potrebe za zaposlene organizuje odgovarajuću obuku, sa ciljem da se njihova interkulturalna komunikaciona kompetentnost još više poboljša.

**Ključne reči:** međunarodna poslovna komunikacija, interkulturalne komunikacione kompetencije, selekcija, obuka, funkcija menadžmenta ljudskih resursa.



## INFLATION TARGETING: DETERMINANTS, PRECONDITIONS, EFFECTS

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**Abstract:** Inflation targeting is prognostically oriented strategy, using as an anchor expected inflation, focused low and stable inflation rate (numerical target or target range with a midpoint) as the ultimate goal. In relation to the loosening commitment to uniform, “softer version” (flexible inflation targeting) implies coexistence of more goals, but clearly the hierarchy and priority of monetary stability in the operationalization of monetary policy. Design, implementation and evaluation of an inflation targeting strategy involves the establishment of institutional mechanisms as an effective monetary management attributes: independence and accountability of the central bank, the absence of fiscal dominance, the transparency of monetary policy, exchange rate flexibility, harmony and a shared responsibility of the monetary and fiscal authorities. Additional conditions concerning the general economic environment: price stability, the absence of external and structural dominance, the fiscal balance, the developed and robust financial sector. The effects of inflation targeting could be seen as positive, in order to reduce the average level of inflation, inflation expectations, reducing the volatility of economic growth, with a neutral impact on the average economic growth. The empirical analysis also suggests that the “rate of sacrifice” production during disinflation is lower by as much as 7% in countries that implement inflation targeting, as compared to other countries that apply the monetary strategy.

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## **Introduction**

History of economic prosperity has given us many "lessons", but the two key lessons may be: (1) some technological or process innovation basically stood behind every economic progress, (2) those innovations, based on the revolutionary ideas (which sometimes used to be quite obvious, but "invisible") were generally "born" in a richer part of the world, economically advanced, innovative, expanding later to the economic periphery. When strategy of inflation targeting was established for the first time, it was first-class innovation in the field of monetary management, so the first parameter was completely true. Second parameter is questionable, since inflation targeting was established originally in New Zealand, during the 90-ies of the last century, and later the strategic monetary innovations spread to the wealthier and more economically prosperous countries. While not universally applicable, it could be considered as one of the best strategic approaches to the conduct of monetary policy, as evidenced by the massive application of the strategy, both in developed and in developing countries and transition economies. Establishing an inflation targeting regime is a complex undertaking, where success is linked with the degree of efficiency in the implementation, but also with necessary *ex ante* assumptions. When it comes to implementation efficiency, policymakers must ensure permanent commitment to the ultimate objective (price stability), with the coordination of all efforts and activities of the central bank in that direction. In addition, the establishment of a strategy for inflation targeting involves the establishment of a communication strategy, a strategy of transparency of monetary policy to ensure that economic agents (and general public) were convinced of the central bank's commitment to low and stable inflation. Of course, management of public expectations in terms of monetary stability is most effective if it is based on trust and credibility of the central monetary institution, which again is a reflection of the effectiveness in achieving the *ex ante* proclaimed goals. When it comes to initial assumptions, inflation targeting is quite demanding and sophisticated strategy, since it relies on effective communication and implementation mechanisms, as well as on the effects of psychological factors. The initial conditions for the implementation of inflation targeting are: (1) *ex ante* disinflation period that would contribute to the credibility of the central bank's commitment to price stability, (2) macroeconomic conditions that are associated with a stable economic environment with no inherent reversible shocks, (3) institutional capacity of the central bank in terms of measurement, monitoring and control of inflation, with the development of communication channels with the public, and (4) developed financial system with flexible and sensitive financial infrastructure (especially financial markets) which will channel monetary impulses through the transmission mechanism from the instruments through the operating objectives, and to the ultimate goals of monetary policy (especially the inflation rate), (5) developed and efficient coordination between monetary and fiscal authorities that would, as a reflection of the economic and political consensus,

eliminate eventual fiscal dominance (which is particularly pronounced in transition countries) and synchronize actions of central banks and governments, when it comes to measures that may affect the price level, (6) a high degree of de jure and de facto central bank independence in the formulation and implementation of monetary policy, including autonomy in monetary policy instruments, and in terms of choice of intermediate targets and price stability as the ultimate goal.

Exploring the effectiveness of inflation targeting in the crisis period is particularly interesting because this monetary strategy has become a "global mainstream" in the area of monetary policy, where countries in transition couldn't "resist" it, even though many of them did not have the initial conditions necessary for the effective implementation of this strategy of monetary policy. After transitional changes and turning to market economy, many transition countries have adopted a strategy of inflation targeting: the first among them were: Poland, Czech Republic and Hungary, and in 2006 Serbia. Research analyzed the effectiveness of targeting inflation in OECD countries and developing countries, particularly in the context of the absolute level and variability of inflation, inflation expectations and economic growth. This paper is structured in three parts. The first part focuses on the determinants of inflation targeting, the views of proponents and opponents, principal framework for the design, implementation and evaluation of the performance of the inflation targeting strategy, with emphasis on two variants - a strict and flexible inflation targeting. Second part of the paper summarizes the institutional and economic conditions for the effective functioning of this strategic monetary alternative, operational mechanism, communications strategy to build a transparent, credible and responsible monetary policy. The third part is devoted to the empirical analysis of monetary policy achievements in selected OECD countries and developing countries, with a focus on critical views regarding the possible failure of the implementation of this strategy. Furthermore, this part of the paper presents codified set of lessons and instructions to target inflation, and suggests possible directions of further evolution of monetary policy in the light of current financial crisis.

### **Determinants of inflation targeting**

History of inflationary trends is cyclic; it includes periods of high inflation, which would in turn be replaced with periods of price stability. Taking into account all economic costs of potential inflationary episodes<sup>1</sup>, it is logical that the selection of the appropriate "style" of monetary policy is one of the key economic issues in each country. After targeting monetary aggregates and exchange rates, which may be marked as the traditional

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<sup>1</sup> Unrealistic expectations about asset prices, difficult economic planning, suboptimal long-term decisions of debtors and creditors, suboptimal investment decisions, the distortion of relative prices, excessive taxation, adverse impact on the credit market due to the impact on the nominal interest rate, reduction in real incomes, economic uncertainty etc.

monetary policy strategies, starting from the 90-ies of the last century, many countries are introducing new strategic monetary framework - inflation targeting. There are numerous controversial economic views, when it comes to the shift from traditional to the strategy of inflation targeting. Proponents of inflation targeting are pointing out that this strategy is "anchoring" inflation expectations, allowing stabilization of the economy (King, 2005) and increasing the accountability of monetary policy creators (Bernanke et al, 1999), while skeptics believe that inflation targeting stabilizes inflation at the cost of greater volatility of production (Kohn, 2005) and that this strategy weakens the accountability of the central bank (Friedman, 2004). More specifically, proponents of inflation targeting believe that it provides substantial benefits over other operating strategies, while opponents emphasize its significant shortcomings in the context of the numerous restrictions imposed by the central bank (Batini, Laxton, 2006).

**Table 1: Inflation targeting: arguments *pro et contra***

Arguments of supporters	Arguments of opponents
Inflation targeting can help build credibility and faster and more durable "anchoring" of inflation expectations.	Inflation targeting involves little discretion and thus unnecessarily hampers economic growth.
Inflation targeting provides appropriate flexibility.	Inflation targeting can not "anchor" inflation expectations, as it involves a high level of discretion. The other reason is that inflation targeting implies a high level of volatility in the exchange rate.
Inflation targeting implies lower economic costs in the event of failure of monetary policy.	Inflation targeting is not applicable in countries that did not meet a demanding set of criteria, which makes this strategy seems virtually unenforceable in many developing countries.

Source: Truman, 2003, 60.

Inflation targeting, as well as traditional strategies is based on the nominal anchor - inflation expectations - and includes an explicit definition and ex ante disclosure of future midterm objective of monetary policy that is uniform and quantitatively fixed: the rate of inflation, as measured by some of the consumer price indices, in the range of 2-4% per annum<sup>2</sup>. Inflation targeting is a monetary

<sup>2</sup> This quantitative definition reflects the empirically established fact that single-digit inflation in that range symbolizes price stability, a psychological and economic determinant of the economic environment in which economic agents in planning and decision making related to the future (investment, lending, etc...) are not taking into account future inflation as a relevant factor. In some countries which are advanced in the implementation of inflation targeting, the inflation target (range) is even narrower (e.g. Canada and New Zealand have a target of 1-3%), while in developing countries and transition economies, especially in the first few years of the implementation of inflation targeting, that range is much wider, in accordance with the principle of gradualism in the introduction and implementation of inflation targeting.

strategy that is characterized by: (1) the publication of official quantitative targets (or target ranges) with respect to the rate of inflation, for one or more successive periods of time, (2) an explicit acknowledgment that low and stable inflation is the primary long-term goal of monetary policy, (3) a strong intention to communicate with the public about the plans and objectives of the monetary authorities, and (4) improving mechanisms for strengthening the accountability of the central bank in terms of achieving its stated aims (Bernake et al. 1999). On one hand, many elements incorporated in the structural framework of inflation targeting testify to the complexity of this strategy, but explicitly defined goal is much clearer and more recognizable to the public in relation to the monetary aggregates, which makes this strategy more effective. Design, implementation and evaluation of an inflation targeting regime should be based on six key principles of (Table 2).

The practical implementation of inflation targeting reflects the controversies in monetary policy which can be viewed through the prism of eternal monetary dilemma: rules versus discretion in monetary policy. If any central bank designs and implements a strategy of inflation targeting in accordance with this principled framework, with strict commitment to the primary purpose, then this version of the monetary policy is called strict inflation targeting (full-fledged inflation targeting). It implies an absolute dominance of inflation target, while monetary policy becomes short-sighted for the other objectives of monetary policy (although some authors believe that this version includes the commitment to the stability of production (outputs)). Practice has shown that this is primarily a theoretic perspective on the strategy of inflation targeting, which is practically very difficult to implement. On the other hand, many countries, during the implementation of inflation targeting emphasize inflation stability as the primary goal, but the "radius" of scope of monetary policy incorporates other objectives (production, exchange rate, financial stability, etc...). They apply a "softer" version of inflation targeting that is often called flexible inflation targeting (flexible inflation targeting, inflation-targeting "light"). In this case, practical dimension of reality, is favoring confidentiality in relation to the rules, to make inflation targeting more comprehensive and effective monetary strategy as a function of the total economic benefits.

**Table 2: Principles of inflation targeting**

Principle	Meaning
<b>Principle 1</b>	The primary role of monetary policy is to provide a nominal anchor, and paying attention to other goals must not be inconsistent with the nominal anchor - inflation and inflation expectations.
<b>Principle 2</b>	Effective inflation targeting regime has initial positive effects on social welfare by reducing uncertainty, by "anchoring" inflation expectations and reducing the frequency and intensity of cycles of sudden economic booms and economic failures.
<b>Principle 3</b>	The success of inflation targeting depends on other policies that facilitate the task of monetary policy and make it more credible.
<b>Principle 4</b>	Due to the effect of delays within the transmission mechanisms of monetary policy and interests for the deviation of inflation from the target level and the deviation of output in relation to the potential level, it is neither desirable nor possible to "hold" inflation exactly at the target, and in practice, inflation targeting becomes targeting of anticipated (forecasted) inflation <sup>3</sup> .
<b>Principle 5</b>	Bearing in mind the possibility of conflict between the inflation target and other targets, central bankers must have clear objectives and sufficient level of independence from political pressures, in order to achieve these goals.
<b>Principle 6</b>	There must be effective monitoring and accountability mechanisms to ensure that the central bankers behave in accordance with published basic goals and monetary policy should be based on consistent practice.
<b>Principle 7</b> (author)	It is necessary to develop effective communication mechanisms, as we are talking about information-inclusive strategy, so that the public could be aware of the goals and future actions of the monetary authorities <sup>4</sup> .

*Source:* Freedman, Laxton, 2009, 13, the seventh principle is observation by the author

### **The initial conditions for the implementation of inflation targeting**

Inflation targeting is a monetary policy operating strategy focused on achieving price stability. In contrast with alternative strategies - particularly monetary targeting and exchange rate targeting, which attempt to achieve low and stable inflation by targeting intermediate variables, such as the growth rate of monetary aggregates or the exchange rate level of "anchored" currency, inflation targeting involves targeting the inflation rate directly (Batini, Laxton,

<sup>3</sup> A practical solution comes from the well-known effect of delay, given that monetary policy actions come into effect with the corresponding time lag. Therefore, the goal is to identify future forecast of the inflation rate, which would be consistent with the existence of the effect of the delay, maintained by the central bank with current activities in monetary policy. Another theoretical concept that has largely shaped economic thought and monetary policy is the inability of long-term exploitation of 'concessions for concessions' between inflation and output. Any attempt by monetary authorities to "sacrifice" production in order to reduce the inflation ends by returning to the potential production level (long-term) with higher levels of inflation and inflation expectations.

<sup>4</sup> In this way, there would be a synergy of efforts of monetary policy makers and economic agents towards achieving its stated aims of monetary policy and monetary policy would specifically involve its "subcontractors", economic agents to greatly contribute to stable economic environment with their behavior, with low and stable inflation. In other words, the market would "unconsciously" do a lot for monetary policy makers. Of course, this "silent alliance" could function if the public has confidence in monetary policy makers and if the central bank enjoys a high level of credibility among the public.

2006, p. 3). Based on this statement, given the mechanism of transmission from instrumental variables to the ultimate goals, monetary policy based on inflation targeting has a better chance of success. Higher probability of success comes from the fact that the central bank targets the expected ex-Nate forecasted (expected) inflation, which is, as an intermediate variable, very clear and "close" to the ultimate goal. Basically it is the identity of the ultimate goal, but what separates them is the adequate time horizon (usually two years). However, this improvement in terms of approaching the intermediary variable to the ultimate goal is necessary but not sufficient condition for the success of inflation targeting. Efficiency of inflation targeting, among other things, depends on the ex ante fulfilled preconditions in the context of the strategy design, institutional, operational and economic preconditions. "Independently from the context of the specific country, there are many necessary presumptions and institutional requirements in many fields. Premature orientation towards this new monetary policy framework, without meeting the prerequisites could cause some risks with enormous potential economic costs." (Kirchner, Crook, 2006, p. 2)

### ***Economic prerequisites***

Economic prerequisites are arising from the current level of economic system development, trends in the macroeconomic variables movements in the period before the adoption of inflation targeting and after that, the level of development of the financial sector and its stability. It is common that inflation targeting is implemented in the period of previously relatively stable economic environment, particularly in the context of monetary stability and to the principle of gradualism in defining the inflation target over time.

Economic prerequisites for the implementation of inflation targeting are: (Kirchner, Crook, 2006, p. 5-6)

- A period of low and stable inflation - It is generally considered that the previous monetary stability is a key prerequisite (current inflation rate up to 10%), since it is then possible to gradually place rational inflation targets, whose achievement is increasing the credibility of the central bank to the public.
- Developed and stable financial system - first of all refers to a stable and robust banking sector that is strong enough to withstand the shocks of interest rate and exchange rate that are common in the implementation of inflation targeting. "Weak banking sector is particularly dangerous because the central bank will not be able to increase the interest rate as an operating instrument, because it would probably cause a collapse of the financial system. Not only that this would cause the collapse of the regime of inflation targeting, but would also cause the collapse of the currency and financial crisis that would erode the system of inflation control." (Mishkin, 2004, p.7) In addition, financial market

should be sufficiently sophisticated and liquid in order to contribute to a strong preference toward price stability, with the guidance of inflation expectations.

- The absence of external domination - Inflation targeting is primarily focused on achieving internal economic objectives, but must also take into consideration the foreign economic (dis) equilibrium of the country to the extent that the external position may jeopardize the achievement of the primary goal. If balance of payments imbalance is expressed, it causes instability in the exchange market; it can undermine the efforts of the central bank in the direction of price stability.
- The absence of structural domination - structural dominance is usually present in the developing and transition countries in which, due to internal economic imbalances and structural mismatches, monetary policy is often forced to respond to absorb these internal shocks (mainly supply shocks). These shocks entail coerced actions of the monetary authorities, which could endanger price stability and thus the credibility of monetary policy.
- Fiscal balance (author's example) - Primarily relates to the budget balance (desirable condition), or to a controlled and livable budget deficit (the most common situation), and the manner of its financing through the credit market. However if funding is the deficit of the generally non inflation character, it may increase interest rates, performance of the banking sector, foreign exchange market, financial and monetary stability.

Therefore, external shocks play an important role and may result in huge volatility of exchange rate, inflation rate and interest rate in developing economies. External dominance is defined as the presence of large external shocks that generate instability in the economy and may jeopardize the fulfillment of the inflation target.

### ***Institutional Requirements***

Institutional Requirements include meeting certain criteria relating to the performance of the central bank, its independence from the executive power, the efficiency of the instruments of monetary policy, the responsibility for taking measures and so on. Basically, the central bank must enjoy a high level of credibility in the public, so that the behavior of economic agents could be "modeled" in a way that contributes to achieving the objectives of monetary policy. The implementation of inflation targeting by itself does not bring the credibility of the central bank. "It seems that, for monetary policy creators, stating of (goals and plans) is not sufficient by itself, the only way to gain credibility with the public is to earn it" (Bernanke et al. 1999, p. 275) by a constant commitment to the goal and success in meeting that goal." It seems that, unfortunately, there is no "free lunch" for the credibility of the inflation targeting. The only way for achieving disinflation is a difficult path: inducing losses in production and employment in the short term, in order to achieve long-term economic benefits on the basis of price stability."

(Mishkin 2001, p. 23) Credibility implies public support even when inflation targets are not achieved, which is extremely important for the continuity of successful monetary policy. Institutional requirements are particularly related to the following (Kirchner and Kruk, 2006, p.4, Siklos, Abel, 2002, p.4):

- Independence of the central bank - refers to the independence of monetary policy instruments (operational independence), since the independence of the target is defined by default, in accordance with the "spirit and purpose" of inflation targeting. "This operational independence is absolutely essential to make the regime (of monetary policy) credible, since it shows that the central bank has the authority and ability to use all instruments to influence operational objective, as a function of achieving the ultimate goal." (Kirshner, Krauk, 2006, p.4). The intention of independence is logical, since there is empirically determined inverse proportion between the degree of central bank independence and inflation rates.
- The absence of fiscal dominance - the last few decades have shown that monetary policy is an extremely powerful tool for stabilizing macroeconomic performance, but its effectiveness is limited due to the dominance of fiscal policy. "Fiscal stability and strong fiscal regime is a primary requirement for the implementation of inflation targeting. Fiscal dominance is a situation in which an irresponsible fiscal policy (high fiscal deficit) is forcing the monetary authorities to monetize government debt, causing a rapid money supply growth and high inflation." (Mishra, Mishra, 2009, p.6) Also, the quasi-fiscal activities, such as lending to certain privileged sectors, either directly by the central bank, or indirectly through a system of state-owned banks, erodes the credibility of the central bank, fosters inflation expectations of the private sector and results in suboptimal results of the monetary policy.
- Transparency and accountability - involves the construction of an effective communication strategy to transparently and consistently represent the "information bridge" between the central bank and the general public. "There is a good reason that the central bank commits to a systematic approach to monetary policy, not only because it provides an explicit framework for decision-making, but also because it is useful in explaining the decisions to the public." (Woodford, 2003) Transparency is built through the adoption of appropriate mechanisms to inform the public about the objectives and plans of the central bank, and responsibility is arising from operational autonomy in the context of (non) achieving the proclaimed goal. The most important mechanisms that ensure central bank accountability for performance of the monetary policy are: (1) publication of regular Inflation reports and reports on monetary policy, (2) publication of special reports and open letters in the case of significant "missing" of the target, (3) use of "protective clauses" that reduce the responsibility of the

central bank in emergency situations, as well as defining the modalities of monetary policy reaction to various types of shocks, (4) publication of extracts from the meetings of monetary policy creators, (5) monitoring by the executive or the legislative authorities (submission of special reports) , (6) monitoring by the supervisory board of the central bank, (7) shifts in decision-makers (the governor or board members) in the case of unsatisfactory performance (Heenan et al. 2006, p. 11).

- Harmony and mutual accountability of monetary and fiscal policy - as both monetary and fiscal policy can affect inflation; inflation targeting implies a high level of coordination between the two policies. Furthermore, since the objective is quantified by monitoring some of the price indices and prices of some products and services are defined and / or controlled by the government, it is logical that in addition to effective coordination of monetary and fiscal policy, there is a division of responsibilities for the (non) achievement of the objectives of monetary policy. As a reflection of that harmony, in some countries (Serbia is a good example), the central bank and the government conclude an appropriate arrangement as a manifest of joint aspirations towards monetary stability, which entails mutual responsibility.
- Flexible exchange rate - Letting the exchange rate to the market forces of supply and demand reflects the liberalization of the financial system, but also the need to establish the typical "shock absorber" that would absorb external shocks. Furthermore, by removing the foreign currency exchange rate from the focus of monetary policy, price stability is becoming more evident as the ultimate priority of monetary policy. One of the dangers of inflation targeting is to refocus the public to the exchange rate as being maybe not so more important, but often as equally important goal of the monetary policy. However this element of inflation targeting is often the subject of criticism for at least two reasons. First, monetary policy becomes "short-sighted", not taking into account the fact that the exchange rate can significantly affect the price level (e.g. through prices of imported goods). Second, volatile exchange rate causes financial instability, and in highly euroized / dollarized economies it affects the escalation of nominal debt (in terms of depreciation), which devastates the performance of the financial sector and endangers the inflation targeting regime.

Operational requirements in terms of effective implementation are related to the "technical details" of the process: knowledge of the transmission mechanism of monetary policy, effective monetary instruments, the proper measurement and disclosure of economic information, defining appropriate measures of inflation (some of price indices), the definition of the target (the target range with midpoint), the publication of the official forecasts of inflation and inflation expectations.

#### 4. The effects of inflation targeting - an empirical analysis

Inflation targeting proclaims explicit goal of a first-class priority (price stability), and in its more flexible variant also promotes the commitment to other goals (those often being: manufacturing, financial stability, etc...), to the extent that realization of these goals does not jeopardize the achievement of the primary goal. Therefore, since the establishment of inflation targeting, there is a new consensus on the scene in the field of monetary policy, which is based on a long-term commitment to price stability. Exclusivity of inflation rate is derived from several logical economic facts: (1) despite the existence of monetary neutrality in the long run, monetary policy in the short term can have an effect on the real economy, (2) high and volatile inflation has devastating effects on the economy, resulting in suboptimal allocation of economic resources and threatening the economic growth, (3) probably the clearest goal of the central bank in the public eye is certainly the inflation, (4) the proclamation of the inflation rate as a first-class goal solves problems of conflicting multiple objectives and automatically identifies priority measures when it comes to monetary instability. Although this favors the rule over discretion, practical implementation has shown that medium solution is the best: more than rules, less than the absolute discretion - limited discretion. According to Bernanke (2003) Inflation targeting in practice is a strategy based on "blind" mechanical rule, it can be characterized as a regime of "limited discretion" and communication strategy that, by focusing on the expectations and explanation of the strategy to the general public, seeks to anchor inflation expectations and promote price stability, together with the stability of production and employment.

Although many believe that inflation targeting is not a revolutionary idea, but a reflection of the evolution of monetary policy, from the initial targeting of monetary aggregates introduced in Germany and Switzerland, the popularity of this new (or derived) monetary paradigm is certainly out of the question.

**Table no. 4: Adoption of inflation targeting regime and target range (target)**

Country	Time of adoption	Inflation target	Country	Time of adoption	Inflation target
New Zealand	1989.	1-3	Mexico	2001.	3 +/- 1
Canada	1991.	1-3	Norway	2001.	2.5
England	1992.	2	Peru	2002.	1-3
Australia	1993.	1-3	Philippines	2002.	4 +/- 1
Sweden	1993.	2	Botswana	2002.	3-6
Finland	1993.	Since 1999. euro	Guatemala	2005.	5 +/- 1
Spain	1995.	Euro since 1999	Indonesia	2005.	5 +/- 1
Israel	1997.	1-3	Romania	2005.	3 +/- 1

Country	Time of adoption	Inflation target	Country	Time of adoption	Inflation target
Czech Republic	1998.	2 +/-1	Slovakia	2005.	Euro since 1999
Poland	1998.	2.5+/-1	Armenia	2006.	5.5
South Korea	1998.	3+/-1	Turkey	2006.	5.5
Brazil	1999.	4.5+/-2	Japan	2006.	1-2
Chile	1999.	3+/-1	Serbia	2006.	4.5+/-1.5
Colombia	1999.	2-4	Ghana	2007.	8.5+/-2
South Africa	2000.	3-6	China	2010.	4
* Thailand	2000.	0.5-3	Uganda*	2011.	< 5
Switzerland	2000.	0-2	USA**	2012.	2
Hungary	2001.	3	Russia***	---	5-6
Iceland	2001.	2.5	Euro zone (implicitly)	---	2 and below

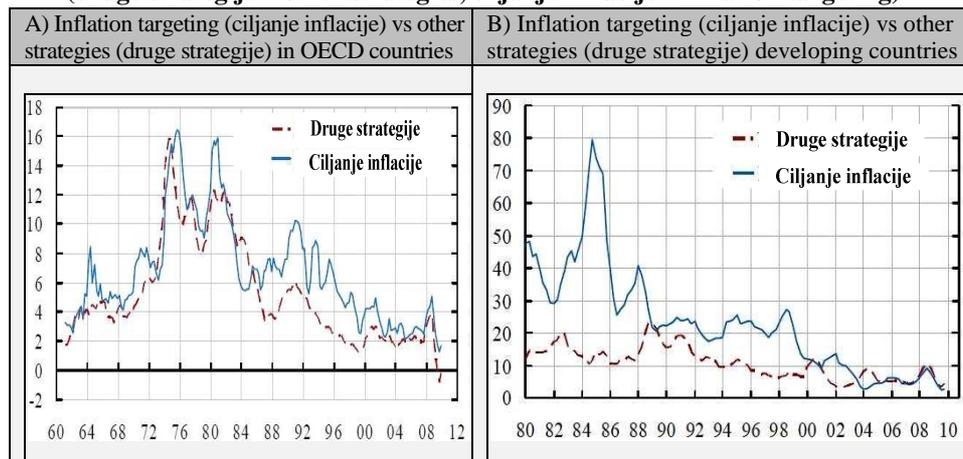
\* The Central Bank targets core inflation; \*\* Fed targets specific price Index, so called PCE (index of personal consumption expenditures), Russia is in a transition period towards an inflation targeting regime in order to achieve the inflation in the range of 4-5% in 2014.

Source: Web sites of central banks, the IMF

### *The effects on inflation and inflation expectations*

The effects of inflation targeting are most visible if we compare the macroeconomic performances in the context of inflation and inflation expectations, on one hand, and the growth rate of real GDP and its volatility between countries that have adopted inflation targeting and those that apply other modalities of monetary policy.

**Figure 1: The average inflation rate in the OECD and developing countries (druge strategije – other strategies, ciljanje inflacije – inflation targeting)**



Source: Svenson, 2010, p.9-10.

Panel A on the chart shows the movement of the average rate of inflation in OECD countries that have adopted inflation targeting regime, as compared to other countries that apply other monetary policy strategies. Interestingly, the inflation trend line is almost identical, phases of rising inflation and disinflationary episodes are matched. Even more interesting is that in the period after the adoption of inflation targeting, inflation was on average lower in OECD countries that apply other types of monetary policy strategies. One explanation is that it is difficult to perform a proper analysis, since it is difficult to classify OECD countries according to criteria of the monetary policy type, given that many countries apply some of the basic elements of inflation targeting, but did not explicitly declared it. Results of empirical studies support the view that inflation targeting is not improving poor economic performance. Ball and Sheridan (2005) found no evidence in favor of inflation targeting, arguing that claim with possible similar interest rate policies. Also, they stress that countries that do not apply inflation targeting have their monetary policy based on the Taylor rule, which is complementary with the mechanisms in the application of inflation targeting. "These results suggest that formal and institutional aspects of inflation targeting - the publication of targets, reports on inflation, increased central bank independence - are not important" (Ball, Sheridan, 2005, p. 256) for achieving monetary stability. Angeriz in and Arestis (2008) came to similar conclusions using the multivariate STS models. Although they stress that their findings are premature, they have come to the conclusion that the same downward trend in the rate of inflation is also found in the countries that have implemented inflation targeting as well as in countries that have implemented other monetary strategies.

Panel B presents the results of the same analysis, but for developing countries. We see that these countries had a difficult history of monetary (in) stability, but that they, after the adoption of inflation targeting, significantly reduced the average rate of inflation in comparison to the developing countries that implement other monetary strategies. Batini and Laxton (2007) came to the conclusion that the implementation of inflation targeting is associated with lower inflation, lower inflation expectations and a reduced degree of variability of inflation, the lack of visible negative effects on production, exchange rate movement, interest rate, foreign exchange reserves. Also, the institutional requirements are not crucial, but they suggest making institutional mechanisms so that inflation targeting results in greater economic benefits. Lin and Ye (2009) came to the conclusion that inflation targeting has a large and significant influence on reducing inflation and its variability in 13 developing countries, and that the benefits of credibility on the basis of explicit inflation targeting proclamation are much higher in developing countries than in developed countries.

When it comes to inflation expectations, empirical studies certainly speak in favor of "anchoring the expectations" in terms of inflation targeting. Ravenna (2008) analyzed the impact of inflation targeting on monetary stability of

Canada and came to the conclusion that the most important determinants of low inflation are the prices of imported goods, and native and foreign interest rate. Furthermore, one might conclude that inflation targeting reduces the average rate of inflation by "anchoring" the long-term inflation expectations. Batini and Laxton (2007), using the index of exchange market pressure, came to the conclusion that inflation targeting results in both a reduction in the inflation rate, and in level and variability of inflation expectations.

**Table no. 3: Elasticity of inflation expectations relative to current inflation**

Mode of MP/ Evaluation	1 year	3 years	5 years	6-10 years
<b>Inflation targeting</b>	0.00	0.00	0.00	0.24
<b>Other strategies</b>	0.23	0.12	0.7	0.00

Source: IMF, World Economic Outlook, p. 108

Transmission coefficient of the current to the expected inflation, as we see, also depends on the monetary policy regime. Countries that implement inflation targeting can count on the effect of delay in transmission, because inflation expectations are anchored, as monetary policy provides the necessary flexibility and the time required for an adequate response. On the other hand, in countries that do not apply inflation targeting, inflation expectations react promptly, with a reduction of transmission rate with the passing of time. "Countries that do not apply inflation targeting - many of them are formally or informally targeting the nominal exchange rate - and are less successful in anchoring inflation expectations. Furthermore, other factors specific to a particular country (other than monetary policy regime) - such as the degree of labor market flexibility, efficiency of fiscal policy - can also affect the rate of reaction of inflation expectations in relation to changes in current inflation." (IMF, 2008, p. 109)

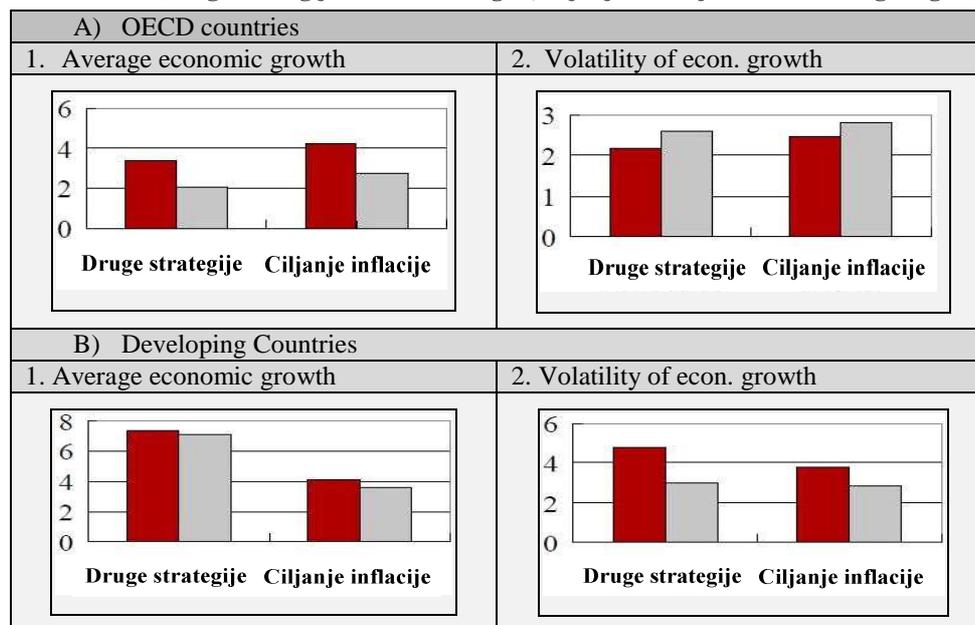
### ***Effects on economic growth***

The impact of inflation targeting on economic growth is more complex analytical problem, at least for two reasons. On one hand, the impact of inflation rate on economic growth is indirect, through the creation of system stability and "anchoring" of inflation expectations, which can be a beneficial impact on economic growth. On the other hand, practice has shown that in the periods of higher inflation rates, it is necessary to use monetary restrictions in order to "sacrifice" economic growth in the short term, but to achieve later benefits arising from price stability. However, "When low inflation is accomplished, inflation targeting does not endanger the real economy." (Mishkin, 2002, p.151)

Panel A shows the average economic growth and the degree of its (in) stability in OECD countries, with hardly visible effects. Empirical studies indicate that in this group of countries, inflation targeting has a neutral effect in the context of economic growth, which refutes the pessimistic views about the

impact of inflation targeting on the real sector of the economy. Ball and Sharidan (2005) came to the conclusion that inflation targeting neutrally affects the average economic growth and volatility of the economic growth; Fang, Miller, Lee (2009) have come to the conclusion which encourages pessimistic attitudes towards inflation targeting, as they came up with findings that inflation targeting reduces average growth in the short term (which could be in the line with suggestions of economic theory) and that it increases variability of the economic growth, but that these effects are offset in the long run. Goncalves and Carvalho (2009) confirmed the existence of a "concession to concession" between inflation and production in disinflation periods, emphasizing that countries that have implemented inflation targeting have 7% lower "rate of sacrifice" of production in comparison to other countries that apply other monetary policy strategies, for 1% disinflation.

**Figure 2: Inflation targeting and economic growth in OECD countries and developing countries (druge strategije – other strategies, ciljanje inflacije – inflation targeting)**



Source: Svenson, 2010, 12.

Panel B shows the experiences of developing countries in the context of average economic growth and its (in) stability and supports the thesis that the inflation targeting has provided greater benefits to the developing countries. Empirical studies generally indicate positive effects of the implementation of inflation targeting - reducing the volatility of economic growth, with a neutral impact on the average economic growth.

### ***Current Challenges***

The global financial crisis has "shaken" the countries in many ways, but there are also the ones that experienced monetary instability besides financial stability. Although it is difficult to judge between extreme views, whether monetary policy is mostly to blame for the crisis (Taylor, 2010), or that monetary policy has not produced a crisis (which can often be found in the analysis of the IMF), it is certainly appropriate to point out some of challenges that the crisis has imposed on inflation targeting. Before the crisis, the dominant approach to monetary policy - that is associated with inflation targeting - is that central banks should follow a simple principle, not to target asset prices or attempt to deflate (puncture) the bubble, but to apply the strategy "fait accompli" that involves the infusion of liquidity to avoid a macroeconomic collapse. (Issing 2012, p.9) Although the inflation targeting based on explicit rules regarding the operational and the ultimate goal is quite simple, the reaction of central banks should be dependent on the factors that cause disturbances in the area of monetary stability, depending on whether they are supply shocks or demand shocks. The crisis has demonstrated the impotence of monetary policy in the ex ante pro-cyclic action (basically there never was an action), but it could help in redesigning the framework of monetary policy on the basis of the following lessons: (1) financial factors and conditions can have a significant impact on the transmission mechanism of monetary policy, reducing the effectiveness of the interest rate as the basic instrument, (2) management of interest rates, is necessary, but not sufficient condition to maintain financial stability, (3) The effect of an increase in systemic risk to the economic activity is largely dependent on the degree of incorporation of the financial sector, leverage in the financial sector, real sector and households sector, (4) In the pre-crisis period, the central bank insisted on a lower level of reserves of depository institutions, which proved to be inappropriate in the crisis period, (5) monetary policy of central banks should be treated from "short-sightedness" and refocus it from the price stability as the undisputed goal, on to the financial system stability, credit growth control, and asset prices monitoring. (Davidovic, Zelenovic, 2010, p.86) What is however, counter-argument in favor of the use-value of inflation targeting is that it reduces the probability of crisis. "At the 5% significance level, inflation targeting is associated with a lower probability of crisis, perhaps because, more de jure, less de facto, a flexible exchange rate regime." (Batini, Laxton, 2007, p. 489)

Although the aforementioned consensus on the role of monetary policy is a disturbance factor in redesigning its operational efficiency in crisis, two issues are particularly interesting: (1) whether the central bank is able to be more efficient relative to financial market, in order to recognize the proliferation of asset prices and take countercyclical measures? And (2) whether it is possible to use the interest rate as an operating instrument in the framework of inflation targeting, to curb asset prices, or as instrument for "leaning against the wind". Both challenges for the central bank are great, but there is a real possibility of their overcoming, since it is

possible to identify trends in the price movements of assets, and use the interest rate as a countercyclical instrument (Taylor 2007, Papademos 2009). As for the second challenge, dilemma "lean vs cleansing" has geographically divided policymakers: while the Europeans and Japanese are for the proactive concept of restraints, the economists in the United States are mainly for the passive concept of ex post response in terms of "greasing" by lowering interest rates. It is the so-called Greenspan doctrine according to which asset prices have a special role and that the central bank should not confront its instruments (interest rate) to the trends of asset prices due to specific economic difficulties in the identification of the balloon, the economic costs and the like. By supporting this doctrine, with the contribution to the consensus in terms of commitment to price stability as the ultimate goal, Mishkin (2010) emphasizes several lessons: (1) the development of the financial sector has a greater impact on economic activity or (2) macroeconomic trends are highly non-linear, (3) doctrine of the lower zero border of the nominal interest rate is more problematic than previously thought, and (4) the cost of repairing the consequences of the crisis are very high, (5) the stability of prices and production does not provide financial stability. (Mishkin, 2010, pp.22-32) The crisis has highlighted the need for permanent adaptation of monetary policy, situational approach, adaptations on the go. Also, with regards to the degree of globalization of the economy, we need coordinated action at the global level, in order to overcome consequences of the crisis. Or, as pointed out by Taylor (2010), during the 70-ies of the last century, countries have practiced irreversible logic: "Keynes at home, Adam Smith abroad", which resulted in poor economic performances. When many countries adopted the concept "Adam Smith both at home and abroad, there was a wave of twenty years of unprecedented progress and stability. In the period of this crisis, we experienced return of Keynes policies, and ironically it looks like we're heading to the "Keynes at home and abroad" principle. If we learned the lessons, we should as soon as possible return to the approach of "Adam Smith at home and abroad". Of course, we can not go completely back to the beginning. The world is different. Policy, including monetary policy, has to adapt this approach to "fight" the increased globalization (Taylor, 2010, p.12).

## **Conclusion**

Inflation targeting is one of the strategic monetary alternatives, which is widely applicable in developed, and in developing countries and in transition economies. It includes explicit disclosure of quantitative, single digit numeric goal for the rate of inflation in a medium-term (usually two or three years in advance) and an absolute commitment to achieving the stated goal - a stable and low inflation. Implementation of inflation targeting should take place after disinflatory period, to ensure that already achieved monetary stability, as positive internalities; contribute to strengthening the inflation targeting regime and to the acceptable results in the

initial phase of implementation. Furthermore, it is necessary to ensure equality of monetary and fiscal policy so that monetary policy would not be in the role of passive actor to absorb shocks that come from the sphere of the fiscus. Also, it is necessary to establish a regime of flexible exchange rates, which would act as absorbers of external shocks, as well as a robust financial sector (especially banking), which would be resistant to the external and the internal shocks, contributing to financial stability. Furthermore, the strategy of inflation targeting implies an instrumental independence of the central bank, an effective system of communication between the central bank and the public, transparency of actions and plans of the monetary authority, and accountability for actions taken and (not) achieved results. Empirical analyzes clearly indicate that inflation targeting resulted in improving macroeconomic performance in the context of trends and variability of inflation, inflation expectations and economic growth. In the field of empirical evaluation of inflation targeting performance, it is important to emphasize a few facts. First, the implementation of inflation targeting is not associated with adverse effects on economic growth (in OECD countries and in developing countries), while there is a noticeable positive effect on stabilizing (reducing volatility) of the production in developing countries. Other countries that have implemented inflation targeting as a monetary strategy have a lower "sacrifice rate" during disinflation (short-run Phillips curve is "steeper", so that the stabilization costs less) compared to countries that implement other monetary strategies. Third, developing countries that have implemented inflation targeting recorded a decrease in the average level of inflation. Fourth, countries that implement inflation targeting have a lower transmission coefficient of current to expected inflation, which implies that inflation targeting is more effective compared to other monetary strategies, allowing that factors other than monetary policy regime (the labor market, fiscal policy) may contribute to the "anchoring" of inflationary expectations.

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## **CILJANJE INFLACIJE: DETERMINANTE, PREDUSLOVI, EFEKTI**

**Apstrakt:** Ciljanje inflacije je prognostički orijentisana strategija koja, koristeći kao nominalno sidro očekivanu inflaciju, fokusira nisku i stabilnu stopu inflacije (numerički cilj ili ciljni raspon sa centralnom vrednošću) kao ultimativni cilj. U odnosu na striktnu posvećenost uniformnom cilju, „mekša verzija“ (fleksibilno ciljanje inflacije) podrazumeva koegzistenciju više ciljeva, ali uz jasnu hijerarhijsku lestvicu i prioritet monetarne stabilnosti prilikom operacionalizacije monetarne politike. Dizajn, implementacija i evaluacija strategije ciljanja inflacije podrazumeva uspostavljanje institucionalnih mehanizama kao atributa efikasnog monetarnog mehanizma: nezavisnost i odgovornost centralne banke, odsustvo fiskalne dominacije, transparentnost monetarne politike, fleksibilnost deviznog kursa, harmonija i zajednička odgovornost monetarnih i fiskalnih autoriteta. Dodatni preduslovi tiču se opšteg ekonomskog ambijenta: stabilnost cena, odsustvo eksterne i strukturne dominacije, fiskalna ravnoteža, razvojen i robusan finansijski sektor. Efekti ciljanja inflacije mogu se označiti kao pozitivni, u kontekstu smanjenja prosečnog nivoa inflacije, inflacionih očekivanja, smanjenju volatilnosti ekonomskog rasta, uz neutralan uticaj na prosečan ekonomski rast. Empirijske analize takođe ukazuju da je „stopa žrtvovanja“ proizvodnje prilikom obaranja inflacije manja za čak 7% u zemljama koje primenjuju ciljanje inflacije, u odnosu na zemlje koje primenjuju druge monetarne strategije.

**Ključne reči:** inflacija, centralna banka, inflaciona očekivanja



## FOREIGN TRADE OF MEXICO AND COOPERATION WITH SERBIA

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Review paper

**Abstract:** Mexico is one of the most open economies in the world and has, among many others, the free trade agreement with the United States and Canada (North American Free Trade Agreement - NAFTA), which in terms of gross domestic product, measured in purchasing power parity of its members, is the largest trading bloc in the world. Mexico is one of the Spanish-speaking countries, which showed that it was not immune to the economic and financial crisis. Today, Mexico has an economy that is developing rapidly, according to the World Bank ranked the eleventh largest in the world. Based on the impressive economic performance of Mexico records, it could be said that the Mexican export-oriented economy, after the periodic crises through which Mexico passed in the last three decades, finally learned pragmatic lessons and more ready than many other economies awaited recovery time. After a brief review of the economic development and the position of Mexico in the world economy, the paper content is mainly a research intensity, volume and structure of foreign trade in Mexico, as well as economic cooperation between Serbia and Mexico.

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**Keywords:** NAFTA, the economic crisis, export-oriented economy, recovery, foreign trade, cooperation between Serbia and Mexico.

### 1. Introduction

The United States of Mexico (Estados Unidos Mexicanos, sp.), abbreviated Mexico, is a country in North America that is bordered on the north by the USA, in the southeast by Guatemala and Belize in the west by Pacific Ocean and on the east by the Gulf of Mexico and Caribbean Sea.

Mexico has a population of about 111 million, and comparing the nominal gross domestic product (GDP), Mexico is the fourteenth global economy, while to the GDP measured by purchasing power parity is ranked eleventh in the world. According to the UN report from 2011, Mexico's Human Development Index was 0.770, and Mexico was the 57th in the world. However, the distribution of wealth is unequal because there are areas with different human development index in the country; some areas are highly developed countries such as Germany while some of them are poor like Burundi. Furthermore, Mexico's economy is part of the North American Free Trade Agreement (NAFTA), a trilateral trade bloc in the region comprising of the US, Canada and Mexico. Mexico has benefited from the NAFTA; being a free market economy, it has increased its trade with the US and Canada threefold.

During the nineties of the last century Mexico was marked by strong revitalization of the economy of Mexico, and strengthened all forms of cooperation and regional integration. That new impulse to the Mexican economy reflected, above all, in the diversification process of regional integration, emphasized pragmatism and parallel operation and intertwinement between different models of cooperation and integration. In addition, we note that with reforms was introduced the model of open market economy (*economía de mercado abierto hacia exterior*) that allowed the access to flexible use of formal and informal mechanisms, multilateral and bilateral or trilateral actions within existing and new regional and sub-regional scheme cooperation.

Although the process of economic stabilization of the early nineties of the twentieth century, gave the first positive results, particularly in the area of foreign trade, we note that the deep economic reforms are taking place in the extremely harsh social conditions including an unbalanced distribution of the domestic product.

### **1. Mexico's Economic Development over the Past Three Decades**

Throughout its history, Mexico has gone through several crisis, but the most notable ones that they suffered greatly is during the 1994 economic crisis in Mexico, widely known as the Mexican Peso crisis or the Tequila crisis, and the 2008 global financial crisis.

The Mexican Peso crisis in 1994 was caused by the Mexico's government decision to devalue the peso. Exchange rate of peso was fixed; the government could borrow by issuing securities in dollars. Monetary authorities did not restrict high credit growth. At one point, investors were frightened, began to sell bonds, so the collapse of a fixed exchange rate was inevitable with its consequences. This resulted in a financial crisis that cut the value of peso into half, create high inflation and set forth a severe recession in Mexico. The

country is hit with massive lay-offs and loss of foreign investments. Gross domestic product (Constant Prices, National Currency) in 1995 contracts by 6.22 percent, which was the worst decline in the country history. Mexico's economy recovered with the aid of a US\$50 billion bailout from the United States, the IMF and the Bank for International Settlements (BIS).

**Figure 1 Mexico's Economic Growth, 1990-2011, %**



Source: Mexico National Institute of Statistics, Geography and Informatics, National Statistics, 1990-2011.

The basic measure of overall economic activity, gross domestic product, in the period 1996 – 2008 grew at an average annual rate of about 3.6%. In 2008, the global financial crisis caused severe economic downturn in many countries, with Mexico one of the greatest hit countries in Latin America. GDP (Constant Prices, National Currency) contracted by 6.2 percent, the highest contraction since the 1994 Mexican Peso crisis. As the Mexico's economy is heavily depended on the U.S. with 45 percent of Mexico's foreign investment come from the US and 80.5 percent of Mexico's exports going to the US, a fall in US demand for exports results in decreasing exports and rising unemployment in Mexico.

However, thanks to solid economic fundamentals and efforts to diversify the structure of its foreign trade, Mexico began the process of recovery in the second half of 2009 and for the year 2010, the growth figures pertaining to the Mexican economy indicate signs of the recovery and have increased the growth figures to 5.6%. This upswing was the result of significant improvement in Mexico's exports, automobile production, manufacturing and increased imports of consumer goods. Employment is also on the rise, despite a deep divide in economic distribution, where 32% of the top earners take in 55% of the country's total income.

According to the World Bank data in 2011, Mexico is the 14th largest economy in the world, with an estimated nominal GDP of US\$ 1.16 trillion. National product measured by purchasing power parity amounted to US\$ 1.75 trillion placing Mexico at the eleventh place in the world, and GDP per capita was US\$ 15.100.

The economic activity of Mexico presented a positive trajectory in 2011, even though the international economic situation propitiated a less favorable environment for the economic growth in the country. Particularly, lower external demand, especially from the U.S., led to a gradual slowdown of the Mexican economy in the second half of 2011.

The performance of various sectors of the economy reflected the fact that the slowdown initially stemmed from the external sector. Indeed, the growth rate moderation throughout the year was especially noticeable in the industrial sector, reflecting above all manufacturing sector evolution.

On the contrary, the services sector maintained a positive trajectory and only in the last quarter of the year demonstrated signs of deceleration. This was due to the fact that services associated with domestic demand continued observing similar dynamism throughout the year, while those especially associated with external demand registered a slowdown similar to that of the manufacturing sector during the year.

Regarding the evolution of Mexico's external accounts, during 2011 it reflected both the performance of external demand and the conditions prevailing in international financial markets. Indeed, as previously mentioned, the slowdown observed in U.S. industrial production led to a gradual loss of dynamism of non-oil exports throughout the year. Nevertheless, the increase in oil exports, as a consequence of high international oil prices, as well as the lower imports growth rate counteracted the above mentioned and resulted in the trade balance and current account deficits remaining at moderate levels of USD 1,167 million (0.1 percent of GDP) and of USD 8,789 million (0.8 percent of GDP), respectively.

## **2. Position of Mexico in the World Economy**

Mexico covers almost two million square kilometers. This is the thirteenth-largest country in the world, and the fifth largest in the United States. Mexico is in a group of middle-income countries and in impoverished Latin America is its one of the most developed part.

Thanks to the abundance of volcanic outbursts, Mexico is rich in non-ferrous metals namely silver, copper, gold, lead, zinc and timber and in the production of zinc, silver, lead and mercury is among the first countries in the world. Mexico is also the world's 7th largest oil producer in 2009, with 3.001 million barrels produced per day, and it is the 2nd largest oil supplier to US.

In terms of conditions for agriculture, nature was not generous toward Mexico. About 1/3 of the total area is desert, semi-deserts and rugged mountain areas, and arable land occupies only 13% of the total area. The greater area is the area of pastures and forests. Arable land is spreading by artificial irrigation.

Mexico has a population of 108.627 million people as of 2010, with a labor force of 46.99 million people. In 2010, the unemployment rate in Mexico is 5.37 percent. Over the past four decades there has been a large immigration wave of 12 million Mexican citizens who moved to the U.S. and half of them illegally. It is estimated that 10 percent of Mexico's population and 15 percent of its labor force is working in the United States. The high migration rate has also generated a huge inflow of foreign income into Mexico. In 2009, Mexicans working in the United States have sent a total of US\$21.5 billion back home, contributing to 2.4 percent of Mexico's GDP.

However, after the crisis in 2008 the Mexicans have realized that it is easier to get the job in their home country, than in the neighboring United States, so it is again a balance between the number of Mexican immigrants and refugees into the country. The unemployment rate in Mexico has dropped to 4.6% in March 2012, while that in the U.S. is more than 8%.

Mexico's main economic activities include: metal industry, mining, metallurgy, nonferrous metals, agriculture and tourism. Industrial products are: food and beverages, tobacco, chemicals, iron and steel, petroleum, mining, textiles, clothing, machinery, consumer goods, tourism, and agriculture: corn, wheat, soybeans, rice, beans, cotton, coffee, fruit, tomatoes, beef, poultry, dairy products, wood products.

Major export products include: manufactured goods, oil and oil products, silver, fruits, vegetables, coffee and cotton, and the main export partners in Mexico are: U.S. 73.5% and Canada 7.5% (2010).

Mexico imports: metal processing machines, steel products, agricultural machinery, electrical equipment, car parts for assembly, repair parts for motor vehicles, aircraft and aircraft parts, and the main import partners are: the United States 60.6%, China 6, 6% and 5.2%, South Korea (2010).

Industry is the most important sector of the economy which operates through numerous connections to the entire economy. The industry of Mexico contributes 33.3 percent of the country's GDP in 2010. Industrial output in 2011 increased by 2.1% compared to 2010. In the structure of industrial production the most common are: food products, metal industry, energy and chemical industries.

One of the most important sectors in Mexico's industry is the automotive industry. Many major car manufactures established their operations in Mexico, including General Motors, Ford, Chrysler, BMW, Toyota, Honda, Volkswagen

and Mercedes Benz. Instead of just functioning as an assembly manufacturer, the automotive industry also functions as a center for research and development for car manufacturing companies.

Electronics is one of the fastest growing sectors in Mexico and it is the 2nd largest supplier of electronics to the U.S. after China. In 2007, Mexico is the largest producer of televisions, ahead of China and South Korea, and also became the world's largest producer of smartphones. In 2009, the Mexican government's initiative of the PCIEAT, Program for the Electronics and High Technology Industry Competitiveness, aims to make Mexico one of the top five global exporters of electronic goods.

In 2010, services in Mexico contribute 62.5 percent to the nation's overall GDP, with two of its most important sectors coming from the tourism and financial and banking services. According to the World Tourism Organization, Mexico is main tourist destinations in Latin America and the tenth most visited in the world. For the most visit are deserved cultural and natural sites, which is classified as a UNESCO World Heritage Site, and there are 31, and in terms of numbers, Mexico is the first on the continent and sixth in the world. By revenue from foreign tourism, which is mainly derived from USA tourists, Mexico is one of the first countries in the world. Tourism in Mexico is supported by 3.3 million jobs in the country, which makes up 7.3 percent of total labour force, and expects to contribute 13 percent to the overall GDP in 2012.

Mexico has a banking system which is financially strong with banks which are well-capitalized. More foreign companies are entering its banking sector with an increasing number of foreign institutions merging with local companies. The acquisitions and mergers of foreign institutions with local companies have helped Mexico recover from its currency crisis in 1994. é é

The Mexican Stock Exchange is the second largest stock exchange in Latin America, and forth largest in North America, with a value estimated at US\$700 billion. It's stock exchange is also closely related to the US market. Hence, Mexico's stock exchange is highly influenced by any movements and developments in the New York and NASDAQ stock exchanges, as well as any interest rate changes in the USA.

### **3. The Volume of Mexico Foreign Trade**

Within a context of severe macroeconomic imbalances, Mexico opened its market through unilateral trade liberalization in the 1980s, joined the General Agreement on Tariffs and Trade (GATT) in 1986, and negotiated a series of regional trade agreements throughout the 1990s, foremost among them the North American Free Trade Agreement (NAFTA), and an Association Agreement with the European Union. Today, Mexico is the world's 9th largest trader and by far

the most important one in Latin America. It participates actively in multilateral trade negotiations, and is still one of the most dynamic participants in regional trade agreements.

It could be said that the General Agreement on Tariffs and Trade, and subsequent participation in the World Trade Organization (WTO) had not that important impact on the volume and structure of foreign trade in Mexico, as well as the diversification of the market, how many have had unilateral trade liberalization and regional initiatives of Mexico and regional trade agreements (Regional Trade Agreements - RTAs), including, of course, the most important NAFTA. In September 1993, the United States, Canada and Mexico signed NAFTA, which came into force on January 1st in 1994. This agreement led to the free trade of goods and services in the entire region of North America. With US\$40 billion in imports from the U.S. in 1993, in the time when the agreement came into force, Mexico was already the third largest trading partner of the USA, just after Canada and Japan. Implementation of NAFTA benefits the United States by increasing competition in product markets and the markets of production factors, and by reducing the prices of many consumer products in the United States. From 1994 to 2004, foreign trade between the U.S. and Mexico has increased by 166%. Free trade access to the Mexican market has enabled U.S. industry to import labor-intensive components of Mexico and to keep the business in the U.S., which would otherwise probably have lost in the benefit of industry in countries where wages are low. Some jobs that Mexico have not really got established in the U.S. but in other countries, such as Malaysia, where wages are about the same as in Mexico.

However, with the signing of the NAFTA, Mexico's trade economy is heavily linked to the United States', with as high as 90% of Mexican exports went to the United States. As a result, Mexico's economy suffered greatly during the 2008 global financial crisis and U.S. economic downturn, due to a drop in U.S demand of exports. Mexico's exports to U.S fell from US\$ 234.6 billion in 2008 to \$ 184.9 billion in 2009. GDP (PPP) of Mexico also posted a negative 5.25 percent growth in 2009, a drop from US\$ 1.553 trillion in 2008 to US\$ 1.471 trillion in 2009.

Mexico has also built an extensive network of free trade agreements with over 40 countries, such as the European Union, Japan Israel, and countries in South and Central America. These agreements liberalize the trade tariffs between countries and regions, and have made Mexico one of the most open countries in the world.

In 2011, Mexico's foreign trade had shown a very positive performance, not only by consolidating its recovery from the effects of the world economic crisis, but also by reaching new historical levels. Mexico is also the 15th largest exporter of goods in the world, and 15th largest importer of goods in the world. The export of products reached almost 350 billion dollars in 2011, representing an expansion

of 17.2% in comparison to the previous year and reaching the highest figure ever. In fact, the export sector was one of the engines that boosted the growth of the Mexican economy, which in 2011 grew at a pace of 3.9%. Around 34% of Mexico's GDP is generated through exports. In terms of employment, this means that one in five jobs is linked to export activities in Mexico.

Imports of products rose 16%, reaching almost US\$ 351 billion and were covered by exports by 99.6%. The share of foreign trade in GDP in Mexico in 2011 is 61.2%.

**Table 1 Mexico Foreign Trade, 1990-2010, Billion US Dollars**

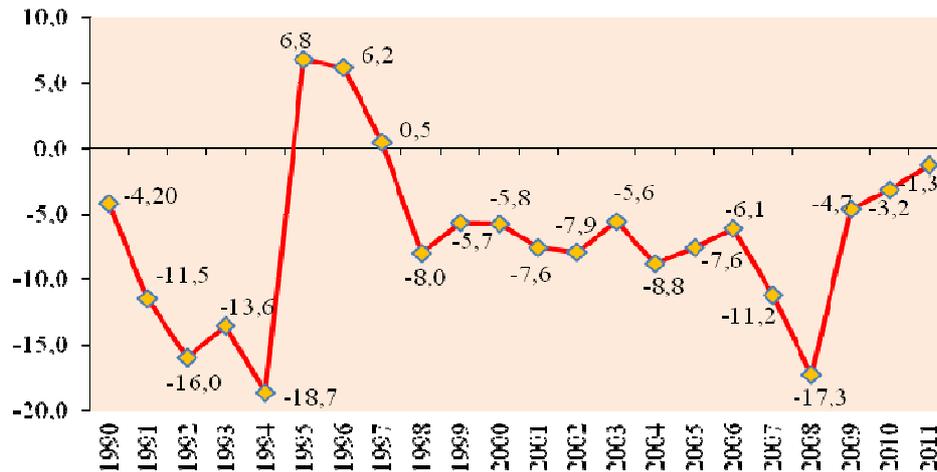
Year	Goods			Services		
	Export	Import	Balance	Export	Import	Balance
1990	26,9	31,1	-4,2	8,0	9,9	-1,9
1991	26,7	38,1	-11,5	8,8	10,5	-1,8
1992	45,9	61,9	-16,0	9,2	11,5	-2,3
1993	51,7	65,3	-13,6	9,4	11,5	-2,1
1994	60,6	79,3	-18,7	10,3	12,3	-2,0
1995	79,3	72,5	6,8	9,6	9,5	0,0
1996	95,7	89,5	6,2	10,5	10,6	-0,2
1997	110,2	109,8	0,5	10,9	12,4	-1,5
1998	117,3	125,3	-8,0	11,3	12,8	-1,5
1999	136,3	142,0	-5,7	11,5	14,3	-2,8
2000	165,3	171,1	-5,8	13,4	17,1	-3,6
2001	157,5	165,1	-7,6	12,4	16,9	-4,5
2002	160,8	168,7	-7,9	12,5	17,4	-5,0
2003	164,9	170,5	-5,6	12,3	17,9	-5,6
2004	188,0	196,8	-8,8	13,6	19,5	-5,8
2005	214,2	221,8	-7,6	15,7	21,0	-5,3
2006	250,0	256,1	-6,1	15,8	22,3	-6,4
2007	272,0	283,2	-11,2	17,1	23,5	-6,3
2008	291,3	308,6	-17,3	17,6	24,7	-7,1
2009	229,7	234,4	-4,7	14,7	23,2	-8,5
2010	298,3	301,5	-3,2	15,2	25,3	-10,1
2011	349,6	350,8	-1,3	15,3	29,5	-14,2

Source: OECD, Country Statistical Profile, 1990-2011.

Mexican trade deficit reached the highest level in 1994 during the Peso crisis, when was increased 445% compared to 1990. However, thanks to the establishment of NAFTA and the increasing demand of U.S. for Mexican exports, in 1995 Mexico reached positive record, recording a surplus of 6.8%. Mexico maintained a surplus in foreign trade in the next three years, and in the period of 1998 – 2008 Mexico maintained moderate average deficit of 7.4 billion dollars. Hard hit by the global financial crisis and the U.S. economic

crisis in 2008, Mexico's trade balance deficit recorded a new negative record of 17.3 billion dollars, the highest one since 1994.

**Figure 2 Mexico Foreign Trade Balance 1990-2011, bln USD**



Source: OECD, Country Statistical Profile, 1990-2011.

Since 2009 Mexico has begun its recovery in economic activity, and in 2011 Mexico reduced the trade deficit to US\$1.3 billion. These impressive results indicate a definite recovery of the Mexican economy from the global financial and economic crisis and confirm the positive growth trajectory of Mexican economy.

#### 4. The Structure of Foreign Trade in Mexico

In addition to the volume of foreign trade, for a complete analysis of foreign trade is necessary to evaluate its structural characteristics, as the production structure of foreign trade, as well as the regional trade structure.

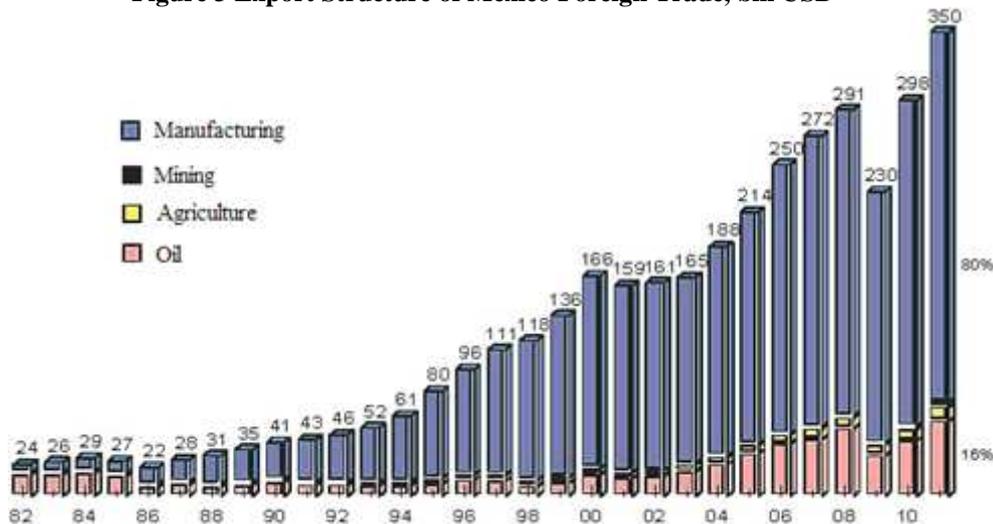
As a result of overdependence of the Mexican economy from the U.S., Mexico has been highly affected by global financial crisis and the U.S. economic crisis due to the drop in demand for Mexican exports. Since 2009 the Mexican foreign trade structure has been undergoing profound changes, both in terms of product structure, and in terms of geographical orientation.

##### 4.1. Production Structure of Foreign Trade in Mexico

Before its accession to the GATT in 1986, Mexico was a commodity exporter, in which oil exports represented more than two thirds of its total

exports. Thirty years ago, the export of the oil counted 70% of the total exports of the country and today, the share of the oil sector has fallen to 15%. On the other hand, manufacturing share rose from 24.3% to 80%. Export of the manufacturing sector in 1980 was counting 2% of GDP of Mexico, and today it is the fourth economic activity of the country. Diversification and higher value added of Mexican exports has been one of the major accomplishments of trade liberalization.

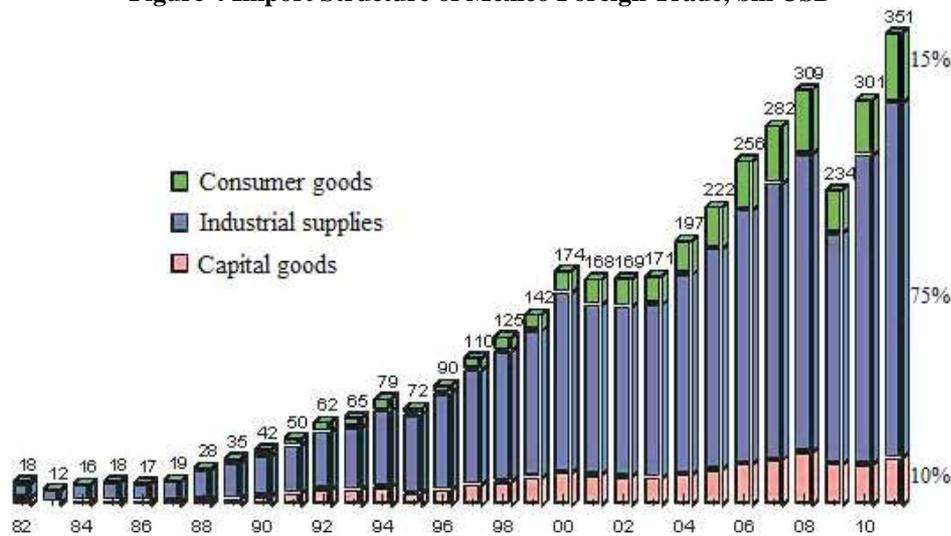
**Figure 3 Export Structure of Mexico Foreign Trade, bln USD**



Source: Taken from: Mexico-EU Trade Links (2012)  
*Mexico's foreign trade strengthens even in the world crisis, 1.*

In 2011, the total value of merchandise export amounted to about 350 billion dollars. The main export goods are manufactured goods, oil and oil products, silver, fruits, vegetables, coffee and cotton. The share of industrial products in total export was 75%. In 2011, manufacturing exports rose 13.4%, highlighting some vigorous industries like automotive (22%) and the mining-metallurgy (41%), meanwhile, mining and oil grew 68% and 35% respectively. Not less important, the external sales of agricultural products established a new historical record of 10.6 billion dollars in 2011.

In 2011, Mexican imports of products rose 16%, reaching almost 351 billion. While capital goods grew 15%, industrial supplies 15% and consumer goods increased 25%. Among Mexico's total imports, capital goods and industrial supplies account for 10% and 75% respectively, mainly because they are highly demanded by the Mexican industry in order to integrate them in high value added products to be exported.

**Figure 4 Import Structure of Mexico Foreign Trade, bln USD**

Source: Taken from: Mexico-EU Trade Links (2012)

*Mexico's foreign trade strengthens even in the world crisis*, p.2.

As for the commercial services trade, the principal services item was tourism accounted for 77.6% of total Mexican export of services, followed by transport services for 5.6%, and 16.9% are other commercial services. The growth of the information services sector, including financial and business services, is in line with the dynamic growth of technology-intensive industries and the globalization of world production and trade. The main services item in Mexican import of services are transport services accounted for 48.3%, followed by tourism services accounted for 31.2% and 20.6% account the other commercial services.

#### ***4.2. The Geographical Structure of Mexico Foreign Trade***

Due to the huge losses that Mexico suffered during the global economic crisis in 2008, as a result of excessive economic dependence on the United States, Mexico has made great efforts to diversify the geographical orientation of foreign trade and in the last three years achieved positive results in its attempts. In 2006, Mexico was exporting about 90% of its goods to the U.S. and now exports less than 80%, with growing exports to Latin American countries.

Table 2 The Largest Trade Partners in Mexico Foreign Trade

EXPORT				IMPORT			
Country	Year	USD	%	Country	Year	USD	%
USA	1995	65.2	82.0	USA	1995	53.8	74.3
	2005	183.6	85.7		2005	118.5	53.4
	2011	274.7	78.6		2011	174.4	49.7
Canada	1995	2.1	2.6	China	1995	0.5	0.7
	2005	4.2	2.0		2005	17.7	8.0
	2011	10.7	3.1		2011	52.2	14.9
China	1995	0.2	0.3	Japan	1995	4.0	5.5
	2005	1.1	0.5		2005	13.1	5.9
	2011	6.0	1.7		2011	16.5	4.7
Columbia	1995	0.5	0.6	South Korea	1995	1.0	1.3
	2005	1.5	0.7		2005	6.6	3.0
	2011	5.6	1.6		2011	13.7	3.9
Brazil	1995	0.9	1.1	Germany	1995	2.7	3.7
	2005	0.9	0.4		2005	8.7	3.9
	2011	4.9	1.4		2011	12.9	3.7
Spain	1995	0.8	1.1	Canada	1995	1.4	1.9
	2005	3.0	1.4		2005	6.2	2.8
	2011	4.8	1.4		2011	9.7	2.8
Germany	1995	0.5	0.6	Taiwan	1995	0.7	1.0
	2005	2.3	1.1		2005	4.1	1.8
	2011	4.3	1.2		2011	5.8	1.6
Japan	1995	1.0	1.3	Malasya	1995	0.4	0.6
	2005	1.5	0.7		2005	3.7	1.6
	2011	2.3	0.6		2011	5.6	1.6
United Kingdom	1995	0.4	0.5	Italy	1995	0.8	1.1
	2005	1.2	0.6		2005	3.5	1.6
	2011	2.2	0.6		2011	5.0	1.4
Holand	1995	0.3	0.4	Brazil	1995	0.6	0.8
	2005	0.8	0.4		2005	5.2	2.4
	2011	1.8	0.5		2011	4.6	1.3
Other	1995	7.6	9.6	Other	1995	6.6	9.1
	2005	14.2	6.6		2005	34.7	15.6
	2011	32.3	9.2		2011	50.6	14.4
TOTAL	1995	79.5	100	TOTAL	1995	72.5	100
	2005	241.2	100		2005	221.8	100
	2011	349.6	100		2011	350.9	100

Source: OECD, Country statistical profile, 1995, 2005, 2011.

Among the leading markets for Mexican exports, U.S. and the EU are first and second, respectively, followed by Canada and China in the third and fourth place. Mexico is the third in supplying the U.S. market, behind China and Canada. It is worth to highlight that the Mexican automotive industry consolidates as the first supplier of the U.S. Considering EU Member States individually, there are four European countries in the top ten destinations: Spain, Germany, United Kingdom and the Netherlands.

Main import partners of Mexico in 2011 were: USA (49.7% of total imports), China (14.9%), Japan (4.7%), South Korea (3.9%) and Germany (3.7%). In 2011, purchases from the U.S. accounted for roughly half of the Mexico's imports, while the EU maintained a market share of 10.8%. Among Mexico's main suppliers, Germany maintained its fifth place and Italy reached the ninth. Five out of the top ten suppliers were from Asia. As a result, in 2011, Mexico's trade deficit totaled 1.2 billion dollars (the lowest for the last 14 years), which represented 0.1% of Mexico's GDP..

**Table 3 Mexico Foreign Trade with EU and EFTA, US\$ million**

Januar - December	2010	2011	%
<b>Export in EU</b>	14,479.80	19,167.20	32.4
<b>Import from EU</b>	32,622.80	37,773.90	15.8
<b>Export in EFTA</b>	908.6	1,253.10	37.9
<b>Import from EFTA</b>	1,735.50	1,716.60	-1.1

*Source:* Ministry of the Economy Mexico, Trade and Investment, 2011.

In particular, Mexican sales to the European Union (EU) rose 32%, accounting for 5.5% of the country's total exports. In fact, since the entry into force, in 2000, of the Mexico - EU Free Trade Agreement, Mexican exports to the EU have increased by 250%, while Mexican sales to the rest of the world grew 152% in the same period. In 2011 imports from the U.S. accounted for about 50% of Mexico's total imports, while the EU takes up about 15.8% of total imports in Mexico. Mexico has also signed a Free Trade Agreement in 2000 with EFTA countries, which entered into force since 2001, under which the Mexican foreign trade significantly increased with this regional integration. In 2001, Mexico's exports to the members of EFTA increased by about 38%, while imports declined by about 1%.

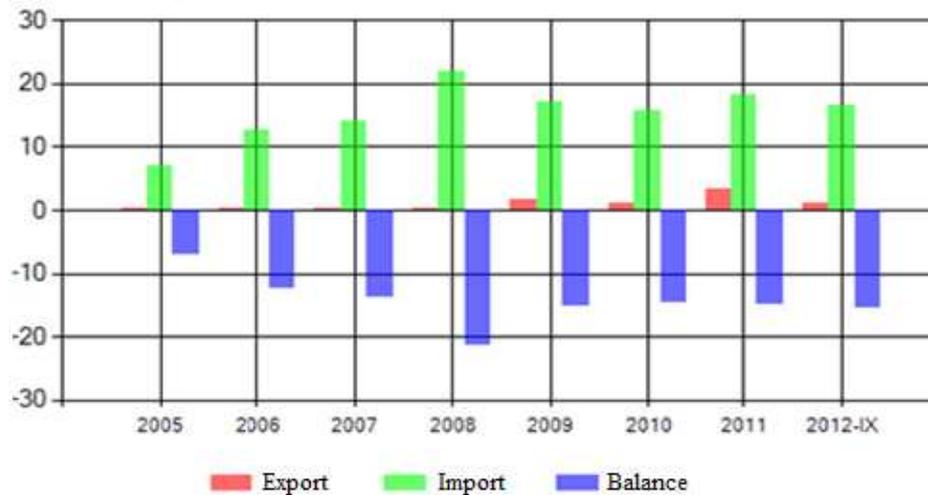
## **5. The Economic Cooperation between Serbia and Mexico**

Since the establishment of diplomatic relations in 1946, the overall relations between Serbia and Mexico were based on common understanding and confidence, and bilateral cooperation in various fields. Mexico has been a

traditional partner, in both of political and economic spheres, as well as in the field of culture and education.

So far, the economic cooperation between the two countries is mostly on the level of the conventional trade, unsatisfactory in terms of volume and structure. The level of realized foreign trade does not respond neither to capabilities nor to the needs of the two countries, even if we take into consideration the difficulties which our economy has gone through over the past period, and the distance that has a negative impact on the price and product competitiveness in the market. One of the reasons for this is the lack of information in the Mexican business community about the conditions and possibilities of doing business in Serbia, which is why most of those who previously had business relations with our country are still reserved in terms of stability and security in the region.

**Figure 5: Trade between Serbia and Mexico, US\$ millions**



Source: Chamber of Commerce and Industry of Serbia, International Economic Cooperation, 2012.

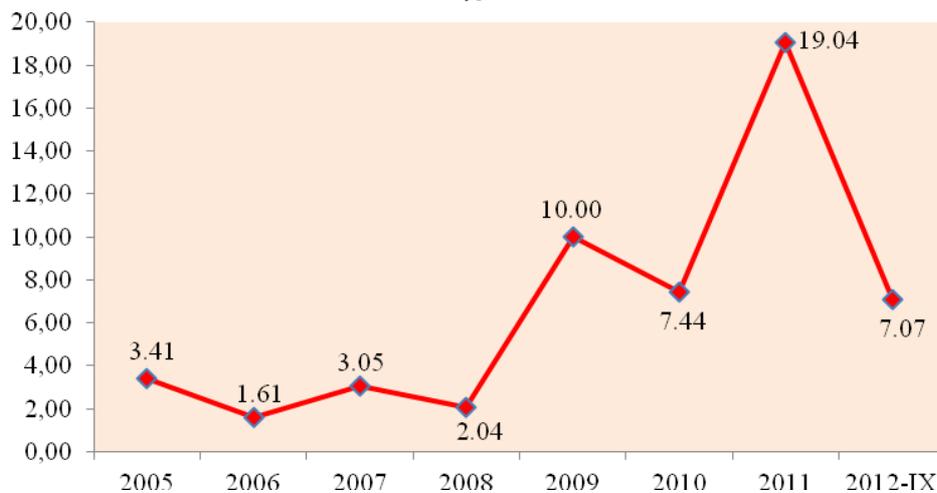
Exchange of goods between Serbia and Mexico is modest, with very limited placement of products on the market and large deficits on our side. However, the greatest concern is our strong export inferiority, which in this exchange, as well as in the trade exchange with a number of other Latin American countries, is one of the main causes of our high trade deficit with this group of countries. Extremely high deficit on our side and the low value of exports of our products, suggests that in the future it is necessary to take adequate measures in the direction of increasing exports from Serbia.

Trade exchange recorded progressive growth in the period from 2005 to 2008, which is always followed by deficit on our side. The most prominent

deficit Serbia recorded in 2008, amounting to about US\$ 22.4 million. From 2005 to 2011, the most Serbian exports to Mexico were recorded in 2011 in the amount of US\$ 3.5 million. In 2011, the total trade between Serbia and Mexico amounted US\$ 21.8 million, up by 30% compared to 2010. For six months of 2012 the total trade amounted to US\$ 11.6 million, which is 7% higher than in the same period in 2011 of US\$ 10.8 million. The value of exports to Mexico amounted to US\$ 0.7 million and registered fall by as much as 70%, compared to the same period of previous year, when it amounted to US\$ 2.3 million.

On the other hand, imports from Mexico in the given period in 2012 amounted to US\$ 10.9 million and grew by 28%, compared to 2011 when it amounted to US\$ 8.5 million. In trade with Serbia for six months of 2012, Mexico is on the 50th place in imports of Serbia, while in exports it is on the 77th place. The deficit in merchandise trade is on our side in the amount of US\$ 10.2 million for the six months 2012, recording a growth of 65% compared to the same period last year of US\$ 6.2 million.

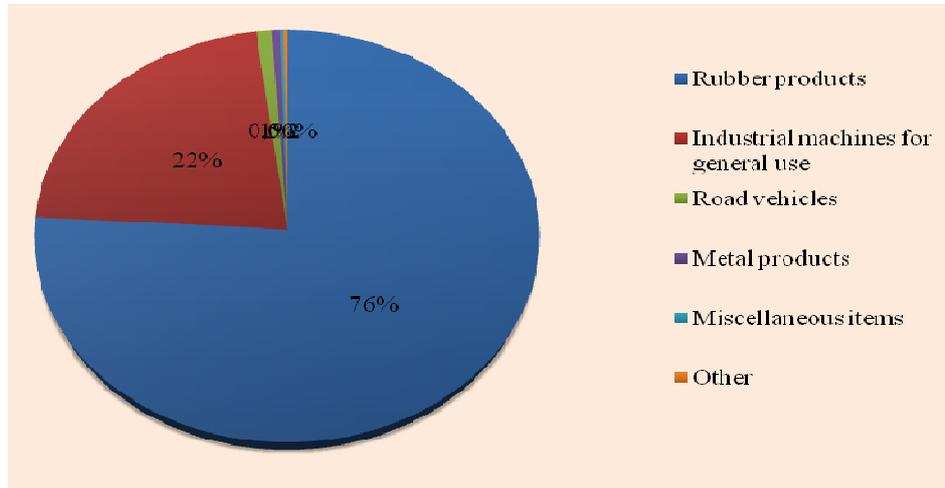
**Figure 6 The Export-Import Ratio,  
%**



*Source:* Chamber of Commerce and Industry of Serbia, International Economic Cooperation, 2012.

Figure 6 shows the coverage of imports by exports of Serbia. From 2005 till 2008 the export-import ratio was almost equal. From 2008 till 2009 the first greater increase in this ratio of 10% was noticeable, but in 2010 there was a fall and the coverage of imports by exports was 7.4%. From 2010 till 2011 the export-import ratio increased by over 19%, and for the first two quarters of 2012, this indicator fell by 6.7%.

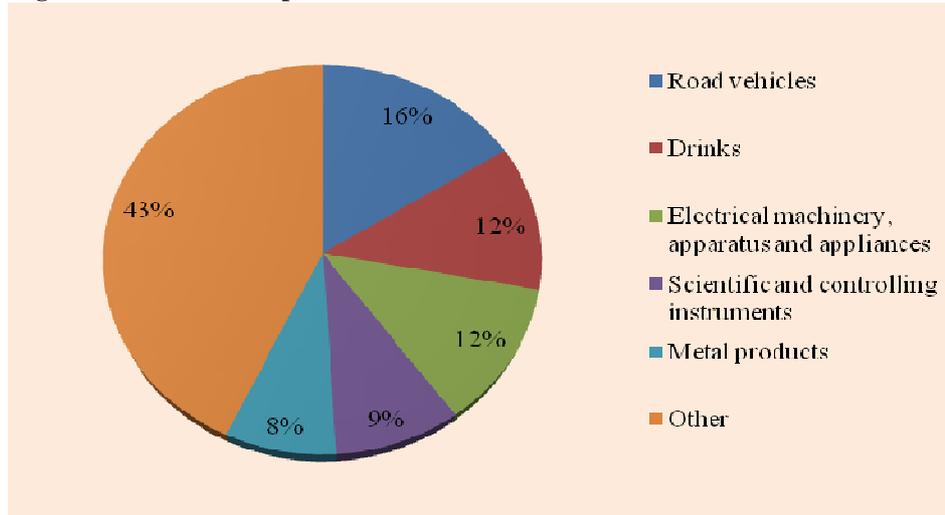
**Figure 7 Structure of Merchandise Exports from Serbia to Mexico for Six Months of 2012**



*Source:* Chamber of Commerce and Industry of Serbia, International Economic Cooperation, 2012.

In the structure of merchandise exports from Serbia to Mexico for six months of 2012 the highest precedence have rubber products, followed by industrial machines for general use, road vehicles, metal products and miscellaneous products.

**Figure 8 Structure of Imports of Goods from Mexico to Serbia for Six Months of 2012**



*Source:* Chamber of Commerce and Industry of Serbia, International Economic Cooperation, 2012.

Companies that have had primacy in exports are: Mitas Ruma (Rumaguma), FKL Temerin, Milo Stamm Indjija Hddsurgery Belgrade, Kikinda LBK Foundry, Unior Komponente Kragujevac, Belgrade Elkom, and Kikinda Kikinda Foundry, Bozen Cosmetics Belgrade, Belgrade Wrigley.

Figure 8 shows the structure of imports from Mexico to Serbia for six months of 2012, in which the priority had road vehicles, electrical machinery, apparatus and appliances, beverages, scientific and controlling instruments and metal products.

Companies that have had primacy in imports are: RRC Belgrade, Sbb Belgrade, Belgrade Comutel, Cooper Tire & Rubber Company Krusevac Serbia, Asseco See Belgrade, Belgrade Roche, Direct Link Belgrade, Cisco Serbia Belgrade, Porsche Belgrade, Begram Service Belgrade.

Mexico and Serbia have traditionally good relations. Last year, Serbia has celebrated 65 years of diplomatic relations with Mexico and without hesitation it can be said that Serbia and Mexico always shared a great friendship and a common level of understanding of each other's political relations and cooperation in technical and educational issues. However, the economic aspects of cooperation between the two countries are necessary to intensify.

The presence of Mexican companies in Serbia is almost non-existent. For now, the only Mexican giant "America Movil", the fourth telecommunication company in the world, purchased the tender documents for the purchase of Telecom. There is a Serbian company operating in the tourism sector in Mexico, near Rivera Maya in Cancun. But in both countries opportunities are endless. Mexico is a huge market where Serbian companies can access a very frequent market either through co-investments or through strategic alliances with Mexican firms. On the other hand, Serbia has a very strong competitive advantage in sectors that are highly dynamic, such as agro-industry and the pharmaceutical sector. Therefore, there are conditions for closer economic ties between the two countries.

That means we have to work hard to increase our trade and to better explore the potential of both the economy. In fact, both countries should be better informed about any changes in the markets and to persevere in their efforts to diversify international trade performance. In this sense, it would be a great help to boost economic promotion by the Serbian government and the private sector abroad.

## **7. Conclusion**

The main characteristics of the economic development of Mexico after the 1982, or after the period of the debt crisis, the so called "Lost Decade" during the eighties, was the implementation of a complex and difficult process of modernization through economic restructuring and the production and adaptation of laws and principles of free and globalized world economy and open market. In other words, the last decade of the twentieth century was a period of redefined and strengthened the international projection of Mexico in the form of intense involvement in the process of globalization. Applying the concept of "an open Latin American regionalism" has grown into a strong and dynamic process, which led to the restoration or making new agreements on free trade zones or common markets on a bilateral, trilateral, subregional, regional or inter-regional level.

Implementation of NAFTA was useful to Mexico in the way that directed Mexico to the export-led economic growth as a result of increased access to the huge U.S. market and by increasing foreign direct investment in Mexico. Mexico has experienced a net loss of employment and income in agriculture, but these losses were more than exceeded by the net growth in the industry. In addition, during the time increasing employment opportunities and rising wages in the industry reduced pressure emigrant Mexicans in the United States.

Like most other countries, Mexico was not saved from the negative effects of still present world economic crisis. Taking into consideration the periodicity of crises in the past, the question is: does the history of financial crises in Mexico repeats?

As a consequence of excessive links to the U.S. economy, Mexico has passed through a difficult period of adjustment to the external circumstances. However, while the USA, the first economic power in the world, with difficulty managed to overcome the financial crisis 2008-2009, Mexico recorded impressive economic performance, leaving behind itself main rival, Brazil.

Mexico's foreign trade structure is undergoing profound changes, both in terms of the product structure, and in terms of the geographical orientation. In 2006 Mexico exported 90% of its goods to the U.S. and now exports less than 80%, with growing exports to Latin American countries. While thirty years ago, 70% of the total exports of the country amounted to export oil, now oil amounts to 14%, which indicates that the oil is no longer the country's main export advantage. Export manufacturing sector in 1980 represented 2% of the gross domestic product of Mexico, now represents a quarter of economic activity in the country.

Great economic success of Mexico is attracting an increasing number of foreign investors, reputable companies like Volkswagen and Nissan that have invested hundreds of millions of dollars to open a factory in Mexico and which now sell their products around the world.

Based on the impressive economic performance of Mexico records, it could be said that the Mexican export-oriented economy, after the periodic crises through which Mexico passed, finally learned pragmatic lessons and more ready than many other economies met the recovery period. Also, despite the significant American influx and its impact on the Mexican economy, Mexico is going through the current challenges without a significant decline in economic activity, which is rare on a global scale.

The recovery of Mexico's external trade underscores its growing importance as one of the main platforms for world-scale production, thanks to its longstanding manufacturing efficiency, expanding infrastructure, qualified labor force and renowned production quality. Moreover, Mexico offers different kind of incentives in favor of investment and export activities, creating the ideal environment for companies established in the country, which take advantage of the wide network of free trade agreement, which provides preferential access to the main markets, such as North America, Europe and Japan, besides the dynamic economies of Latin America. With all these factors and yet in the context of the current global economic crisis, Mexico continues improving its competitive advantage by attracting more leading companies in sectors with high technology, that acknowledge Mexico as the best manufacturing location to integrate themselves into the global production.

Parallel with reforms in the industrial sector, Mexico has created favorable conditions for the adaptation to the logic of integration into the globalized flows of the world economy. From the perspective of Serbia, particular significance may have the fact that Mexico's new economic policy is based on a method of "geographic specialization," which involves quickly turns into profitable transnational production processes. Our conclusion is that the results of these reforms provide a positive experience, especially in the area of exports, which becomes diversified and in addition to traditional export items - raw materials, progressively include semi-finished products include, certain components of complex products, as well as finished composite products.

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## **SPOLJNA TRGOVINA MEKSIKA I SARADNJA SA SRBIJOM**

**Apstrakt:** Meksiko je jedna od najotvorenijih privreda na svetu i ima, pored mnogih drugih, i sporazum o slobodnoj trgovini sa SAD i Kanadom (North American Free Trade Agreement – NAFTA), koji u pogledu bruto domaćeg proizvoda, merenim paritetom kupovne moći svojih članova, predstavlja najveći trgovinski blok na svetu. Meksiko je i jedna od zemalja španskog govornog područja koja je pokazala da nije imuna na ekonomske i finansijske krize. Danas, Meksiko ima privredu koja se brzo razvija, rangirana od Svetske banke jedanaesta po veličini u svetu. Na osnovu imponantnih ekonomskih rezultata koje Meksiko beleži, moglo bi se reći da je meksička izvozno orijentisana privreda, nakon periodičnih kriza u koje je upadala u poslednje tri decenije, konačno izvukla pragmatične pouke i spremnije od mnogih drugih privreda dočekala vreme oporavka. Nakon kraćeg osvrta na privredni razvoj i položaj Meksika u svetskoj privredi, sadržaj rada se pretežno odnosi na istraživanje intenziteta, obima i strukture spoljne trgovine Meksika, kao i na ekonomsku saradnju Srbije i Meksika.

**Ključne reči:** NAFTA, ekonomska kriza, izvozno orijentisana privreda, oporavak, spoljna trgovina, saradnja Srbije i Meksika





## QUALITY CONTROL AND PUBLIC OVERSIGHT OF EXTERNAL AUDIT

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**Abstract:** Quality control of external audit should ensure that the audit results meet the expectations of stakeholders and also respond to all the challenges the audit faces. The process of quality control of external audit includes all subjects who have an interest in the reliability of audit reports and provision of a high level of audit services: certified auditors, audit firms, professional auditing organizations and the public. In the early 21 century, the outbreak of financial scandals and economic crisis has created the need for increased public oversight over the audit. In this sense, quality control of external audit has become a subject of interest to professional organizations, regulatory bodies and governments. These subjects tighten the monitoring of the audit profession, establish rules for assurance of audit quality control and impose the use of high quality auditing standards for all audits.

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**Keywords:** audit quality control, public oversight of audit

### Introduction

In the long history of development of the audit of financial statements, the auditor profession has freed itself from public supervision by applying professional ethics, reputation, professional work, and by contributing to the national economies and fighting for the right of self-regulation. However, in the late 20th and early 21st century, there was a large outbreak of financial scandals which led to a major economic crisis, but also raised significant issues related to financial reporting and the audit of the financial statements. The emergence of

financial scandals and their far-reaching consequences demanded a response from the profession, the state and the regulators. Thereby, activities are focused on four key areas: corporate governance, internal control system, accounting system relevant to financial reporting and external audit. Special attention is paid to improving the quality of external audit which should result in better financial reporting. The authorities of IFAC, the relevant EU institutions and regulators in the U.S.A. and European countries were involved in improving the quality of the audit. One of their major activities in this regard was the work of strengthening the regulating of the quality control of audits.

Starting from the need to respond to the financial scandals, to overcome the effects of the economic crisis, to provide improved quality of financial reporting and the audit of the financial statements and to increase the safety of investors, the paper will develop into four thematic units. First thing to distinguish will be the importance of ensuring the quality control of external audit and indicate the standardization of quality control of an audit as a regulatory framework for establishing control of the auditing profession, and then special attention will be paid to quality control and public supervision in the audit in the EU and the U.S.A.

### **1. The Importance of Ensuring Quality Control of External Audit**

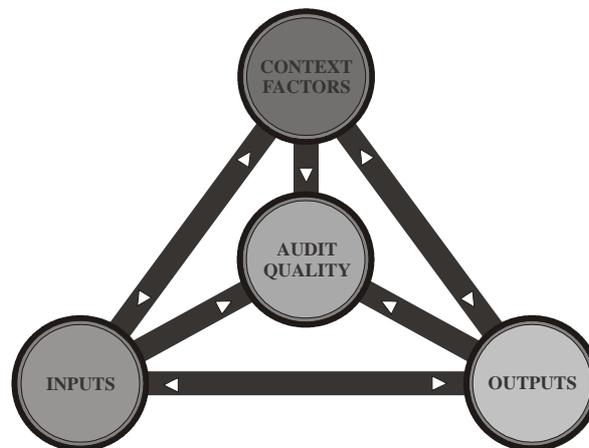
One of the basic conditions necessary for efficient operation and further development of a national and even global economy is providing reliable and relevant information in financial statements. With that in mind, the provision of high quality financial reporting has critical importance and audits have an especially prominent role in this process. Specifically, in addition to internal control, the audit committee and internal audit, external audit is an important link in the so-called quality of financial statements supply chain. An audit controls the correct application of accounting standards, the predefined accounting policies and procedures and, in accordance with that, expresses its opinion about the objectivity and fairness of the financial statements, and, respectively, whether all statements are prepared in accordance with the laws and professional regulations. It reduces uncertainty and doubt about the accuracy of the information contained in the reports, prevents deterioration of the quality of the financial reporting system, increases the confidence of the audited entity and other interested parties and the like.

Contribution of an audit to the entire process of financial reporting, especially to the quality of information contained in them, fully justifies the fact that the quality of the audit stands out as a very important issue. Specifically, the contribution which an audit provides to the process of financial reporting can only be expected if the audit is properly conducted. For these reasons, the provision of a high quality audit is an object of interest of professional

organizations and an imperative for the accounting and auditing profession. However, although many attempts have been made for recognition and adoption of the single - universal definition of the quality of an audit, it has not happened to this day. Thus, the quality of an audit implies “delivering adequate professional opinion, based on the necessary evidence and objective judgment. Ultimately, auditors provide quality service to its stakeholders if they provide audit reports that are independent, reliable and supported by adequate audit evidence,, (ICAEW 2010, 15). Also, another definition says that “properly conducted audit involves gathering sufficient appropriate evidence to provide a drawing of conclusions on which to base the auditor's report and the adoption of an objective opinion. Quality of an audit also includes adequate and complete reporting by auditors which enables the Audit Committee and the Board of Directors to properly perform their responsibilities” (Audit Inspection Unit 2005).

The issue of quality assurance is quite complex given the fact that it is a phenomenon which is influenced by numerous factors. Thus, the International Auditing and Assurance Standards Board (IAASB) indicates that the quality of the audit is determined by inputs, outputs, and additional factors (Figure 1).

**Figure 1.**



*Source:* (IAASB, IFAC 2011, 4)

In addition to auditing standards according to which auditing procedures are determined, the inputs also include personal skills and competencies of an auditor, their experience, ethical values etc. Also, an important input is the audit process itself, which involves the use of appropriate methodology, audit tools, technical support and so on which will enable the auditor to make adequate conclusions based on conducted tests and the proper assessment of the evidence in order to provide an adequate audit report (Francis 2011, 126). Also, a

significant impact on the quality of audits is achieved by audit outputs, that is to say the auditor's report and its contents, additional disclosures, additional communications achieved with the auditor that may be related to the qualitative aspects of financial reporting practices of the audited entity, the shortcomings of the client's internal control, etc. Finally, the quality of the audit is conditioned by many factors such as, for example, the quality of corporate governance (emphasizing transparency and ethical behavior), regulations (audit framework which implies its efficient implementation and an opportunity for the supervision of the auditor), etc.

In addition to the IAASB, Financial Reporting Council (FRC) issued a document in 2006 entitled "Promoting the audit quality" which identifies the key carriers of audit quality and the existence of possible threats that can compromise those carriers. According to the FRC, the main carriers of audit quality include:

- the established culture inside of audit firms (investment and valuation of high audit quality, providing funds for the consideration of specific issues, establishing a reward system for employees who promote personal skills which provide high audit quality, etc.);
- skills and qualifications of auditors (adequate conversance with the client's business, compliance with auditing principles and ethical values, demonstrating professional skepticism in their work, providing training for assistants in the revision, etc.);
- effectiveness of the audit process (audit methodology and instruments are properly structured, a provided framework for the efficient and effective collecting of sufficiently relevant and reliable evidence, adequate supervision of the work of the auditors, etc.) and
- reliability and usefulness of audit reports (clear and unequivocal expression of opinion on the financial statements, the existence of auditor's communication with an Audit Committee in relation to the scope of the audit, the existence of eventual threats to the independence of auditors, etc.)(The Financial Reporting Council 2006, 17-41).

FCR pointed out that the quality of the audit should be viewed as a dynamic category considering that the aforementioned carriers of audit quality change over time. For these reasons, the FCR updated the document and in 2008 issued the "Framework of Audit Quality", which is considered to be of a great assistance to audit firms, the auditing committees, audit stakeholders and regulators in understanding and raising the revision quality (Financial Reporting Council 2008, 1).

The fact that the consequences of poorly performed audits and biased financial reporting negatively affect the financial markets and the economy, on the national as well as on the global level, requires the control of audit quality to

be approached very seriously. The importance of audit quality control is that it reduces the risk of unreliable audits and therefore provides a better and more objective financial reporting and increases the certainty of investors in the capital market.

Establishment of an adequate system of audit quality control is intended for minimizing the risk of poorly conducted audits. Effectively established audit quality control system is the basis which should ensure that the audit results meet the expectations of stakeholders and also respond to all the challenges the audit is facing. For these reasons, all subjects who have an interest in the reliability of audit reports and provision of a high level of audit services must be involved in this process. Here, first of all, we have in mind: an authorized auditor who signs the audit report, the audit firm issuing the audit report, the audit profession and the public that uses financial statements (Andric, Krsmanović, Jaksić 2009, 37). Thus, each of these entities in accordance with their interests and responsibilities must take an active part in the audit quality control. Only in this way will an audit ensure users confidence in the reliability of financial statements. Therefore, audit quality control implies multilayer mechanism that operates on two levels as internal and external control. Internal audit quality control is conducted at the level of the audit firm and the audit engagement, while external quality control is achieved by professional organizations and their regulators, and especially through a system of public supervision..

## **2. Standardization of Quality Control of External Audit**

In the previous part of this paper it was mentioned that the adoption and implementation of auditing standards, which highlight obligation to conduct the audit in accordance with certain audit procedures and methodology, represent important carriers of audit quality. In fact, in addition to providing guidance for the proper conduct of the audit, the audit standards also represent main factors in securing the control of its quality. More accurately, the international regulatory framework for audit quality control is given in the standards issued by the IAASB as a body established by the International Federation of Accountants (IFAC) - the association with the most significant influence on the theory and practice of auditing (Table 1)

As can be seen from the table International standard on quality control 1 – “Quality control for firms that perform audit and review of financial statements, and other assurance and related services” provides guidelines for quality control at the level of auditing firms, in the sense that it refers to a quality control of all services provided by the audit firm. Bearing that in mind, in addition to the traditional audit of financial statements, audit firms also provide other services

(inspection, assurance, contractual procedures and compilation of financial statements, etc.); a need of defining standards of quality control at the level of individual engagement emerges. So, when it comes to audit of financial statements, the quality of its control is determined by the International Standard on Auditing 220 – “Quality control for audit of financial statements”. The last official versions of ISQC 1 and ISA 220 came into force on 15 December 2009. This is a result of the Clarity Project, realized by the IAASB with the aim of improvement and additional clarification.

**Table 1 Structure of IASSB Standards**

International standard on quality control 1 (ISQC 1)			
International Framework for Assurance			International Standards on Related Services (contractual procedures, compilation of financial statements, non-audit services)
International Standards on Auditing	International Standards Service Review	International Standards on Assurance	

*Source:* (Eilifsen, Messier, Glover, Prawitt 2010, 50)

ISQC 1 indicates the objectives of the quality controls which the audit firm needs to meet, the requirements that must be met in order to carry out the control at the appropriate level and provides guidelines to facilitate the implementation of the standards in practice. On the other hand, the ISA 220 emphasizes the responsibility of the Auditor-General in the implementation of control procedures at the level of specific audits of financial statements. According to ISQC 1, an audit firm should establish and implement an adequate system of quality control, and according to ISA 220, auditor should adequately implement quality control procedures to gain assurance that:

- work of the audit firm/auditor is in accordance with professional standards and applicable legal and regulatory requirements and
- reports signed by the audit firm / auditor are appropriate in the circumstances.(IFAC, ISQC 1 par. 11, 220 IAS par. 6 2010)

ISQC 1 and ISA 220 are organized in a similar manner and suggest appropriate areas in which auditors and audit firms can take appropriate action to promote and ensure a high level of audit quality control. These include:

1. Responsibility for the quality of the audit - audit firm should determine the person who bears the ultimate responsibility for the establishment and functioning of the system of quality control as well as monitoring of the

system and documentation. Also, it is necessary to ensure adequate communication within the company and to promote business culture that will emphasize the critical importance of achieving a high quality service. In doing so, the engaged auditor is expected to assume responsibility for the proper implementation and communication of quality control procedures in performing specific engagements.

2. Relevant ethical requirements - within the system of quality control it is necessary to establish policies and procedures to ensure that the employees in the audit company comply with ethical requirements, stressing the independence of auditors. In doing so, it is important to establish policies and procedures that will enable employees to recognize circumstances that may jeopardize the independence and to notify the relevant person to undertake activities that will eliminate perceived threats to independence. Also, the company needs, at least once a year, to obtain a written statement from the employees for complying with policies and procedures that ensure independence.
3. Acceptance and continuation of the cooperation with the client - the audit firm is expected to establish a quality control system that will include policies and procedures that provide assurance that the acceptance of the new, as well as the continuation of cooperation with existing customers is based on previous reviewing of the firms' competence to perform the engagement, availability of resources and time, then, to act in accordance with relevant ethical requirements and that client's rectitude is considered.
4. Human resources - a system of quality control includes establishing of the policies and procedures which will provide assurance that the audit firm has sufficient audit staff with adequate capacity, competence, experience, who will respect ethical principles with the aim of achieving the goal of quality control at the firm level. Besides, for every operation it is important to assign the responsibility to the head of the audit with the appropriate level of expertise, skills, authority. Also, the firm must assign appropriate staff to each operation to ensure a high quality of service.
5. Implementation of engagement - an audit firm should establish policies and procedures to provide assurance that engagements are performed in accordance with professional standards and legal and regulatory requirements. Also, it is necessary to establish policies and procedures relating to: the performance of consultations (to enable their performance along with the availability of necessary resources, that the content and conclusions of these consultations are documented etc.); engagement quality control inspection (to determine the person who will be responsible for quality control inspection, to ensure an adequate plan, the time period, the scope of inspection, preserve the independence of the person who performs the inspection, documentation of those inspections, etc.); the

differences in opinion which may arise between the personnel of the hired team, the hired team and a consultant, hired team and the person who performs the inspection of quality control, and resolving those differences.

6. **Monitoring** - One of the conditions which ensure that the quality control system is functional, efficient and applicable is to establish monitoring over policies and procedures of quality control. Namely, the audit firm is expected to: assess the functioning of quality control system for identifying potential deficiencies and to give appropriate recommendations for their elimination; communicate perceived deficiencies and recommend corrective measures to the engaged staff, at least once a year to prepare and present a report on monitoring to the top management of the audit firm. In doing so, it is important for the responsibility for assessment, reporting and giving recommendations for overcoming the problems to be passed to the person who has the appropriate competence and authority in the firm.

Implementation of the Clarity Project the IAASB has provided a great contribution to the improvement of audit quality control. In addition, the IAASB believes that, in partnership with all stakeholders, it is possible to create an international audit quality framework that will provide continuous assessment of the adequacy of the standards, and their further improvement.

### **3. Quality Control and the System of Public Monitoring in Auditing in the European Union**

Changes in approach to quality control, public monitoring and self-regulation in the auditing of the EU, in the first decade of the 21st century, were made as a result of the initiative of professional and regulatory bodies in order to respond to the financial scandals that have compromised the audit. Also, in the EU, in order to secure the requirements of the single market, audit quality control is becoming an important issue for its regulators and the coordinating of the audit quality in member countries.

The European Commission, as a response to the collapse of Enron and other corporate scandals in the U.S., as well as the financial scandal in the Italian Parliament in 2003, made efforts to improve the commercial law and audit quality in the EU (Stojilković, Bonić 2009, 168). On the 21st of May in 2003 the Commission published two reports. The first report contained ten priorities for the harmonization and improvement of audit quality in the EU, while the second report focused on the commercial law and corporate governance. Adoption of these statements was directed towards the development of a single European capital market and the harmonization and improvement of the audit of the financial statements. This was aimed at ensuring of the safety and security in informing the investors and other

interested addressees in the sense that they can rely on the accuracy of audited financial reports and at preventing of the conflict of interests for auditors and greater protection from corporate scandals.

The Commission issued a Communication from the Commission to the Council and the European Parliament - Consolidation of the statutory audit in the EU <sup>1</sup>. Thus, a plan was set for auditing, commercial law and corporate governance as a countermeasure to the spreading of the regulations from the U.S.A. Commission's plan referred to the regulations related to the auditing of financial statements, the rules of the performance of the audit, an audit infrastructure needed to protect the audit quality. It was divided into short-term and medium-term priorities set out in Table 2:

**Table 2 Commission's Plan with Ten Priorities**

	<b>Short-term priorities</b>
1.	Modernization of the Eighth directive
2.	Consolidating of the regulatory infrastructure in the EU - the establishment of the Regulatory audit committee
3.	Strengthening of the public monitoring of the audit profession in the EU
4.	Request for the use of ISA (International Standards on Auditing) for all audits since 2005.
	<b>Medium-term priorities</b>
5.	Improvement of the disciplinary sanctions system
6.	Achieving transparency of audit firms and their networks
7.	Corporate governance, strengthening of audit committees and internal controls
8.	Strengthening of the auditors independence and the Code of Ethics
9.	The deepening of the internal market for audit services
10.	Examination of the auditor's responsibility

*Source:* (according to Soltani 2010, 167-168)

The aforementioned priorities were amended by the Commission's broader plan of activities related to the amendment and harmonization of commercial law and corporate governance. The objective of these activities was to strengthen the rights of shareholders, to establish the protection of creditors and to increase the efficiency and competitiveness of business. The European Commission has achieved its objectives of harmonizing the legislation in audit using two instruments. These are the directives and regulations. Directives relating to the audit are **the Eighth Directive, which relates to the audit of the**

<sup>1</sup> Audit of Company Accounts: Commission Sets Out Ten Priorities to Improve Quality and Protect Investor

**financial statements (84/253/EEC) and the Council Directive (89/48/EEC).**

The Eighth Directive, adopted in 1984, can be considered the first significant instrument of the EU in the field of auditing. The content of this directive had been modified several times, but significant changes followed in 2006. The lack of precision of the Eighth Directive is reflected particularly in the issue of the auditor's independence requirements, approval of persons responsible for audit by the authorized bodies (in some countries, more than one body is in charge of this), as well as in terms of the established expert rules for the conducting of an audit approved by professional associations, which led to differences in national legislation. However, even the new Eighth Directive did not provide full harmonization as the EU directives allow member states to impose stricter rules than those provided by the Directive. However, the new directive has considerably helped in accomplishing of the following goals:

- creation of a single EU market of audit services,
- improvement of audit quality in the EU and
- protection of EU financial markets (Andrić, Krsmanović, Jaksić 2009, 33).

**Among the significant issues regulated by the new Eighth Directive there are issues of quality control of auditors and audit firms (internal control) and public monitoring of audit (external control).<sup>2</sup>**

The new Eighth Directive regulates the **establishment of a system of quality control of auditors and audit firms**. System of audit quality control at the level of the audit firm should be organized to ensure the independence of the auditor when drawing conclusions. Providing of the audit quality is the main vessel for convincing the public and regulators that auditors and audit firms to do business with respect to the auditing standards and ethical rules. European initiative for audit quality assurance aims to set a reference level for the quality assurance systems of the member states. The issue of quality assurance had been touched upon earlier in the Commission's Green Paper on the role, position and responsibility of auditors in the EU in 1996, in the statement Audit in the EU, in 1998, in the recommendation of the Commission - Quality Assurance of Audit in the EU - the Minimum Requirements in 2000. However, despite these attempts to harmonize the quality control in the EU, there was still a variety in

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<sup>2</sup> The new Eighth Directive includes the following chapters: I Definitions of Terms, II Education, Continuing Education and Mutual Recognition of Qualifications, III Registration of Auditors, IV Professional Ethics, Independence, Objectivity, Confidentiality and Professional Secrecy, V Auditing Standards and Reporting, VI Audit Quality Control, VII Investigatory and Disciplinary Actions, VIII Public Oversight, IX Appointment of Auditors and Termination of Cooperation, X Special Provisions Relating to Compulsory Audit of the Company of the Public Interest, XI International Aspects and XII Transitional and Final Provisions.

national quality assurance systems in terms of the scope of quality testing, mandatory or voluntary implementation of quality control, as well as in terms of public reporting about it. The new Eighth Directive tightens the monitoring of the audit profession, establishes rules for quality assurance of audits, lists the rules about the independence and ethics and imposes the use of high quality auditing standards for all audits. The new directive gave the proposal for the improvement of the quality of work of auditors and audit firms:

- Inclusion of the principle that the auditor of the group is responsible for reporting on the audit of the consolidated financial statements of the group companies.
- The request for the existence of independent audit committees in all companies listed on the stock exchange.
- Improving of educational program of auditors, which includes knowledge of IAS, IFRS and ISA.
- Legislative support for the principle of independence of auditors.
- The obligation for Member States to lay down rules for compensation for audit to ensure audit quality and help prevent the provision of audit services at low fees which would be compensated by the income of non-audit services.
- Introduction of requirements for the Member States to organize a system of quality assurance of audit in accordance with clearly defined principles.
- The obligation of member states to introduce effective investigative and disciplinary systems.
- The obligation of introducing rules concerning the appointment and resignation of auditors and audit firms and the introduction of requirements that companies should document their communication with the auditor or audit firm.
- Introduction of an annual report on the transparency of audit firms.
- A request that the quality of the audit is inspected at least once every six years, and at least once every three years for auditors and audit firms which perform the auditing of companies listed on the stock exchanges in the EU.

The new Eighth Directive deals with **the regulation** of the **public monitoring of the audit** in EU member states. The request for public monitoring of the audit should provide quality assurance in auditing and in expressing opinions. The aim of the mechanism of public monitoring is to increase the level of trust and credibility of financial reporting. Public supervision should enable the auditing profession to act according to the public

interest at the highest level of quality. The European Commission has established standards for the quality assurance systems and explicitly stated that these systems and disciplinary regimes must be connected at the national level. So, the new Eighth Directive requires EU Member States to organize an effective system of public monitoring for all auditors and audit firms. The system should be independent from the auditing profession, so that it is managed by people who possess adequate knowledge and experience in the field of auditing, but are not currently working in the auditing practice. The system of public monitoring should provide supervision over the procedures for approval and registration of auditors and audit firms, adoption of ethical standards and internal quality control standards, implementation of continuous improvement, quality control, and undertaking investigations and disciplinary actions. Also, the Directive requires the member states to establish one or more authorized bodies to which they will delegate these responsibilities.

Public monitoring is an essential element in giving credence to the auditing function. With the development of capital markets in the EU the European Commission has set up the European Group of Auditors' Oversight Bodies (EGAOB). This group should provide technical expertise for the successful implementation of the Eighth Directive, including issues related to the adoption of the ISA, audit quality assurance, relations with the third countries and inspections. The EU has endorsed the use of the ISA and ISQC along with the Eighth Directive and the statements. Also, the European Commission had in mind the passing of SOX Act in 2002, the measures of the SEC and the PCAOB in the U.S.A. Although the Commission accepts the goals of SOX Act and supports many of its measures, the differences in the legal environment and culture of the EU require that the United States also accept some of the equally effective European measures. The global market cannot be achieved unless the EU and the U.S.A. recognize the equivalence of regulatory systems of quality control (Soltani 2010, 177).

In the beginning of the 21st century, the EU reached the conclusion that they can no longer accept self-regulation by the accounting profession and the public oversight outside the profession is necessary to provide protection of the interests of the users of financial statements and of the public. It has in some ways led professional organizations to lose significant authority which is transferred to new bodies to be formed in the system of public oversight of the audit. One of those transferred authorities is the quality control of the audit's performance which is carried out by inspectors with experience in auditing, but not employed by the audit firm, and not by a fellow auditor (Andrić, Krsmanović, Jaksić 2009, 43). The system of public oversight should strive to be independent from the influence of auditors and audit firms and must be regulated by law.

#### **4. Quality Control and Public Oversight of the Audit in the U.S.A.**

In the U.S.A., there is a long tradition of audit quality control. What is a characteristic of the American system of control since the beginning of the development is the existence of multiple forms of audit control. Big financial scandals in the U.S.A. have contributed to the reduction of investors' confidence in the financial statements and their audit so the audit quality control policies have been significantly amended by the SOX Act from 2002.

Before the enactment of the SOX law, a system of audit quality control included: the Securities and Exchange Commission (SEC), the American Institute of Certified Public Accountants (AICPA), Securities & Exchange Commission Practice Section (SECPS), Quality Control Inquiry Committee (QCIC), Independence Standard Board (ISB), Professional Oversight Board (POB) (a combination of public oversight and self-regulation) and state boards of accountancy. The AICPA's Professional Ethics Executive Committee (PEEC) was very significant in the domain of self-regulation, research of rule-breaking and taking disciplinary action. They were responsible for reviewing of misconduct of individuals. Also, there was the Quality Control Inquiry Committee (QCIC), who was in charge of the review of inadequate firm management.

In the U.S.A., for the purpose of quality control, generally accepted auditing standards are applied (SAS No.25), standards on quality control (SQCS No.2 and No.3) and independence, with respect to the ethical principles. Before Sarbanes-Oxley Act (SOX Act) the American Institute of Certified Public Accountants (AICPA) had been responsible for the adoption of these standards, while after the SOX Act this jurisdiction has been conferred on the Public Company Accounting Oversight Board (PCAOB). The Board has accepted the adopted standards of the AICPA as interim standards, and gained the jurisdiction to adopt the new standards, especially those related to the area of audit quality control with the obligation to respect the measures of the Securities and Exchange Commission (SEC).

Corporate scandals in the United States resulted in the most significant changes in the audit taking place in the area of quality control. Framework of audit self-regulation was under attack and the changes were required in the sense of the introduction of public supervision over the work of the auditors. In that sense, the SOX Act, Section 103 specifically addresses the auditing, audit quality control and ethical rules. This law has initiated significant changes:

- establishment of the Public Company Accounting Oversight Board (PCAOB),
- introduction of the oversight role of the audit committee over the external auditor
- direct involvement of the regulator (SEC, NYSE, NASDAQ and AMEX) in audit quality control.

Before SOX legislation, Professional Oversight Board (POB) was responsible for the improvement of audit quality and financial reporting, public protection and strengthening of the independence of the auditor. **SOX Act authorized the PCAOB to establish auditing standards, standards relating to quality control and ethical rules.** This was the basis for replacing the self-regulation framework of the auditing profession. PCAOB takes over the activities which were previously conducted by the AICPA, which refer to the audit quality control and disciplinary actions. The purpose of the forming of this committee is the improvement of public interest in the issuing of accurate and objective audit reports. Four duties of this committee singled out:

1. registration of audit firms,
2. adoption of auditing standards, quality control standards and the standards of independence,
3. inspections of firms which perform audits and
4. conducting investigative and disciplinary procedures.

All **audit firms** (American and foreign) which perform audits of companies participating in the American financial markets must **be registered with the PCAOB.**

**SOX law has given the authority to PCAOB to adopt the AICPA standards (auditing, quality control, and independence standards), or to create standards of its own.** The board adopted Generally Accepted Auditing Standards (GAAS) developed by the AICPA as interim standards in April 2003. The board set its own standards which were initially standards for certification. Also, the board has formed an advisory group for standards which consists of 25 members with experience in accounting, auditing, corporate governance, investment and finance, and which has the task to assist the Board in establishing the standards.

**SOX Act provides that the PCAOB is to inspect firms which carry out audits.** PCAOB conducted "limited inspection procedures"<sup>3</sup> in the four largest audit firms in 2003, and started with a complete inspection in 2004. The board checks whether there were any violation of the rules and standards adopted by the board, SEC rules, professional standards and polices of performance quality control of the audit firm. SEC and the appropriate state regulatory bodies, as well as the audit firms report about this by the means of letter response to an audit firm. If an audit firm fails to resolve the problem within one year from the date of reporting, the public is notified.

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<sup>3</sup> The limited inspection procedures implied: the overview and understanding of the policies, rules, methodologies and programs for the development of the firm, visiting administration, working paper checks in certain areas of selected audit engagements.

**PCAOB is in charge of the conduct of investigations and disciplinary proceedings** instead of the SEC's practice section (SECPS). They conduct an investigation and take disciplinary action when auditors violate professional and ethical rules, and can even deprive the audit firms of the rights to perform audits.

**Within its reforms, the SOX Law introduced the direct responsibility of the Audit Committee for the supervision of the performance of the external auditor.** A change in the focus of the audit committee is introduced in the sense that it turns from the past to the future. The Audit Committee becomes the channel of communication between the internal and external auditors, management, employees and board of directors (Jaksić 2009, 364). An independent audit is a prerequisite for reliable financial reporting and audit committee can encourage independent auditor and contribute to high-quality financial reporting. Audit committee recommends appointment of independent auditors, and even their replacement if needed, while the auditor is directly responsible to the committee and the shareholder assembly (owners). The Audit Committee is associated with the external auditors on several grounds (Soltani 2010, 112-113):

- The Audit Committee has the authority to approve all fees and terms of audit engagement, as well as non-audit engagements conducted by auditors and shall ensure that the audit of financial statements is not compromised;
- The Audit Committee should examine the scope of audit work and the approach to the auditor after the appointment of auditors and to examine the results of the review with the auditor after finishing the audit;
- The Audit Committee is directly responsible for the oversight of the external auditor, including the resolution of disagreements between management and the auditor about financial reporting, while the external auditor reports directly to the committee and the board of directors;
- The Audit Committee should be informed of all the difficulties encountered by the auditor in the engagement, including restrictions (in access to information, in terms of the conduct of activities, etc.) and significant disagreements with management;
- The Audit Committee should protect the external auditors from discharge which can ensue due to the disagreement with management regarding the issuing of opinions with reserve (for example, issuing the auditor's report with reserve related to the durability of operations or as a result of poor relations with management)<sup>4</sup>.

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<sup>4</sup> Empirical study conducted by Carcel J.V. and Neal T.I. in 2003 and published in the paper "Audit committee characteristics and auditor dismissals following" new "going concern reports", showed that if there are directors associated with the company or members who have shares of the company in the audit committee, there will be a greater chance of the dismissal of the external auditor who gave a qualified opinion due to problems with the durability of the business. On the

**SOX Act also implies changes in the supervisory role of the SEC.** One of the significant powers vested in the SEC is reflected in the **prevention and detection of irregularities, as well as the initiation of disciplinary proceedings against independent auditors and deciding which cases will be prosecuted.** Separate sector within the SEC investigates violations of the law on securities and advises procedures of the SEC about the initiation of proceedings in a federal court or before the administrative law judge, and negotiates settlements on the behalf of the SEC.

SEC has the authority to **monitor the activities and decisions of the FASB<sup>5</sup>**, in terms of overseeing the establishment of standards in practice and whether the standards serve the public interest and the protection of investors. Members of the SEC and FASB work together for improving the procedure for establishing standards including the need for timely updates. It also supervises the activities of ASB<sup>6</sup>, established by the AICPA to establish auditing standards to ensure continuous improvement in the auditing process.

SEC is engaged in **the supervision of the private sector**, making of the interpretation related to the accounting standards of the private sector, **and monitoring of international bodies that establish accounting and auditing standards and the standards of independence.**

**In the case of financial fraud of a company, which listed securities on the stock exchange, the SEC also investigates the role of the external auditor.** Based on the research SEC may include the auditor as co-defendant in the proceedings against the company or initiate separate proceeding against the auditor. There are two basic ways in which the SEC takes action against auditors. The first includes disqualification of the auditor for performing the auditing profession due to lack of qualifications, integrity, or engaging in unethical conduct or violation of the law on securities (suspension or permanent disqualification of the audit firm or auditor is possible). Another way in which SEC may act against the auditor is to initiate legal proceedings in which an injunction or an order for suspension and termination of conducting activities is being issued. Proceedings against audit firms and auditors that undertaken by SEC are known as AAER's actions or proceedings in which the Commission summarizes the accounting and auditing procedures, which are codified in a

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other hand, if the members of the Audit Committee are more experienced in management, they will be less likely to decide on the dismissal of the auditor. Also, the same study indicated that clients who dismiss their auditors after issuing opinions with reserve, also dismiss audit committee members in a higher percentage than clients who retain their auditors. This is because clients who dismiss auditors can also dismiss the audit committee members who voted for the retention of the auditor.

<sup>5</sup> Financial Accounting Standards Board

<sup>6</sup> Auditing Standards Board

series of reports on conducted procedures. Such actions can have negative consequences on auditors and their firms because, other than the sanctions of SEC, they imply the loss of reputation, and bad publicity.

SEC can also **issue warning messages to the auditors** in order to: provide quality control of business, indicate the existence of fraud by the client, maintain independence in the performance and in the forming of opinions and to achieve ethical professional behavior (Feroz, Patrick, Pastena 2003, 110).

SEC **proposed the rules to establish a framework for improving the quality of financial reporting by improving public oversight of the audit process** in 2002., which should restore investors' confidence. Forming of the special Public Accountability Board (PAB) is also planned, which would be a substitute for self-regulation to which the accounting and auditing profession has been subjected until 2002.

## **Conclusion**

The outbreak of major financial scandals and economic crisis in the early 21st century led to serious questioning regarding financial reporting and auditing of financial statements, resulting in an increased oversight of the audit. The ensuring of audit quality control has become a subject of interest for professional organizations, regulatory agencies and the state. The establishment of an effective audit quality control system is to ensure that the audit results meet the expectations of stakeholders and interested parties respond to the challenges the auditors face in the audit process. That is why all subjects are interested in the reliability of an audit report and the services involved in the process: a licensed auditor, an audit firm, professional organizations and the public, including the state.

The importance of quality control is that it reduces the risk of unreliable audits which provides better and more objective financial reporting and increases investors' certainty in the capital market, as well as other stakeholders. Audit quality control is achieved at two levels as internal and external control. Internal audit quality control is conducted at the level of the audit firm and the auditing engagement. External quality control is achieved by professional organizations and their regulators, and especially through a system of public oversight.

Standardization of audit quality control involves the establishing of the regulatory framework for the successful implementing of audit control. The most famous standards on audit quality control are known as ISQC 1 - "Quality Control for Firms that Perform Audit and Review of Financial Statements, and Other Services of Assurance and Related Services" and ISA 220 - "Quality Control for Audit of Financial Statements", whose last official versions represent a result of the Clarity Project, realized by the IAASB.

In the EU, the assurance of audit quality control becomes the subject of interest of regulatory and professional bodies in order to ensure the requirements of the single market and harmonize the audit quality in member countries. Issues related to the assurance of audit quality control are incorporated into the Eighth Directive of the EU and are gaining in importance after the changes made in 2006. With this Directive the EU countries have harmonized their legislation with the use of ISQC and ISA and compliance with the SOX Act and the measures of SEC and PCAOB in the U.S.A. The general attitude is that the self-regulation of the auditing profession can no longer be accepted and that the supervision at the level of the audit firm and the engagement is necessary, as well as public audit oversight. This has led to a situation in which professional organizations lost certain powers that were transferred to new bodies.

Audit quality control in the United States has a long tradition. In U.S.A. the area of quality control audit is regulated by generally accepted auditing standards, standards on quality control and independence standards, with the code of ethics. In audit quality control system in the United States and before the SOX Act were included numerous professional organizations and their regulator bodies. Corporate scandals in the United States resulted in the further work on improving quality control audit by strengthening public oversight. It is regulated by SOX Act which has brought changes in the area of audit quality control: PCAOB is responsible for the strengthening of public oversight, insists on the oversight role of the audit committee and requires direct involvement of the regulator in the public oversight.

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## **KONTROLA KVALITETA I JAVNI NADZOR EKSTERNE REVIZIJE**

**Abstract:** Kontrola kvaliteta revizije treba da obezbedi da rezultati revizije ispune očekivanja korisnika revizijskih usluga i ujedno da odgovori svim izazovima sa kojima se revizija suočava. U proces kontrole kvaliteta revizije uključeni su svi u čijem je interesu pouzdanost revizijskih izveštaja i pružanje kvalitetnih revizorskih usluga: ovlašćeni revizori, revizorske firme, profesionalne organizacije i javnost. Izbijanje finansijskih skandala i ekonomske krize početkom 21. veka uslovalo je potrebu za pojačanim javnim nadzorom nad revizijom. U tom smislu kontrola kvaliteta revizije je postala predmet interesovanja profesionalnih organizacija, regulatornih tela i države. Ovi subjekti pooštravaju nadzor nad revizijskom profesijom, uspostavljaju pravila za obezbeđenje kontrole kvaliteta revizije i nameću upotrebu revizijskih standarda visokog kvaliteta za sve revizije

**Ključne reči:** kontrola kvaliteta revizije, javni nadzor revizije





## AUDIT PROCEDURES FOR DISCLOSURE OF ERRORS AND FRAUD IN FINANCIAL STATEMENTS

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**Abstract:** Auditors' responsibility regarding errors and fraud disclosure in financial statements is an essential element of the commitment they undertake to the users of information. Although auditors are responsible for expressing reasonable assurance that the financial statement contains no substantial deviations, the standards limit the auditor's opinion without explicit requirement that fraud and errors be identified. Nevertheless, auditors need to apply the adequate procedures to respond to internal and external factors generating errors and fraud, which reflect on the reliability of financial statements. This will contribute to improving the performance of entities and raising the value added of conducted audits.

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**Keywords:** audit procedures, errors, fraud, indications of fraud, auditors' responsibilities, financial situation

### Introduction

A series of changes have been introduced into Bulgarian legislation regarding accounting and independent financial audit. The harmonization of statutory acts that govern these two professions implies improved efficiency and increased responsibilities for both economic agents and society as a whole. Management is obliged to ensure the disclosure of information in financial statements, while auditors are expected to form an opinion and give a conclusion regarding the reliability of financial statements.

**The object** of this study refers to the factors which determine the occurrence of errors and fraud in financial statements and the procedures applied in audit. **The subject** is to describe the characteristics of audit procedures for identifying errors and fraud at various audit stages. **The objective of the study** is to establish the interdependence between the

characteristics of errors and fraud in financial statements and the possibility for implementing adequate audit procedures for their identification and disclosure.

The objective of the study may be accomplished by fulfilling the following **specific tasks**:

- Describe the economic factors which predetermine the occurrence of errors and fraud;
- Identify the essential characteristics of errors and fraud in financial statements;
- Analyse audit procedures applied for discovery of error and fraud depending on the stages of the audit process.

**The thesis** developed in this study is that economic crises increase the potential risks of errors and fraud occurrence in financial statements. Auditors should therefore apply adequate procedures at every single stage of the audit process to identify the factors for untruthful presentation of information.

The methods employed in the study include deduction, induction, analysis, comparison, modeling and research. Their main application is discussing the nature and characteristics of main categories, statutory acts and in processing the data collected from the subjects of research.

## **1. Economic Environment as a Prerequisite for the Occurrence of Errors and Fraud**

Economic environment is a major factor influencing the behaviour of economic agents. According to a survey conducted by PricewaterhouseCoopers (PricewaterhouseCoopers, 2009, 1) [1] in 2009, 25 per cent of participating Bulgarian companies were subject to serious fraud once or on several occasions. 78 per cent of those companies claimed that the major reason was the pressure to achieve certain financial targets and the variable component in employees' remuneration according to the achievement of those targets. The results from a survey on the business climate in Bulgaria show that when the financial situation is uncertain, most companies tend to report lower results in the financial statements (National Centre for Public Opinion Research, 2010, 4) [2]. Some of the reasons are [3]:

- Decrease in turnover ( production and/or sales volume) – 85.5 per cent of respondents;
- Serious delay of receivable payments to the surveyed company – 51.3 per cent;
- Cancelling already planned expenditures (for example, purchase of long-term tangible assets, personnel training, know-how) - 33.5 per cent.

As the information presented in financial statements is a starting point for decision-making by stakeholders, auditors should focus their attention on the

economic reasoning behind the modeling of financial results. Based on the above the main schemes for fraud in financial statements most often relate to presenting an improved or worsened financial situation than the real one.

Fraud in financial statements which aim to present an **improved financial situation** could be divided into two categories – qualitative and quantitative misstatements. Qualitative deviations might be tendentious or ambiguous names, forgery of figures, etc. Usually, companies overstate assets and revenue and/or understate debts and expenditure. This results in incorrect presentation of the net earnings per share and portraying a more stable financial state than the real one. Fraud can also be committed by omission or untruthful presentation of data in the financial statements, inaccurate disclosure of information, etc.

The schemes applied in committing such fraudulent financial activities include: fictitious sales; revenues recognized in advance, before meeting all conditions of a sale; sales under conditions; incorrect reporting of sales during the reporting period; inaccurate application of the percentage of completion method; unauthorized deliveries and consignment sales etc. Indicators for fraud schemes in the financial statements can be:

- fast growth rate or unusual profitability, especially compared to that of other companies in the same industry ;
- recurrent negative cash flow from operating activities or inability to generate cash from operations, while at the same time profit and profit growth is reported;
- substantial transactions with related parties or special purpose entities which are unusual for the company's business or with enterprises and organizations that are audited by another company;
- substantial and unusual or complicated transactions, especially ones concluded towards the end of the reporting period and therefore posing complex questions as to the application of substance over form rule;
- unusual increase in the number of days for turnover of accounts receivable from sales;
- substantial volume of sales to entities whose substance and ownership are unknown;
- unusual impetus in the sales of a small number of assets within the company or sales accounted for by the head office of the company.

According to the PricewaterhouseCoopers (PricewaterhouseCoopers, 2009,1) the report quoted earlier, nearly 33 per cent of the companies included in the survey engaged in fraud that resulted in increasing their revenue by reporting fictitious assets or assets they did not own, capitalization of costs which should have been expensed, overstating the value of available assets by applying higher market values and reducing the allowances for current accounts receivable [4]. Assets which are most often misstated are inventories, trade

receivables, buildings, equipment and machinery, current receivables, cash, investments in securities, patents, good-will, licenses and know-how, etc.

The indicators of fraud through overstating the assets' value largely overlap with the above mentioned indicators of revenue. Fraud indicators are often part of schemes. For improving the financial situation the entity's management actions can focus on:

- decrease of costs and liabilities;
- assets misappropriation and misuse;
- inappropriate disclosures, etc.

Other fraud indicators might be:

- the dominance of a single person or a small group of people in the management of the entity with no compensatory controls;
- unusual increase in the gross margin or a margin exceeding that of leading companies in the field;
- provisions for returned goods, customer claims, etc. whose percentage decreases or is different from those of leading companies in the industry;

The other type of fraud in financial statements which aim to present a **worsened financial situation of the entity** usually relate to taxation and tax evasion (tax fraud), forthcoming privatization or sale of a private company to other legal or natural persons, bankruptcy announcement, etc.

## **2. Characteristics of Financial Statement Errors and Fraud**

The term 'error' is used to describe unintended inaccuracies, deviations, or inconsistencies in financial statements, including the omission or disclosure of an amount, such as (International Federation of Accountants, 2008, 367) [5]:

- errors in the collection and processing of data necessary for the preparation of the financial statements;
- inaccurate accounting estimate occurring as a result of negligence or misinterpretation of facts;
- error in the application of accounting principles regarding evaluation, recognition, classification, presentation or disclosure.

The term "fraud" refers to an intended act of one or several executives, persons in charge of the overall management, employees or third parties, including the use of deception in order to gain unfair or illegal advantage. Even though "fraud" is a broad legal concept, auditors focus their attention on fraud which might lead to substantial inaccuracies, deviations or inconsistency in the financial statements. Auditors (including internal auditors) do not engage in the

legal definition whether fraud has been actually committed (International Federation of Accountants, 2008a, 44).

Auditors are mainly interested in two types of intended inaccuracies, deviations, and inconsistencies - inaccuracies, deviations, and inconsistencies occurring as a result of fraudulent financial reporting and inaccuracies, deviations, and inconsistencies occurring as a result of illegal appropriation of assets. Fraudulent financial reporting [6] involves intended inaccuracies, deviations, and inconsistencies, including the omission or disclosures of amounts in the financial statements aiming at misleading users of the financial statements [7]. Fraudulent financial reporting might be a result of:

- manipulation, counterfeiting (including forgery) or adjustment of financial records and data or of primary and secondary documents on which the financial statement is based;
- misleading information about events, transactions or other substantial information or their intended omission in the financial statement;
- intended misapplication of accounting principles regarding amounts, classification, presentation and disclosure of information.

Financial statement fraud often implies the circumvention or negligence of controls on behalf of the management, which might otherwise seem to be working efficiently. The circumvention or negligence of controls on behalf of executives might employ techniques such as:

- fictitious entries in the accounting records, especially at the end of the reporting period in order to manipulate performance results or for other purposes;
- inadequate adjustment of assumptions and altering the judgments used in the estimates of accounts balances;
- omission, preliminary or deferred recognition in the financial statement of events and transactions which have occurred during the reporting period;
- concealing or failing to disclose facts which might have an impact on the amounts presented in the financial statements;
- engaging in complex transactions and operations which have been structured so as to present inappropriately the financial situation or the financial results of the entity;
- changing documents and terms related to substantial and unusual transactions and operations.

Fraudulent financial reporting might be the result of the executives' efforts to manage earnings so as to mislead users of financial statements by manipulating their perception of the results achieved by the entity and its profitability. Such management of earnings might start with some insignificant activities or inaccurate adjustments of assumptions and altering the judgments

by the executives. Illegal appropriation of assets involves theft of company assets and is often committed by employees with relatively small or insignificant amounts. Top executives, however, may also be involved in similar activities, as they have more opportunities for concealing or keeping in secret illegal appropriation, in ways which are more difficult to discover. Assets might be illegally appropriated through:

- Assignment of proceeds (for example, misappropriation of collected receivables or diversion of proceeds from unused accounts into private bank accounts);
- Theft of tangible assets or intellectual property (for example theft of inventories for personal consumption or re-sale, stealing scrap metal for re-sale, entering into agreements with competitors to disclose technological information against remuneration);
- Payments made by the entity for goods and services which are received (for example, payments to fictitious suppliers, commissions paid by suppliers to the purchase officers of the entity in exchange for increased prices, payments to fictitious employees);
- Use of the assets of the entity for personal needs (for example, using the assets of the entity as a collateral on personal loans or loans extended to related parties).

Misappropriation of assets is often accompanied by counterfeited or misleading papers and documents aiming to conceal the fact that assets are missing or are used as collateral without appropriate approval.

*Elements of fraud are* (International Federation of Accountants, 2008, 57):

1. A motive (pressure, need);
2. Favourable opportunity;
3. Certain organization.

Fraud is committed in favour of a person or entity or both. *The motives* behind fraud might be:

- Financial;
- Character flaws/personality weaknesses;
- Work-related pressure;
- Other types of pressure.

Surveys conducted reveal that nearly 95 per cent of all fraud involves pressure arising due to either financial motives or vices. (Pricewaterhouse Coopers, 2009, 4)

Pressure and motives might lead to a substantial increase in the occurrence of these activities resulting in fraudulent financial reporting. Such situation might arise when due to the pressure to meet market expectations or desire to

obtain maximum results-related remuneration, the management deliberately takes positions which result in fraudulent financial reporting through substantial inaccuracies, deviations and inconsistencies in the financial statement, i.e. fraudulent statements. In other entities the management might be motivated to decrease earnings substantially in order to minimize taxes or to report higher earnings in order to secure bank loans.

Financial pressure is the most common motive for fraud. Usually, when managerial fraud occurs, companies increase the assets in their statements of financial position and the net income in the income statements. The motive in such cases is mainly poor liquidity, bad debt receivables, loss of clients, shrinking markets, obsolete inventories, etc.

*A perceived favourable opportunity* for committing fraud is the second element of the so-called fraud triangle. The major factors contributing to increase in the opportunities for committing fraud in entities include:

- Lack of or bypassing controls preventing and/or detecting fraudulent behaviour;
- Lack of access to information;
- Negligent behaviour, apathy or lack of capacity;
- Inability to assess performance quality;
- Failure to discipline fraudsters;
- Lack of audit trail, etc.

Fraudsters always *organise* their activity in order to minimize the risk of being identified. This helps them conceal their dishonest behaviour. Employees often commit fraud in response to employer's lack of adequate acknowledgement of their input or due to their perception that they are not adequately paid for the work they do etc.

The means for fraud discovery can be divided into two major groups: incidental fraud discovery and fraud discovery through the systems for risk management. The most successful method for economic fraud discovery in Bulgaria remains internal audit (30 per cent of fraud detected in 2009). However, it is an alarming fact that about one third of fraudulent activities in Bulgaria are detected incidentally (the percentage for Central and Eastern Europe is 32 per cent, while on a global scale the percentage is 40). (Pricewaterhouse Coopers, 2009, 3)

External auditors conducting audit in compliance with the International Auditing Standards should obtain reasonable assurance that the financial statements contain no material inaccuracies, deviations or inconsistencies, regardless whether due to fraud or error. The auditor cannot obtain absolute degree of certainty that material inaccuracies, deviations or inconsistencies will be discovered in the financial statements be disclosed due to factors such as professional judgement, the use of tests, limitations inherent to internal controls

and the fact that the majority of audit evidence available to auditors is convincing rather than persuasive in nature.

In order to obtain a reasonable degree of assurance, the auditor must retain an attitude of professional skepticism during the entire audit process, take into account the possibilities for the management neglecting controls, and consider the fact that audit procedures that are efficient in errors identification might not be appropriate within the context of identified risk of material inaccuracies, deviations and inconsistencies due to fraud. Due to the characteristics of fraud this attitude is essential for the auditor especially when ascertaining the risks of substantial inaccuracies, deviations and inconsistencies due to fraud. Professional skepticism is an attitude which implies questioning and critically assessing audit evidence. This requires constantly questioning whether the information and obtained audit evidence imply the possibility of material inaccuracies, deviations and inconsistencies due to fraud.

The best practices recommended for conducting similar activities might involve all or some of the following mechanisms and procedures, depending on the characteristics of the process employed by separate entities:

- Duly record policies, procedures, control mechanisms and monitoring reports;
- Check lists to verify procedures and basic control elements;
- Self-assessments of managers, for example self assessment of control;
- Review draft documents before submitting them;
- Process maps that record the sources of separate data elements to be presented, key control mechanisms and the persons, responsible for each element;
- Subsequent verification of reported problem issues;
- Special or targeted inspections of highly risky, complex or problematic areas, including critical accounting estimates, assessment of reserves, off balance sheet activities, main subsidiaries, joint ventures, and entities with special functions;
- Reports from the internal auditors on inner control issues, submitted at least once a year, or once a quarter where possible.
- Regular meetings of the audit committee and the disclosure committee.

The characteristics of errors and fraud described above have a considerable impact on the procedures applied by external auditors.

### **3. Audit Procedures Applied in Identifying Errors and Fraud in Financial Statements**

The role of the auditor regarding errors and fraud is related to applying a set of procedures which should recognize the possibility of their occurrence at

every stage of the audit process. The International Audit Standards defined it as a key priority of financial statements audit.

A retrospective analysis of the changes introduced in the International Audit Standards which regulate audit procedures in response to identified risk of errors and fraud indicates that once being its primary objective, fraud disclosure has gone beyond the scope of auditor's responsibility in the course of time (Petrova, 2004, 94). In line with increasing public interest in the reliability of financial reporting, when there are some negative consequences for information users more and more frequently the question is raised: "Where were the auditors in the first place?" (Johnson, 2010, 1) If disclosure of substantial errors and fraud is a major audit element, then it is not very clear what value-added service the audit has provided to investors and agents on capital markets. The aim in this respect is to fill the gap between the expectations of shareholders, investors, suppliers and customers and the framework in which the International Audit Standards put audit procedures and auditors' responsibility.

According to the International Audit Standards, "management is responsible for preventing and disclosing fraud and error by introducing a continuously functioning accounting system and an internal control system" (International Federation of Accountants, 2008, 44). We could, therefore, point out that auditors should ascertain the degree to which those two systems could reduce the risk of error and fraud occurrence and whether it is essential to have them. The responsibility of the auditor only goes as far as accounting for the possibility of error occurrence and its potential impact upon the reliability of the financial statement.

The International Audit Standards define auditors' responsibility in terms of their objectives, namely:

- To identify and assess the risk of substantial deviations in the financial statements, which are due to fraud;
- To obtain sufficient and relevant audit evidence about assessed risk of substantial deviations, due to fraud;
- To respond adequately to identified and potential fraud.

As for the responsibility of managers, they should study the facts and circumstances related to (Kostova, 2005, 181):

- The management structure and the possibility of one person dominating it;
- The complex character of corporate structures and the interdependence between their components;
- Negligent attitude on behalf of managers to identified errors in the system, which need to be adjusted.
- High degree of turnover of highly-qualified finance and accountancy staff with core functions in the entity;
- Frequent replacement of advisors and auditors.

Efficient external auditors must be able to recognize potentially fraudulent business practices every time they conduct an audit and recommend the control and procedures required in order to limit the scale of such fraudulent activities. Efficient internal controls are the first form of protecting the entity from fraud (Miller, 2007, 307). An all-inclusive and regularly inspected system of internal control is essential for preventing and disclosing losses which occur as a result of fraud; in addition, internal auditors often identify fraud-related problems.

As required by International Audit Standard 315, in order to gain understanding of the company and its environment, including its internal control, the auditor must implement certain risk assessment procedures. As an element of this activity the auditor conducts the following procedures for obtaining the information which is used in identifying risks of substantial inaccuracies, deviations and inconsistencies due to fraud:

- The auditor interviews managers, the persons responsible for the overall management of the entity and other persons, when this is appropriate, and gains understanding about the way in which persons in charge of the overall management supervise managing processes in order to identify and provide answers about fraud risks and about the internal control system which the management has established in order to reduce those risks.
- The auditor ascertains whether there are one or more factors of fraud risk.
- The auditor examines any unusual or unexpected interrelations, ratios and trends which have been identified during the implementation of analytical procedures.
- The auditor reviews any other information which might be useful for identifying risks of substantial inaccuracies, deviations or inconsistencies due to fraud.

Substantial inaccuracies, deviations or inconsistencies due to fraudulent financial reporting occur as a result of **overstating the revenues** (for example by recognizing earlier the revenues or reporting fictitious earnings) or **understating the revenues** (for example, by the improper transfer of revenues to a later period). Therefore, the auditor usually assumes that there is a risk of fraud in the recognition of revenues and ascertains which revenues, revenue operations or assertions might produce such risks. In cases when the auditor has not identified revenues recognition as a risk of inaccuracies, deviations or inconsistencies due to fraud, he/she records the reasons in support of the conclusion he/she has made.

Substantial inaccuracies, deviations or inconsistencies in the financial statement due to fraud often include manipulating the process of financial reporting by **making inappropriate or unauthorized entries in the accounting records** during the year or at the end of the period by adjusting the

sums recorded in the financial statement, which have so far not been entered officially in the records.

When elaborating and implementing audit procedures to test the appropriateness of journal entries, records in the ledger and other adjustments made during the preparation of the financial statement, the auditor:

- Gains understanding about the financial reporting process in the entity and the controls on journal entries and other adjustments made;
- Evaluates the designed model of controls on journal entries and the other adjustments and ascertains whether they have been properly introduced for implementation;
- Makes enquiries to people engaged in financial reporting about inappropriate or unusual activities related to processing the entries in the journals and other adjustments;
- Determines the time for conducting the tests;
- Identifies and selects the journal entries and the other adjustments on which the tests will be conducted.

In order to identify and select the journal entries and the adjustments on which the tests will be conducted and to choose an appropriate method for verification of supporting primary documents for the items selected, the auditor takes into consideration the following elements:

- The assessment of risks related to substantial inaccuracies, deviations and inconsistencies, due to fraud;
- Introduced controls to be exercised on journal entries and other adjustments;
- The financial reporting process in the entity (i.e. the preparation of financial statements) and the nature of evidence that might be obtained;
- The characteristics of fraud in journal entries or other adjustments;
- The character and complexity of accounts;
- Records in diaries or other adjustments processed outside the normal course of the activity.

When preparing the financial statement, managers bear responsibility for a number of evaluations and assumptions which influence significant **accounting estimates** and the continuous monitoring of the reasonability of those estimates. Fraudulent financial reporting is often implemented through deliberate inaccuracies, deviations and inconsistencies in the accounting estimates. When inspecting the accounting estimates to check if they contain bias and intent that might lead to substantial inaccuracies, deviations and inconsistencies, due to fraud, the auditor:

- Judges whether the differences between the estimates which are best supported by audit evidence and the estimates included in the financial statement, even if being reasonable when considered separately, exhibit

contents that may show potential bias or intent on behalf of the entity managers, in which case the auditor inspects estimates as a whole; and

- Examines in retrospect those estimates and assumptions made by the managers, which are related to significant accounting estimates, recorded in the financial statement for the previous year. The aim of this examination is to determine whether there are any indications of possible biased or intended contents on behalf of managers. This examination, however, does not question the professional estimates given by auditors the previous year on the basis of information available at that time.

If the auditor identifies possible bias or intent on behalf of managers in defining the accounting estimates, he/she *gives an assessment* whether the circumstances giving rise to that bias pose a risk of substantial inaccuracies, deviations and inconsistencies, due to fraud.

The auditor ascertains whether in determining the accounting estimates managers seem to have understated or overrated all provisions or reserves in the same way, so as to aim at leveling the earnings from two or more accounting periods. Those actions might also have been taken with the intention of producing a certain earnings rate in order to deceive the users of the financial statement and influence their perception of the results achieved by the entity and its profitability.

External auditors disclose errors and fraud by reviewing and assessing **the adequacy and efficiency of the internal control system**, compared to the degree of potential risk exposure of various segments of the entity activities. In assuming this responsibility they should determine whether:

- The environment within the organization encourages conscientious control and whether the targets and objectives set within the organization are realistic;
- There are written documents to account for activities which are not allowed or the assistance required in case some violations are disclosed;
- Communication channels provide adequate and reliable information to managers;
- The appropriate policies for authorizing transactions have been introduced and are conducted;
- It is necessary to make some recommendations for establishing or strengthening cost-effective controls to prevent fraud.

During the preliminary research related to planning the audit, it is necessary to collect relevant material so as to have an idea of the history of the object to be audited. Some information about the past of the entity might be available in the working documents from previous audits conducted or in the correspondence of the entity. During the preliminary study the following documents need to examine:

- Review of previous working documents. This is necessary in order to gain a better understanding of the approaches applied and to get familiar to the results from previous audits;
- Examine the reports from previous audits. The factual findings from an audit conducted earlier must be considered, as well as the degree of management involvement in undertaking the relevant adjusting measures. In order to give instructions for work in other vulnerable areas, the auditor must study the reports from similar objects or functions within the organization. It is important to pay attention to any controversial issues in a previous report;
- The organization of the object. The auditor must examine the organization scheme of the entity which will be subject to audit in order to understand its structure and responsibilities;
- Other materials related to the audit. It is also necessary to examine complementary data from completed, planned or currently conducted audits related to the field.

It is necessary to determine the procedures on which the collection of audit evidence will be based to ensure that there are no substantial inaccuracies, deviations or inconsistencies in the financial statement. The factors which influence the volume of evidence relate to:

- The special characteristics of the external environment in which the entity is functioning;
- The specific features of the organization and management of the economic entity;

In terms of external environment, risk factors relate to the conditions in the branch and the economic and regulatory environment in which the entity functions. It is necessary to study possible impacts on the financial statement of:

- New accounting, legal and regulatory requirements which might deteriorate the financial situation of the entity;
- Deteriorated relations with suppliers and clients;
- Difficulty faced by the managers in handling competitive pressure;
- Low adaptability of the entity to the rapidly changing environment;
- A considerable number of transactions with related parties beyond the normal course of the business.

The assessment of the above-mentioned factors equips the auditor with some preliminary idea about the business and the interdependencies in the branch. After studying those features, managers are interviewed in order to assess the characteristics of the organization and the management, in terms of reducing the errors and fraud risk in the financial statement. The objective is to ascertain whether managers have provided the necessary prerequisites for

limiting the number of material errors and fraud in the financial statement. Attention is then focused on:

- Assessment of risk management regarding errors and fraud;
- The activities undertaken by managers in order to establish and ensure the functioning of internal control systems and accounting reporting systems;
- The efficiency of the internal control system.

Those procedures are closely related to the specific characteristics of the entity. In some entities, annual assessments are made which are then announced in the managers' report. Such activities help the auditor assess the control environment and the risk related to clients [8] (Bozhkov, 2003, 81). In other entities, managers' assessments are not official and are only formally made, which increases considerably the control risk and results in an increased number of substantial procedures in order to minimize the disclosure risk.

The assessment should take into account the fact that errors represent an unintended action and frequent deviations and inconsistencies are related to the low efficiency of the internal control system, the system of accounting reporting or poor qualification of the personnel. In such cases, attention is shifted on managers' motivation to engage in a real assessment of all the factors which create conditions for errors and fraud. Auditors examine whether there is *adequate behaviour* in terms of internal control and accounting. That includes compliance with ethical principles, ongoing monitoring of the systems, due adjustment of errors, keeping the accounting personnel well qualified, using the appropriate accounting software, etc.

As a result of the preliminary assessment, the risk zones where the danger of errors or fraud is biggest are identified. Then on the basis of all the information collected, certain tests and procedures are initiated that aim to reduce the audit risk. Those include detailed test and analytical procedures.

**Detailed tests** are applied to different accounts and account balances. The attention of the auditor is focused on the susceptibility of assets to misappropriation. The basic principle applied is that of surprise spot checks. Those checks give some real idea about the current situation and make it possible to improve the audit quality. The auditor may change his audit approach and demand written rather than verbal support of the account balances. The aim is to collect sufficient and reliable evidence in cases when there are:

- Incomplete accounting records;
- Unsubstantiated transactions;
- Material inconsistencies in the documents related to the transactions;
- Accounts for suspicious estimates which have not been reconciled, etc.

Regarding the account entries, documents and records are subject to verification. The objective is to find out whether a lot of adjustments have been

made and whether all accounting regulations have been observed. Elaborated and processed documents, attached supporting documents for transactions and the availability of required signatures are verified. In cases when there are significant differences between the accounting records and third parties acknowledgement, the auditor interviews managers which should then reply with a written statement.

In such cases, the auditor must focus his/her attention to the verification of any unusual transactions made at the end of the reporting period, complex transactions and accounting treatments, transactions with related parties and payments for services which largely exceed the volume of the services provided.

The assessment of the IT environment is very important. It must be reliable so as to enable the auditor to refer to it. The following circumstances have a negative effect on the reliability of audit evidence:

- Inability to obtain information from computer files;
- Outdated software, not adequate for the purposes of accounting;
- A large number of modifications in the programmes, which have not been recorded;
- Inadequate overall reconciliation of computer operations and data base with the accounts.

According to Sawyer (Sawyer, *et al*, 2003, pp. 282-295), there are six categories of procedures applied during an audit engagement. The first five relate to measuring and the sixth one is related to assessing.

**Monitoring** is a deliberate visual examination which includes mentally comparing the activities traced with existing standards and assessment. Monitoring must then be documented. Its quality will depend on the experience and qualifications of the external auditor. The better qualifications and the longer experience he/she has, the more likely it is that he/she will notice differences from desirable situations. Monitoring usually precedes the verification of facts by means of other procedures, as the latter impedes successful monitoring. It is conducted during the preliminary examination of the object of audit and the work processes or it might take place during the interviews. It might help establish the existence of risks such as inefficient controls, untapped resources, incompliance with safety regulations, etc.

**Interviews** might be made verbally or in written form. This is the procedure most widely applied in the verification of operations. Verbally asked questions are the most common variety of the procedure, and in addition, the most difficult one. It requires that the auditor be skillful in human relations and in formulating the questions so as to obtain the most useful information. The external auditor must be able to avoid unnecessary contradiction with or embarrassment of the interviewees. Nevertheless, he/she must pertain to his/her

objective to find out the truth. This information must be confirmed by at least one more person. The standardized questionnaire on operational procedures helps not only the external auditor but the clients as well. The questions included in it must be limited to major issues, updated and clarified with the client's management.

The interview is an organised and structured process of collecting information by applying selected strategies for asking questions and obtaining answers with information which will then be used at the next stages of the verification, fraud investigation and the preparation of the report with the conclusions and findings of the auditor.

**Analysis** is applied to examine the parts of the whole. It is implemented through adequate analytical procedures which are practically useful regardless of the subject analysed. Those procedures verify documents in terms of policy, contracts, regulations, etc. The analysis includes comparisons, reports on trends and acknowledgement of differences from expected data.

Analytical procedures involve vertical and horizontal analysis as well as the analysis of ratios. Yet they could be misleading to both their user and a lot of auditors who have not applied them. Analytical procedures are conducted in order to verify the financial situation and the profitability of the entity. Items put to verification include the possibility for generating cash flows and their interdependence with reported earnings, growth of profitability in comparison to other entities in the same field, sale methods, risk of inevitable bankruptcy or deteriorated financial situation, etc.

While conducting analytical procedures several factors which might expose the entity to pressure should be considered. Those could be:

- a declining industry with progressively growing losses;
- deficient capital due to decreasing earnings;
- investment instability and dramatic changes in the product structure;
- the significant dependence of the company on one or several products, one or several suppliers or clients.

Analytical procedures involve examination or comparison of the relationships between two or more indicators in order to determine the rationality of each of them. There are six types of analytical procedures which help identify unusual trends, errors or fraud: analysis of the BSC table; horizontal analysis or analysis of ratios; vertical analysis; analysis of deviations; analysis of ratios or tags; comparison with other operative information.

These varieties of analysis are applied when recognizing motives or opportunities for applying financial result management and its results equip the auditor with some idea about possible risks or fraud indicators.

**Verification** is a process of confirmation or comparison. Attention is focused on documents compliance with statements of the managers, outstanding amounts in the ledger and analytical reports, deliveries and orders for deliveries, approved quantities, production plans, delivery and acceptance certificates.

**Investigation** is in essence a systematic search for hidden facts when there is some violation or other suspicious circumstances. It is focused on violations (crimes). Poorly conducted investigation might have negative legal and punitive consequences.

**Assessment** refers to giving an opinion about the work done. This conclusion is based on the adequacy, efficiency and effectiveness of the measures adopted by managers in response to identified fraud risks. Assessment takes into account the so-called collateral damage such as detriment to the entity's image, lower confidence in the entity, deteriorated relationships with contractors and decreased staff motivation.

The audit procedures thus conducted are recorded in the working documents which represent the records made by the external auditor (documents, reports, correspondence and other sample papers). It is a general feature of all working documents that they represent evidence used to exemplify the results from the external audit. Those should be stored so that the rationality of reported conclusions and recommendations from the audit can be supported.

The working documents of the external audit are the only records of the audit work done and might be used as evidence in future to show what was or was not done during an audit conducted at a specific time. Their common objective is to support with documents the fact that audit has been conducted appropriately and in compliance with professional standards. The auditor's report is a formal document in which the auditor summarises the work he/she has done and reports on findings and recommendations based on that work. The auditor's report is the primary source of information for stakeholders both within the entity and outside it, which is based on the results of the external audit conducted.

When as a result of the audit conducted there is fraud disclosure this must be reported to managers through various verbal or written messages. The report must contain the conclusion of the external auditor whether there has been sufficient information available for conducting the audit and it must summarize the findings and recommendations on which this conclusion has been based. After presenting the Board of Shareholders with the report verbally, a written report may be prepared in order to record the findings of the audit. The written report must include all findings, conclusions, recommendations and measures adopted to eliminate negative consequences.

The International Auditing Standards give an interpretation how to present the results of a fraud investigating engagement. Further aspects of reporting committed fraud include:

- When major fraud can be ascertained, senior managers and the Board must be informed immediately;
- The results of the investigation might be indicative of fraud whose negative effect on the financial situation or the operation results of the entity for a year or more have not been disclosed earlier, while financial statement have already been elaborated.
- The final results of a fraud-related verification must be confirmed by a lawyer before being announced. Special attention must be paid to submitting the report to lawyers in cases when the external auditor is willing to guarantee for his client's rights.

As a result of these additional verifications, the potential effects of errors and fraud on the reliability of the financial statement are identified and the adjustments which must be made are discussed with the managers. Depending on the degree of materiality and the measures adopted by managers, the auditor forms an opinion which is recorded as a conclusion in the auditor's report.

When inaccuracies, deviations and inconsistencies are below the materiality level, the executives must be informed about their presence and the possibility of their recurrence (Dodge, 2002, 30). Those inaccuracies might be stated in the auditor's report in an emphasized of matter paragraph(s) in order to present real information to external users of the financial statement.

When fraud and errors influence significantly the financial statement, those must be discussed with the executives so that they can be accurately presented and adjusted.

The auditor prepares a table with the errors which gives a reference to working documents and the contents of the adjustments. These details are given in separate columns about the balance sheet and the income statement. The table also contains the sums of adjustments and the net effect, the tax effect and the amount of error. In case there are unadjusted material errors, a qualified opinion must be given or the auditor may refuse to express an opinion.

The activities of the auditor might also be related to withholding from the commitment when the entity refuses to make the necessary adjustments regarding fraud in its financial reporting. Since fraud is a deliberate activity, an accurate assessment from the auditor is essential as to which level of management he/she should inform about it.

The concluding procedures conducted by the auditor in relation to errors and fraud disclosure in the financial statement may have a preventive effect on the further development of the audited entity. The preventive character is in terms if

undertaking actions whose aim is to prevent fraud or minimize the effects of committing fraud. Counteracting fraud in financial statements is more complicated than countering fraud through misappropriation and misuse of assets or other fraud, as they are committed by senior-level managers and owners, usually assisted by auditors, consultants and lawyers.

If in result of inaccuracy, deviation or inconsistency due to fraud or suspected fraud, the auditor is faced by extraordinary circumstances which make questionable his/her ability to continue the audit, then he/she should:

- Take into account the professional and legal responsibilities applicable under the specific circumstances, including whether to report in front of the person or persons who have hired him/her, or in some cases, in front of the regulators.
- Consider the possibility to withdraw from his/her commitment.
- Should the auditor decide to withdraw, he/she must discuss with the appropriate level of managers and the persons in charge of general management his/her withdrawal and the reasons behind it.

On this basis, the auditor determines whether there is a professional or legal requirement to report in front of the person or persons who have hired him/her, or as the case may be – in front of the regulators about his/her withdrawal from commitment and the reasons for that.

## **Conclusion**

A distinctive characteristic of the auditor's profession is assuming responsibility in favour of the public. Therefore, it is not merely a profession related to meeting the demands of individual clients or employers.

Auditors work in circumstances which may put to risk the compliance with some fundamental principles. It would be impossible to identify every situation which poses similar threats or to suggest appropriate actions for alleviating the threat. Increased staff fraud in audited entities has proved to be an even greater impediment for the normal conduction of audit procedures. Those problems render auditors' working environment slightly different and demand that solutions be found to solve related problems.

To conclude with, the role of the auditor in errors and fraud disclosure is on the one hand related to the compliance with ethical principles, and on the other hand, to high professionalism demonstrated in response to changes in the economic environment in which entities operate. The audit procedures must aim at identifying the factors which are indicative of errors and fraud and at initiating the appropriate activities to reduce audit risk.

## Notes

1. The survey includes 3 037 companies from 54 countries and 59 leading entities in Bulgaria.
2. The survey was conducted in the period from May to June 2010.
3. The survey included 580 Bulgarian enterprises from different branches. The total percentage of responses exceeds 100 per cent because more than one answer could be given to each question.
4. The percentage referred to here is about the year 2009. In comparison, in 2005 the percentage of fraud was 16, and in 2007 fraud accounted to 15 per cent.
5. After the revision of the standards in 2009 the explicit definition of the term “error” has become obsolete.
6. The terms “fraudulent reporting” and “fraudulent financial statement” refer to cases of financial statements which aim to deliberately mislead users of those statements about the real situation of the entities presented in those statements.
7. In as much as the auditor expresses his/her opinion as to the reliability of the financial statement as a whole, the term ‘fraudulent financial reporting’ in a more narrow sense will be interpreted as ‘fake financial statement’.
8. This is the combination of internal and control risk as both risks refer to the client.

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## PROCEDURE REVIZIJE ZA OTKRIVANJE GREŠAKA I PRONEVERA U FINANSIJSKIM IZVEŠTAJIMA

**Apstrakt:** Odgovornost revizora kada je reč o otkrivanju grešaka i pronevera u finansijskim izveštajima je važan element posvećenosti koji oni pokazuju prema korisnicima informacija. Iako su revizori odgovorni za iskazivanje razumnog ubeđenja da finansijski izveštaji ne sadrže značajne devijacije, standardi ograničavaju mišljenje revizora bez eksplicitnih zahteva da se greške i pronevere identifikuju. Ipak, revizori treba da upotrebljavaju adekvatne procedure da odgovore na unutrašnje i spoljašnje faktore koji generišu greške i pronevere, što se oslikava na pouzdanost finansijskih izveštaja. Ovo će doprineti poboljšanju performansi entiteta i podići dodatnu vrednost sprovedenih revizija.

**Ključne reči:** revizijska procedura, greške, pronevere, identifikovanje pronevera, odgovornost revizora, finansijska situacija





## BUSINESS BUDGET - A TOOL FOR IMPLEMENTATION COMPANIES' STRATEGIC GOALS

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**Abstract:** Business budget, or so "master" budget is the basis for the control of realization, and at the same time very powerful tool for the realization of the set of strategic goals. Therefore, it is the key link between business strategy and value creation of companies. Without a business plan, managers can not evaluate the economic impact of various strategic alternatives, and see the impact of formulated and developed strategies to create value for shareholders. For this reason, the aim of this paper is to emphasize the importance of business budget in implementation of strategic objectives and effective execution of operational activities. During the preparation of the article, author will apply methods of analysis based on the available and relevant international literature and practice, methods of synthesis and methods of analogy and continuity.

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**Key words:** operating budget, strategic goals, activities, value creation

### Introduction

In contrast to the formulation of the strategy, which is the process of defining the goals and major strategic directions, strategic planning is the process of selecting programs and projects to be implemented and to make adequate allocation of resources for the successful implementation of the set up strategy and an effective and efficient achievement of goals. Strategic or long-term plans are drawn up at the level of companies and strategic business units. These plans include the financial implications of selected strategic options that may be related to the maintenance or expansion of existing facilities, development of new markets, diversification of products and processes and so on.

By creating a clear idea of the direction that will move the company's operations in the next couple of years, the strategic plan provides a broad framework for the effective preparation of tactical plans and operational budgets.

Ignoring the process of strategic planning, short-term budgeting phase can be loaded with too many strategic questions, information and inadequate consideration of alternatives. Such a dysfunctional environment can seriously affect the quality of decisions related to resource allocation.

The budget, as a result of budgeting is an effective instrument for short-term planning and control. At the same time, the purpose of budgeting, which consists in making the strategic plan, coordinating, delegating responsibilities and creating a basis for the actual performance evaluating, refers to the concept of the business budget as an instrument for the realization of the strategic goals of the company.

### **1. Strategic Planning as a Framework for the Adoption of the Annual Budget**

Strategic planning is a framework for the adoption of the annual budget, management development tool, a mechanism that forces managers to look ahead and asset of comply the managers objectives with the strategic aims (Anthony, R., Govindarajan, V., 2007, 332). The ultimate goal of the strategic plan is to convert strategic objectives into operational execution, which planning becomes a major shift in approaching the business activities to the global strategic direction.

The strategic plan helps companies to properly understand the implications of strategic decisions on the short term budgets. Strategic planning creates opportunities for education and training of managers reviewing strategic directions and their implementation, becomes a source of new ideas, and thus the instrument of management development. Encouraging managers to take their time and efforts to the important long-term problems, not just tactics and present day operations, strategic planning becomes a mechanism for observing and creating the future of the company. Shaping the strategic goals of a company in the process of strategic planning followed by debates, discussions and negotiations, reveals the implications for the objectives of managers and consequently made adjustment of the individual with the strategic objectives of the company as a whole.

The link between business strategy and planning, which has become particularly pronounced in the early 21st century (2002 g. percentage of corporations that reported a significant alignment of planning and business strategy rose from 70% to over 51% recorded in 1997, Dressler, S., 2004, 256) best can be reflected on the specific examples, such as the following (Dressler, S., 2004, 257):

- if the company aspires to innovation strategy, planning of the funding research and development projects to be stronger than usual;
- if the company aspires to internationalization strategy with multiple entry into foreign markets, funding new marketing activities to target markets must be relevant part of the plan;

- if the company aspires to a rigid cost control strategies, capital plans must be carefully studied before the final composition and verification.

Formal strategic planning process is not required in a relatively small, simple organizations with an informal understanding of the future direction of the company enough to make decisions about the allocation of resources. Also, in the stable and the organizations that cannot bring reliable and rational assumptions about the future, or do not have enough flexibility to adapt to circumstances, strategic planning loses its importance.

Mid-term or tactical plans cover a period longer than one and less than five years. These plans are essentially a rough, approximate projection of the key dimensions of planning, i.e. revenues, costs, investments, cash and profits. These projections are the basis for the focusing of planning system on annual and quarterly horizon.

Operational or short-term planning is operationalization of strategic and tactical plan. In this regard, operational plans, which arise as a consequence of previous decisions made in the strategic and tactical plans, contain projections of activities to be undertaken in order to realize set business strategy (Stevanović, N., Malinić, D., 2003, 446).

Budgetary control in a broader sense comprises the process of budgeting or accounting planning and control based on budget. Budgeting, as an unavoidable instrument of efficient enterprise management, is the process of preparing data for careful guidance of activities of the company according to the desired objectives, directions and global development strategies. This is actually the process of translating these goals, directions and strategies in the detailed financial projections. In other words, budgeting is a continuous and dynamic process of estimating future cash and the business flows to achieve desired profitability, maintaining a satisfactory level of liquidity and the maintenance of a healthy financial structure (Novičević, B., 2003, 18). This projection is estimated that there are sufficient funds to implement the set strategy, the attractiveness and feasibility of strategies and establish the ability to create value for the owners and other stakeholders of businesses (Malinić, D., 2005, 104).

The budget, as a result of budgeting, is a „numerical statement about the future of the company and the parts“ (Stevanović, N., 1991, 197). This instrument of an effective short-term planning and control, which evaluates the profit potential of the company, is structured so that it points to the necessity of establishing centers of responsibility for its implementation and evaluation of their performance. Budget flexibility lies in the fact that they are not fixed and firmly determined value, but over time adapting to the changing real conditions.

The purpose of budgeting is to fine finishing of the strategic plan, coordinating, delegating responsibilities and creating a basis for evaluating actual performance.

The budget is adopted before the start of the budget year, as opposed to the strategic plan, which is prepared well in advance on the basis of information that was available to top management and with the use of some extent global terms. Therefore, the budget opens up the possibility of using the latest information in consultation with managers at all levels. Participation of the overall management in the preparation of the budget may lead to some inconsistencies (for example, non-compliance the production plan with sales plan, total or per some production lines), but during the budgeting process this inconsistencies are identified and resolved. Adoption of the budget specifies the responsibilities of managers, but also their power to use funds in a strictly defined purposes without approval from the senior levels of management. Although the initial assumptions on which the budget is based may change, it is an excellent foundation and benchmark for the assessment of actual performance (Anthony, R., Govindarajan, V., 2007, 382).

Studies have shown that lower-level management participation in the preparation of the budget produces a positive effect on the motivation of managers for reasons of greater acceptance of targets caused by the perception of managers about the possibility of control, rather than imposing goals. Also, participation in the budgeting process results in effective exchange of information between the various levels of the organizational structure, as well as many benefits from the expertise and experience of staff nearest production environment. Participation in the preparation of the budget is particularly appropriate in a dynamic environment where managers of responsibility centers have the best information opus about the variables that affect revenues, expenses and operating results.

Although there is no perfect budget, one that approximates it has the characteristics of a challenging, but achievable plan. It is clear that if the planned size is too high, managers are prone to short-term activities that are not consistent with the long-term interests of the company. Also, too high planned profits often mean optimistic estimates of the selling level that can lead to over-allocation of resources in order to encourage more sales activity. On the other hand, when managers are in a position to exceed the amounts budgeted, there is „winning“ and „positive“ atmosphere within the company and reduces the tendency to engage in data manipulation in order to achieve budget. One of the limitations of the budget feasibility refers to the ability to decrease of the motivational impulse that goes beyond by the use of bonuses depending on the level of the budget overshoot.

In order for any budget system to be effective, management must participate in the review and approval of the budget, in order to avoid a situation of simultaneous existence of easily achievable budget for one, and budgets that have substantial tolerances for other centers of responsibility. If there is no feedback to top management, the budget system stops to ensure the efficient standards of its execution.

Accordingly set out, budgeting as a process requires setting goals and defining the powers and responsibilities, and the establishment of centers of responsibility

for achieving objectives (cost centers, centers of discretionary expenditure, revenue centers, profit and investment centers), providing efficient communication on horizontal and vertical lines of the organization and creating the basis for the operational functioning of motivation system. The relevance of budgeting consists and on aligning of numerous activities and connecting partial budget in an overall plan, operating budget, which is an instrument for the realization of strategic goals. Finally, by the establishment of a set of financial and non-financial performance measures, the result of budgeting are certain standards and criteria for testing the possibility of execution, i.e. to control of set business - financial and investment flows.

## **2. Making a Business Budget**

The crown of the business aspect of planning is the business budget, which indicates the expected amount of the financial results of the company for a certain period. It comprises a set of individual agreed plans of company: sales plan, plan of sales cost, production plan, plan of the production costs, plan of sell products cost, plan of general management and administration costs and plan of research and development costs (Adam, E., Eberth, R., 1992, 373-399).

Preparing a business budget, plan of business results, or profit plan, as it is called, the „master“ budget does not include simply downloading of the value from individual plans, but it is necessary their mutually combination, tuning and testing eligibility in terms of resulting scores. For the planning period is set quantified target result. However, the results derived from individual business plans need not comply with the target outcome of the business plan. One of the instruments of reconciliation and acceptance testing and adjusting the results of individual business plans to target result is the analysis of break-even point, i.e. testing changes in operating results depending on sales volume and sales prices changes, product assortment and cost changes. Thus tested and adjusted operating budget forms the basis for further testing by the cash flows plan and the target rate of return on operating assets and equity (Novičević, B., 2003, 28).

Complete business budget received by the final reconciliation of the individual budgets must be consistent with the goals of the company. As such, the plan in which it is defined accountability of managers responsible for its implementation, is distributed to lower level in the company. In doing so, managers are forwarded to those parts of the overall plan that relate to a specific area of responsibility.

By this basic assessment instrument of operating plans of responsibility centers, instrument of coordinate relations between different courses of action, instrument of creation of target performance measures and instrument of evaluate the ability to reach them, provides a very important communication between managers and all interested in the future of the company, which certainly depends on the set of strategic objectives and selected strategic alternatives. This communication can be very effective in reducing the negative impact of the key

factors associated with uncertainty regarding corporate prospects. By „master“ budget automatically becomes the flawless basis for a realization control, it is a very powerful tool for the realization of established companies' strategic goals and key link between business strategy and value creation of companies.

Strategic decision, from whose regular decision dependent elements that make up a business plan, can be varied. Thus, the income depends on decisions regarding the number, assortment of products, the introduction of new or elimination of existing products, as well as decisions about product prices in function of the quality or price of competing products. Cost of sell products, however, still depends on the decisions concerning the characteristics and quality of products but also of investment in plant and equipment, and research and development, as well as the decisions that affect the efficiency of internal processes, i.e. decisions on production volume and the series, on capacity, distribution cost and the like. As for the cost of sales and general management and administration expenses, their level will depend on the decisions regarding the level of support activity, outsursinga etc. Finally, the operating profit is a function of the attractiveness of the company, shareholders will invest in the company's operations, accepted and implemented strategy and the like.

Except for the company as a whole, the business plan is made only for those organizational units of the company that generate profits and that are responsible for revenue and expenditure, i.e. for profit centers and investment centers. In doing so, the aims of this course a significant part of the business planning process are a triple and consisting of (Simons, R., 2000, 77):

- translating the strategy into a detailed plan indicating the constituent elements of value creation,
- assess of compliance with the quantity of resource with needs and strategy implementation and
- creating and monitoring fundamental interdependence of economic goals with leading indicators of strategy implementation.

The planning process should involve the entire organization and include frequent interaction between the hierarchical levels of the organization. Since the foundation of the planning made in assumptions regard to how the future will look like, managers must agree on these assumptions and adopt a plan that would, employees of the company agree on the direction of future development of the planning process, which will facilitate coordination between services, communication and motivation. Given that managers are held accountable for achieving the goals of the business plan, they can take advantage of the availability of certain information for subsequent evaluation of performance, i.e. they can try to adapt to their advantage the information necessary for making a profit plan. This can lead to distortion of the data and jeopardize strategy implementation. For these reasons, some companies reduce the role and importance of the plan as an

instrument for the assessment of business performance. However, regardless of that, the significance of the business result plan is too big and in more companies is very popular management tool.

Developing a business plan prior to finding answers by managers to the following questions: Does formulated and developed strategies create enough economic value that would attract investors, and whether the company is able to finance the strategy set and remain solvent over the years? One thing is for sure, investors will be willing to invest their money only if they believe they can achieve the expected return on those assets.

Without a business plan managers cannot assess the economic impact of various strategic alternatives and cannot know whether the formulated and developed strategy creates value for key stakeholders. At the same time, it provides an emphasis and understanding of the importance on achieving strategic goals such as leadership in the quality of products or services, cost, technology and innovation, creating growth and development of the company and so on (Malinić, S., 2010, 184).

To prepare profit plan, which includes anticipated revenues and expenses for a period, preceding analysis of profit circuit, to which is analysis of cash circuit and return on equity circuit, which you get an insight into the adequacy of resources for the implementation of the plan profits. Circles simultaneously turning are connected, so that any change in one necessarily affects the other variables, as shown in Figure 1 (Simons, R., 2000, 78).

Adoption of the plan profit using *profit circuit* consists of the following five steps: assessment of the volume of sales, operating expenses prediction, calculation of expected profits, designing investments in new tools and closing circuit of profit by testing key assumptions (Simons, R., 2000, 80).

*Estimate sales volume* based on estimates of sales representatives, customer surveys and assessment of experts and managers. This assessment certainly includes the impact of external and internal factors, but is largely present and the impact of subjectivity. External factors, which are beyond the control of the company, but are critical to the future of the company, are related to macroeconomic factors, government regulations, supply market, actions of competitors and changes in demand. In addition to external factors, internal decisions have a major impact on the level of sales. These relate to: product mix and selling price, marketing programs, the introduction and elimination of products offered, changes in the quality and characteristics of products, production and distribution capacity, the level and quality of service, etc.

*The prediction of business expenses* is the analysis of different categories of current expenditure. The first category of operating expenses are variable costs, which can be reduced by using economies of scale, greater operational efficiency,

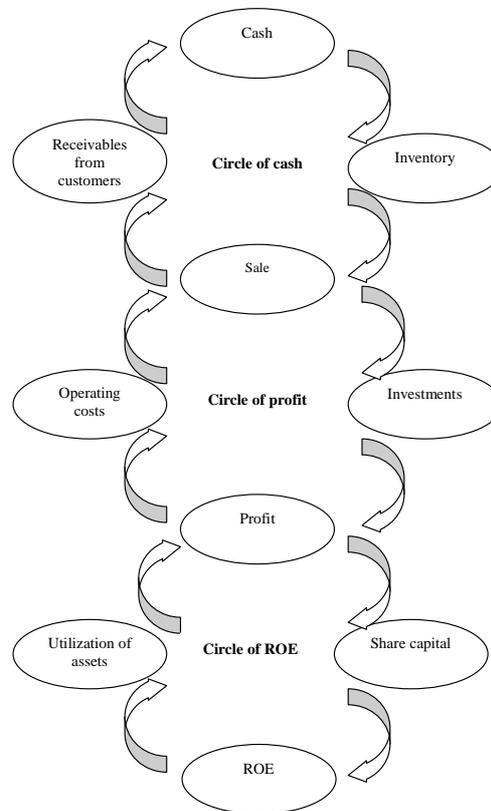
the agreement with the supplier of the lower prices, products redesigning and so on. The second category of operating expenses are unvarying costs that do not vary directly with changes in sales volume, but are still not completely fixed. They make up a growing share of the operating expenses of companies. There are three types of these costs: specifically (previously defined) costs (e.g. salaries of managers), discretionary expenses, whose level is open to change during the planning process as well as during the period of adjustment (e.g. expenditure on advertising, training, and research programs, etc.) and indirect costs are dependent on the activity, which cannot be directly connected to the holders, which vary depending on the level of certain activities (eg. supervision, storage costs, etc.).

The difference in operating income and operating expenses determines the amount of operating results that are planned for the coming period. The business result and result of financing make up the result of taxation, from which is deduced the tax and a net result, available for distribution to owners or reinvestment for the business. *Estimate of the expected profit* is based on determining the business and net results.

Based on the previous steps can make the income statement as the most important part of the business plan. However, it will be complete only after it determines the required *level of investment in new assets*. Given that the anticipated level of sales rated by the level of assets available, assumptions about the required level of investment must be supported by the plan of investments in assets. In doing so, managers must consider how investments in working capital, and in the long-term capital assets. The proposed investments in capital assets are in the form of capital investment plan, which has to reflect and support the adopted strategy, because often indicates the company to a limited set of strategic alternatives.

*Feedback loop* between all the components of profit circle suggest that profit planning process is not linear. Managers have to go back and adjust the variables in the plan to ensure that the plan reflects a strategy and that is attractive from an economic point of view. After determining an acceptable level of profit is performed a sensitivity analysis to changes in the volume of sales or other variables in the plan, with the aim of monitoring changes in profits, depending on changes in plan assumptions. It is an analysis of the break-even point, which is primarily directed to short-term planning and control of relationship „costs - revenue - result“ to alternative volume of activity.

*Cash circle* illustrates the well-known cycle of the cash trends in the business: sales of products generate receivables from customers that are converted into cash which in turn can be used for the procurement of supplies, which in turn can generate additional revenue. However, depending on the nature of the business, may elapse a specific time between the spending cash for the purchase of raw materials and the collection receivables from customers. During this period, the company has to borrow working capital for ongoing operations and capital expenditures.

**Figure 1 Profit Planning Circles**

Source: (Simons, R., 2000, 81)

Prediction of the need for cash is important for the reason that the company has limited cash reserves and borrowing capacity. The most intuitive method for assessing the demands for cash is inflow and outflow forecast from operating activities in a period, where the formula is used: (Simons, R., 2000, 93)

$$\text{Need resources} = \text{Cash from customers*} - \text{Cash paid to suppliers} - \text{Current expenditure of operations}$$

\* The formula does not include other determinants of cash benefits, such as advances from customers, short-term and long-term debt, cashing of long-term and short-term investments, shares issuing, income from interest on loans, etc., which should not be ignored in predicting the need for cash.

If required cash for a business according to business plan exceeds these limits, the plan was not viable and must be restated. In this way the cash plan is emerging as a test of the admissibility of the business plan.

Given that investors are closely monitoring the return on their investment, the most important indicator of corporate performance for investors is the return on investment - ROI. This measure is one of the best surrogates of global financial performance of companies. However, as the aim of every manager is wise use of investment for the benefit of shareholders, adequate measure of return on investment is return on equity - ROE, which planning is enabled by the use of the *circle of ROE*. And stock prices and dividend payments depend on the ability of the company to a business venture generates profits from investments of shareholders. Higher profits and higher ROE, means more money to invest in business ventures, higher dividends to investors, higher stock prices and lower borrowing costs.

Circles of profit, cash and return on equity are used to evaluate the efficiency, profitability, financial position and consistency of formulated and developed business strategy. In order to prepare a plan of profit for each strategic alternatives, the company uses the first round of profits. Numerous partial budget of revenues and costs are compiled as part of this plan, which is a management tool for testing various business activities from the perspective of their impact on the targeted result. Acceptability of profit achievement should be assessed primarily in terms of the set goals and objectives of an enterprise and breakpoint analysis. After initial testing and adjustment of various budget proposals, approaches to the analysis of cash circle to determine the adequacy of resources for the implementation of the profit plan and the adequacy of financing of various strategic initiatives. Cash budget indicates that all anticipated needs for funds possible finance by the flow of funds from operations, or whether there is a need for more engagement of long-term or short-term funding sources. Finally, an acceptability test of business budget is target rate of return on investments and equity, i.e. analysis of return on equity circuit. In this way, compares the ROE of each strategic alternatives and make a selection of the most attractive of them.

Of course, the economic criterion alone is not sufficient for a full evaluation of strategic alternatives. Profit plans can be attractive, but the opposite to core competencies of companies or do not conform with the current position in the market.

### **3. Activity Based Business Planning**

Purpose of the business plan is the guiding of business operations and providing of bridging difficulties in achieving the desired performance. Many companies identify business plan and projected income statement. Such an approach implies the absence of description of necessary activities in order to achieve the desired financial results. The reasons for these attitudes are related to management attitudes toward with a formal descriptive business plan hinders creativity and causes fatigue by details that will change, maybe every week.

In the mid eighties, activities based costing, and on top of it activities based management have become very used in many companies. Their essence consists in the allocation of resources to necessary activities that in this way can be better managed. Power of activities based management is over time amplified by Hoshin business planning cycle (planning, execution, analysis, audit), and thus was born a powerful tool for successful business planning (Wade, D., Recardo, R., 2001, 114).

Activities based business planning is the dynamic process that in the foreground emphasis customer requirements and determines appropriate actions and resources, both financial and operational, necessary for the conduct of these activities and the timely response to requests from the market sales. It provides a detailed analysis of the needed resources and comparison them with the existing in order the efficient and effective use and management (Gooderham, G., 2001, 29-43). Power of the activities based plan is on that communicate targeted levels of performance necessary to deliver the desired output to buyers. These target levels are helping the company to plan capabilities and determine the performance necessary to deliver the required level of output to customers (Sharman, P., 2000, 46). The planning-based activities are considered two forms of capacity, the level of activity and the level of resources. A fundamental feature of this planning system as part of the strategic planning process, related to the orientation to the additional capacity that will be in service of production and sales range, scope of activities and resources (Antić, Lj., Novičević, B., 2011, 390). The budget, as a result of activities based business planning, is used as a basis for evaluating of success in setting and executing operational and strategic goals of the company.

Methods that many companies use in order to achieve a broader insight into the business and set achievable plans are: environmental scan, customer feedback and analysis of organizational gap (Wade, D., Recardo, R., 2001, 119). Information from these sources is used specifically for the development of a activities based business plan.

The purpose of the environmental scan is to assess the market environment for existing products or services, the identification of current and potential customers, insight into the development of new products and services from other industries, insight into global events and distant future. Scanning is performed using marketing research, branch outlets, futuristic articles, trade shows, newspapers and the opinion of experts.

Dual purpose of customer feedback analyzing is to assess the customers satisfaction by existing products, but also to estimate the probability that a customer buys back the same or similar products offered by the company. Customer feedback is essential for: identifying attributes of products and customers, identifying needs for new products, identify and prioritize and incorporate these findings in planning, identifying, documenting and responding to trends, identifying and locating contacts with customers, assessment of obligations

and responsibility of the company's representative at the contact with the customer reviews, assessment of response of representative to customer complaints and identify performance that should be rewarded. For this purpose we use different instruments, such as surveys, interviews, focus groups, feedback from professional associations, user diaries, the so-called „mystery shopper“ and the like.

The purpose of the organizational gap analysis is to test the internal capacity of the company to meet all claims brought by the strategy implementation. Some examples of internal skills include: identifying inconsistencies in the organizational architecture, inter-functional cooperation evaluation, assessment of horizontal and vertical efficiency, in view of the possible future research and development projects, etc.

Activity based business planning consists of five major components: determining of the activities, predictions of outcomes of activities, creation of target indicators for the assessment of effort or outcome of the action, predictions of data sources used to assess the outcome of the action and accountability for the completion of activities and the quality of their outcomes (Wade, D., Recardo, R., 2001, 121).

Between a typical business plan and activities based plan there is a fundamental difference, although both instruments for performance measurement and assessment of deviations from planned results during the year. First and foremost, activities based plan covers all the necessary activities identified by analyzing the causes of these variations and deviations. Second, activities based plan engaged in the outcome of the action. Third, it has planned performance measures for all activities and their outcomes. Fourth, it lists all sources of information for assessing the performance of employees. Fifth, it identify accountability and the person responsible for each activity.

Business plan based on the activities should include perspectives that are listed in one of the selected multi-dimensional performance measurement systems and a set of measures which connects the plan with formulated and developed business strategy. Here we list the minimum requirements to be met by a quality business plan based on the activities, consistent with the known system Balanced Scorecard: (The most developed of all the performance measurement system is the Balanced Scorecard by Kaplan and Norton, who has four perspectives. In the early '90s, before the popularity of the concept of Kaplan-Norton, studies have shown that there is a wider set of perspectives of the Balanced Scorecard, with a broad set of key measures, based on a variety of systemic approaches to research and performance measurement at the level of the whole enterprise. At this point, we will present the Balanced Scorecard that includes five perspectives, Wade, D., Recardo, R., 2001, 122-124):

- In the *financial perspective* manager and his immediate supervisor determine the financial outcome of their areas of responsibility, with the financial planning indicators could include combined ratio, including various expenses and receipts.

- Activities related to *customer perspective* are directed to increase the number of contacts with customers, development of customer satisfaction index and monitoring of characteristics of the product relevant to customers, thereby contributing to the achievement of the overall objective to maintain existing and attract new customers.
- Operational excellence, characterized by *internal business process perspective*, refers to compliance with the standards of quantity and quality, costs reduction, business cycle, etc., with the inevitable of activities compliance in this and other perspectives (e.g. solving a problem related to customer effectively increased productivity).
- The *growth and innovation perspective* follows the responsibility of employees for the training and continuous process improvement, and to accept the transfer of innovations and improvements.
- The *perspective of the organization* identify the activities inherent to leadership, management, employees, technology architecture and organizational structure that are critical to the success of the company, and are related to teamwork and cooperation, developing of the quality of leadership skills, communication quality and performance management.

The contents of each column of the plan based on the activities must be clearly defined in order to meet requirements of successful business planning. In this regard, the *list of planned activities*, which should be under the direct control of the employee, is long and variable. Each activity has its *ultimate outcome*, product or service (for example, output of activity „sympathy with the customers“ is satisfied customer). Although it seems obvious, most managers are surprised in the consideration of identifying (or underreport) employees with the outcome of the activities. *Planning measures*, such as activities performance standards and their outcomes are usually expressed in the form of ratios such as „reduction of scrap by 23% for 3 months“ or „growth satisfaction within 6 months“. *Data sources* indicate where they come from the collected information, and where they will still accrue. Thus, the data source information related to teamwork and cooperation should be the observation of the team members, as well as feedback from the managers. Sources are also diaries, audits, reports, surveys, etc.. *Rating* column of results indicates the degree to which individuals performed their duties, achieved their goals and meet projected financial performance or performance measures in the field of human resources.

#### The Components of a Business Plan Based on the Activities Shown in Table 1.

To reach their full potential of activities based planning is not easy. It is technically very difficult to implement, requires a long experience in the use of activities based costing and management accounting, and the use of modern instruments and systems for measuring performance. Also, it requires a new way of thinking about the role of activities and resources in the execution of the plan. However, the successful implementation of this type of planning generates

numerous advantages reflected in selective adjustment of the labor force, better allocation of overhead costs, identifying activities that do not add value, more complete informative base for understanding of strategic issues and cost analysis in accordance with the value chain of the company as a whole and its small organizational parts etc. (Novičević, B., Antić, Lj., 2009, 275).

**Pregled 1. Komponente poslovnog plana baziranog na aktivnostima**

Perspective / Activities	Activities Outcome	Target Measure	Data Sources	Rating
<b>Financial perspective</b> Return on equity Added economic value		20% 15%	financial statements financial statements	<b>T</b> T T
<b>Customer perspective</b> Increase ratios of customer retention Increase ratios of customer satisfaction	Stable cust. base Loyal cust. base	94% 99%	survey survey	<b>T-</b> T- T-
<b>Operational processes perspective</b> The percentage of complaints electronically Percentage of regulated complaints		2.5% 2.5%	audit audit	<b>T</b> T Th
<b>Growth and innovation perspective</b> Increase in market share Percentage of goals achieved		20% 93%	survey team report	<b>T</b> T Th
<b>Organization perspective</b> Increase employee satisfaction index Reducing employee complaints Increase indices leadership	Hired workers Reduce operating costs	>81% <22% >86%	report of management report of management report of management	<b>T+</b> T+ T+ T+

Th = 80-90% of target

T- = 91-95% of target

T = 96-104% of target

T+ = 105-114% of target

Source: Wade, D., Recardo, R., 2001, 126

## Conclusion

As a framework for the adoption of the annual budget, strategic planning is a tool of management development, a mechanism that forces managers to look ahead, and as a means of harmonizing the goals of managers with strategic aims. Its ultimate goal is to translate strategic objectives into operational activities.

Instrument for the realization of the strategic objectives is considered to be primarily a business budget. It shows the expected amount of the financial results of the company for a certain period, and composed of a set of individual agreed plans of companies. Preparing a business plan, which includes anticipated revenues and expenses for a period of time, prior to analysis of so round of profit, to which is a circuit analysis of cash and return on equity, in order to realize the supply of resources to implement the profit plan.

Business planning based on activities is the dynamic process that emphasizes customer requirements and determine appropriate actions and resources, both financial and operational, are necessary for the conduct of these activities and the timely response to consumer demand. Also, it provides a comparison existing resources with necessary to effective and efficient use and management.

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## POSLOVNI BUDŽET - INSTRUMENT ZA REALIZACIJU STRATEGIJSKIH CILJEVA PREDUZEĆA

**Apstrakt:** Poslovni budžet, ili tzv. „master“ budžet predstavlja osnov za kontrolu ostvarenja, a istovremeno i veoma moćan instrument za realizaciju postavljenih strategijskih ciljeva preduzeća. Samim tim, on je ključna spona između poslovne strategije i kreiranja vrednosti preduzeća. Bez poslovnog plana, menadžeri ne mogu oceniti ekonomski efekat različitih strategijskih alternativa i ne mogu sagledati uticaj formulisane i razvijene strategije na kreiranje vrednosti za akcionare. Iz tog razloga, cilj ovog rada je da ukaže na značaj poslovnog budžeta u realizaciji strategijskih ciljeva i efikasnom izvršenju operativnih aktivnosti. U toku izrade članka biće primenjene metode analize na bazi relevantne i raspoložive inostrane literature i prakse, metode sinteze i metode analogije i kontinuiteta.

**Ključne reči:** poslovni budžet, strategijski ciljevi, aktivnosti, kreiranje vrednosti



**STRENGTHENING INSTITUTIONAL CAPACITY FOR  
EFFECTIVE MANAGEMENT OF WEEE – CHALLENGE  
FOR SUSTAINABLE DEVELOPMENT OF COUNTRIES  
IN THE PROCESS OF EUROPEAN INTEGRATION**

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**Abstract:** Inadequate management of Waste Electrical and Electronic Equipment (WEEE) leads to environmental pollution and threatens human health. A number of countries that are in the process of joining the European Union (EU) are characterized by non-systematic and institutionally unfinished approach to regulation of WEEE. In these countries, this problem has been neglected for long time, and not timely addressed. However, the fact that WEEE has the highest growth and progressive legislation in the EU, led the competent authorities of these countries to seriously address the institutional solutions, adoption of new, and improvement of existing regulations. Appropriate legal regulations are in force in the developed EU countries and the world for a long time, so that countries in the EU accession process find examples of good practice in them. The aim of this paper is to analyse institutional arrangements for managing WEEE in the EU and especially in the countries that are in the EU accession process.

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## Introduction

Waste electrical and electronic equipment (WEEE) has become an environmental problem of global proportions in recent decades. Production of this waste poses a major risk to the environment and human health due to toxic substances it contains. These materials contaminate air, water and ground. In addition, there are specific concerns regarding this waste due to the increasing amount and speed of its creation. This is due to intensive technological development and aging electrical and electronic equipment (EEE). On the other hand, WEEE contains substances that can be reused with proper treatment and recycling. This creates the opportunity for profit, job creation and higher standards of living for the community. Reduction of environmental pollution and negative impacts on human health by WEEE can be contributed by: a) obligations for manufacturers of electrical and electronic equipment (EEE) to take responsibility for their products in all stages (from the moment of production until the end of their lifetime), b) encouraging consumers to buy products made from recycled materials and to dispose of WEEE appropriately. When properly handled and sorted, WEEE is an important source of secondary raw materials. On the other hand, if the recycling process performs poorly, WEEE can be a source of toxins and carcinogens. Because of many problems (high cost of recycling, poor directing of exports by the state, etc.), a large amount of this waste ends up in countries with lower environmental standards and/or cheap labour which makes the processing more profitable. For this reason, it is important to effectively manage the WEEE. In this process, the key is in adequate legal regulation of this area.

However, addressing the treatment or control of WEEE requires joint and coordinated efforts of various institutions, organizations and other key government and NGO actors. Generally, there are growing concerns in competent institutions of the EU and other developed countries in the world due to the enormous increase in the amount of this waste. The growing anxiety over the accumulation of WEEE is present in less developed countries where there is no adequate regulation of this area. In developed countries there is an adequate institutional control of management of WEEE, but they noticed the shift in focus from the waste management policy to policies to prevent the creation and increase in the amount of this waste. *The objective of this research is the analysis of institutional arrangements for managing WEEE in the EU and, especially, in countries in the EU accession process.* Regulatory mechanisms in this area should be in operation for contributing to sustainable development so as to reduce the negative impact on the environment, preserve natural resources, employ a significant number of people and, finally, allow the realization of economic benefits.

## Policy and Management of WEEE in the EU

One of the main goals of environmental management policies in the EU is the rational use of natural resources and improving the environmental quality. Achieving this goal involves pre-implementation of many sub-goals. One priority is the effective management of WEEE, as the rate of its growth in Europe is estimated at about 3 to 5% per year (Press Release, Basel Conference Addressess Electronic Wasted Challenge, 2006). Waste management policy is a significant segment of the environmental policy and sustainable development. Prior to the adoption of the official policy for WEEE regulation, several EU countries had legislation and customized management systems for this type of waste. In a joint policy, in 2003, the European Union adopted guidelines for treatment of WEEE: (a) WEEE Directive (*Waste of Electrical and Electronic Equipment - WEEE*) (Directive 2002/96/EC, 2003) and (b) Directive on the limitation of the use of hazardous substances (*Restriction of the use of hazardous substances - RoHS*) (Directive 2002/95/EC 2003).

The emphasis in the first, *WEEE directive* is to prevent creation of waste, and encourage recycling and other forms of its reuse. "It also seeks to improve the environmental performance of all operators involved in the life cycle of electrical and electronic equipment, e.g. producers, distributors and consumers and in particular those operators directly involved in the treatment of waste electrical and electronic equipment" (Directive 2002/96/EC, p. 26).

This Directive should allow increased effectiveness of WEEE as follows: a) Selective recovery of WEEE using the appropriate systems; b) The exercise of WEEE collection rates at the level of 4 kg per inhabitant per year; c) Emphasizing individual responsibility of the manufacturer in terms of achieving rates of reuse, recycling and recovery of 50-80%, d) Provision of information to end users who participate in the collection and recycling. Also, in order to prevent pollution and reduce emission and environmental impact, there is a requirement to apply BAT - "best available techniques" (Implementation Program for Directive 2002/96/EC on Waste Electrical and Electronic Equipment and Directive 2002/95/EC on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment in Bulgaria 2004, p. 11).

The purpose of *RoHS Directive* ("*Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment*") is the harmonization of the laws of the member states on the reduction of hazardous substances in EEE, such as lead, mercury, cadmium and others. In this Directive (article 4) the deadline for replacing these hazardous substances other substances was 1<sup>st</sup> July 2006. All that is determined in the Directive (Directive 2002/95/EC 2003) is aimed at achieving the final goal. The goal is to protect human health and the environment through proper disposal and reuse of waste

from production and use of this equipment. RoHs Directive in its specification precisely specifies the ratio of heavy metals and other substances in relation to the mass that each component of EEE may contain. In other words, it is proposed a maximum concentration of certain substances in EEE.

In these directives, it is particularly highlighted that each individual state can contribute to improving the situation in terms of environmentally acceptable production, disposal and beneficial reuse of waste after its recycling process. However, more significant effects can be achieved through common action based on respect for the principles of sustainable development.

The EU promotes the reduction of waste in accordance with the principle of reducing the waste problem at its source (the source). In this sense, there are campaigns for introducing cleaner technology and expanding public awareness of the problem. However, the processes of reuse and recycling of WEEE are also important goals. "An extended life of goods is supposed to be the best alternative. Next comes reuse of parts and recycling, while measures like incineration and landfill are the worst alternatives" (Faure, Skogh, 2003, p.102).

**Table 1 Waste Electrical and Electronic Equipment in some EU Countries in 2008 (tons)**

Country / Large household appliances	Products put on the market	Waste collected	% of waste collected in relation to the total number of EE products on the market	Total recycling and reuse	Share recycling and reuse of waste in total waste collected	Treated in the Member State
1	2	3	4 = 3 / 2 * 100%	5	6 = 5 / 3 * 100%	7
United Kingdom	696,115.83	492,747.97	70.7	194,042.82	39.3	-
Germany	673 297	260,269	38.6	220,879	84.8	257,761
Spain	448 810	251,403	56	203,636	80.9	251,403
France	870 095	173,570	20	135,085	77.8	162,931
Italy	641 547	106,386	16.5	-	-	219,277
Sweden	99 955	70,055	70	60,597	86.4	70,471
Norway *	71 698	45,937	64	35,386	77	30,936
Belgium	96 240.67	39171.61	40.7	30443.5	77.7	35825.94
Ireland	-	38,946	-	31,517	80.9	38,938
Denmark	76 108	35,579	46.7	33,279	93.5	39,485

\* Norway is not EU country, but it incorporated in the EUROSTAT analysis.

Source: Waste Electrical and Electronic Equipment (WEEE), Eurostat

Table 1 shows the analysis of ten winners of WEEE in the EU countries with most collected waste (measured in tons) in 2008. In the United Kingdom, from the total volume (measured in tons) of EEE put on the market 70% was collected as waste. Of the total waste collected, about 40% was recycled or reused. In Germany

in 2008, approximately 38% of WEEE was collected from the total amount of EEE placed on the market. The percentage of recycling and reuse is high at about 85% of the collected WEEE. Almost the total amount of this waste is treated in the territory of this country. Spain, for example, collected about 56% of the total amount of WEEE from EEE placed on the market. Of the total amount of waste in the territory of this country about 80% was recycled, and the rest is exported, and mainly recycled in other EU countries.

**Table 2: Comparative Review of Collected WEEE Average (kg / inhabitant) by Category - Benchmarking of EU Countries to Japan, Norway, and Switzerland**

Country	Category*										Totals
	1	2	3	4	5	6	7	8	9	10	
Japan	2.58	nd	nd	0.82	nd	nd	nd	nd	nd	nd	N/A
Norway	8.15	0.46	2.68	2.01	-	-	0.04	0.06	-	0.01	13.41
Switzerland	4.19	1.40	3.52	2.17	0.12	0.04	0.01	0.00	0.00	0.00	11.44
Austria	2.00	0.3	0.1	0.2	0.1	Inc2	Inc2	Inc2	Inc2	Inc2	2.77
Belgium	2.99	1.12	1.16	1.64	0.20	0.14	0.00	0.02	0.00	0.00	7.26
Czech Republic	0.14	0.00	0.12	0.05	0.00	0.00	0.00	0.01	0.00	0.01	0.33
Estonia	0.48	0.00	0.04	0.10	nd	nd	nd	nd	nd	nd	0.63
Finland	4.75	0.28	1.44	1.30	0.27	0.03	0.00	0.02	0.01	0.00	8.10
Hungary	0.91	0.04	0.09	0.22	0.01	0.00	0.00	0.00	0.00	0.00	1.27
Ireland	6.68	0.28	0.43	0.67	0.09	0.07	nd	nd	00,00	nd	8.22
Ireland	2.59	0.53	nd	1.18	0.03	0.06	0.03	0.00	0.00	0.02	4.44
Slovakia	0.35	0.04	0.05	0.20	0.02	0.00	0.00	0.00	0.00	0.00	0.66
Sweden	5.01	1.41	2.54	2.36	0.74	0.11	0.02	0.02	nd	nd	12.20
UK	7.17	0.54	0.59	1.10	0.04	0.35	0.16	0.00	0.00	0.00	9.95
J / NO / CH average	4.97	0.93	3.10	1.67	0.06	0.02	0.02	0.03	0.00	0.01	10.80
European average	3.11	0.42	0.65	0.88	0.14	0.08	0.02	0.01	0.00	0.00	5.31

nd - no data; Inc2 - included in category 2; N/A – not available

\* "Category 1 - Large Household Appliances, Category 2 - Small Household Appliances; Category 3 - IT and Telecommunications Equipment; Category 4 - Consumer Equipment, Category 5 - Lighting Equipment, Category 6 - Electrical and Electronic Tools (with the exception of large-scale stationary industrial tools), Category 7 - Toys, Leisure and Sports Equipment; Category 8 - Medical Devices (with the exception of all implanted and infected products) Category 9 - Monitoring and Control Instruments; Category 10 - Automatic Dispensers "

Source: 2008 Review of Directive 2002/96 on Waste Electrical and Electronic Equipment, p.72)

Besides the United Kingdom, Sweden is a country with most collected WEEE in relation to the total amount of put on the market EEE, and after it, comes Spain and Denmark. In all countries except the United Kingdom, a high percentage of recycling and reuse of WEEE requirements was reported. In Denmark, Sweden, Germany, Spain and the Netherlands, this percentage is over 80%. These countries have met the request highlighted in the WEEE Directive. As for the collection and recycling of WEEE, it is largely done by each country within its capacity, and a very small amount of WEEE is exported to other countries. The exception is Norway, which treats about ¼ of WEEE in other member states, and about 3% is exported to countries outside the EU.

Benchmarking analysis of EU countries collection performances related to Japan, Norway and Switzerland are shown in Table 2. The analysis includes the amount of WEEE collected in categories (from 1 to 10) per kg/inhabitant. This analysis showed that the EU countries collect WEEE nearly two times less on average per inhabitant in relation to the average of the three countries (Japan, Norway, and Switzerland). Sweden is the only country in the EU, which in this analysis had a better performance of collecting WEEE (average 12.20) than the performance of the best countries in this area (average 10.80).

However, the EU countries average of 5.31 kg/inhabitant is higher than the collection target of 4 kg/inhabitant, which is provided by the WEEE Directive. A significant number of EU countries have exceeded this target (UK - 9.95; Ireland - 8.22; Finland - 8.10; Belgium - 7.26; Holland - 4.44), meaning that "the current WEEE Directive, collection target (4 kg / inhabitant) is clearly not a very challenging one for the EU 15 countries" (2008 Review of Directive 2002/96 on Waste Electrical and Electronic Equipment, p. 72). However, for countries that are potential members of the EU and other European countries, this target level would certainly be very challenging.

**Table 3: Comparison of Cost for WEEE Treatment for 2009 (in Euros/tones)**

Country / Categories of EEE	Large appliances	Cooling appliances	Screens	Small appliances	Gas discharge lamp
Austria	70	150	160	70	600
Bulgaria	82	255	290	204	900

*Source:* adapted from Analysis of the different systems of management WEEE used in EU countries and benchmark of Serbian practices and options for improvement 2011, p.37

In addition to these indicators of the management of WEEE, it is relevant to monitor the costs of treatment of this waste, in order to project the necessary investments for the realization of various projects of collection, disposal, recycling and reuse. Table 3 shows the costs of treating WEEE by certain categories of EEE. Cost of event is expressed in monetary units (Euros) per ton quantities of EEE. This identifies that the level of these costs varies according to different categories of

EEE. These costs are lowest for large appliances, and highest for the category of gas discharge lamps.

To manage the costs of treating WEEE, it is necessary to take into consideration the following factors that may affect their overall level:

- “Higher treatment standard, e.g. for land filling, will lead to increasing costs;
- Higher treatment standard for hazardous waste will lead to increasing costs;
- Establishment of dedicated treatment plans for waste streams resulting from WEEE treatment might increase revenues and lower cost for export;
- Increasing labour cost will increase cost “ (Analysis of the different systems of management WEEE used in EU countries and benchmark of Serbian practices and options for improvement 2011, p. 37).

Labour costs are particularly important to consider. Collecting, sorting and waste treatment is labour-intensive activity (Tietenberg 2006, p.184). Thus, the importance of high labour costs issues is especially true when considering the migration capacities for recycling to countries or regions where labour is cheaper.

### **The Role of Government and NGOs in the Management of WEEE**

State and its institutions play a very important role in solving the problem of WEEE. The state has multiple functions in the waste management. In this regard, it is necessary to consider four important aspects (Implementation Program for Directive 2002/96/EC on Waste Electrical and Electronic Equipment and Directive 2002/95/EC on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment in Bulgaria 2004, p. 40): the *legal, economic, technical/operational and information*.

*Legal aspect* of managing this type of waste is associated with the adoption of appropriate legislations that should regulate this segment of activities and roles of the state. Mechanisms for managing WEEE should be incorporated into laws, strategies, plans or directives at the national level. This framework should set the rules, objectives and responsibilities of all participants in the chain of this type of waste management. Therefore, different countries formulate and implement strategies and plans for environmental management, or particularly formulate strategies for waste management.

*Economic aspect* means the provision of necessary financial resources to support the planned activities and goals. Because this area requires a policy of subsidizing, role of the state is even more important.

*Technical/operational aspects* include mechanisms and methods for implementation of measures and actions to implement legislation. It is important to consider ways of collecting waste and its disposal in terms of technology solutions required for its treatment.

*Information aspect of waste management* involves organizing the data collection system on the amount of waste types, monitoring the effectiveness of its collection, the amount of waste treated using different techniques, etc. The system of adequate and timely information is essential to establish a good system of planning and monitoring the achievement of objectives in the management of WEEE.

Bulgaria is an example of neighbouring countries and EU members, which has implemented regulations and standards related to WEEE. In this EU country, waste management is regulated in a manner prescribed in the same way as in the countries of the EU. Thus, the "*Law for Waste Management*" (Law for Waste Management, Bulgaria 2003) from 2003 and "*Ordinance on the requirements for marketing of electrical and electronic equipment and transportation and treatment of waste electrical and electronic equipment*" (Ordinance on the requirements for marketing of electrical and electronic equipment and treatment and transportation of waste electrical and electronic equipment, 2006), regulates the management of the WEEE in this country. Like other EU member countries, Bulgaria has fully incorporated the provisions of the WEEE and RoHS Directives in this regulation.

"*Law for Waste Management*" (Law for Waste Management, Bulgaria 2003) is based, firstly, to prevent harmful effects of WEEE on the environment, and then on measures to reduce the amount of waste, take measures for labelling, manufacturing, transport and use of EEE. "*Implementation Program for Directive 2002/96/EC and 2002/95/EC*" (Implementation Program for Directive 2002/96/EC on Waste Electrical and Electronic Equipment and Directive 2002/95/EC on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment in Bulgaria 2004) analyse the requirements that this Directive imposes and Bulgaria's opportunities to apply them. Thus, under this program, the subjects that distribute EEE for households should provide waste collection at the rate of at least 4 kg per capita per year. This information is published in the "National Statistical Institute (NSI)." Also, these entities are responsible for achieving the following goals:

- "recovery rate shall be between 70-80 per cent by an average weight per appliance of WEEE from the specified categories; and
- component, material and substance reuse and recycling shall be between 50-75 per cent by an average weight per appliance of WEEE from the specified categories" (Ordinance on the requirements for marketing of electrical and electronic equipment and treatment and transportation of waste electrical and electronic equipment, State Gazette, 36/2006, p. 6-7).

In addition to the state, the role of *NGOs* is significant. Projects of *NGOs* can contribute to solving the problems with WEEE in different ways: by networking the various structures and institutions, updating information on the

collection, recycling and export of waste, as well as activities in the function of raising awareness of economic operators and citizens on this issue.

In the area of Balkan countries there is still insufficient public awareness and under-strengthened role of the state as the WEEE policy management creator and guarantee for the implementation of the WEEE regulations. Therefore, NGO activities are important, through the implementation of various projects related to WEEE. One of the projects in this area is "*Balkan network of advocacy on the management of e-waste.*" It connects several countries of the region - Serbia, Macedonia, Croatia and Bulgaria. The countries covered by this project will benefit by increasing the readiness of the application of EU laws and standards (Balkan E-Waste Management Advocacy Network). Some of the activities of this project that will serve to meet the standards in the management of WEEE are: a) Analysis of existing situation related to this type of waste in each of the countries in the project; b) The media campaign and organizing public events to raise awareness; c) Exchange of knowledge and experience with representatives of professional organizations from the EU; d) Workshops and training sessions for prospective educators on the importance of inclusion of all social groups and structures in the waste problem that is growing rapidly and creating problems for the environment and the society.

### **Plans and Regulations for the Treatment of WEEE in the EU Accession Process**

Countries in the EU accession process (Serbia, Montenegro, Croatia, Bosnia and Herzegovina) are making efforts to regulate the field of WEEE by making various plans, strategies and regulations, which are based on the principles of sustainable development and existing EU regulations. The requirements determined in the above mentioned EU directives, are necessarily incorporated by these countries in their legislation in order to regulate the procedure and method of managing WEEE. However, the experiences of these countries and the process of regulation of this area are different, so it is necessary to consider the results so far, and plans for the management of WEEE.

**Serbia.** - Given the intention of this country to join the EU, many prerequisites in the form of harmonization of legislation and regulation should be met. One particularly sensitive area is the harmonization of legislation concerning environmental protection, and in that context, the waste management. "Following problems are identified in waste management in Serbia: lack of infrastructure for treatment and disposal, common disposal of municipal and hazardous waste from households, lack of data on the composition of the waste streams, the lack of facilities for the storage, treatment and disposal of hazardous waste, soil pollution and surface and groundwater pollution" (Izveštaj o stanju životne sredine u Republici Srbiji za 2009. godinu, 2010, p. 52).

In Serbia, the area of managing electronic and electrical waste is regulated in a number of regulations. The most important are the *Law on Waste Management* (Zakon o upravljanju otpadom, Sl. glasnik Republike Srbije, br. 36/2009 i 88/2010) in from 2009 and *Waste Management Strategy for the period 2010-2019* (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13).

*Law on Waste Management* (Zakon o upravljanju otpadom, Sl. glasnik Republike Srbije, br. 36/2009 i 88/2010) states the following as basic goals: waste prevention, recycling and reuse of waste, improving waste disposal procedures, better information system on the state of waste disposal, and development of personal and social awareness of the importance of this issue. Regarding the management of WEEE, the law prohibits the disposal without prior treatment. Also, the liquid waste from EEE must be treated appropriately. The activity of collection, treatment and disposal is strictly regulated in a manner that one must have a permit for this type of activity, and keep meticulous records on the amount and type of these products. In addition, the *Law on Waste Management* (Zakon o upravljanju otpadom, Sl. glasnik Republike Srbije, br. 36/2009 i 88/2010) provides an opportunity to more closely regulate the regulations to ban or limit the use of EEE containing hazardous substances. In this way, the *Law on Waste Management* (Zakon o upravljanju otpadom, Sl. glasnik Republike Srbije, br. 36/2009 i 88/2010) set the framework for compliance with the above mentioned EU directives - WEEE and RoHS Directive (to prevent the creation of electrical and electronic waste, recycling and other forms of reuse, reduction of hazardous substances in electrical and electronic equipment). More detailed regulation and quantitative restrictions for the existence of this waste should be further regulated.

The strategic documents of the Republic of Serbia, regardless of the fact that there is no obligation for implementation of EU directives in the field of waste management, still include the objectives and requirements of the EU. Thus, the *Waste Management Strategy for the period 2010-2019* (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13) contains the basic guidelines to regulate this area based on requirements set by the EU, as explicitly pointed out: "*Waste Management Strategy* defines the basic orientation of waste management for the next period, in accordance with EU policy in this area and the strategic orientation of the Republic of Serbia and directs the activities of legislative harmonization in the process of EU legislation" (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13). The *Strategy* (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13) points out that previous *National Waste Management Strategy for the period 2003-2008*, did not fulfilled expected results. Actual implementers of the *Strategy* are expected to achieve these results.

When it comes to WEEE, the Strategy (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13) states that in Serbia there are no precise data on the quantity of waste. Estimates are that there is about 30,000 tons of waste annually, and the amount of EEE that is annually imported is about 85,600 tons. In analysing the current situation regarding this waste, it is pointed out "the lack of WEEE management system. In the Republic of Serbia just a few % of WEEE is recycled per year" (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13, p. 29). Recycling of waste is being only in major cities in the country (Stanković, Anđelković-Pešić, Janković-Milić, 2012). In addition, what is lacking in the management of this waste is to adopt regulations that would regulate the manner and process of waste management based on the requirements of EU Directives WEEE and RoHS EU. The projected amount and investments in the management of WEEE in Serbia until 2019 are shown in Table 4.

**Table 4: Projected Volumes and Investments in the Management of WEEE in Serbia by 2019**

Year	2010	2014	2019
The projected amount of waste in 000t/year	30	35	40
Year	2010-2014	2015-2019	2010-2019
Estimates of investment costs, in mill. EUR	8	8	15

*Source:* adapted from Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13

In order to monitor progress in achieving objectives, it is necessary to determine a system of indicators. The key is to measure two indicators: the total amount of WEEE produced annually and the total amount of WEEE per inhabitant per year. However, in addition to the inclusion of these indicators, one must design a much more complete and better measurement system for the management of WEEE.

**Montenegro.** - The institutional approach to waste management in this country is based on several of the following documents: *the Law on Waste Management* (Zakon o upravljanju otpadom, Sl. list RCG, br. 80/05 od 28.12.2005, Ukaz o proglašenju ovog Zakon od 26.08.2008), *the Strategic Master Plan for Waste Management at the National Level* (Strateški master plan za upravljanje otpadom na republičkom nivou, Crna Gora 2005) and *Waste Management Plan in Montenegro for the Period 2008-2012* (Plan upravljanja otpadom u Crnoj Gori za period od 2008-2012, 2008).

*Law on Waste Management* (Zakon o upravljanju otpadom, Sl. list RCG, br. 80/05 od 28.12.2005, Ukaz o proglašenju ovog Zakon od 26.08.2008) regulates

the most important waste management issues in Montenegro. The first principle which is based on waste management, referred to in this *Law on Waste Management* (Zakon o upravljanju otpadom, Sl. list RCG, br. 80/05 od 28.12.2005, Ukaz o proglašenju ovog Zakon od 26.08.2008) is a principle whose application should "contribute to achieving the objectives of sustainable development" (Zakon o upravljanju otpadom, Sl. list RCG, br. 80/05 od 28.12.2005, Ukaz o proglašenju ovog Zakon od 26.08.2008). It is apparent that in defining the principles of waste management it is not clear whether it is the concept of sustainable development or, in turn, the principle on which development is based. It is common in the EU strategic documents in the field of waste management and also in *Waste Management Strategy in Serbia* (Strategija upravljanja otpadom za period 2010-2019, Službeni glasnik Republike Srbije 29/2010-13), that the first principle is – "the principle of prevention". Regulation of WEEE management segment within this Law has been made by the Montenegrin Law Art. 50, which is essentially similar to Art. 50 *Waste Management Law of the Republic of Serbia* (Zakon o upravljanju otpadom, Sl. glasnik Republike Srbije, br. 36/2009 i 88/2010).

*Waste Management Plan in Montenegro for the Period 2008-2012* (Plan upravljanja otpadom u Crnoj Gori za period od 2008. do 2012, 2008) is a document which embeds the basic guidelines for waste management, defined by the EU. So, basically this Plan has the prevention of waste generation, which is the main goal, based on the directives and standards. In terms of WEEE, this *Plan* (Plan upravljanja otpadom u Crnoj Gori za period od 2008 do 2012, 2008) points out that for this type of waste; there are no data on quantities and its sources. However, there is increasing interest in the problem of waste and it is certainly necessary to establish a system for information on managing WEEE. Some of the courses of action to the regulation of this issue are (Plan upravljanja otpadom u Crnoj Gori za period od 2008-2012, 2008, p. 66): a) Establishing a system of collection of these wastes; b) Providing the system for breakdown in order to collect recyclable materials, or if it is not possible, the system for the disposal and proper removal of this waste; c) Provision of handling parts/equipment grouped under the hazardous waste that should be in accordance with national and international regulations on hazardous waste management, d) Acquisition of data on collected worn EEE, recyclables and hazardous waste materials in the EEE should be regularly submitted to the relevant institutions; e) Conduction of training programs.

**Croatia.** - In contrast to the potential candidate countries for EU accession, Croatia, as a country which becomes a member of the EU in 2013, is required to has its legislation fully in line with EU legislation. The legal document that provides a framework for waste management policy is the *Law on Waste* (Zakon o otpadu, Republika Hrvatska). Other documents in this area are: *Waste Management Strategy of the Republic of Croatia* (Strategija gospodarenja

otpadom Republike Hrvatske, Hrvatski sabor 2005), *Waste Management Plan in the Republic of Croatia for the period 2007-2015* (Plan gospodarenja otpadom u Republici Hrvatskoj za razdoblje 2007-2015) and a number of rules, regulations and decisions (Ministry of Environmental Protection, Physical Planning and Construction). One of the important documents to regulate the management of WEEE is the *Ordinance on waste electrical and electronic appliances and equipment* (Pravilnik o gospodarenju otpadnim električnim i elektroničkim uređajima i opremom, Republika Hrvatska 2007) from 2007 in which the EU Directives on WEEE and RoHS are applied. What is common in these documents is to respect *the principles of prevention* and an emphasis on measures to influence the reduction of waste and its harmful impact on the environment and human health.

In Croatia, there is *The Draft Law on Waste with Final Law Proposition* (Nacrt prijedloga Zakona o otpadu s konačnim prijedlogom Zakona) in preparation and it is fully compliant with EU legal acts. In this Draft, waste management policy requires a particular hierarchy of goals. In the first place in the hierarchy is to prevent waste and reduce the harmful properties of waste, then a reuse, recycling and proper waste disposal. "The draft law proposal establishes new waste management goals that should be reached by 2020. These goals include recycling 50% of municipal waste this year and 70% of construction waste. And it includes strengthened articles relating to waste prevention with the obligation for development of national programs for prevention of waste" (Nacrt prijedloga Zakona o otpadu s konačnim prijedlogom Zakona). The projected amount of WEEE in Croatia is shown in Table 5.

**Table 5: Projected Amount of WEEE in Croatia by 2015**

WEE	Deadline	Quota (% of total)	
		Reuse	Recycling
4 kg per inhabitant per year	2015	70-80	50-80

Source: Strategija gospodarenja otpadom Republike Hrvatske, Hrvatski sabor 2005

According to the *Waste Management Strategy of the Republic of Croatia* (Strategija gospodarenja otpadom Republike Hrvatske, Hrvatski sabor 2005), WEEE appears in the municipal and the industrial waste. In 1998, Zagreb conducted a pilot project for collecting and reuse of electronic equipment. "Estimates are that in Croatia, about 30,000 to 45,000 tons of WEEE waste is produced per year, or 6.67 to 10.11 kg per capita, and that its growing amount of about 10% a year" (Strategija gospodarenja otpadom Republike Hrvatske, Hrvatski sabor 2005). Management of this waste is still not at a sufficiently high level so that this waste mostly ends up in landfills in the actions of municipal waste collection. However, despite the high degree of compliance with EU

legislation, Croatia sets out following WEEE management problems: lack of control over this type of waste, lack of control of imported EEE, underdeveloped market for the purchase of parts of electronics waste, as well as non-payment of charges for collection (Strategija gospodarenja otpadom Republike Hrvatske, Hrvatski sabor 2005).

When it comes to the management of WEEE, the predicted way to manage this type of waste, in addition to above mentioned includes the export and reuse of materials and energy. In terms of human and financial resources that are engaged for waste management, the practice has shown that they are insufficient in the whole Balkan region. Also noticeable is the inefficiency in regard to implementation of existing laws in practice and application of sanctions for non-compliance. Also worth mentioning is that awareness of the problem of WEEE is underrepresented both among decision makers in these countries as well as in the public. However, existing legislation or, more precisely, its inefficient and ineffective application in practice, fails to resolve the environmental, economic and social problem of WEEE in the region. The Balkans is often a place to store (export) WEEE from the other countries. This increases the problem, assuming that there is ineffective management of WEEE which generates in these countries.

## **Conclusion**

The problem of WEEE is generated by the rapid technological progress, as well as by wider use of its results in daily lives and workplaces. It is worrying and requires special social attention. Problem of generating and recovering WEEE is a challenge for sustainable development management at the level of cities, regions and states. Effective management of WEEE requires institutional decisions and legislation. Legally, EU is covering this problem by WEEE Directive and RoHs Directive. The the EU promotes the policy of reduction of waste in accordance with the principle of reducing waste on the place where it is generated. Developed EU countries and other countries in the world have shifted the focus from the waste management policy to the policy of prevention of creation and increasing the amount of the waste. The most developed EU countries are characterized by a significant amount of WEEE collected which represent more than 70% of the total weight of EEE placed in the market. In addition, it is important to note that of that amount, the largest share; almost 80 % has been recycled and reused. These parameters indicate that these countries meet the requirements and goals, which are set in the above mentioned EU Directives. In these countries, the governments have an important role in the WEEE management. The governments provide the legal, economic, technical and informational prerequisites for solving the problem of WEEE. NGOs also provide

contribution by acting through organizations and programs that advocate for the implementation of the principles of ecology and sustainable development.

The problem of WEEE is generally neglected for a long time in the Balkan countries, which are in the EU accession process. Today, these countries are insufficiently active in solving this problem. Under the influence of EU legislation, the WEEE legislative is promoted in the analyzed countries, i.e. Serbia, Montenegro and Croatia in their accession process. So far, these countries have adopted appropriate legislation, which serves as the basis for the formulation of national strategies for waste management. These countries should be more focused on prevention and on the measures for influencing the reduction of waste and its harmful impact on the environment and human health. Most of the WEEE ends on municipal waste landfill, and there is not developed network of organizations for collecting this waste. Also, a significant problem is the efficient control of waste imports. It is required the stronger role of government of these countries in subsidizing the project of building the recycling capacities. In that way governments make this economic activity more economically attractive for entrepreneurs. It is especially important to stimulate the export of waste in the environment where there are no adequate capacities for collection, sorting and recycling of waste in these countries. The insufficient investments of financial resources, the economic crisis, the lack of awareness and manifested negligence, have left negative impact on the environment and human health in the past decade. In addition, there are not effective control mechanisms for implementation of laws on waste management, as well as the other legislation. In addition, there were no control and monitoring mechanisms of the implementation plans and strategies on waste management in the past. Therefore, it is necessary to develop an adequate system of performance measurement indicators for monitoring the success of realized actions and programs in management of WEEE. In the future period, countries in the EU accession process should focus more on strengthening institutional capacities for effective management of WEEE, the developing of legislation, developing of control mechanisms for its full implementation, as well as developing a strong partnership network of state institutions, NGOs and entrepreneurships in solving this problem.

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## **JAČANJE INSTITUCIONALNIH KAPACITETA ZA EFEKTIVNO UPRAVLJANJE OTPADOM OD ELEKTRONSKE I ELEKTRIČNE OPREME – IZAZOV ODRŽIVOG RAZVOJA ZEMALJA U PROCESU PRIDRUŽIVANJA EU**

**Apstrakt:** Neadekvatno upravljanje otpadom od elektronske i električne opreme (waste electrical and electronic equipment - WEEE) dovodi do zagađivanja životne sredine i ugrožavanja zdravlja ljudi. Veći broj zemalja koje su u procesu priključivanja EU karakteriše nesistematski i institucionalno nezaokružen pristup regulisanju WEEE. Ovaj problem je kod njih dosta dugo zapostavljan i neblagovremeno rešavan. Međutim, činjenica da WEEE ima najveći rast i napredne regulative u EU, uticali su na nadležne organe ovih zemalja da se ozbiljnije pozabave institucionalnim rešenjima, usvajanjem nove i unapređenjem postojeće regulative. Odgovarajuća pravna regulativa je na snazi u razvijenim zemljama EU i sveta već dugo, tako da zemlje u procesu pridruživanja EU u njima nalaze primere dobre prakse. Cilj ovog rada je analiza institucionalnih rešenja za upravljanje WEEE u EU i, posebno, u zemljama u procesu pridruživanja EU.

**Ključne reči:** upravljanje, otpad, regulativa, unapređenje.





## ORGANIC FOOD AS A PROMISING PRODUCT IN SERBIA

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**Abstract:** Organic production appeared as a reaction on ecological degradation and unhealthy food. Its aim was to keep the surrounding with the better production. It a represent suitable ground (soil) for keeping the financial gain of manufacturer, because the articles from ecological production are 20-40% more expensive than thos products from conventional agriculture (agronomy). The most suitable location for healthy food production are in the areas of Fruska gora, Tara, Djerdap, Golija, Stara planina, Sokograd, Mokra gora, Vlasina, Radan, Ovčarsko-kablarske klisura (canyon). The cooperations for the organic food production are in Leskovac, Čačak, and some other parts of Serbia. In Serbia there is 0.1% of about 1600 ha area where organic food is produced. For the organic food to be led from home manufactures to customers, there must be greaterit involvement of country, and manufacturer, but also the uprise of citizens mind, but also the uprise of citizens awareness a higher level.

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**Key words:** organic, production, import, food, sustainable development

### Introduction

The organic agriculture came out as a reaction to the life environment pollution, urbanization and keeping the plant and animal species. In the 1990s of the 20<sup>th</sup> century, new producers of organic food in Serbia appeared and the trend of growth intensified in the past. Fruit, vegetables and cereals are mostly grown. Organic products in our country are 40% more expensive compared to the products of conventional agriculture.

Organic agriculture includes:

- Wide crop rotation,
- High restrictions to chemical-synthetic pesticides and synthetic fertilizers,
- Interdiction of using genetically modified organisms,
- Manure utilisation,
- Selection of plant and animal species resistant to disease and adapted to local conditions
- cattle raising in free space, with the organic food presence

Contemporary world becomes a big playground for competing of the producers and consumers of organic food. That stipulates new "aggression" to ecologically still unruined agricultural resources all over the planet. To avoid the influence of "the riders of Apocalypse" all the interested participants from the business sphere in the field of production and placement of organic agriculture, as its business surrounding and "socially cultural" upgrade of civilized world, have to achieve the consensus and partnership interest relations which make redistribution, but also relocation of products of organic agriculture. "The implementation of measures predicted in the Law on Food Security will make that safety from the view of getting the highest possible level of health care." (Buncic, Kostic, 2009, 60-63).

In our literature the contemporary management of agriculture is interesting, and also the production of the organic food has adequate treatment. The works of professors Snezana Djekic, Milica Vujacic i Branka Ljutic, who adapt management and moderns agro-business to contemporary tendencies of societies' development, but also to more flexible need for healthy food, are specially emphasized. They see that agro-business and its management allow multipurpose structure of that activity, in order to make the marketing mix from 7p in organic food production important category of theory and practice of all production and consumption elements in expanse. (Djekic, S., 2001; Djekic, S, Vujacic, M. 2003; Ljutic, B., 2003).

"From the position of production and usage of healthy safe food, in world ratios, there are 3 main claims:

- 1) how much is the so far conflict situation between certain economic branches influenced on the collocation and production structure which was determining the reproduction and standing of healthy safe food;
- 2) how much contemporary economic system of the world succeeded in establishing coexistence, actually, undisturbed development from the aspect of producer and bidders of eco-food; and
- 3) how do the modern and post-modern conceptions of world's global development see symbiotic relation between the producer and the consumer " (Milenkovic 2006, p. 279).

## **1. Main Characteristics of Organic Food**

Organic agriculture as a part of economic sustainable development had the aim to produce enough healthy food, with the rational usage of natural resources and keeping the condition of healthy environment. One of the big problems of humanity was the problem of providing enough amount of highly healthy food for the existing human population. The consumers buy this food mostly for healthy reasons- 46% and better taste- 40% ([www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana)). In some developed countries organic agriculture represents a big part in total agricultural production, in Denmark it accounts on it 13%, in Austria 10%, in Switzerland 8%, ([www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana)). The biggest market of organic products is in Germany with the years' growth of 10% and it is double than the market in France.

The organic (ecological) agriculture is based on the concept of sustainable development, through which the reliable basis is made to use all the non-renewable resources in agriculture, to protect renewable resources, life environment and more productive agricultural production, i.e. the expansion of organic products production. Ecological agriculture reduces the usage of chemical, artificial fertilizers, pesticides, by reducing with it the influence of natural laws that increase the growth and the resistance to diseases ([www.wellnessadria.com/organskapoljoprivreda](http://www.wellnessadria.com/organskapoljoprivreda)). Some pesticides have heavy metal copper, which can be the source of accumulation in product. Organic products are result of organic production that is led with the use of agritouristic measures which include the usage of chemical agents.

For many advantages of organic food I will quote some:

- Organic food farms do not release synthetic pesticides threatening to flora and fauna in the surrounding,
- These farms do not distort existing eco-systems of flora and fauna, and
- According to the calculation of yield per product's unit there was a conclusion that the smaller amount of the energy is used for their production.

Organic products (organic fruit- apple, plums, raspberries and berry fruit, mostly) are the biggest export potential in Serbia. They are, certainly, safe because they do not consist of the adverse materials (pesticides, heavy metals), synthetic additives and preparations. They have lower content of nitrate, and do not have poisons from unhealthy package, because they are packed in natural materials. These products consist of higher biological value, and higher amount of dry material. Many researches in the area of Germany showed that all these products have high amount of oligo minerals, i.e. Calcium, Iron, Magnesium, Phosphorus and Vitamin C. Organic products do not have chemicals that would

pollute life environment, water, air, and soil, but to keep flora and fauna, giving the priority to the recoverable sources of energy ([www.moja-vizit-karta.evision.rs/organski-proizvodi](http://www.moja-vizit-karta.evision.rs/organski-proizvodi)). Ideal locations in Europe for production of healthy food are: Germany, France, Italy, etc. Also consumption of the healthy organic food improves the growth of integral (agricultural) production.

Courses of this system of production are: ([www.vesti.krstarica/organska-poljoprivreda](http://www.vesti.krstarica/organska-poljoprivreda)):

- Fertile soil control,
- Crop rotation as a system of plant production,
- Integral and biological protection of agricultural crops,
- Guidelines (associations for integral production),
- Quality of products (high biological value and content of harmful substances under the level of the law allowable values),
- Agricultural products' brand and refinement's brand- the certificate with the symbol of association,
- Applied agrotechnical modules reciprocally integrated, and which give the best preservation of natural resources.

Leading regions in the organic food production are the parts in west and east Serbia. In our country about 80 producers of organic food are registered. At the European organic food fair „Biofach”, in the German city Nuremberg, in February 2012, above 2500 exhibitors from all over the world, seven Serbian companies introduced themselves with the high assortment of organic products. The most famous companies from Serbia that promoted their products on the fair were: Foodland, Zadrukar, Zdravo Organic, Mondi, Radoslovi, Royal Eco Food. From the rich offer, the following organic products are distinguished: wild strawberries, cherries, plums, apricots and dog roses jams, chutney, beet, apple, blackberry and raspberry juices, and vegetables from Serbia.

Thanks to the partaking at the fair „Biofach”, in 2011, companies from Serbia succeeded to make the export contract for about of 3, 2 million dollars. At this fair the company “Hemel” also had a big success in organic food production. Royal Eco Food company for the production of organic food at the year's level had about 40 tons of organic food production capacity, and for the next year, in 2012, the plan is to increase it, because the higher requirement for the organic food is expected in EU. The investments are double in this kind of production in comparison with commercial food, because there is a lot of physical work, little mechanization, specific requests in terms of preparation, processing and harvesting, and the products are expensive ([www.b92.net](http://www.b92.net)). The county of Pirot also stands out for the production of highly-valuable food for which there is a great interest at the home and foreign market. The production of potatoes, onions, marrow squashes, plums, green beans, is organized within

the Agricultural Cooperatives „Arbinje“ from Pirot, which allows the export to the EU market. Over one French- Serbian company the organic potatoes and onions are qualified to France, and the plan is to qualify the fruit and vegetables to Russia. The area of Pirot is unpolluted, and very suitable for making food as the future of our region. State subvencies over the hectare are 14 000, and for organic food 43 000 RSD ([www.blic.rs](http://www.blic.rs)).

According to many regional analyses for the organic food production in Serbia, there is a conclusion that 96% of the area are certified regions for collecting the yields from nature (201.000 ha), and the agricultural production is taking about 4% from the total certified area, at about 8.660 ha. The biggest part of the surface are long-year cultures (5.000 ha), then pastures and meadows (2.500 ha) and field and vegetables corps (about 1.250 ha) ([www.organiccentar.rs](http://www.organiccentar.rs), 1). At about 90% of field and vegetables corps (wheat, corn, soybeans) the products are produced in Vojvodina. Long-year plants, pastures and meadows are mostly in the areas of the south Serbia. This area is very famous for its fruits- raspberry, strawberry, blackberry, apple, plum, cherry. All these fruits are produced on the principle of organic production and are directed to the export. Specifically, the companies from Serbia as „Lion Foods“, „Foodland“ and „Herba“ from Belgrade, that are doing the production and processing of the fruits, vegetables, and healthy plants and forest fruits, are successfully represented at the International Fair of Organic Food in German the city of Nuremberg, and also all those companies made very successful contacts with foreign customers, from USA, Romania, and other countries from European Union.

The company „Ecosoil“ from Niš for the first time placed the organic fertilizer to the customers. The highest interest for organic products in Serbia showed the customers who in past year had the growth of organic food market. On the production of fruits and vegetables the agricultural farm Radivojevic stands out, that is spread on 6 hectares of arable land, between Lipovacka forest and slope of Kosmaj in Barajevo near Belgrade. In this farm there is the organic farm Laf, on which the flora and fauna species are grown on the principles of organic production ([www.organskafarmalaf.rs](http://www.organskafarmalaf.rs)).

Many laws that are brought because of food safety and organic agriculture, and which are reliable basis for the placement to foreign market ([www.glassrbije.org/buducnost-organske-hrane](http://www.glassrbije.org/buducnost-organske-hrane)). „Arilje“ raspberry is 30% of the total world's production of raspberry and it is very valuable in the foreign market. In order to make the further development of organic production, four centres of organic food production are made in Serbia- in Svilajnac, Selenca, Valjevo and Leskovac. Healthy food is produced in Serbia, so that Serbian village is more promoted. For making bigger export results in organic food production- fruits, vegetables big investments are needed, and also the knowledge about their regular growth according to European standards.

## **2. Comparative Analysis of Organic and Genetically-Modified Food**

Serbia is a country of unpolluted natural resources and agrarian potentials, and like that there is no need for the production of genetically modified food, toxic food which would be reflected negative to health and life of the whole human population.

The want for the organic food grows, and the future of this economy branch is manifested through the export on the foreign market. Organic products (potatoes, onion, marrow squashes, organic fruits- apples, raspberries, blackberries) are full of potassium, magnesium, phosphorus, vitamin C, and have harmful substances (pesticides) and chemicals in themselves that would pollute area and soil. Ecologically clean organic food is produced in Serbia on about 2 400 hectares, and the aim of that area is to be doubled in ten years. The biggest organic food product market is in Europe- in Germany, France, and Hungary, and in other developed countries. From the leading regions in organic production of fruits, west and south Serbia are distinguished, and for the production of vegetables and farming cultures Vojvodina stands out.

About 80 organic food producers in Serbia are registered. Just about 90% of organic products are directed from Serbia to the market of EU countries, USA, and Japan. The plan of the experts from the sphere of agricultural production has its tendencies to increase the area of arable land in our country for the next ten years for more than 20% under the organic production, about one million hectares. According to the information of Chamber of Commerce, a kind of production is done in Serbia at about 15 000 hectares. Compared to the whole arable land area which is 4,2 million hectares in Serbia, that is only 0,3% ([www.emg.rs./vesti/srbija](http://www.emg.rs./vesti/srbija)).

The lands with the biggest organic areas are Australia (11, 8 miliona hectares), Argentina (3, 1 miliona hectares), China (2, 3 miliona hectares) and USA (1, 6 miliona hectares). The biggest producer of organic fruit is Italy, of organic coffee Mexico, whereas cacao is produced in the Dominican Republic. Spain and Turkey are the biggest producers of organic olives, Italy, Spain and France of grapes. Serbia could become one of the biggest producers in collecting organic juniper ([www.tehnologijahrane.com/organska-poljoprivreda](http://www.tehnologijahrane.com/organska-poljoprivreda)). In Serbia there is 4.500 hectares under organic food, and more than 2.500 hectares are in the process of certification. There are 600.000 hectares in our country that can be transported to organic production.

Law of Organic Production, but also the Action Plan Development of a Agriculture till 2015, should be reliable basis to agrarian production development ([www.glassrbije.org/buducnost-organske-hrane](http://www.glassrbije.org/buducnost-organske-hrane)). The certification is very important, for the free export of products to the EU market. In the programmes of selling organic food, the agricultural farms participate the most,

of which there are 770 000 in Serbia, while 450 000 are registered. One ecological cooperative from Kragujevac called „Eko Plus“, that had 70 farms, succeeded with Canadian help in doing the certification of the area such as: Zagubica, Petrovac na Mlavi etc. All the organic food products found their place on the USA, Japan and EU market. In organic food production there are bigger economic effects, and the aim is to save the biodiversity in general. Organic (ecological) production is based on keeping the criteria of sustainable development for the purpose of producing the safer and healthier food, both for its own (personal) needs, and for the export. When speaking about genetically modified food, the fact is that unlike the developed world, in transition was allowed from 0,3 to 0,5% genetical modifications, and countries- members of European Union 0,9% genetical modifications. Germany, Great Britain, France are the countries where the usage of genetically modified food is not allowed. Based on some researches done in the USA in 1996, the conclusion was that the area of land, where genetically modified food was grown, was about 1,5 million hectares, and that number raised to 21 million hectares ([www.pravoslavije.spc.rs/broj/926/tekst/izazovi\\_genetski\\_modifikovane\\_hrane](http://www.pravoslavije.spc.rs/broj/926/tekst/izazovi_genetski_modifikovane_hrane)).

Advantages of genetically modified food are seen as:

- Reduced use of pesticides and insecticides that pollute the surrounding;
- Growing of plants that would give bigger incomes;
- Producing healthy cattle, resistant to many diseases.
- Genetically modified food deficiencies are manifested:
  - As a change in ecological system, by eliminating some useful plants and insects, and making new species which are unknown;
  - Through the appearance of allergic diseases, and the decline in immune system, and
  - The appearance of the bigger monocultures and production at bigger areas that are very suitable for polyculture (multipurpose).

Many controls haven't been done yet in order to guarantee the correctness of this kind of food. Countries of the EU, Switzerland, Hungary, Australia, Norwegian, have permission for marking genetically modified food. The biggest producers of genetically modified food are: USA (59%), Brazil (6%) and Argentina (20%) ([www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana), page 3). Our laws disable input of genetically modified food into life environment. But apart from all that soya is present on our fields. The Republic of Serbia has begun to bring new real legal framework, which will integrate control all the aspects of production, traffic control and food consumption (Buncic, Kostic 2009, p.60-63). The implementation of measures provided in the Law on the Food Security will provide better organisation for getting the highest possible level of health. Many researches of the Ministry of Agriculture and Trade showed that the accuracy of our products at home market is not from

the genetically modified products. In Vojvodina was, for example, found, about 1.000 to 1.500 hectares under genetically modified soya buckshot and corn. Only 80 hectares from that are destroyed. If Serbia allows further growth of genetically modified soya, then we will have polluted land and foodstuffs in the future, otherwise, Serbia has big opportunities in bio-food production. The society "Zelena omladina Srbije" (Green youth of Serbia) in Resolution of genetically modified food suggested the following measures:

- Independant and public evaluation of risk to human health and natural surrounding,
- Rising the level of human concience about this subject, giving labels to all the existing products (genetically modified),
- Precise defining of law on import and export of genetically modified food.
- It needs to be thought to all previous facts, in order to keep more human health, economic perspective and agriculture of our country.

### **3. Possibilities of Placement of Highly-Valuable Food in Serbia's Tourism**

Nowadays humanity is faced with huge problems concerning pollution of healthy life environment, urbanisation and expansion of big amounts of non-renewable resources. This knowledge made mankind change its behaviour towards nature in order to keep as much as possible flora and fauna, and make better conditions for the development and progress od some future generations. As a reaction to ecological degradation and poor quality food, organic (ecological) agriculture developed.

After ten years the production and selling of organic products becomes more popular and economically significant to sustainable development of rural tourism and increasing of life standard, i.e. life quality. Its purpose is to save the life environment with healthy food by high-quality production. Its aim is showed through consistant healthy food production which will secure existence and the development of human population.

Agrarian politics is of important influence on contemporary development of the country and intensification of sustainable agriculture and healthy food production (Petrovic, Cerovic 2006, p. 223, 224). In our country the agriculture is not completely protected. There is a need for agraricultural policy to be chan

The last report from the World Bank that reffers to Serbia shows that only energetics and agricluture sectors have the potential for the increase which can bring the increase of total export ([www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana)). Serbia imports meat, exports primary agricultural products and very little of refined food. When there is economic crisis, the food

becomes more significant, so the investment to agriculture is the safe investment. The biggest organic fruit producer is Italy, while of organic raspberry are grown in Italy and Turkey, and cocoa in the Dominican Republic. The value of world production of mentioned food rose to 23 billion American dollars.

**Chart 1 Area of Organic Agriculture in the World, and Countries from the Alliance of the Former Federal Republics of Yugoslavia**

Country	Area of organic agriculture (ha)
Australia	10.000.000
Argentina	2.960.000
Italy	1.168.212
USA	950.000
Brazil	841.769
Germany	696.978
Austria	297.000
Switzerland	107.000
Hungary	103.672
Serbia and Montenegro	15.200
Bosnia and Herzegovina	1.113
Croatia	120

Source : [www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana), pages 3, 4

**Chart 2. Organic Food Surface in the World**

Country	Years' growth in %
Denmark	13%
Austria	10%
Switzerland	85
Germany	10%
USA	20%
France	20%
Japan	20%

Source: [www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana), pages 3, 4.

When talking about our country, the Government of the Republic of Serbia in December, 2005 adopted the Statute of Organic Production and Organic Products and sent to parliamentary procedure. This Statute had the aim: ([www.tehnologijahrane.com/nutricionizam/organska-hrana](http://www.tehnologijahrane.com/nutricionizam/organska-hrana), p. 6):

- To get the products with certain production procedure,
- To keep socially economical rural development,
- To protect the consumer,
- To protect natural resources from pollution,
- To upkeep and increase for a long period soil fertility,
- To keep the biodiversity.

Serbia is the country that has wealthy natural potential (suitable climate, position, and fertile soil), and as that it gives appropriate conditions for the development and the production of high-quality food. Now there is an area of 0.1% at 1600 hectares under organic production under it. The aim is to enlarge those areas to 600.000 hectares, and in twenty years to make the production of about million hectares. The tourist offer of Serbia at foreign markets consists of: forest fruit (hazel bush, wild strawberry, wild oak nut), medical and aromatic plants (lemon balm, thyme, birch, thyme, chamomile), fruits, vegetables and other, organic products. Our country can, certainly, develop its competitive advantages in healthy food production. Ideal locations for healthy food production are in the areas of Gornje Podunavlje, Tara, Palic, Djerdap, Golija, Stara planina, canyons of the river Resava, Sokograd, Mokra gora, Radan, Vlasina, Ovcar-kablar canyon (Kostić-Nikolic, Milovanovic-Golubovic 2006, p. 13-20).

**Chart 3 Analytical Calculation of Wheat Production at Family Farms  
in 2008/2009 for Different Levels of Investment  
(Wheat price 10.000 RSD/t, RSD/ha)**

Elements	Yield (t/ha)				
	3,5	4,5	5,5	6,5	7,5
<b>I Income</b>					
<b>1. Income from the wheat seeds selling</b>	<b>35.000</b>	<b>45.000</b>	<b>55.000</b>	<b>65.000</b>	<b>75.000</b>
<b>II Costs</b>					
<b>1. Variable costs</b>	<b>40.946,6</b>	<b>45.634,1</b>	<b>50.321,5</b>	<b>55.008,9</b>	<b>59.696,3</b>
1.1 Seeds	7.500,0	7.500,0	7.500,0	7.500,0	7.500,0
1.2 Mineral fertilizer	14.890,9	19.145,5	23.400,0	27.654,5	319.090,1
1.3 Means of protection	1.500,0	1.500,0	1.500,0	1.500,0	1.500,0
1.4 fuel, lubricant and sustainable materials	13.357,3	13.357,3	13.357,3	13.357,3	13.357,3
1.5 Other variable costs	3.698,4	4.121,3	4.546,2	4.997,1	5.429,9
<b>2. Fixed costs</b>	<b>15.137,0</b>	<b>15.137,0</b>	<b>15.137,0</b>	<b>15.137,0</b>	<b>15.137,0</b>
<b>3. Total costs</b>	<b>56.083,6</b>	<b>60.771,0</b>	<b>64.485,5</b>	<b>70.145,9</b>	<b>74.833,3</b>
<b>III Profit</b>	<b>-21.083,6</b>	<b>-15.771,0</b>	<b>-10.458,5</b>	<b>-51.49,9</b>	<b>166,7</b>
	<b>-60,24%</b>	<b>-35,05%</b>	<b>-19,02%</b>	<b>-7,92%</b>	<b>0,22%</b>

Source: [www.agroprofil.rs/Agrarna](http://www.agroprofil.rs/Agrarna) i ruralna politika u Srbiji, p. 64

In the developed production programmes and organic food selling the most part have: agricultural economy, consumers, agricultural farms, intermediators, etc. Our country is, with its agricultural products, mostly directed to the market of European countries. Most countries give subventions in the area of agriculture, in order to raise the productivity to a higher level, and get foreign investors (South America, Japan, Australia) to support the organic agricultural development (Jonathan, M., Harris 2009, p. 239). Many changes that appeared in past years in Serbia at the agricultural products market had big influence to profitability of wheat production. Many family farms couldn't afford financial needs which reflected negatively to the level of investment.

With the income of 3,58 t/ha farmers do not succeed to cover variable costs of production. It is clear that agricultural farms worked with lost in wheat production. With states help farms with the income of 3,58 t/ha covered the variable production costs. In production costs the costs of mineral fertilizer are very important. Suitable usage of mineral fertilizers and in the conditions of high purchase price results with the production profitability.

**Chart 4. Profit Made on Hectare in Production of Wheat at Family Farms in 2008/2009. According to the Level of State's Incentives and Yield of Wheat (Wheat Price 10.000 RSD/t)**

State incentives for agriculture (RSD/ha)	Yield (t/ha)				
	3,5	4,5	5,5	6,5	7,5
<b>0,00</b>	-21.083,6	-15.771	-10.458,5	-5.145,9	166,7
<b>1.712,32</b>	-19.371,3	-14.058,7	-8.746,14	-3.433,56	1.879,03
<b>12.000,00</b>	-9.083,62	-3.771,0	1.514,54	6.854,12	12.166,71
<b>14.119,10</b>	-6.964,52	-1.651,94	3.660,64	8.973,22	14.285,81
<b>15.000,00</b>	-6.083,62	-771,04	4.514,54	9.854,12	15.167
<b>20.000,00</b>	-1.083,62	4.228,96	9.541,54	14.854,12	20.166,71
<b>25.000,00</b>	3.916,39	9.228,96	14.541,54	19.854,12	25.166,71

Source: [www.agroprofil.rs](http://www.agroprofil.rs)/Agrarna i ruralna politika u Srbiji, p. 66

It can be seen from this chart that if the production reaches income of 5,5 t/ha, the wheat production is profitable, until country's stimulus are bigger than 10.458.46 RSD per hectare. Higher country's stimulus to wheat producers and higher income have bigger profitability of wheat production.

## **Conslusion**

Organic (ecological) agriculture is based on the concept of sustainable development, over which the reliable basis is made to use all non-renewable resources in agriculture, life environment and agricultural production more productive. Organic products have bigger content of dry materia. They are full of potassium, iron, phosphorus, magnesium and do not have chemicals that would pollute water, air and soil. The biggest organic products market is in Europe (France, Germany, Hungary). The leading regions in organic food production are the parts of west and south Serbia. To keep the bigger competition and profitability of Serbian branches, the cluster of model is going to be used, ie. The society and the incubator centre. The special importance needs to be given to touristic bio-gardens that are organic food producer for tourist market needs.

Many problems in agriculture sphere can be only solved with adequate usage of agrarian policy, as strategy of sustainable development and also by measures that are focused on:

1. Investment and production of farms and processing of final agricultural products,
2. Activities of the village and life environment development,
3. Improvement of the infrasturcture in rural areas and training of personnel. With the increase of globalization in the world market, home agriculture producers should use all the flaws of market players in order to keep the market needs. The knowledge and the analysis of home and foreign market presents only one advantage of producers for making high profit and becoming main leaders in regional targets (segments).
4. Enhancement agriculture producers' concience about life surrounding questions,
5. Increase of area under organic production and
6. Introduction of good agriculture practice code.

Organic agriculture for mountain area of Serbia (about 80% of total area of our country) represents such a challenge that can in connected to the productivity of life space, optimum yield of flora and fauna and appreciative to business success because the need for organic food long forms in the whole world. Also, in Serbia, there is a good space location of organic agriculutre to those products that are helped by the optimal natural conditions (microclimate, pedology soil types, landforms). Those areas we see through: hilly, mountainous and clean mountain areal Serbia.

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## ORGANSKA HRANA KAO PERSPEKTIVNI PROIZVOD SRBIJE

**Apstrakt:** Organska proizvodnja je nastala kao reakcija na ekološku degradaciju i nekvalitetnu hranu. Njen cilj je bio da se uz kvalitetniju proizvodnju bolje očuva životna sredina. Ona predstavlja pogodno tlo za ostvarivanje finansijske dobiti proizvođača, jer su artikili iz ekološke proizvodnje na tržištu 20-40% skuplji od proizvoda iz konvencionalne poljoprivrede. Najpogodnije lokacije za proizvodnju zdrave hrane prostiru se u oblastima: Gornjeg Podunavlja, Tare, Đerdapa, Golije, Stare planine, Sokograda, Mokre gore, Vlasine, Radana, Ovčarsko-kablarske klisure. Zadruga za proizvodnju organske hrane postoje u Leskovcu, Čačku, i još nekom delovima Srbije. U Srbiji se pod organskom proizvodnjom nalazi 0,1% površina na oko 1.600 hektara. Da bi organska hrana domaćih poljoprivrednika pronašla put do potrošača, neophodna je što veća angažovanost države, i proizvođača, ali i podizanje nivoa svesti građana na jedan viši nivo.

**Ključne reči:** organska proizvodnja, uvoz, hrana, održivi razvoj.

## **Author guidelines for the academic journal**

### **ECONOMIC THEMES**

The journal primarily publishes scholarly research articles, communications (short or preliminary research articles), and review articles, but is also open for book reviews. It is economic journal, however, we encourage authors from other social science disciplines with novel approaches that may be interesting to our readers, to submit their manuscripts.

#### **1. Copyright**

Articles submitted to the journal should not have been published before in their current or substantially similar form, or be under consideration for publication with another journal. After their manuscript being successfully selected for publishing, authors must submit written warrantee that above is not the case, as well as to give copyright to the journal.

If excerpts from copyrighted works (including websites) such as illustrations, tables, animations, or text quotations (longer than 150 characters) are included in your manuscript, please obtain permission from the copyright holder (usually the original publisher).

#### **2. Review and publication process**

Submit your manuscripts electronically to [ekonomske-teme@eknfak.ni.ac.rs](mailto:ekonomske-teme@eknfak.ni.ac.rs). All submitted manuscripts are double blind peer reviewed before being published. The final decision upon your manuscript rests to the editor. The journal is responsible for smooth process of reviewing. We try to follow the policy of first in first out. The editorial board allows authors to publish one manuscript per a volume (exceptionally two).

#### **3. Manuscript outline**

##### ***3.1 Obligatory and optional elements***

Any submitted manuscript should contain title, authors names, surnames, affiliation, contact details (postal address and e-mail), abstract, list of five keywords, introduction, main text, conclusion, and list of references. Optional are acknowledgement, appendices, data description, mathematical proofs, etc.

Title of the manuscript should be clear and concise (up to 10 words). Title may contain one subtitle in which case the subtitle are to be separated by hyphens or colon. Title format: **BOLD**, capital letters, 12 pt.

Author(s) name should be followed by affiliation data (University, Faculty/department), academic title, postal address and e-mail.

Abstract should not exceeds two hundred words. Abstract should be structured so as to include notes on purpose, methodology/approach, main findings and possibly research limitations. Do not include reference citations or undefined abbreviations in the abstract. Five key words should follow the abstract.

The journal accepts manuscript of five to ten thousands words length. Italics should be used for emphasized words or phrases in running text, but do not format entire paragraphs in italics. Use italic for words or phrases of non-English origin (e.g. Latin). Use bold only for headings. Always use footnotes instead of endnotes, but never instead of a list of references. Tables and Graphs must be in quality for reproduction and can be returned to the author for re-editing.

### ***3.2 Headings***

All headings must be consecutive numbered. Avoid using more then three levels of subheadings.

First level heading: **bold**, small caps, 11 pt.

Second level heading: *italic bold*, small caps, 11 pt.

Third level heading: *italic*, small caps, 11 pt.

### ***3.3 References citations***

The journal follows Harvard style (system) of referencing. Please, cite both authors surname if there are two of them, or surname of first author followed with **et al.** if there are three or more authors.

When the author(s) surname is mentioned withing the text, it must be followed by year of publishing in parenthesis:

*Example: ... according to Fisher (1933) ....*

Otherwise, both surname(s) and the year are in parenthesis:

*Example: (Fisher, 1933)*

Include page number if quote text (original text should go *in extenso*), or if referred not to general conclusion but to specific idea or statement, e.g. **(Fisher, 1933, p. 58)**. Quoted text must be clearly separated form other text by using quotation marks before and after it.

### **3.4 List of references**

#### **3.4.1 Completeness**

Citations in text must fully agree with reference list. References in the list should appear in alphabetical order (first author surname), unnumbered.

#### **3.4.2 General style remarks**

If the same author(s) has been two or more times referred, first appears older one. If the same author(s) has been referred multiply in the same year use suffix letters (a, b and so on) appended to the date (for example: 2010a). Note that within the year the entries are ordered alphabetically by title. The references should be formatted as to have the second line intended for five characters. The journal prefers authors to be listed by their full names and surnames, but initials instead names are also acceptable.

#### **3.4.3 Specific entry style**

##### **Book authored:**

*Pattern:* surname, initials. (year) *title of book*, place of publication: publisher.

*Example:* O'Hara, M. (2004) *Market microstructure theory*, Cambridge: Blackwell Publishers.

##### **Book authored, with an edition number:**

*Pattern:* surname, initials. (year) *title of book*, number ed., place of publication: publisher.

*Example:* O'Hara, M. (1998) *Market microstructure theory*, 2<sup>nd</sup> ed., New York: John Wiley & Sons.

##### **Book edited:**

*Pattern:* surname, initials. (eds.) (year) *title of book*, place of publication: publisher.

*Example:* Bisignano, J. and W. Hunter (eds.) (2000) *Global financial crises: Lessons from recent events*, Boston: Kluwer Academic Publishers.

##### **Modern edition of an older book:**

*Pattern:* Surname, initials. (original publishing year) year of reprint, *title of book*, place of publication: publisher.

*Example:* Keynes, J. M. (1936) 1973, *The general theory of employment, interest and money*, London: The Royal Economic Society.

##### **Book chapter in edited book or other collective works:**

*Pattern:* Surname, initials. (year) "title of chapter", editor(s) surname and initials (ed.), *title of book*, place of publication: publisher, pages.

*Example:* McKinnon, R. (2000) “Limiting moral hazard and reducing risk in international capital flows: The choice of an exchange rate regime”, in Bisignano J. and W. Hunter (eds.), *Global financial crises: Lessons from recent events*, Boston: Kluwer Academic Publishers, pp. 159–176.

*Note:* If there are two or more editors instead of (ed.) use (eds.).

**Book authored by an institution:**

*Pattern:* Institution (year) “title”, place of publication: publisher.

*Example:* OECD (2013) “OECD Economic Surveys: China 2013”, Paris: OECD Publishing.

**Single-author journal article:**

*Pattern:* Surname, initials. (year) “title of article”, *journal name*, volume (number): pages.

*Example:* Haggard, S. (1985) „The politics of adjustment: Lessons from the IMF’s Extended Fund Facility“, *International Organization*, 39 (3): 505–534.

**Two-author journal article:**

*Pattern:* First author surname, initials. and second author initials. surname (year) “title of article”, *journal name*, volume (number): pages.

*Example:* Frenkel, A. J. and R. M. Levich (1975) “Covered interest arbitrage: Unexploited profits?”, *Journal of Political Economy*, 83 (2): 325–338.

**More-than-two-author journal article and multiple works by same author(s):**

*Example:*

Josifidis, K., J. Allegret, and E. Beker Pucar (2009) “Monetary and exchange rate regimes changes: The cases of Poland, Czech Republic, Slovakia and Republic of Serbia”, *Panoeconomicus*, 56 (2): 199–226.

\_\_\_\_\_ (2011) “Inflation targeting and exchange rate regime in Serbia and selected transition economies”, *Eastern European Economics*, 49 (4): 88–105.

**Forthcoming article:**

*Pattern:* Surname, initials. (forthcoming) “title of article”, *journal name*.

*Example:* Marinković, S. and O. Radović (forthcoming) “Bank net interest margin related to risk, ownership and size: An exploratory study of the Serbian banking industry”, *Economic Research*.

**Journal with DOI:**

*Pattern:* Surname, initials. (year) “title of article”, *journal name*, doi: address

*Example:* Fungáčová, Z. and T. Poghosyan (2011) “Determinants of bank interest margins in Russia: Does bank ownership matter?” *Economic Systems*, doi: 10.1016/j.ecosys.2010.10.007

**Working/Discussion Paper:**

*Pattern:* Surname, initials. (year) "title of article", *working paper name*, number, publisher, place of publication, month of publication.

*Example:* Gordon, J. R. (2012) "Is U.S. economic growth over? Faltering innovation confronts the six headwinds", *NBER Working Paper*, No. 18315, National Bureau of Economic Research, Cambridge, MA, August.

*Note:* Please differ it from other online documents. Working/Discussion papers are not necessary online available, or only online available, and they are periodical usually consecutive numbered published by some institutions.

**An article with an author from a newspaper:**

*Example:* Krugman, P. (2011) "Killing the Euro", *The New York Times*, 1 December.

**An anonymous article form a newspaper:**

*Example:* Financial Times (2012) "Siemens to pay €170m to Græce over alleged bribery of officials", 9 March.

**Unpublished work:**

*Example:* Arsić, M., Z. Mladenović, A. Nojković, and P. Petrović (2005) "Makroekonometrijsko modeliranje privrede Srbije: Teorijske osnove i rezultati", CES MECON, *mimeo*.

**Online document and database, private homepage and website:**

*Example:* Jelašić, R. (2010) Ključne determinante kretanja cena u Srbiji: Empirijski pregled devet godina tranzicije, [http://www.nbs.rs/internet/latinica/15/konferencije\\_guvernera/prilozi/20100309\\_kopaonik.pdf](http://www.nbs.rs/internet/latinica/15/konferencije_guvernera/prilozi/20100309_kopaonik.pdf). Accessed 15 August 2012.

**Non-English language or non-Latin alphabet publications:**

*Note:* Title of a non-English, Latin alphabet publication or article when cited in an English version of the Journal should only go in original language. If the title is originally in non-Latin alphabet, title in the original alphabet and an English translation are optional.

*Example 1:* Schmidt, G., J. Allouche, P. Bardelli, and R. Beaujolin-Bellet (2012) "Restructurations d'entreprises", *Revue française de gestion*, 38 (220): 73–74.

*Example 2:* Капелюшников, Р. (2013) „Сколько стоит человеческий капитал России?“ (Russia's human capital: What is it worth?) *Вопросы Экономики*, 2, 24–46.

**Secondary sources:**

*Note:* This style of citation is acceptable only if you are unable, with reasonable perseverance, to obtain the original source. If that the case, original source always goes first, accompanied with secondary source in parenthesis.

*Example:* Israel, G. and B. Ingrau (1990) *The invisible hand*, Cambridge: MIT Press. (quoted in Minsky, P. Hyman (1995) "Financial factors in the economics of capitalism", *Journal of Financial Services Research*, 9, 197–208).

**Titles and subtitles:**

*Notes:* Some books, and less frequently journal articles, have titles and subtitles. If warranted, a subtitle may follow a title, separated with colon, even if no punctuation is used on the cover page of the book or article. The first word of the subtitle is always capitalized.

*Example:* Harris, Larry (2003) *Trading and exchanges: Market microstructure for practitioners*, Oxford: Oxford University Press.

**4. Proofs**

Authors may receive page proofs of their articles, which should be returned to the publisher within ten working days.

**5. Reprints and financial details**

Each author will receive a complimentary copy of the issue in which her or his article appears. Neither referee fee nor publication fee is applied. The journal pays no honoraria to authors.