MACROECONOMIC DETERMINANT OF ECONOMIC GROWTH AND WORLD ECONOMIC-FINANCIAL CRISIS

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Abstract. *Economic measures in circumstances of world economic and financial crisis can not be of universal character. Specific characteristics, as well as differences between economic systems should result in specific proposals for creating economic policy. The paper at the beginning analyzed macroeconomic determinants that influence economic growth and development. Hence, the paper analyzed specific characteristics of CEEC-5 countries in the period 1993-2007. By econometric analysis, using GMM dynamic panel model, real and monetary determinants influence on economic growth and development in this region is estimated. Also, descriptive statistic has provided possibilities for insight of specific characteristics of countries inside the region individually. Different specific characteristics of countries and different influence of macroeconomic variables on economic growth has as result different effects of world economic and financial crisis. At the end of the paper, an analysis of the implemented measure of creating economic policy in the mentioned countries has, first and foremost, provided a solid basis for creating economic policy in Serbian economy. In the focus of the analysis is the real sector of economy and reaction on effects of world crisis in recent years.*

Key Words: *economic growth and development, real sector of economy, world economic and financial crisis, CEEC-5, Serbian economy*

INTRODUCTION

The basic aim of each country is conceiving an adequate economic concept and thereafter implementation of suitable economic measures which are acceptable for a given country at a given moment in time. As there is not such unique economic concept in the world, there is also no universal, unique solution that can be applied in the cases of all countries at any times. Least of all, it is harder to find unique solution in the times of new global economic crisis. Hence, the aim of the paper is to show us which are macroeconomic factors of economic growth for each country and consequences of the effects of

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economic and financial crisis on that factor, and economic growth as well. Specifics and differences which exist between economies *ad-hoc* indicate that a different factor has a different influence on the growth of economy, i.e. that different factors in different surroundings indicate different effect on growth and simultaneously suffer from different pressure of environment. Accordingly, basic factors of growth are the pre-eminent parts of national income and activators of economy. At the same time, they perish the effect of crisis at once in comparison with derived factors of growth or specific determinants of growth which are typical from some countries.

The here-mentioned standpoint is going to be the cornerstone and our further research will rest upon this paper. In the following chapter, the beginning shows the macroeconomic determinants of growth that exist in each country despite of the system and growth level, i.e. basic determinants of growth and development. Afterwards, in the second part, it is methodized empirically analyze the influence of basic and specific growth determinants on the economic growth and development of five selected East-European countries (The Czech Republic, Slovenia, Hungary, Poland and Slovakia – CEEC-5) – in the period from 1993-2007. The empirical analysis is aimed at drawing attention to differences between these countries, if any in terms of the influence certain economic variables have on economic growth and development of the countries tested. In the third part the potential solutions for mitigating effects of global economic crisis are shown. One solution represents the IMF receipt and another one reflects income mechanism of adjustment. The next part of this paper analyzes negative effects of global economic crisis on economic performances of tested countries as well as the countries' attempts at mitigating the same. The fifth part of the paper is dedicated to Serbian economy through comparative analysis and experience in overcoming the economic crisis of tested countries. The final part is conclusion.

MACROECONOMIC DETERMINANTS OF GROWTH

In theoretical terms, analyzing influence of fundamental economic variables on the economic growth and development is based on the basic macroeconomic relation. This relation represents expenditure based approach for calculating gross domestic product in one country:

$$Y = G + C + I + X - M \tag{1}$$

in which Y is gross domestic product, G budget consumption, C private expenditure, I investments, X exports and M imports.

Identity (1) represents equilibrium between aggregate supply and aggregate demand in the open economy. It is also used for examining functional dependant of some macroeconomic variables, measure of economic activity, and polygon for implementation adequate mix of economic policy (monetary policy, fiscal policy, balance of payment policy, exchange rate policy etc). At the same times it clearly shows connection between internal (real and monetary) sector and external sector in an economy.

Macroeconomic variables which are included in the growth equation (1) represent the basic indicator of economic activity in any country. They are the key indicators of the country, despite the growth rate. Also, they are quantitatively measurable and make ade-

quate base for comparative analysis. Contemporaneously, almost all traditional theoretical school (Physiocracy, Mercantilism, Classicism, Neoclassicism, Keynesianism etc) is used some of these macroeconomic variables as the main components of the economic growth and development. But, it does not mean that only the traditional theories used these variables in their analysis growth and development of the countries. Modern theories of growth (theory of endogenous growth, theory of location, supply side economics, etc) use these determinants of growth too, but less then they use components of human capital (ideas, acknowledge, trainings, learning by doing, etc). Much attention is given today to derived determinants of growth such as composite indicators, protecting environment, scale of education, distance of the equator, the birth rate, etc. Latter ones are qualitative measurable indicators and they can give better results only in comparison to analysis of the countries which are on higher level of development. It is unexpected for the country with big problems in fundamental economic questions, like internal or external imbalance, to concentrate their economic policy solely on derived determinants of the growth. Also, it is unlikely that the effects of latter determinants will give positive influence on economic growth if an economy is on lower level of development. For example, the effects of budget consumption or investments on growth rate are not the same in a developed country and an undeveloped one. Previous empirical experiences in this analysis show the best results in comparative analysis of OECD countries (approximately the same level of growth). From that point of view, this paper is conceived to analyze growth rate on basic of macroeconomic variables which are specific for any country and any period. Let us start the empirical analysis with the fundamental macroeconomic identity, i.e. the growth equation (1).

EMPIRICAL ANALYSIS

On principle, the econometric analysis is positioned to analyze the influence of fundamental macroeconomic variables on economic growth and development. Generalized Method of Moments (GMM) is used to estimate this influence. The dynamic panel model simultaneously enables carrying out of an analysis of changeable models, first by an analysis of variable differences through their levels and then by an analysis of variable levels through their differences. Dynamic relations scrutiny provides information and variables values for the previous period. Accordingly, GMM panel model provides sufficient number of observations in which assessments describe more clearly dynamics within the model (Blundell and Bond, 1998). The restriction regarding the number of countries necessary for obtaining valid assessment of the variable influence was regulated by expanding number of countries of the region tested, i.e., the empirical analysis comprised other Central-European countries for which there was available data over the period tested. On the basis of coefficients obtained in this way for the whole region, the influence of economic variables on economic growth and development of CEEC-5 countries is descriptively examined (Schadler, Mody, Abiad, and Leigh, 2006).

Starting from the key macroeconomic relation, with an aim to consider the impact that relevant economic variables have on economic growth and development, the equation (1) was enlarged by the influence of inflation rate (π), direct foreign investments (*sdi*), the real national interest rate (*r*) and the real exchange rate (*rer*) (The real exchange rate is

calculated by IMF methodology which calculates the real exchange rate by multiplying the nominal exchange rate with ratio of foreign and domestic prices.). It means that in the analysis of economic growth the following data were used: real Gross Domestic Product *per capita* (rGDPp.c.), public/budget consumption (G), private consumption (C), investments (I), exports (X), imports (M), inflation rate (π), direct foreign investments (sdi), real national interest rate (r), real exchange rate (rer). Time series for mentioned variables encompass the period from 1993-2007. The data were collected and processed from International Monetary Fund website – IFC-online (www.imfstatistics.org).

$$y = c + \alpha y_{-1} + \beta G + \tau C + \eta I + \varphi X + \mu M + \gamma \pi + \theta sdi + \lambda r + \chi rer \qquad (2)$$

On the basis of the growth equation (2) we estimated the influence of economic variables on economic growth and development of the countries in the tested region. The real GDP per capita was used as a dependent variable in the following model since GDP represents an index of economic activity within a country. At the same time, the real GDP per capita is an indicator of growth and development rate which demonstrates a high level of compliance with other life quality parameters, so it is often used as an indicator of life standard in one country's economy. Monitoring the economic activity over the years, we have actually estimated the economic growth of the countries in the region tested. Apart from these mentioned independent variables, we can perceive that the model includes one more independent variable representing the lagged real GDP per capita. By inclusion of this variable it is wanted to detect if there existed a convergence in the region tested, that is, whether the development of the countries remained on the approximately same level at the end of the period in spite of initially different economic growth and development rates (Cerra, and Chaman Saxena, 2004).

Estimated model parameters are represented by the following equation:

$$y = 0{,}41 y_{-1} + 1{,}73 G + 4{,}04 C + 3{,}87 I - 1{,}57 X + 2{,}45 M - 12{,}03 \pi + 20{,}89 sdi - 8{,}13 r + 0{,}92 rer \quad (3)$$

The model evaluation was subject to appropriate specification tests. One of these is the Sargan test, by which the overall instrument validity is being tested by sample analysis at a given moment of the evaluating procedure. Another test (AR2) tests the hypothesis that model errors are not serially-correlated (Durlauf, Johanson and Temple, 2004). In this growth equation we have satisfactory number of observations at disposal and both tests (Sargan and AR2) show validity of model evaluation through the given growth equation. A note for the growth equation: initial GDP p.c., public consumption, private consumption, investments, exports, imports are the variables included as ln(variable/100) whereas inflation rate, direct foreign investments, real national interest rates and deviation of real exchange rate from equilibrium exchange rate are included as ln (1+variable/100).

Estimated coefficients of the key economic variables influence on economic growth and development in equation 3 show us that individual increase by 10% on CEEC-5 regional economic level, has the following effects on the economic growth: budget consumption increase by 10% boosts economic growth for approximately 0.2%, private consumption increase by 10% boosts economic growth for approximately 0.4%, investments increase by 10% influences the economic growth for approximately 0.4%, export increase by 10% decreases economic growth for approximately 0.2%, import increase by 10% would boost economic growth for approximately 0.2%, inflation increase by 10% de-

creases economic growth for approximately 1.1%, direct foreign investments increase by 10% boosts economic growth for approximately 2.0%, real national interest rate increase by 10% decreases economic growth for approximate 0.8% whereas real exchange rate increase by 10% would increase economic growth for approximately 0.1%.

In the ensuing part of empirical analysis it is relevant to point out that estimated coefficients refer to the CEEC-5 region in total, while descriptive analysis observing distinctive characteristics of particular economies in the region. On the basis of growth equation results, we notice absence of convergence within the CEEC-5 region. This is inferred from the positive value of initial real GDP per capita coefficient which implies that the rule, by which less-developed economies achieve higher growth rates than more-developed economies, is not at work here. At the same time, the absence of convergence confirms our standpoint that there are not any universal, *a priori* given economic solutions which would generate identical effects on the economic mechanisms of various countries. The time frame in which we analyzed basic economic variables influence on economic growth and development cannot be moved out of the concept generally accepted for the countries in transition – "Washington consensus". The above mentioned result regarding tested convergence influence indicates that even within such a generally accepted economic concept we can perceive significant differences between countries. Simultaneously, previous results of implementation latter concept in transition countries and in some developing countries are not imposing as some expected. Contrary, they are defeating. It is not important any more what the pros and cons of "Washington consensus" are, as it is the concept that will take it over.

Model evaluations reveal general (internal and external) imbalance within the region. Simultaneously, the positive impact of investments and private consumption on economic growth imply that along with the increase of investments and private consumption come internal imbalance through reduction of savings, that is, domestic accumulation. In other words, this means that, within the given period, the level of domestic accumulation did not match the volume of investments within the region. Except Slovenia because during the whole tested period its investments are lower than savings (measure in %BDP). Therefore, the primary macroeconomic equation within economy (S=I) has not been reached. This imbalance can be partly eliminated by budget consumption increase. Nevertheless, the toll is being paid through further deepening of state budget deficit, except significant increases of tax burdens within economy happen. External imbalance suits to absence of internal balance just well. Export has negative impact whereas import generates positive effect on economic growth. Thus, imports share in GDP exceeds exports share in GDP which indicates increase import of foreign accumulation for finance economy growth into region.

Direct foreign investments had the most positive and inflation rate most negative impact on CEEC-5 economic growth within the observed period. From the aspect of real sector, this situation is more than favourable for expansion of economic activity. Moreover, negative impact of real interest rate on the economic growth additionally spurs economic activity in the region through reduction of inflation and nominal interest rate. Simultaneously, the influence of real exchange rate indicates that real exchange rate depreciation positively influences economic growth whereas appreciation has negative, though weak impact.

All economies in the CEEC-5 region reached more or less similar economic growth rates in the observed period. Average annual economic growth rate for CEEC-5 region countries in the given period was 4.3%. The highest average annual economic growth rate was achieved by Slovakia approximately 5.3% whereas the Czech Republic had the lowest average annual economic growth rate – approximately 3.4%. Over the tested period, we could notice significant fluctuations in economic growth towards both directions, which is a consequence of both cyclic movements in the region and strong economic anomalies in the form of economic and financial crisis that firstly afflicted Czech economy and later on spread to other countries in the region.

Considerably increasing real GDP per capita was indicative for the first years of economic transformation. In the last years of the 20th century, particularly in 1997 when the Czech economy was stricken by economic and financial crisis, a decline in economic activity ensued and accordingly, a decline in the real GDP in all countries in the region. The Czech growth rates have a downward tendency since 1995, when the general regional CEEC-5 growth rate was high. The whole countries in region experienced most serious difficulties in the region as consequences of the financial crisis effects, which manifested through lower, but positive, industrial production growth rates. Obviously, the crisis which hit Latin America countries in 1994 spread to the Czech Republic by contagion effect, when the first negative symptoms manifested. At the beginning of the new millennium world economy falls into new but mild recession with negative effect on this region as well. Then, there followed a new economic recovery and economic boost which lasted until 2007 when the world economic and financial crisis affected the observed countries in the region, in a different form and intensity though.

The analysis of economic activity of CEEC-5 region showed that the real sector, measured by industrial output, is a driver of economic growth (Chart 1). Besides, fluctuations in industrial output rates were higher than the fluctuations in economic growth rates. In the beginning of transformation process of their economies, the countries of this region were facing severely negative industrial output growth rates but along with the real sector recovery, economic growth started to revive as well.

Detailed analysis of data from Chart 1 show increasing trend both tested variables, industrial production and real GDP pc. Besides, industrial production has higher growth rate in the period analyzed. It confirms former attitude that the real sector is a driver of economic growth, regardless of differences in tempo of growth rate.

The descriptive analysis show that private consumption had the largest share in GDP, from the aspect GDP structure, in the countries observed for the given period. Average annual private consumption share in the regional GDP in the given period totalled 59%. The annual share above average was recorded in Hungary – about 66.8% and Poland – about 63% whereas the annual share below average was recorded in the Czech Republic – approximately 51.2%, Slovakia – approximately 55.5%, and Slovenia – 56.6%. The analysis showed that the countries whose major part of GDP depended on private consumption (such as Hungary and Poland) depended far less on other economic variables, e.g. public consumption and investments, and *vice versa*. Although we can, on the regional level, detect stable movements within private consumption share in GDP, however, since 2001, a downward tendency has been manifesting in this part of aggregate demand. Suppression of this part of aggregate demand by restrictions in the form of tax policy reforms, which in most cases meant tax burden increase, slightly influenced slowdown of economic growth.
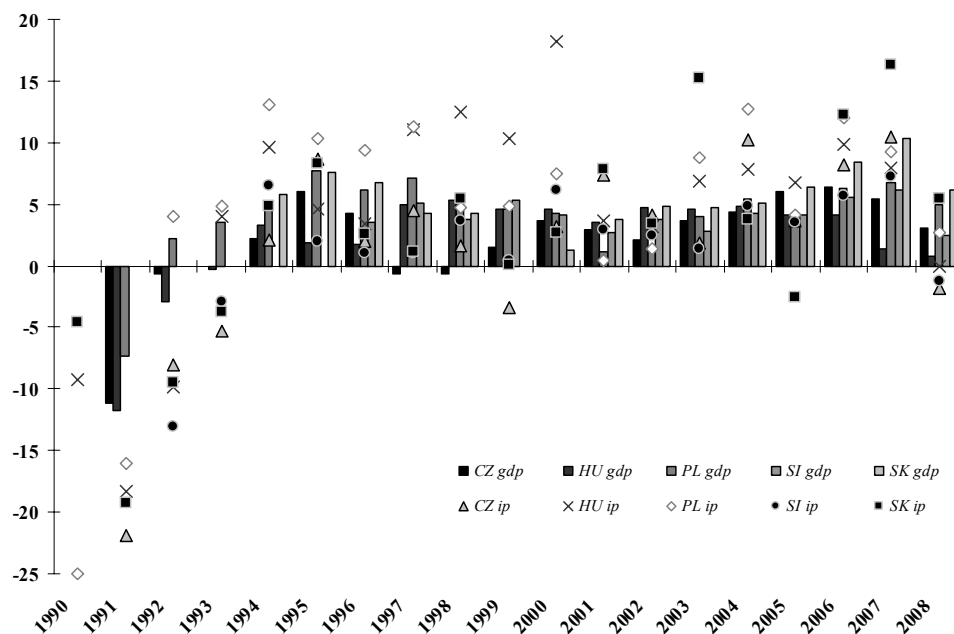
Chart 1 Real GDP per capita and industrial production of CEEC-5 region, growth rate

From the aspect of budget consumption influence on economic growth and development, and on the basis of econometric results and the descriptive analysis, we can indisputably detect slightly negative impact on economic growth which is first and foremost a consequence of budget consumption decrease (Table 1) due to adoption and implementation of restrictive fiscal measures. The effect is obviously a result of gradual adoption of the game rules set within uniform monetary policy of the European Union (EU). CEEC-5 countries' convergence and association processes to EU socio-economic area and, accordingly, complying to above mentioned game rules, conditioned these countries to rely predominantly on fiscal policy measures in the process of restoring general economic equilibrium. Coordination of economic policy measures is a characteristic of optimal currency area therefore restrictions regarding implementation of desired economic measures should be taken in account. In uniform monetary policy circumstances and solely relying on fiscal policy measures, it is hard to establishing both internal and external balance without affecting an economy (inflation, unemployment, loss of competitiveness etc.). To tell the truth, it should be said that this model reveals slight influence of budget consumption on economic growth, meaning that only extremely high budget deficit would have had significant effects on economic growth (Pushak, Tiongson and Varoudakis, 2007). In the observed period, an average annual budget consumption share in GDP for CEEC-5 region was about 45.7%, Poland being only country with above average share – about 50.2%.

Table 1 Budget consumption (percentage share in GDP)

	1995	1996	1997	1998	1999	2000	2001
Czech Republic	54.5	42.6	43.2	43.2	42.3	41.8	44.5
Hungary		52.6	52.2	52.8	49.9	46.6	47.4
Poland	47.7	51.0	46.4	44.3	42.7	41.1	43.8
Slovenia	52.6	44.5	44.8	45.7	46.5	46.7	47.6
Slovakia	48.6	53.7	49.0	45.8	47.8	50.9	44.5
	2002	2003	2004	2005	2006	2007	2008
Czech Republic	46.3	47.3	45.1	45.0	43.8	42.6	42.4
Hungary	51.4	49.1	48.9	50.1	51.9	49.7	49.8
Poland	44.2	44.6	42.6	43.4	43.8	42.1	43.1
Slovenia	46.3	46.4	45.8	45.3	44.6	42.4	43.6
Slovakia	45.0	40.1	37.6	38.2	36.9	34.4	34.9

Source: IFS online

The most drastic reduction of public (budget) consumption was recorded in Slovakia, especially over the last five years, i.e. from 2003 to 2008. Solely on the basis of this information, say, in the case of Slovakia, it could be easily concluded that budget consumption had negative impact on the economic growth. But, such conclusion could be acceptable only if growth rate stay constant, which is not the case for CEEC-5 countries. And it is exactly where an answer to the important question about the decrease of budget consumption share in GDP in Slovak case lies. Exceptionally robust economic growth and development of the Slovak economy reduced budget consumption share in GDP. This is supported by the data on Slovak budget and primary budget. Both show a deficit in the period from 2003-2008, the deficit of primary budget being on average 1% point lower than the budget deficit.

As the results of econometric analysis imply that direct foreign investments and inflation rate had a dominant influence on economic growth over the period observed. On the basis of measured inflation rate coefficient in the growth equation 3, we perceive that efforts of CEEC-5 economic authorities directed towards cutting down inflation rates had a positive and straightforward influence on the economic growth of the countries observed. However, a considerable indirect inflation impact on economic growth is also evident through the reduction of nominal interest rate.

Regarding inflows of direct foreign investments, it is evident that all countries of the region showed considerable inflows of capital from abroad in relation to GDP for the period observed. This also represents a significant factor of economic growth. The Czech Republic and Hungary showed the direct foreign investments inflows of 5.7% of GDP, as Poland and Slovakia had comparably lower share which reached about 3.4 % of GDP. Slovenia had the lowest average share for the period observed, about 2% of GDP. On the basis of these figures and results of the econometric analysis, we could conclude that the Czech Republic and Hungary benefited most from the inflows of direct foreign investments, hence Poland and Slovakia, and Slovenia, in comparison, had benefited least. Of course, we cannot help concluding that an initiative for free trade zone - CEFTA largely contributed to this state of affairs. In the CEFTA agreement the features of optimal currency area have not been fully adopted, such as common currency, even though certain

requirements were met (product diversification and openness, but not labor mobility and financial integration). But, the formation of free trade zone, and the participation in the same, enabled these countries to reach and, at the same time feel all positive effects of direct foreign investments in the right way. This was especially evident in the real sector. In all five countries of the region, products intended for manufacturing in industry were predominant in foreign trade (with average annual participation of over 80%). Moreover, it is curious that the countries of the region had different choice of diversified product groups in commodity trade. In other words, it is obvious which economy is specializing for which industry. Namely, a concept of GDP formation, observed through the newly added value, indicates that the analyzed countries had very few and slight changes in the structure of different sectors share in the gross value added formation. For example, industrial sector participates on average with 27.8% in the formation of gross value added, the Czech Republic having the largest participation of 31% and Poland the lowest, 23%. Over the last ten years, there have been very slight changes regarding industry participation in gross value added formation, ranging from 0.5 to 1 % point. For the countries observed, agriculture participates with 4.15% in the formation of gross value added, construction with 6.45%, trade, transport and telecommunications with 24%, business activities and financial services with 18.7% and other services with 18.9%. Also, as in the case of industrial sector for the given period, there were not significant oscillations in changes. These changes were very slight and gradual, indicating that there was a serious strategy for economic growth and development in these countries, where direct foreign investments were not regarded as an *ad-hoc* element of economic growth or as a mere figure in the balance of payments, i.e. as a sum necessary for maintaining internal and external stability in the medium term. Indirectly, one may conclude that direct foreign investments were equally distributed to above mentioned sectors.

However, all aforesaid benefits and positive effects of the economic growth and development strategy, relying predominantly, or exclusively, on inflows of capital from abroad, could swiftly and easily turn into a raging monster difficult to fight against. That is exactly what is happening now, in the times of the world economic and financial crisis. For instance, Hungary has almost collapsed financially, being deprived of substantial inflow of foreign capital and its exports, having reached 80% of GDP, suffered a dramatic fall. Both of these had an adverse effect on internal as well as external balance. The reduction of capital inflow from abroad, followed by shrunk demand for Hungarian exported goods, caused a serious problem with the balance of payments deficit, simultaneously creating a powerful effect of mistrust among foreign investors. Severe exports decline, which, as mentioned, had represented 80% of GDP, caused a sharp drop in economic activity. Certainly, this fall in economic activity has spread to tax revenues in the budget which caused deepening of the budget deficit. Creating internal instability by decline in economic activity, a rise in unemployment rate and deepening of the budget deficit additionally augmented foreign investors' mistrust thus causing "capital escape". A collapse would have been almost imminent if the International Monetary Fund (the IMF) and the European Union (the EU) had not, in joint efforts, provided a financial aid package in the amount of 25 billion dollars. In the Czech economy case, the situation is less dramatic but also unfavourable. However, what is interesting is the fact that Poland is in a different situation than the abovementioned countries. Yes, there has been a slowdown of economic activity in the Polish case, but economic parameters show that the Polish econ-

omy registered modest economic growth in the second and third quarter of 2009. Analyses show that the Polish economy, though stricken by negative effects of the world economic and financial crisis, has achieved better results than other countries because it is less dependent on foreign capital and foreign demand for domestic products. Poland's exports stand on the level of about 40% of GDP, and direct foreign investments, which in total amount were largest in comparison to other countries (average 8.5 billion dollars per annum for the observed period), had relatively low participation in GDP, of annual average of 3.5% for the given period.

So, decreasing demand for exports significantly tremble external sector inside CEEC-5 region, except in Poland. Additional problem was relatively lower market share this group of countries on the key external partner countries during the whole analysed period (1990-2009). Trade share is indicator of country's export competitiveness. It shows is the increase/decrease of exports result of improving/worsening country's export competitiveness or it is result increasing/decreasing export market. It is used Fisher formula for analyzing trade share of country. It is real to expect increase of market share if partner countries get higher growth rates which could result in increase their imports (exports demand) as function of national income. But, the Western European countries who are the main partners of CEEC-5 region had low growth rate in longer period in past. The most important thing is that CEEC-5 countries succeeded to transform their economy through CEFTA and during 1990's to achieve economic scale, diversification and specialization in production process which increase their help them to become export competitive. Such position contrive them to quick increase market share, both through improving country's export competitiveness and through expand export market. Today, with new world economic-financial crisis the market share doesn't play important role in an economy. It needs more time for economic recovery of partner countries and afterwards recovery of their own countries. Also, the analysis of the market share suggests advantage of Poland economy because of its export's structure. Namely, share of Poland product is equally divided on all partner countries so that it isn't directly linked for only one, or a few country, as is the case with other countries in the region. Likewise, the same analyses introduce the lowest share of Slovenian economy inside the region and higher concentration on the Balkan's countries. Negative trade balance with EU countries Slovenia cover with surplus in trade balance with the Western Balkan's countries (Bosnia and Herzegovina, Croatia, Montenegro and Serbia).

POSSIBLE SOLUTIONS FOR MITIGATING EFFECTS OF CRISIS: IMF RECEIPT *Vs* INCOME MECHANISM OF ADJUSTMENT

The previous analysis derived the following conclusion: in CEEC-5 region exists internal and external imbalance during the period tested. Obviously, CEFTA agreements between these countries, that exist until of their entrancing in European Union, haven't fulfilled expectation regarding the criteria of optimal currency area (OCA) criteria. Albeit, CEFTA agreements help these countries in transforming their economy from planed to market oriented economy. Some of the criteria were implemented – production diversification and opening economy, but it's still absented of common currency, labour mobility and financial integration. Production diversification and opening economy have conduced increasing the level of specialization of production process, improving competitiveness of

products and economy, increasing market share, and thereby higher economic growth. From the other side, the common currency and financial integration claim higher levels of countries integrity. But it is obvious that flexibility and mobility of labour is absented – there is low employment rate and/or high unemployment rate. Where is the problem? Namely, if country wanted to improve competitiveness it increases effectiveness in production process. Then we talk about actual competitiveness. But, country can improve competitiveness with lower number of workers, i.e. by decreasing employment. Latter one introduces the position CEEC-5 countries, which means that they spuriously increase competitiveness. At the final iteration this can lead new social indignation and delaying economic activity. Other analysis, also, confirm that higher influence on economic growth in this region comes from capital, then through total factor productivity and in the end labour.

Regarding proposed solutions to economic difficulties in the stated countries, there are no significant differences, especially not among countries which addressed the IMF for help - the world physician number one! What the IMF medicine suggests as a remedy in most cases implies strict fiscal adjustments aimed at maintaining macroeconomic stability. Namely, even though the countries which addressed the IMF for help are negotiating the budget deficit for 2010, ranging from 3.5% to 4% in relation to gross domestic product, it still does not mean strict fiscal adjustments, bearing in mind sharp drop in tax revenues caused by decline in economic activity. Also, the room for fiscal adjustments is usually sought in expenditure cuts by structural adjustments focused on reforms of pension-funds, health service financing and considerable reduction of state subsidies.

This concept imposes the chain questions: Do we talk about short-term measure of mitigation the various effects of crisis or long-term measure of adjustment? Or can we expect positive results of these measures (the IMF medicine) and in very short run? It is apparent that reform actions with long-term effects are at work here, on condition that they are nicely "packed" in a short-term dimension of economic crisis solution. It is disputable whether proposed solutions of the IMF are right or not. However, the statement of Jan Fischer (Rejection of the budget will be a signal that the government does not enjoy support, www.vlada.cz), the current Prime Minister of Czech Republic, concerning the dispute over proposed budget deficit of 5% in relation to gross domestic product for 2010, is very indicative one. Mrs. Fisher, explaining why it would be convenient to accept the proposed budget, says that it is aimed *at stabilizing state finance in a way that Czech Republic, or more precisely the Government which is to be formed after the next year elections, gets at least some manoeuvring space for decisions to be made in the future over the state budget*. **Otherwise, it may happen that the decisions about future budget are made by IMF, which the institution financial aid would be requested from.**

This conclusion is analogue to econometric analysis in this paper – only higher budget deficit can exert significant influence on economic growth. It means that each country had to insure measures that will stimulate economic activity over the real sector of economy. But the levels of fiscal adjustment aren't the same for every country and there is no exists universal solution for economic recovery. At that, strict fiscal adjustments decreasing domestic demand and demand for foreign products, so the reader can ask himself when will the countries overcome recession whereas high level of economic integration between entity in EU. Of total trade in Euro Area almost ¾ make intra-industry and intra-sector trade.

According to the above mentioned it is obvious that the IMF can hardly ignore income mechanism of adjustment. Ignoring this mechanism means ignoring real sector in econ-

omy. The whole story about adjustment is in connection with budget policy, precisely on expenditure side of the budget while revenue side of the budget needs to adjust mainly over additional tax burden.

Income mechanism of adjustment is very important for each country. It is connected directly with external sector over the international trade and indirectly with internal sector over the process of production. This helps country to increase the international trade. The higher the degree of opening economy, the higher the integration process in the world economy. Today, the world economy has problem because the world trade widening faster then the world production. It is especially expressed during the crisis when absence of trade implied decrease of production. Then the negative effects of crisis transpose between countries very quickly (contagion effect). Stimulating the process of production economy can expect higher foreign demand for domestic products and higher export returns. Why is so important for economy to increase both export demand and import demand? Baldly, export demand of the first country represents import of the second one, and *vice versa*, import demand of the first country represents export of the second one. Under such circumstances, both countries wish to increase their own production and ensure freely international trade. If anything broke this link, each economy would be confronted with decrease of economic activity. Lower level of production will decrease trade between countries. Integrated countries will suffer from the same thing – decreased economic activity. Decreased economic activity, as a role, complicates functioning of the government and economy, because lower level of tax revenue can be increased with vigorous economic activity. The similar principle can be copied on the whole world. Now, it is clear, that economic activity of one country can threaten the economy of another. The problem is more complicated if a developed country is confronted with recession (as the USA is today). By contagion effect other countries will be destroyed, especially small and undeveloped countries. Crisis comes in countries through financial sector and overwhelms real sector. Developed countries permanently increase liquidity in real sector trying to revive economic activity in their borders. From the other side, small countries and developing countries are continuously forced to accept strict fiscal adjustments, i.e. the IMF recipes. It is obvious today that undeveloped countries largely bear crisis burden by deflator adjustment as was the case in the past.

The European Commission has seen the importance of real sector position in solving the world economic and financial crisis, especially underlining the importance of support to small and medium-sized enterprises in the European Union region. Namely, small and medium-sized enterprises make the majority of companies in the European Union, employing 80 million people. What is more, they generate every second employment of unemployed labour force, and it is a source of 60% of gross domestic product of the European Union. The European Commission establishes the fact that these enterprises require support since they are facing liquidity problems and limited access to capital i.e. commercial credits on the financial market. Therefore, the European Union (Temporary Community framework for State aid measures to support access to finance in the current financial and economic crisis – 2009/C 83/01) by innovate the Recovery Plan, offers Member States opportunity of granting considerable financial support to small and medium-sized enterprises. Also, the Recovery Plan states that the Member States have to pay particular attention that financial support, offered to bank sector with a view of improving financial situation, has to be effectuated as benefit for the rest of economy and proceeding of normal credit activities. Even today when Greece has serious financial

problems and decrease in economic activity, the USA insists on implementation of the IMF recipes. The European Commission is trying to resolve the problem in Greece without any help and explicitly disclaims the USA tendency. After the European Commission's conference in February, one of the advocates gave an explanation of the USA insistence: ***when California had financial problem, the USA tried to resolve the problem itself rather than call the IMF to give a solution for the current problem***. (Source: statement after The European Commission's appointment to Radio Television of Serbia – Dnevnik 2 RTS, 16.02.2010.). Euro Area prepares financial injection for Greece of EUR 30 billion to exceed actual economic problems. The same approach was given to Hungary for similar reason a few months earlier.

Basically, there are two different approaches to resolving the problem of the world economic-financial crisis. The first, which stresses importance of real sector, and points out solutions in that respect, is based on income mechanism of adjustment which is at the same time supported by expansive monetary and fiscal policy. And second approach of the IMF, which is based on monetary theory of adjusting to external and internal imbalance, based on no matter how "packed", on restrictive monetary and fiscal policy. There is apparent difference within the European Union from the point of centre and suburb. Most developed economies of the European Union (centre) use the first approach in different modalities while less developed economies of the European Union (suburb) use a different approach.

SERBIAN ECONOMY AND EFFECTS OF THE WORLD ECONOMIC AND FINANCIAL CRISIS

Unfortunately, Serbian economy is under the influence of the second approach in solving world economic-financial crisis. The world economic-financial crisis has not spared Serbian economy. The biggest problem is the fall of economic activities which is the cause of big problems in state functioning in terms of budget. Unemployment rate, similar to neighbouring countries, is the result of a great number of dismissals, caused not only by slow-down of business activities but also total work stoppage in many enterprises. Negative effects of reduction in foreign and domestic demand, along with unfavourable structure in forming gross domestic product, brought to light many fallacies of economic strategy for economic growth and development of Serbia (if privatization can be called a strategy) in the past. Unlike previously analyzed countries in the region CEEC-5 many serious and significant changes have taken place in Serbia concerning formation of gross value added. It is particularly important for real sector i.e. industry recording fall in contribution from 28.2% in 1999 to 20.3% in 2008. On the other hand, contribution of trade, transport and telecommunication services records dramatic rise of 14.7% in 1999, to 30.7% in 2008. The data itself, does not say too much if the difference in number of employees for the sectors is not taken into account. The point is that there is higher number of employees in sectors which, relatively speaking, contribute less to rise in gross domestic product, and unfortunately those sectors are considerably affected with negative effects of world economic crisis. The fall of industrial production is about 20% and unfortunately it is not the biggest problem. The biggest problem for real sector is liquidity problem. As the Economic Commission of the EU stated, companies are faced with liquidity problem and harder access to capital i.e. commercial credits on the financial market. There is between 65 and 70 000 enterprises in Serbia with liquidity problem

employing between 150 000 and 200 000 employees. Small and medium-sized enterprises and private enterprises (family firms) represent 90% of the total number of insolvent enterprises. It is wrong to perceive these data only as figures. People who have invested their capital, ideas, employed certain number of people are behind these figures and who finally, just like in the EU, and in accordance with the Lisbon treaty, represent the basis of future economic growth and development of Serbia.

At first glance, Serbian economy had almost the same problems as CEEC-5 countries. But an additional problem in Serbian economy is in the exports structure and partner countries' economic growth. From the aspect of the export structure, there are mostly mentioned resources, labour intensity products and lower technology intensity products. Such export structure, as role, cannot provide base for exports growth and economic growth and development in long-run. Principally, comparative advantage of these products could be easily lost (prices of primary products tendency decrease in long-term, mining and natural resources are scarce, labour intensity sector is under the pressure of competitive countries with low-cost labour, climatic factors are adverse and hardly predictable). From the aspect of the partner countries, aggravation of their economic manner directly reflects on their (external) demand for Serbian products, i.e. their import. Additional problem is the structure of partner countries. Namely, higher size of external trade Serbia materialise with low developed countries and small countries. There are new members of EU (Slovenia, Slovakia, the Czech Republic, Hungary, Poland, Bulgaria and Romania) and CEFTA countries (Croatia, Bosnia and Herzegovina, FYR Macedonia, Montenegro, Albania and Moldavia). Impaired position is confirmed by the results of market share analysis. It means that Serbian competitiveness in international trade is worsened. Already impaired position also makes worse acceptance restrictive the IMF recipes both Serbian economy and partner countries. Amongst main partners in the group of developed countries are Germany and Italy. The main problem is that Serbian products have a small share in their imports. So, their economic recovery cannot guarantee intensive effects on Serbian economy. Therefore, only big increase in their import can positively influence on Serbian economy. From that reason it is hardly expect quick and easy economic recovery in Serbia.

After the first negotiations with the IMF this year it is obvious, together with optimistic statements by domestic politicians, that Serbian economy ought to accept strict fiscal adjustment, especially if Serbian government wants to carry on with financial arrangement. It still insists on adjustment on the expenditure side of budget, i.e. reducing expenditure. Revenue side of budget is postponed because there is no alternative for real sector in economy. No, no one mentions it, and Serbian economy and real sector primarily is in the following situation:
- Aggregate demand decrease (foreign and domestic),
- Huge problems with liquidity,
- Access to financial market is made impossible due to high capital price,
- And despite reduction of reference interest rate it is still among highest in the region,
- Life standard of citizens is in decline as a result of salaries and inflation growth freezing, and
- Unemployment increases.

The Government of the Republic of Serbia has undertaken certain economic measures referring to support to real sector, aimed at mitigating previously mentioned negative

effects. However, we are under impression that applied economic measures do not hit the target, for the most underprivileged people do not get financial means, but those who are solvent. One of the economic measures, aimed as direct support to real sector refers to subsidizing part of interest rate so as to obtain favourable financial means for the economy. Considerable amount of financial means is spent but the number of insolvent companies remains unchanged since banks are not willing to undertake risk and grant financial means to companies with liquidity problem. What is to be done in that case? Further burden increase of economy (by tax increase, higher excise, high spread etc.) and additional burden increase of people (over taxes and freeze salary and pension) will limit already low aggregate demand in economy. Lower level of aggregate demand rather will decrease production and output then increase stocks in economy. Then, economy is confronted with decrease of supply, increase of unemployment and decline of economic activity as the result of decrease of output. The main problem of unexpected effects, as the result of appointed desired measure, is selective and inopportune reaction of policy maker. Israel faced similar problems in 1985 – huge problems in real sector (slowdown of economic activity, high inflation rate), fiscal sector (budget deficit around 17%) and external sector. Israel introduced dramatic heterodox strategy of adjustment which was based on sharp budget deficit reduction (Liviaton, 1988), freezing of prices and salaries for certain period, certain devaluation rate of national currency (though not priority) and world financial support by the USA in the amount of 1.5 billion dollars (Don, 1993). The results were very positive for Israeli economy because measures were implemented simultaneously (Leiderman, and Liviaton, 2003).

All intense and purpose expansive measures of fiscal policy introduce better solution than restrictive measures of fiscal policy. It means that the Government should promote stimulations in real sector to initiate economic activity and aggregate demand. It is also important to avoid tax burden on disposable income as part of aggregate demand. But, many politicians, as well as economic analysts, mention that it is possible to resolve problem of budget deficit solely using restrictive measure of fiscal policy. As they emphasise, reducing budget deficit can lead increasing investments and thereby increasing economic activity. Wishful thinking! Namely, tax increase or decrease in budget expenditure relate on increase in budget surplus (or decrease in budget deficit) which can lead decline in economic activity and national income. Lower level of national income means lower disposable income and decrease in consumption and saving. At first, low income is corresponding with lower decrease in consumption so that decrease in saving can be higher or lower from increase in budget surplus (or decrease in budget deficit). In Serbian economy situation is worse because of permanent increase tax burden and excises and hidden inflation. As a result we face decrease in disposable income and decrease in saving, which is higher than increase in budget surplus (or decrease in budget deficit). Under these circumstances, investments decrease and economy slow down. This short mechanism clearly shows that expansive measures of fiscal policy rather than restrictive ones stimulate investments. The effects are better in the short run, so it can represent useful instrument in making policy in Serbia.

So, the expansive measures of economic policy represent the key argument taken to mitigate negative effects of the global economic crisis in Serbia. From one side, monetary expansion can lead increasing liquidity, expanding supply of credits and decreasing reference interest rate. Further reduction of reference interest rate would enable gradual cost reduction of capital gain and easier access to real sector with needed finances. It would cer-

tainly positively contribute to invigorating economic activities, which along with unchanged tax policy might contribute to tax revenues increase. On goods market lower interest rate facilitate increase in investments and creating better business environmental. From the other side, fiscal expansion can lead increasing production activity through stimulating investments and competition (Miljković and Ristanović, 2009).

If policy makers disregard of all this, Serbian economy keeps on the following problems. Firstly, inadequate supply on domestic market. Secondly, tax evasion and grey economy increase. Thirdly, additional unemployment increase. These can lead to further problems with expenditure and revenue size of budget in terms of increase budget deficit with following phenomena – which is the cause of big problems in state functioning in terms of budget and prevailing social discontent.

It is important, as mentioned above, to provide necessary financial resources in order to avoid negative overflow effect in economy. This will help especially enterprises who work with large number of suppliers in production process. The state, which is expected, to prepare the plan preparation for economic and financial recovery of enterprises, on a guarantee that enterprises will not reduce the number of employees, that all liabilities will be duly settled to suppliers (so as not to cause chain effect of transferring negative effects to other producers in reproduction chain – domino effect). In order to provide compliance with given guarantees, the state has to secure itself by participating in capital structure of enterprises depending on the amount granted, which are to be decreased by returning debt to the state. Undoubtedly, such move would partly contribute to redirecting limited domestic demand to domestic supply, and there would be positive effects on budget revenues from customs and VAT on imported products.

CONCLUSION

The results of the analysis of economic performances in CEEC-5 region show that negative effects of world economic and financial crisis are stronger in countries which depend on foreign capital, accept "suggested" restrictive adjustment measures and depend on foreign demand. Obviously, the real sector of economy is a driver of economic growth and development in the long term. Simultaneously, it can mitigate crisis effects. Previous experiences cannot guarantee success of the IMF solutions taken to mitigate effects of the global economic crisis. The main reason for such conclusion refers to universal characteristic of all suggested solutions, i.e. on the IMF approach. As such, these solutions consider identical implementation and approximately expected results, which is hard to believe in completely different structural characteristics of countries.

Serbia is in the similar position. No one mentions the real sector today, neither the IMF nor the Serbian Government. It is obvious that Serbian economy and its citizens could expect (painful) fiscal adjustments. Almost all statements hold from Government emphasis their approach on the expenditure side of budget and recommend strict reduction in budget expenditure over saving in public sector and administration. Revenue side of budget put aside, and nobody knows if the state will continue with slowing down economic activity, extinguish economy and increasing poverty or if someone will take adequate measure for overcoming economic crisis in Serbia.

Strict adjustments cannot guarantee positive effects under the crisis conditions. Consequences of such measure will obtain as far as exist curtain on real sector of economy. It

means that only with expansive measures of economic policy, which will stimulate economic activity, we can expect world economy recovery.

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MAKROEKONOMSKE DETERMINANTE RASTA I SVETSKA EKONOMSKO-FINANSIJSKA KRIZA

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Mere ekonomske politike u uslovima svetske ekonomsko-finansijske krize ne smeju biti univerzalnog karaktera. Specifičnosti kao i razlike koje postoje između privrednih sistema trebalo bi da rezultiraju i posebnim rešenjima prilikom kreiranja ekonomske politike. U radu su prvo analizirane makroekonomske veličine koje utiču na privredni rast i razvoj. Potom su analizirane specifičnosti zemalja regiona CEEC-5 u periodu 1993-2007. godina. Ekonometrijskom analizom, uz pomoć dinamičkog panel modela – GMM, ocenjen je uticaj realnih i monetarnih determinanti na privredni rast i razvoj celokupnog regiona, dok je deskriptivna statisika pružila mogućnost sagledavanja specifičnosti zemalja unutar regiona pojedinačno. Različite specifičnosti zemalja i različiti uticaji makroekonomskih veličina na rast ovih privreda imale su za rezultat i različite posledice efekata svetske ekonomsko-finansijske krize. Na kraju je analiza primenjenih mera ekonomske politike pomenute grupe zemalja pružila dobru osnovu za kreiranje ekonomske politike u privredi Srbije. U fokusu analize nalazi se realni sektor privrede i reakcije na svetsku ekonomsku krizu poslednjih godina.

Ključne reči: *privredni rast i razvoj, realni sektor privrede, svetska ekonomsko-finansijska kriza, CEEC-5, privreda Srbije*