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THE EMU SYSTEMIC CRISES - CAUSES AND SOME POSSIBLE REMEDIES TOWARD SUSTAINABLE CURRENCY AREA

Abstract

With the latest enlargements, the European Monetary Union has become a composition of economies on different levels of economic development. Based on the theoretical setting of the theories of the Optimal Currency Area as well as the convergence theory, the paper aims at exploring the causes of the EMU debt crises from the perspective of the Balassa - Samuelson effect, a phenomenon that has been widely established in many converging and transition economies.

The restrictive nominal criteria for enlargement imposed at Maastricht are in contradiction with the growth prospects and the BS effect that positively affects inflation and real exchange appreciation. Deteriorated competitiveness in less developed countries in the Monetary Union stimulates the imports from the developed ones affecting the division of the EMU into net debtors and net creditors that is unsustainable in the current framework of unified monetary policy and decentralised fiscal policies. Austerity measures imposed towards the debtor countries, in conditions of different growth models of the core and periphery EMU countries claim to be harmful for growth, employment and convergence. Resulting rising long-term interest rates switch investments from private to public sector, further harming the investment in the private sector and growth and herewith undermining the perspective optimality of the currency area and its sustainability.

The measures that will be undertaken for healing the crises should be in consistence with the long term convergence of the less developed countries in EMU towards meeting the optimal currency criteria that would provide EMU sustainability. Different remedies and solutions for regaining competitiveness of the peripheral EMU countries and overcoming the crises have been suggested. Most of the proposed solutions are found in the fiscal sphere such as the fiscal devaluation for improving competitiveness as well as fiscal integration for providing stabilization mechanism from asymmetric shocks. However, if fiscal integration eventually leads to tax harmonization it would undermine the benefits of the tax competitiveness on capital mobility and herewith convergence in the EMU. In addition, fiscal devaluation could be politically unsustainable in conditions of nominal wage rigidity. Profound structural measures in the labor markets should also be made, that would become effective only in longer time period. Therefore, the remedies of the crises should be found in the less restrictive

monetary policy, consistent with the process of convergence and as a solution of real wage decrease. A less restrictive monetary policy could hamper price competitiveness of the core EMU economies but would meet the needs of the converging EMU economies. These changes in the monetary policy accompanied by the structural reforms could add to the process of convergence in the less developed EMU economies, close the interest rate gap and add to the optimality herewith sustainability of the currency area.

Key words: *EMU, OCA, systemic crises, convergence, Balassa - Samuelson effect, sustainability*

JEL classification: F5, E3, E4, E5, E6

1. Introduction

For several years, EMU is facing the most severe crises since the launch of the euro and the creation of the monetary union. The severity of the crises jeopardises not only the existence of the monetary union, but the entire EU project that could impose serious consequences for the European continent.

There have been several manifestations and characterizations of the crises. Namely, the crises exploded as a fiscal one as the fiscal deficit in several countries, starting with Greece, has reached unsustainable levels leading to bailouts of the economy. Soon after the fiscal collapse of the economies, bank crises emerged as a result that the largest share of the fiscal debt was part of the European and wider bank's balance sheets. The third crises that Europe currently faces are the competitiveness crises of peripheral countries, imposing a division of the EMU on deficit and surplus countries according to their current account balance. At last, the current crisis was qualified a hidden balance of payments crises due to the misalignment of internal real exchange rate (Deutche Bank research October 26, 2011). The appreciation of the exchange rates in a system of fixed exchange rates, as the euro system is, leas to higher imports than exports and therefore to a current account deficit. In addition, investors tend to sell the more expensive domestic capital assets for cheaper foreign capital assets that lead to outflow of capital and to negative capital account and balance of payments. The fact that government deficit/GDP ratios were sound for the economies in crises before its emergence[1] states that debt was not direct cause of the crises, but rather a consequence. We believe that that the crisis is structural and it could be overcome only trough deep structural changes in the governance of EMU.

2. The different levels of development and different growth models

The crucial reason behind this multiple crises is the lower level of development and the lack of growth in the less developed parts of Europe in a constellation of different levels of development and diverse growth models each one complementing with each other. While the core economies of the monetary union were growing steadily as a result of massive FDI inflows that strengthened their productive and export structure, the peripheral countries attracted FDI mainly in the real estate sector and other non productive activities. While the growth of the core EMU countries was mainly supply driven, the optimism that the creation of euro made in the peripheral countries led to a rise in the domestic demand and accordingly some rise in GDP. The low level of growth was an initiating factor for intense private and public debt. Behind this vicious circle there was the lack of growth and demand due to liquidity problems mainly as a result of the restrictive policy that has been imposed by the European Central Bank (ECB) since creation of the euro that has been hampering growth of the new member states.

That raised again the debate on the optimality of the currency area and the possible prematurity of the launch of the single currency, a decision made by the European

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[1] Except for Greece public finance for which a data fraud has been revealed

Commission supported by the endogenous theory of optimal currency areas. According to this theory, the intensified cooperation between the economies in the monetary union would lead to equalization of the economic development and to optimality of the currency area.

The prematurity of the creation of the monetary union and it's current composition of economies that are on a different level of economic development are relevant in the current political framework of unified monetary policy and decentralized fiscal policies accompanied by the strict Maastricht nominal criteria and the Stability and Growth Pact (SGP), as a wish of optimal currency area, according to which the economies are qualified for joining EMU. However, the success of achievement the nominal criteria has not been reliable factor for achieving real economic convergence. On the other hand, the small European budget that comprises only 1% of the EU member states budget is relevant only for the allocation and redistributive function, but not the stabilization function due to the small amount and due to the fact that it is accounting, but not a functional budget.

In such constellation, the highest cost from joining a monetary union, i.e. the asymmetry of business cycles has been bordering the authorities - how to help the indebted economies that slipped into deep recessions by preserving the competitiveness of the core countries and lastly to preserve the euro currency. The estimated costs from disintegration of the indebted economies from the monetary union were estimated at 40-50% from GDP in the first year, followed by 15% from GDP in each consecutive year and 20-25% cost of GDP for the core European countries (The Economist, 2011). However, disintegration would also unable the indebted economies pay their debts by their weak currencies and would ruin the whole concept of the EU project. Therefore, profound measures should be undertaken to preserve EMU, but that would also ensure its' sustainability.

3. Is EMU an optimal currency area?

Optimality of the currency area is a condition in which the most important economic variables such as the exchange rates, interest rates, prices and government finance have converged creating preconditions for running a credible unified monetary policy. An optimal currency area would assure its' sustainability. According to the theory, the preconditions for integrating economies in a manner that they form an optimal currency area, is the free movement of trade and factors of production, openness of the economies and diversification of the productive and export structures as a backbone against asymmetric shocks, convergence in the economic policies leading to equalization of the interest rates, integrated financial markets and a certain degree of fiscal integration. The issue of the optimality of currency area is about equalization of the levels of development and economic structures in order to create a functional monetary union.

Krugman (1993) stated the monetary union would lead to divergence in the income levels of it's economies due to increased specialization supported by the monetary integration. According to Frankel and Rose (1988), the monetary union is endogenous meaning that the increased trade stemming from the monetary union was supposed to

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lead to increased levels of integration and equalization of the income levels providing background on enlargement of the union with countries whose level of development was not as the one of the core EU countries. The equalization of growth and income levels as well as the structure of the economies is especially important for the synchronization of the business cycles of the monetary union preventing from adverse economic shocks, as one of the most important aspects of a functional monetary union, i.e. "optimal currency area" . However, most studies do not confirm the optimality of the currency area, as stated by Mundell (1961), McKinnon (1963), and Kennen (1969). In fact, since the introduction of the euro in 1999 until the crises, there has been convergence of the interest rates of long-term bonds with maturity period of 10 years, decreasing until the crises emerged, as well as convergence in the purchasing power parities. After the introduction of the euro, we have perceived convergence of the inflation rates and prices in the EMU17 measured as a standard deviation of the PPP's for all EMU economies. Long-term government bonds with a maturity period of 10 years have also converged until the beginning of the crises. The economies that deviate the most from the average are those that were first affected by the crises. At the same time, those are the economies whose GDP per capita has been below EU average when they joined the monetary union. On the other hand, there was also convergence in the unemployment rate, however towards increased rates of unemployment. This has long provoked the question weather Europe was able to deliver growth under the current framework. Since the emergence of the crises in 1999, there has been divergence in all relevant parameters of the OCA, stressing the polarization of the union on differently developed economies and regions and imposing severe debt and deficit burdens on the peripheral countries questioning the further existence of the EMU.

4.Processes of convergence before and after introduction of the euro of the peripheral and converging EMU economies

Since the root problem of the current crises is the different level of economic development accompanied by different growth models, processes of growth and convergence of the weak EMU economies are analysed.

The hypothesis of income convergence has its' background in the Neoclassical (Solow-Swan) growth model. There are two types of convergence in the theory. The conditional or β convergence stems from the hypothesis that the less developed economies tend to grow faster in terms of income per capita or product per capita. It is calculated trough a regression analysis estimating the growth of per capita income of a certain period of time on the initial level of per capita income. The other type of convergence is the σ convergence that is measured by the standard deviation denoting a process of convergence when the standard deviation the production levels between the developing and the benchmark economy decreases, and vice versa. Sometimes, it is measured using the coefficient of variation as a measure between the standard deviation and the mean of the series.

Several studies have tested convergence of EU economies before and after creation of EMU (Barro and Sala -i - Martin, 2004, Ron Martin 2000). De Grauwe and Schnabl

(2004) analysed the conflict between monetary and real convergence with respect to EMU accession.

We have analysed the process of convergence of the less developed EMU economies before and after introduction of the nominal Maastricht criteria. We have measured the convergence of Greece, Spain, Ireland and Portugal towards the average of EMU with the coefficient of variation that has been used to measure convergence in several studies. The existence of conditional convergence is a prerequisite for achieving absolute convergence. At first, we have analysed data for the period 1970-1992 that is the period before introduction of the strict Maastricht criteria, and after that the period after their introduction (1993-2010). The joint coefficient of variation states that the discrepancies among the observed economies and the core EMU countries have increased after imposing the obligation of the nominal criteria.

We have perceived the slower growth of the converging economies after introduction of the euro in the conflict between nominal and real convergence, i.e. the Balassa-Samuelson effect (BS-effect) that has been widely established in the transition and converging economies. Paul De Grauwe and Frauke Skudelny (2000) used data set covering the period 1971-1995 and found that the BS effect was responsible to 8% increase in inflation differential in EMU. We estimated the BS-effect using Johansen cointegration analyses for Greece, Ireland, Portugal and Spain in the period after introduction of the euro (1999-2010). The cointegration between differences in productivity of the trade and non-trade sectors and the relative price of the nontrade goods; cointegration between the difference in productivity to Germany and the difference in the relative prices as well as the cointegration between the difference in the relative prices and the real exchange rate have been analysed. The obstacle of our analyses was the short period of time using annual OECD data (for some variables only annual data were available), but having these restrictions in mind, in each of the estimation we have found at least one cointegrating vector of the respectable variables, when the peer country was Germany.

The intensified integration has led to increased productivity in converging economies trough the channel of the trade sector. The increased productivity lead to increase in wages in the trade, as well as the non trade sector, so that the economies in debt crises exhibit higher productivity growth than core EU countries but lower than the overall wage growth. The BS effect had a deverging effect on the bilateral exchange rates that compose the euro currency. While the exchange rates of Greece, Spain, Portugal, Ireland and Slovenia have been steadily appreciating after introduction of the euro in 1999, the exchange rates of the core EMU countries such as Germany and Austria have been depreciating. The difference in inflation and exchange rate misalignment has led to loss of competitiveness of the less developed economies and restrictions to growth. We have made a pooled estimation of the relationship between the current account and exchange rate. Data on REER has been used, deflated with consumer price indices, so that the rise in the index means appreciation of the exchange rate. The regression analysis for the relationship between current account balances and exchange rates for Austria, France, Germany, Greece, Italy, Netherlands, Portugal and Slovenia is negative, meaning that the higher REER for the economies leads decrease in the current account. The t and F statistics are significant, coefficient of determination is

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0,3. Results should be taken with caution since there is a positive autocorrelation in the model.

Table 1: EViews Pooled estimation of the relationship between current account and exchange rate

Dependent Variable: CA?
Method: Pooled Least Squares
Date: 05/22/13   Time: 22:12
Sample: 2000 2010
Included observations: 11
Cross-sections included: 8
Total pool (balanced) observations: 88

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	941420.3	152376.0	6.178269	0.0000
ER?	-9235.184	1510.126	-6.115506	0.0000
R-squared	0.303076	Mean dependent var		10133.84
Adjusted R-squared	0.294972	S.D. dependent var		59541.37
S.E. of regression	49994.46	Akaike info criterion		24.49968
Sum squared resid	2.15E+11	Schwarz criterion		24.55598
Log likelihood	-1075.986	Hannan-Quinn criter.		24.52236
F-statistic	37.39941	Durbin-Watson stat		0.141180
Prob(F-statistic)	0.000000			

Source: Own calculations based on EUROSTAT data and World Bank Data, available at:
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes and http://data.worldbank.org/

EMU has obviously been split on two different growth strategies due to the different restructuring strategies in the eve of globalization. The development differentials occur as a result of the process of real divergence due to the fact that the centre accumulates capital, whereas the peripheral countries accumulate debt that in a constellation of loss of competitiveness is a factor of instable growth.

5. Possible solutions?

Austerity measures imposed towards the debtor countries, in conditions of different growth models of the core and periphery EMU countries lead to forced devaluation of the unilateral exchange rates of the debtor countries. However they are costly measures that had led to decline in the production and increased unemployment rates (25% in Spain in 2012, 21% in Greece in 2011, and 10% in Slovenia in 2012). Resulting rising long-term interest rates switch investments from private to public sector, further harming the investment in the private sector and growth and herewith undermining the perspective optimality of the currency area and its sustainability.

Table 2: Maastricht criterion interest rates (annual data)

GEO/TIME	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Euro area	4,14	4,12	3,42	3,84	4,32	4,31	3,82	3,61	4,41	4,01
Belgium	4,18	4,15	3,43	3,81	4,33	4,42	3,90	3,46	4,23	3,00
Denmark	4,31	4,30	3,40	3,81	4,29	4,28	3,59	2,93	2,73	1,40
Germany (including former GDR from 1991)	4,07	4,04	3,35	3,76	4,22	3,98	3,22	2,74	2,61	1,50
Ireland	**4,13**	**4,08**	**3,33**	**3,76**	**4,31**	**4,53**	**5,23**	**5,74**	**9,60**	**6,17**
Greece	**4,27**	**4,26**	**3,59**	**4,07**	**4,50**	**4,80**	**5,17**	**9,09**	**15,75**	**22,50**
Spain	**4,12**	**4,10**	**3,39**	**3,78**	**4,31**	**4,37**	**3,98**	**4,25**	**5,44**	**5,85**
France	4,13	4,10	3,41	3,80	4,30	4,23	3,65	3,12	3,32	2,54
Italy	4,25	4,26	3,56	4,05	4,49	4,68	4,31	4,04	5,42	5,49
Cyprus	4,74	5,80	5,16	4,13	4,48	4,60	4,60	4,60	5,79	7,00
Luxembourg	3,32	2,84	2,41	3,30	4,46	4,61	4,23	3,17	2,92	1,82
Malta	5,04	4,69	4,56	4,32	4,72	4,81	4,54	4,19	4,49	4,13
Netherlands	4,12	4,10	3,37	3,78	4,29	4,23	3,69	2,99	2,99	1,93
Austria	4,14	4,13	3,39	3,80	4,30	4,36	3,94	3,23	3,32	2,37
Portugal	**4,18**	**4,14**	**3,44**	**3,91**	**4,42**	**4,52**	**4,21**	**5,40**	**10,24**	**10,55**
Slovenia	6,40	4,68	3,81	3,85	4,53	4,61	4,38	3,83	4,97	5,81
Slovakia	4,99	5,03	3,52	4,41	4,49	4,72	4,71	3,87	4,45	4,55

Source: EUROSTAT, available at:
http://epp.eurostat.ec.europa.eu/portal/page/portal/interest_rates/data/database

Two of the main problems that arose due to the different development models of the economies within EMU are the competitiveness of the peripheral countries and the asymmetry of shocks. Due to the fixed bilateral exchange rates that form the euro currency, individual currency devaluation is impossible solution for restoring competitiveness. One possible solution found in the fiscal sphere that has same results is the so called "fiscal devaluation" and dates back to the gold standard when currencies could not be devalued. Fiscal devaluation refers to increase in the consumer taxes, i.e. the VAT and with simultaneous decrease in the social contributions that has a final effect of increased prices of foreign goods while decrease in the domestic prices as a result of the payroll taxes. Such a policy is revenue neutral (Farhi, Gopinath and Itskhoki, 2012) and is a way of unilateral restoring of competitiveness. However, few problems may arise. First, the policy of fiscal evaluation may be applied by the other member states, so that the result would be neutral. On the other hand, since Balassa-Samuelson effect is present, increased import prices may have an impact on the trade sector prices so that the effects from fiscal devaluation can be only relative. The same effect would come into force if the domestic production is relatively import dependable if the raw materials are not exempted from VAT. However, the biggest obstacle are the social effects that this measure can imply when increasing consumer prices and reducing social contributions in the framework of nominal wage rigidity.

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In order to cope with the asymmetry of shocks, as a result of the different level of economic development and different development strategies, a fiscal integration would be a suitable solution. However, in this framework, economies would not have any solution except for profound structural measures to restore competitiveness. Also, subsequent tax equalization, as a result of an introduction of a fiscal union could also have a negative effect on FDI distribution in the less developed but more tax competitive regions and economies. But, fiscal integration is a project to be implemented for a longer period of time. In the meantime, European Commission has constituted a European Stability Mechanism that would act as a lender of last resort in periods of major misbalances as the current one is. This body would issue bonds and other instruments on the financial market in order to raise capital and provide loans to euro area member states intervene in the debt primary and secondary market, act precautionary or provide loans to governments for recapitalisation of financial institutions (European Commission, 2012).

However, mechanisms of lenders of last resort can not heal the roots of distortions, i.e. lack of competitiveness of the peripheral countries due to the higher real wages and appreciated exchange rate than productivity of the economies. In this case, monetary policy could play a role in restoring competitiveness. In practice, monetary policy is implemented by the Taylor rule according which the short-term interest rate is calculated as a sum of the current and targeted interest rate i.e. 2% of HCPI and the difference between the real and potential GDP. In a constellation of a different level of economic development, there is difference in the gaps between the real and potential GDP in the core and peripheral EMU economies (IMF WEO, 2012).

The process of integration should in principal increase the growth potential of the converging economies trough the trade and capital movement effect. The unified monetary policy is unable to accomplish multiple goals itself. However, a policy is needed that would lead to convergence of the economies towards similar levels of development and structures in order to obtain functional and optimal currency area. Therefore, a higher nominal monetary target could elevate the problem and lead to adjustment of prices between creditor and debtor countries and accordingly to exchange rate adjustment (Deutche Bank research October 26, 2011). Herewith, it would, on one hand hamper competitiveness and the export led model of the more advanced creditor economies due to increase in the prices and on the other hand lead to slower price increase in the recession and to real wage cuts in the debtor economies, as well as bilateral exchange rate depreciation. The final effect would be a shift of consumption from import to domestic goods and services and enables restore of domestic led growth and credit capability of the debtor countries.

The problem with this strategy could also be found in the Balassa-Samuelson effect, especially in the conditions of major import dependant production that could lead to increased rise in the debtor economies' prices and to exchange rate appreciation.

6. Conclusion

The division of EMU on net debtor and net creditor economies is harmful for the existence of the single currency. We perceived the different level of economic development and the different growth strategies as a major root to this problem that fuelled by the Balassa-Samuelson effect leads to exchange rate misalignment and accordingly to asset redistribution between the core and peripheral economies as a disequilibrium factor.

Fiscal devaluation can be a strategy for restoring competitiveness under the condition it is only applied by the peripheral countries but not the advanced EMU economies. However, BS effect could relativize the effects of this policy.

A higher nominal monetary target could lead to adjustment of prices between creditor and debtor countries and accordingly to exchange rate adjustment. A more relaxed monetary policy would, on one hand hamper competitiveness and the export led model of the more advanced creditor countries and on the other hand lead to slower price increase in the recession and to real wage cuts in the debtor economies. Herewith, the import consumption will be switched from import to domestic consumption in the debtor countries.

This monetary policy can be effective in the short period of time. In a longer run, structural changers should be undertaken on the labour market towards increased flexibility and labour mobility. In addition, measures for attracting a higher level of productive Greenfield FDI in the debtor countries would lead to exchange rate depreciation due to the effect of increased production.

The long run sustainability of EMU will be provided only with policies that encounter the balanced economic development and the convergence of the less developed economies towards the core of EMU and more optimal currency area.

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