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## OPTIMUM CURRENCY AREA CRITERIA IN THE GREECE

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### Abstract

Creation of a monetary union in any region, regardless of the structure and level of development among countries, carries along certain costs and benefits. This paper explains Mundell's concept of Optimum Currency Area and criteria that are needed to achieve it. Viewed through the prism of these criteria the EMU is currently far from achieving the OCA confirming the current crisis in Greece and other PIIGS countries. The example of Greece and shortcomings that contributed to its current crisis represents the biggest cost and a break-even point for the future of the monetary union. However, it is encouraging that Greece is not alone in its problems, since various funds for help have been established in a relatively short period of time. The reason for this is certainly a huge cost if any country should leave the union and the spillover effect that it would cause. Certainly serious transformations can be expected and the result should be a stronger union with better control from supra-national level.

**Keywords:** the European Union, the European Monetary Union, Common Currency, the Maastricht Treaty, Optimum Currency Area, European Financial Stability Mechanism

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### 1. Introduction

In the past, almost every country in the EU has had its own currency (sometimes as a symbol of sovereignty). As the process of integration went deeper and deeper, majority of them gave up on their own currencies and accepted a new one - common currency. The new regime established on January 4<sup>th</sup>, 1999 was completely in the line with the "Impossible Trinity" theory.

The "Impossible Trinity" theory explains that it is impossible to have monetary sovereignty, capital mobility and fixed exchange rate at the same time, as these are mutually exclusive goals. According to the theory, all eleven countries, which initially joined the Monetary Union, have sacrificed their monetary sovereignty in order to get exchange rate stability and capital mobility. They actually just moved from one to another point in Mundell's triangle of impossibility. Being aware of the trade off, member states (MS) gave up their own currencies in exchange for the benefits that the free movement of capital and stable exchange rate bring. Prior to joining the Monetary Union, all member states expected positive effects to exceed negative in the long run (Mundell, 1961).

The easiest way for understanding benefits and costs of the common currency is to observe them from the microeconomic point of view. There are a few important benefits, but for citizens the most visible one is transparency and comparability of prices (De Grauwe, 2003).

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Moreover, reduction in transaction costs and stabilization of exchange rate have caused increases in trade and competition between companies in MS. These, like many others, which would be explained later in the text, represent benefits which countries in Euro Zone have gained after joining the currency union (Fink and Salvatore, 1999).

On the other hand, many preconditions that existed in early stages were somewhat neglected. Level of development among MS in Europe was and still is heterogeneous, considering GDP per capita, purchasing power, poverty, income distribution etc... In that kind of economic environment functioning of monetary union can be really problematic. Primarily because monetary policy is centralized and measures can be unitary defined for complete currency union. Although a number of the OCA criteria were not satisfied, the EU representatives decided to form monetary union neglecting many facts which clearly indicated potential problems (Grauwe and Mongelli, 2005).

Absence of the central lender of last resort function for European Monetary Union (EMU) and the lack of central authority which supervises the financial system were crucial shortcomings in the functioning of EMU. Moreover, lack of fiscal policy coordination and unduly strict criteria for domestic debt and deficit imply that EMU would be less resistant to asymmetric shocks. Member States probably expected that many of these problems would disappear after the introduction of Euro. In fact, many of them thought that many of them would disappear in early stages immediately after introduction of Euro (Mongelli, 2002).

Unfortunately, something completely different happened and caused huge number of problems in the EMU. Uncontrolled spending in some countries, particularly Greece, led to severe debt crisis that might threaten the existence of EMU. This is definitely a turning point for the future of EMU and it should be used to make a strong union which will be under the strict control from supra-national level.

## **2. Greece as a Part of (Non) Optimum Currency Area**

Before entering the EMU, Greece was continuously recording bad results considering convergence criteria. That was the main reason for postponing its accession for three years more. However, the question is how did European representatives miss the fact that Greece has improved its overall condition of economy in such a short time and how did this country succeed to meet most of the convergence criteria.

Analyzing OCA criteria in Greece will show that most of them were not satisfied. Nevertheless, taking into account that, except for Greece, some of the initial members of the union did not make optimum currency either, this question can be treated as irrelevant. Moreover, we saw that it is possible to have the monetary union without the optimum currency area, but with higher costs. However, it is necessary to see whether Greece can satisfy some of OCA criteria. Analysis starts with flexibility of Greek wages. This criterion is very important since wage flexibility represents the most important automatic stabilizer in case of asymmetric shocks.

We can say that every member state would help Greece and support it, as long as there are substantial political and economic benefits. If Greece would be allowed or forced to leave the EMU, negative effect would spread over the EMU. The debt crisis in one member state can result in a much larger crisis in other countries, making them weak and causing similar problems with budget deficits (as in the case of Spain, Ireland, Italy and Portugal). On the other hand, if Greece voluntarily leaves the EMU and establishes its national currency, it will face significant economic costs. The first and the most important would be higher debt payments due to the devaluation of the national currency. Secondly, the international borrowing market will be closed for a number of years. Thirdly, Greece will be forced to balance their own budget and it will also be excluded from international markets and would not be able to borrow

funds for financing budget and trade deficits. Current situation and official statements indicate that there is an action plan for Greece to leave the EMU and return to drachma. This process could imply the other PIIGS countries to do the same. This is certainly one step further towards an undesirable scenario that is so far presented as impossible (Baldwin and Wyplosz, 2010).

## 2.1. Wage Flexibility in the Greece

Movement of wages is a very complicated process because it is influenced by many factors. The most important are productivity, inflation rate, bargaining power of employees, tax rates, social security measures and economic growth. However, sometimes wage trend is very difficult to define and also which of those factors have the biggest influence on cost of labor. Moreover, reasons for upward movement of labor costs depend on the country and above mentioned factors. In the absence of coordinated fiscal policy wage flexibility was the most important automatic stabilizer. Still it is difficult to have labor cost coordination in the heterogeneous area like EMU (Prokopijevic, 2007).

This criterion is correlated with neoclassical theory that every economy is self-balanced but in the real world Keynesian theory that prices and wages are in short run and long run downward sticky is more applicable. On the figure 1 are represented costs of labor in Greece and Germany. From this example we can see that wage costs differentiated among MS and correlation with changes in productivity is very low.



Figure 1. Costs of labor in Greece and Germany from 1975 to 2010.

Source: Peeters and Den Reijer (2011)

Although the cost of labor does follow changes in economic environment, correlation between unemployment and growth rate is stronger. Hence, in the period of asymmetric shocks increase in unemployment is a more likely outcome than decrease in the cost of labor.

Unlike above explained OCA theory, Dellas and Tavlas (2010) assert that countries with nominal wage rigidities benefit more if they form monetary union with similar countries. They concluded, if for example England, which has flexible labor costs, forms monetary union with Germany and France, which both have rigid labor costs, both these countries would be better off and for England it would be better to stay out (Dellas and Tavlas, 2005).

## 2.2. Price Stability

From 1995 inflation decreased and Greece was close to level which can be considered to be consistent with price stability. That was the result of expedient policy of Greek government.

From 1998, they started negotiation with commercial and industrial companies to reduce prices of important goods and services. Main goal of this negotiation was to reduce retail prices of goods and services which are part of CPI basket. Direct effect of this policy was the reduction in inflation of about 0.2 percent in the next few years.

Another policy was related to indirect taxes which were gradually lowered from 1997-2000, but only in the short run. However, effect of this reduction was extended through lowering of inflation expectation and wage catch up clauses.

In this period, both monetary and fiscal policies were very tight because price stability and low inflation were the main goals. From the graph 2 we can see that during the nineties inflation was reduced sharply and prices were stable in the period after joining the EMU. However, inflation rate was still too high comparing to other MS so OCA criterion of similar inflation rate was not satisfied.



**Figure 2. Consumer price index for Greece for the period 1995-2010**

Source: Consumer Price Index for Greece, <http://www.tradingeconomics.com/greece/consumer-price-index-cpi>

### 2.3. Financial Integration

Levine and Zervos (1996) proved that level of financial integration is positively and significantly correlated with GDP growth rate, productivity and capital accumulation (Vasila, 2003). Mainly because efficient financial market provides industrial sector with cheaper capital and do that in shorter period. This is probably the main reason why EMU representatives insisted to connect and increase cooperation in financial sector among member states. There are few factors which explain why financial integration would bring benefits:

- Possibility for better diversification (geographically)
- Improvement in flow of information which brings better corporate control and more efficient organizational structure
- Wider range of investment opportunities (Vasila, 2003)

On the Athens stock market a lot of improvements have been made after the introduction of common currency (introduction of Stock Market for derivatives, improvements in electronic market, better transparency, stronger control and etc...). However, many parameters prove that level of development in Greece is still very low.

Market liquidity also known as "marketability" is the ability of an asset to be sold without causing huge movement in price. Comparing to other states in the EMU, marketability in Greece

is far below average. For example, London Stock Exchange has 0.83%, Spanish 0.72%, Stockholm 0.68% but Athens Stock Exchange market liquidity is 0.18% (Vasila, 2003).

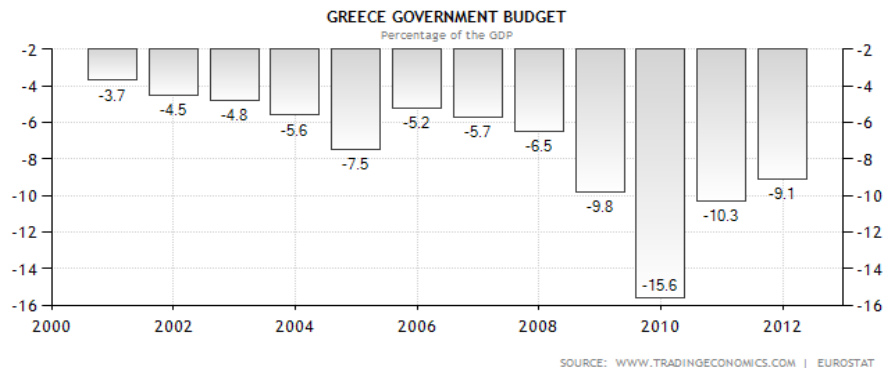
## 2.4. Long-term Interest Rates

During the nineties, as Greece was preparing to adopt the Euro as its national currency, borrowing costs dropped significantly. Between 1993 and 1999, interest rates on 10-year bonds fell down by 18% (from 24.5% to 6.5%). In that period Greek long-term interest rates tended to converge towards rates in the other EU countries. Main factor is that investors were doubtless about consolidation of policies of the member states and their confidence was increased by establishment of already mentioned convergence criteria. Member states were obliged to follow the rules of the Stability and Growth Pact that was established to limit the growth of government deficits and public debt. Moreover, the system of punishment was introduced (fine for not following the rules mounted up to 0.5% of GDP). All these factors created new confidence of investors, not only in the case of Greece, but also in other countries, which were characterized as ones with high inflation and low growth during the period before entering the EU. (Nelson et al. 2011).

## 2.5. Inefficient Public Finance and Wasteful Spending

According to the Greek state officials, the state taxed only one third of the officially declared income before the crisis. There were also a huge number of activities that fall under the tax jurisdiction of Greece but tax revenues from these were never collected because of the inefficiency of government. Most analysts look at tax evasion and deeply rooted political clienteles in Greek society as a symbol of distrust in state institutions. Measurements made by "Transparency International" in 2010, brought Greece into third place on the list of most corrupted countries, right behind Bulgaria and Romania.

Despite difficult situation of its economy, Greece managed to meet the convergence criteria and to join the Monetary Union. Still, representatives of the ECB doubted the correctness of the information provided and therefore two independent commissions were formed, whose aim was to examine the actual state of the economy. Commission reports showed that the data was completely different from those presented by the Greek government. The budget deficit had been beautified to the extent that it only demonstrated the critical value of above 3% of GDP for the year 1997. After that it recorded a steady decline. The actual picture was completely different which can be seen from the figure number 3.

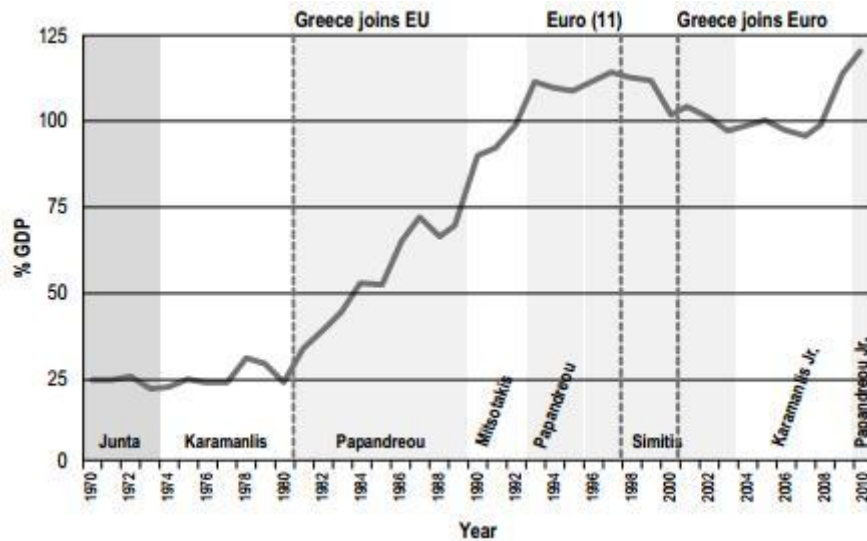


**Figure 3. Greece government budget**

Source: Greece government budget trends, <http://www.tradingeconomics.com/greece/government-budget>

One interesting fact is that even after the fraud was revealed, EU representatives did not determine any penalty for Greek officials (although the Treaty of Maastricht stipulates the punishment of undisciplined members), but only ordered to cut its expenditure and to set budget deficit to proper level. However, rating agencies and investors were not so generous. All of four major rating agencies (Moody's, Fitch, Standard & Poor's and R & I) lowered credit rating of Greek treasury bonds to a level of CCC (meaning extremely risky) and thus costs of borrowing increased significantly.

Figure 4 shows the evolution of public debt starting from 1970 to date, depending on political regime and other government offices. It can be seen that the debt/GDP ratio was constant but very low until 1979, about 25%. Inauguration of the socialist government led by Andreas Papandreou established a new era of fiscal policy in Greece. Socialist government implemented the program of economic policy based on promotion of income of the average Greek household through extensive loans from market. These loans aimed to increase the level of household's spending as an attempt to raise their living standard.



**Figure 4. Evolution of Greek debt**

Source: Kouretas and Vlamis (2010)

This process is driven by capital inflows from the EU in the form of agricultural subsidies and financing of infrastructure within the policy convergence and cohesion of the EU. In a case study carried out by Stelios Makrydakakis, Elias Tzavalis and Athanassios Balfoussias in 1999, that uses data from 1958-1995, it is shown that the Greek government failed to meet its intertemporal budget constraint leaving the public debt unsustainable in the long run. (Kouretas and Vlamis, 2010).

In the year 2000, state budget and trade deficit were enormous, and borrowed funds that would generate future growth and competitiveness of the economy and create new funds for covering the debt, were not channeled effectively. In contrast, inflow of capital was used for financing the current consumption, which was not able to actualize so much income in order to repay the debt.

## **2.6. Low Level of Economic Growth and Twin Deficit**

Experts point out a number of deep-rooted characteristics of the Greek economy and society, which prevented the sustained economic growth of the country and created conditions for the current crisis. Fundamentals among them are definitely pervasive state control of the economy, large but inefficient public administration and tax evasion.

During the nineties, government controlled about 75% of business activities within the country and tightly regulated other participants of the economy. In 2008, this share was reduced to about 50%. However, according to the OECD report, huge part of the private sector continues to suffer from severe and complex regulations and a lack of a coherent and systematic approach to decision making.

A decade before the crisis, significant part of the growth in government spending was caused by an increase in salaries and benefits in the public sector. In 2009, government expenditures accounted for 50% of GDP and 75% of this was allocated to salaries and benefits in the public sector. According to the OECD, this ratio is the highest in all OECD countries, but there is no evidence that the quality and quantity of these services are at a high level. (Pascual and Ghezzi, 2011).

After entering the Monetary Union in 2001, Greece has experienced a sharp decline in competitiveness, because inflation consistently exceeded the average inflation of the Euro Zone. Real effective exchange rate, based on price and labor cost per unit, appreciated by 20% and 40%, respectively, since 2001. As a result, Greece has lost its market share in comparison to other states. The blame falls on the most deeply-rooted structural problems at virtually all levels, including high administrative costs, high margins in most of the economic activity and increased labor costs. Poor management and regulation has also been an obstacle for direct foreign investment, which are at a very low level in recent years. By operating continuously at a loss, state enterprises were particularly ineffective. The decline in productivity and loss of competitiveness has led to a long-term balance of payments deficit.

Cumulated over a number of years, current account deficit requires funding sources that are constant: net inflow of foreign direct investment, portfolio investment, credit transaction, or reducing the country's foreign currency reserves.

Influx of capital from abroad should not only cover current account deficit, but should also create good surface for productive investments and increase in savings which would create an increase in productivity, efficiency and competitiveness of Greece in the long run. Borrowing abroad has its own limits, i.e. creating a net foreign debt creates its repayment obligation. One of the questions here is about sustainability of current account deficit and ways of its financing, especially in terms of reduced investment inflows, which can be one of the most important causes of current crisis.

Unique criteria for assessing the sustainability of the deficit that could be applied on every country do not exist. The facts we should include are specific characteristics of the country, shifts of other macroeconomic indicators (inflation rate, GDP growth rate etc.), tendency of balance of the current account, structure of imports (import of consumer goods or investment goods), capital and financial market accounts (foreign direct investments and portfolio investments, credits and their structure and purpose). It can be concluded that the EMU and member states were facing serious troubles while coordinating and balancing current account deficit.

In addition to deterioration of current account deficit (which exceeded € 50 billion in 2008), there was a more rapid deterioration of the trade deficit in sector of goods (in the amount of € 65 billion in 2008). Surplus in sector of services, even in the golden years of global growth, could not compensate for the loss in trade in goods sector. In 2008, this surplus was € 25 billion,

and net transfers were 4 billion €, which was not enough to cover the deficit in trade of goods, since the increase in transfers are a consequence of help awarded last years. (Pascual and Ghezzi, 2011)

## 2.7. Degree of Economic Openness

The degree of economic openness is calculated as the ratio of the sum of imports and exports of a country over GDP. This indicator is very important because there is increasing evidence that the increase in trade between the two countries or groups of countries create convergence between them. Among EU members the degree of openness is highly heterogeneous.

In the case of Greece, this ratio is very low. Situation is even more difficult if we consider the fact that import contributes much more than export to numerator of this equation. Another way to calculate degree of economic openness is Index of Economic Freedom created by the Heritage Foundation. According to this index Greece is on 120<sup>th</sup> position, much lower than all the other member states.

In their study, Nikolaos Mylonidis and Vangelis Vassilatos examined the causes of slow productivity growth of Greece. As one of the main reason for this they have mentioned low rate of Total Factor Productivity which is caused by low economic openness. They compare Greece with Sweden and Ireland, and this relationship is shown in the figure 5. We can see that this is a low level of trade between Greece and the rest of the EMU (Mylonidis and Vassilatos, 2006).

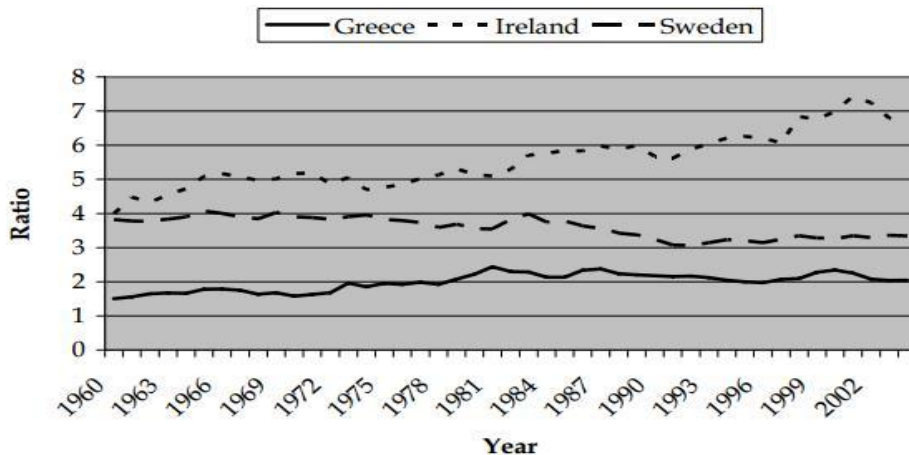


Figure 5. Index of economic openness for Greece, Ireland and Sweden

Source: Mylonidis and Vassilatos, (2006)

## 3. Conclusion

Creation of the European Monetary Union was probably the biggest challenge for policy makers in the EU. Expected benefits from EMU were significant. Reduction in transaction costs and exchange rate volatility, positively affects trade among MS. Free capital movement decreased the cost of capital and improves capital allocation. On the other hand, very important economic instrument (monetary policy) is not any more available to individual members of EMU. Moreover, MS lose the opportunity to issue debt in currency over which they have full control and therefore investors lose confidence.



For each MS there was a dilemma if it should form a currency union and avoid transaction costs and many other problems or should MS have its own currency. Current situation proved that structural and governance problems exist in the EMU. Separate fiscal and monetary policy is first and the most important structural problem in the EMU. European institutions do not have control over complete revenues and spending in the MS. Future changes should go in the direction of budgetary integration with full democratic accountability. The second thing which has to be transferred is a system of redistribution. If, for example, one county experiences asymmetric shock individual redistribution systems, in currency unions, are inefficient.

The transformation is also needed in the field of operation of the monetary system in the EMU. ECB should have more power and jurisdiction in control of financial system. Better accountability should also be provided and to ECB should right to punish hazardous behavior of financial institution in the EMU. Before joining the EMU, Greece satisfied only one, among five Convergence Criteria. Since many other states also have not satisfied these criteria, conditions for joining the currency union had to be weakened and that is why Greece in 2001 joined the EMU. Nevertheless, analysis of Greece through Optimum Currency Area criterion showed that only few of them have been satisfied. Accordingly, we can conclude that Greece is not a natural part of the Euro Zone. Unfortunately, Greece is not the only case and several other countries do not satisfy these criteria. Thus, that is probably the most important reason why, above stated transformation is highly desirable.

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