THE APPROACH OF THE EUROPEAN MONETARY UNION THROUGH THEORETIC MONETARY AREAS

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Abstract: *The project of setting up the European Monetary Union has stimulated interest in theoretical and empirical research on optimum currency areas. The analysis of the monetary unification in Europe has as a starting point the theory of optimum currency areas. The European Monetary Union represents a major step in the integration of EU economies both in economic and monetary plan. The introduction of the euro in the new EU member states in Central and Eastern Europe raises important questions about the widening and deepening of the European Union and the Eurozone. These questions focus on Europeanization and convergence characteristics existing in the main areas of microeconomic policies and widening Eurozone implications for the future development of the EU. Considering these aspects, the authors intended to answer in this paper to some of these questions. In this study we also analyze the theory of optimum currency areas following a logical approach and not just chronological, instead of examining each contribution as recorded time, as have done it many other authors before. The present research is a theoretical type of research, the implementation of which was aimed specifically replying to the question whether European Monetary Union can be considered a currency area optimal. The answer to this question was given by achieving a Schematic of the main positive and negative aspects that can characterize a hypothetical budget consists of benefits and costs of committing to a monetary union among several countries.*

Key words: European Monetary Union, optimum monetary area, *benefits and costs of committing to a monetary union*

JEL classification: E40, E42

INTRODUCTION

The theory of optimum currency areas - Optimal Currency Areas (OCA) was formulated by Robert Mundell (Mundell, 1961) in 1961 and Rondd McKinnon (McKinnon, 1963) in 1963. These two founders of the theory of optimum currency areas wondered which were the conditions that should be satisfied for a country not to bear high costs if they have given up monetary independence and exchange rate as a means to stimulate aggregate demand and output. Meeting these conditions would have allowed the identification of optimal territorial perimeter of a single currency (European Monetary) or irrevocable fixing of exchange rates (EU Currency) (Mundell, 1961 and Masson, 1992).

THEORIES AND CONCEPTS REGARDING THE EUROPEAN MONETARY UNION

It is also important to indicate the presence of issues of confusion and ambiguity in defining the Monetary Union and the Currency Union. Masson and Taylor (1993) using the expression "Currency Union" refer to the presence of a currency, for example a single currency, while using "Monetary Union" (Monetary Union or "Exchange Rate

Union"- Exchange Rate Union) refer to the irrevocable fixed exchange situation. In his *"The New Theory of Optimum Currency Areas",* George Tavlas distinguish instead the following categories of unions, namely:

- Union of the Exchange Rates (Exchange Rate Union) does not necessarily imply that monetary policy coordination between the participating countries;
- Monetary Integration area synonymous currency - currency area involving irrevocable fixed exchange absence of margins of fluctuation, currency convertibility full and complete financial integration, full freedom of capital movements and the requirement of a common monetary policy;
- Monetary Unification characterized by the presence of a single currency and a common central bank.

Paul Krugman and Maurice Obstfeld in their paper *"International Economy, Theory and Policy"* uses the expression of optimum monetary area and optimum currency area, ignoring inexplicably, any difference between the two concepts. We shall begin the series of universal definitions of the European Monetary Union with one of the first characterizations made it (Sadeh, Verdun, 2009). According to the Hegemonic Stability theory, the survival of any international regime, including the monetary regime, depends on the prevalence of major powers (Gilpin 1987), who wants and can use its influence to support monetary cooperation. And while economic factors support a monetary union, they are neither sufficient nor necessary for sustainability (Cohen 1998, 2004). Many important contributions were made in the 60s and 70s to supplement and improve these definitions and concepts. In the 80s and early 90s traditional theory submit to credibility theory - that seemed to represent so-called "new" theory of optimum currency areas. Ignoring the criteria identified by R. Mundell (Mundell, 1961) and other authors, who have analyzed and studied the subject, the theory of credibility sustained the opportunity of abandoning the monetary discretionality - and thus the currency itself- in favor of fixed rules such as adherence to a currency or monetary union. The development of the empirical theories and studies that followed, demonstrated the necessity of returning to the traditional criteria, but which need to be integrated in assessments regarding the offer, on which credibility theory sustained its arguments.

THE ROLE OF POLITICAL FACTORS IN THE INITIATION AND EXPANSION OF THE EUROPEAN MONETARY UNION

The economists are nearly unanimous in agreement that the purely economic benefits of a monetary union do not outweigh the costs. This conclusion can be debated, but even the most skeptical of economists recognize that political factors played a decisive role in the creation of the monetary union. But policy involves many things. Three key factors contributed to the attractiveness and feasibility of the euro (Frieden, 1998):

- the anti-inflationary credibility desire: a single currency regime, relative inflation countries such as Italy and Finland, could correlate to the currency of a country with low inflation, Germany, in order to prove efforts and intention to reduce its inflation:
- the extensive links with European integration: starting with efforts to achieve an area of monetary stability, the countries that did not participate in these efforts were afraid not to be excluded from other future initiatives and thereby forfeits citizenship status "second-class "in the European Union;
- the support from the business community: the perspective of exchange rate stability and the single currency has gained support from the majority of large companies and banks in Europe. Large companies have considered eliminating concerns about currency

fluctuations could help to fulfill the promise related to a single European market will stabilize internal position, thus giving advantages in dealing with foreign competition.
These three forces were enough to energize the 11 EU members to create European Monetary Union. And these were sufficient to support them - perhaps with some other countries - in the implementation of the single currency in 2002.
Taking into consideration the inherent instability of fixed exchange systems arising from both historical records and the development of the theory of speculative attacks, it is important to emphasize that the theory of optimum currency areas should be properly defined, as well as the theory of optimum monetary areas. Even if we consider these types of integration, it is not possible to explain the yearning to a Monetary Union of many countries, including the European ones. In order to do this you need to drop a static context, taking account of endogenous dynamic could lead to satisfying future requirements. This would require a nominal interest rate close to zero, which corresponds to a moderate deflation. Some other disagreements are as least clarified, but may have a significant importance. Many central banks have empowerment to achieve price stability and the fact that our model does not have this objective does not mean that it is wrong;
In other words, our models can sometimes be lacking. The message of this study is not that monetary policy should deviate from zero inflation to reduce distortions associated with nominal price adjustment. On the contrary, the message is that in terms of fundamental relative price changes in the context of nominal price adjustment related differences, there is no monetary policy - zero inflation or not - that can resolve these differences without financial consequences.
The objectives of the new theory analysis and the traditional answer to the following question: How high are the costs that would derive from giving up monetary independence and exchange rate? ... But also describes the theory of credibility as " new " theory of optimum currency areas, may notice that there are such costs that would entail giving up monetary independence if this independence is ineffective as demonstrated credibility theory; Another objective is the one that emphasizes the theoretical and empirical limitations of such conclusions, for example if the maintenance of the monetary discretionality is beneficial in certain circumstances, the loss will not occur without any cost. The traditional analysis of the theory shows that the abandonment of counter cyclical instruments involves costs so high that it is likely onset of asymmetric shocks; According to Peter Kenen the likelihood of such shock will be even higher as the more specialized are the countries acceding to the currency or monetary union (Kenen, 2007).
According to Robert Mundell we can see that giving up to monetary or currency instrument, it does not involve high costs if once there was an asymmetric shock there are implemented automatic adjustment mechanisms for these shocks, such as labor market flexibility and mobility (Mundell, 1961).

COSTS AND BENEFITS OF THE DECISION TO PARTICIPATE IN A MONETARY UNION

In the figure below (taken from Krugman 1990) we shall present the costs and benefits of a monetary union related to the decision based on the degree of integration and the level of openness of an economy.
The cost of participation in European Monetary Union depends negatively on the degree of openness (according to McKinnon, 1963) to the extent that it has a strong negative impact on the possibility of a free economy to choose (through a monetary policy and as a result of the exchange policy) the closest level to the real exchange rate. In other words, in a very open economy, a change in the nominal exchange means a change in the price level, meaning that the real exchange rate as unchanging and therefore desired

stabilizing effect would be zero. In this respect it is obvious that the ineffective instrument, the cost of giving up joining the Monetary Union would be zero. In the formulas below we briefly present the definition of the real exchange rate and the "purchasing power parity" between the two currencies.

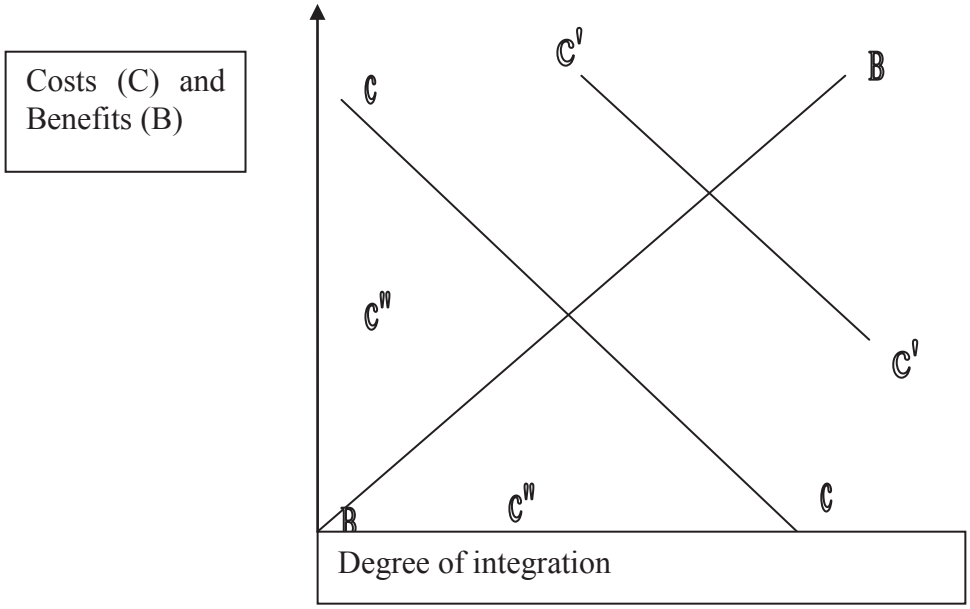

Figure 1. Costs and Benefits of Participating in a Monetary Union after Krugman B. 1999

Nominal and real exchange rate

Rate of the nominal value € is the relative price of two currencies:

$$1€ = E\$$$

($:any currency whose value can be measured as units per 1€)

When we have $P^{€}$ and $P^{\$,}$ It involves the establishment of E fixing a value for the real exchange rate:

$$\eta = \frac{EP^{€}}{P^{\$}}$$

The equilibrium value (long-term) of η is the value that Purchasing Power Parity (PPP) of the two currencies is the same. That is, η=1

The equilibrium value (long-term) of E is therefore:

$$\frac{1}{P^{€}} = \frac{E^{*}}{P^{\$}}$$

If $E \gtreqless E^{*}$ ↔ $ is under/over the value reported to €

When we have: $\Delta\eta_{\eta} = \Delta E_{E} + \pi^{€} - \pi^{\$}$

If $\Delta\eta < 0$, then RER of the dollar is increasing.

If in the same time we have $\Delta E = 0$, the $ depreciation is equal to the substraction value from inflation :

$$-\Delta\eta_{\eta} = \pi^{\$} - \pi^{€}$$

Therefore, according to McKinnon in a very open economy a variation of the nominal exchange rate would mean a change in the rate of inflation, so the real exchange rate remains invariable. Instead, in a not very open economy, a variation of the nominal exchange rate would be, at least in part, a real exchange variation (a change of purchasing power parity) implying real effects: for example, a depreciation of the nominal exchange would be a depreciation of the real exchange (improving

competitiveness) and therefore an improvement in current values, expansive effect on aggregate demand.
A second cost factor determined by giving up to an independent monetary policy is the degree of asymmetry of the business cycle compared to other EU countries; cost will be greater the more significant asymmetric shocks hitting the (compared to the average of countries wishing to join European Monetary Union) demand and/or aggregate supply. A country with a very economic cycle "asymmetrical" will stand at par with the level of integration a higher cost of giving up monetary instrument: curve CC (cost curve) in his case will be oriented to the right.
A situation is considered by definition to be "symmetric" when the role of internal factors of a country (conditions of supply and demand in other sectors, the level and structure of final demand, labor market characteristics) in determining the cyclical fluctuations of a sector (or even a region of the country or the whole country) is not dominant (or lower) than the role assigned to international factors. An opposite situation is considered to be "asymmetric" because the country-specific variables play a significant role.
A third cost factor depends on the relevance of nominal rigidities; basically these aspects of price adjustment delays stiffness of shock, making it useful for stabilizing monetary policy action. In a country where the price is maximum flexibility in adjusting their specific shocks due to supply and demand, prices are stabilizing economic activity and it is not necessary to use stabilization policies. Greater flexibility would lead to a shift of the curve (CC) to the left (see Figure No. 1). The measures of financial integration are motivated by the desire to reap its benefits. More specifically, it tries to measure two aspects of financial integration: changes in the cost of capital and access to more developed markets of the EU. The first set of measures is designed to capture changes in the cost of capital. Revenues and rising interest rates in the countries compared to those in the old EU. Integration of financial markets should close. This unit of measurement is a law enforcement integration of one price, which should be in force in integrated financial markets. Since the developing countries do not have much capital and are expected to have a faster growth than the first EU member countries, the financial integration should lead to a decrease in income and therefore to a lower cost of capital. The stock markets are analyzed if future dividends are discounted by global factors rather than local ones. And while individual actions are less risky for international investors than local, the cost of capital should be considered also as an increase in financial integration. The second set of measures is designed to determine the access of individuals and companies from more developed financial markets. It measure, especially, the number of industrial and sovereign issued Eurobonds. In addition, it provides details on the changes in the efficiency of the banking sector. Increased competition and further increase efficiency are seen as a form of financial integration. These data are particularly relevant for countries where the banking sector has been rising in the past dominated by large state-owned banks (Tomas, 2007).

The "new" theory of optimum currency areas

The European Monetary Union is a preferable rule instead of dicretionality when costs related to abandoning the monetary or currency independence are not significant or when this independence is ineffective.
Within the process of identifying the conditions to be met for an optimal transition to a monetary union or exchange, the theory of optimal currency areas is focused on costs rather than on the benefits of membership, wondering what are the criteria to be met for these costs related to abandoning the monetary and currency independence to be minimized. Following this approach it can be seen, firstly, that giving up to monetary independence does not imply high costs when the discretionality characterizing

monetary policy is ineffective or even counterproductive. In fact, this is the conclusion drawn by the so-called "new" theory of optimum currency areas (Tavlas, 1993), which is the theory of credibility. According to this theory that inflation occurs in a country is the result of private sector expectations. These expectations are determined within the module and depend on that country's institutional asset. If the monetary authority enjoys independence, expectations will be formed taking into account the degree of aversion to inflation, so that if the private sector believes that the central bank is very sensitive to costs arising from high inflation, expected inflation will reduced because it is aware of the benefits of the monetary authorities. If the central bank does not enjoy a high reputation for anti-inflationary, the maintenance of the discretionality in conducting the monetary policy will only cause an increase in the inflation rate equal to the level of production to be achieved. Hence the features of this model: it is preferable to abandon any discretionality in conducting the monetary policy, adopting instead fixed rules, like those suggested by Friedman in the 50s (Friedman, 1951). Only in this case, the markets will adapt to their inflationary expectations and may have a steady low inflation rate.

This long regression requires giving up to autonomous monetary policy coordination (and the exchange rate instrument) based on their inflationary preferences of a specific country to determine the costs. Significant costs would also determine and maintain the discretionality that would increase the steady inflation without changing the level of real output, depending mostly on the real factors than monetary ones. The adoption of a single currency, characterized by stability, involving at the same time giving up to national monetary discretionality could solve the problem and allow temporary decreasing the inflation steady rate. During the '80s, the theory of rational expectations and its corollary, the theory credibility related to the idea of temporary inconsistency of monetary policy dominated the economic context, the traditional theory of optimum currency areas remaining "silent". The deformity inflationary argument seemed to come out a winner until Tavlas defined the theory of credibility as the new "theory" of optimum currency areas (Tavlas, 2004). If true, the theory argued that maintaining the credibility of anti-inflationary preferences, different country, may not be optimal, because there may be structural and institutional reasons for the inflation rate of a country to be superior to the existing another country. This conclusion can be drawn only if it is considered, on the one hand, labor market, and on the other aspects of public finances.

With regard to the first point, it must be stressed that equal shocks may produce different effects on one economy or another depending on the aspects that characterize the labor market in a country, centralized or decentralized concentration and other forms of intermediate concentration. As powerful forms of concentration centralized or decentralized, labor will not respond to shocks suffered by the economy, imposing “recovery" of high wage. In the first case, the trade unions will be able to assess negative effects and dangers of spiraling prices report / wages derived from the demand for full compensation of losses of purchasing power of employees as a result of shock. In the second case, every employee, besides the fact that it has low bargaining power, will fear that each wage "recovery" may lead the company in which they work outside market; in such a situation likely to lose their job. The intermediate forms of concentration make possible the emergence of free-riding phenomena, which is why unions defending their interests and lacking a holistic view of the economy could ask for wage "excessive" increases just ignoring the whole economic context, especially the consequences of such "recoveries".

Regarding the public finances, the optimal taxation theory initiated by Edmund Phelps in 1973 concluded that under a certain increase in public spending, the means of financing should be equal to the margins of those costs: if the tax collection involves high costs, for example, could reduce this source and will increase funding by

seigniorage (for example, through the issuance of currency) or credit (loans), where the remaining countries cannot count on sufficient capacity of taxes, the inflation rate would be a quite effective means of financing the public spending. The countries with "submerged" economies need a strong seigniorage with countries that do not face these difficulties. Canzoneri and Rogers (1993) consider the theory of optimal currency areas only from this point of view..

The presence of very high public debt, according to Cohen's (1998) lead to an increased use trend inflation, even if empirically demonstrated how in recent years preceded the unification of monetary seigniorage was very low for all European countries.

In both examined cases, a reduced aversion to inflation would produce inflationary distortion, which is not enough to cause a change in the equilibrium inflation rate as structural and institutional changes are needed both on the labor market and public finances. The conclusion about the superiority of fixed rules of the discretionality however, is not without limitations. Suffice it to add deterministic model used by Barro and Gordon (1993) regarding the possibility that the system may be affected by asymmetric shocks on the supply curve, to observe that on the one hand setting rules reduces deformation inflation, and on the other hand does not allow the performance in a discretionary manner, which generates a cost derived from the oscillation of the revenues. If we consider the stochastic curve of Philips characterized by uncertainties, it can be seen that it is not possible to deny the usefulness of a discretionary behavior of the central bank. The empirical studies clearly demonstrate that the inflation rate in Europe in the 80s did not happen in a "painful" manner as it provides the theory of credibility, but was accompanied by a rise in unemployment as specified the "old" curve of Philips (Philips, Parron, 1998). Together with the demonstration of the theoretical and empirical limits of the conclusion, to which we add the theory of credibility regarding the superiority of fixed rules of discretionality in coordinating the monetary policy, it is clear that the abandonment of monetary and exchange independence it is not necessarily optimal nor costless. So we can focus on the conclusions of the theory of "traditional" optimum currency areas.

CONCLUSIONS

Despite the efforts over the debates on European Monetary Union, there is little empirical research on the sources and responses to economic shocks in this region. A number of studies show that regions of the U.S. have a symmetrical behavior. They are faced with similar problems and they react in a similar manner. On the contrary, the European Monetary Union countries can be grouped in a symmetric center and an asymmetric periphery. Central countries are Austria, Belgium - Luxembourg (considered as a whole for data collection), France, Germany, Italy, Netherlands, Portugal and Spain, while peripheral countries are Finland and Ireland (1991). Central countries show essentially the same features as the U.S. regions when reporting criteria optimum currency area (OCA). Peripheral countries seem to have problems of a different nature compared to the central ones. Moreover, they appear to respond to a different shock from the central area. Michael A. Kouparitsas, based on a statistical analysis, conclude that the European Monetary Union will be a viable monetary union for central countries, but expressed reluctance about the benefits of such a union for the countries of the periphery. The conventional theories about optimal currency area examine the conditions under which countries can unify in order to irrevocably align their exchange rates or to adopt a single currency, a common monetary policy to follow and ensure freedom of current and capital transactions between them; also analyze the costs and benefits of such collaboration.

Although the pro-euro smaller states can be explained in instrumental terms, an approach such cost / benefit couldn’t solve the problem for larger states. Although the

latter recognize the long term benefits of adopting the Euro currency, the short and medium term economic benefits were ambiguous and include likely higher costs. Juliet Johnson argues that economic scientists and policy makers have expressed concern in unison about the possible negative effects that it would have an integration of other countries in the Euro area on larger states.

As a reliable conclusion we can say that joining a monetary or exchange union will therefore be appropriate only when the flow of benefits that are expected to be realized surpasses the flow of costs that will be generated.

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