



CONSIDERATIONS REGARDING THE OPTIMAL MONETARY AREAS

Mihai Cosmin Curiman

*Faculty of Economics and Business Administration, Babeş-Bolyai University, Cluj-Napoca,
Romania, 58-60 Teodor Mihali, 400591, Cluj-Napoca, Romania
c.mihai_1980@yahoo.co.uk*

Bogdan Mihai

*Faculty of Economics and Business Administration, Babeş-Bolyai University, Cluj-Napoca,
Romania, 58-60 Teodor Mihali, 400591, Cluj-Napoca, Romania
bogdanmmihai@gmail.com*

Abstract

This paper provides a complex theoretical framework on the optimal monetary areas and their implications. According to some opinions, the integration will lead, to a greater extent, to the homogenization of the economic structures and, to a lesser extent, to the occurrence of asymmetric shocks. Within a single market, most demand-related stocks tend to become asymmetric due to the convergence of economic structures, hypothesis that is known in literature as the Endogeneity of the Optimum Currency Area Criteria. Such approach represents one of the paradigms of the optimum currency area.

Keywords: optimal monetary areas, economic factors, currency, exchange rate mechanism

I. INTRODUCTION

For a long time the states were deemed to have their own currency and that was a paramount aspect of their sovereignty. In lack of control on their own currency, the authorities' freedom to conduct their own monetary policy is undoubtedly sacrificed.

However, the last decades of the past century revealed new forms of currency organization. The economists started to increasingly emphasize the economic factors that determine monetary arrangements suitable for modern economies, considering that the number of currencies may not necessarily match the number of countries. The innovative idea was put forth by the Canadian economist Robert Mundell, in his work "A Theory of Optimum Currency Areas" (1961). Some of the countries, having similar economic structures, for instance, may have significant economic benefits when joining currency unions. The surprising element at that time, when almost every nation had its own currency "one country, one currency rule" (Pomfret, 2005), is that Mundell (1961) proposed as optimal alternative the reduction of the number of currencies in relation with the number of countries. Such process may give competitive odds to



the members of the union. Hence, the states using a common currency may develop trade relationships that are unbound by the risks and costs entailed by currency exchange.

In Mundell's opinion, an optimum currency area may be a geographic area consisting of states that join towards the common goal of attaining an equilibrium between the internal balance (maximum level of employment, price stability, low inflation) and the external balance (sustainable position of the balance-of-payments). Such optimum may be reached easier than keeping track of the two balances individually, by each state. In his articles and books published since 1960 (Mundell, 1961; Mundell, 1973; Mundell, 2002), Mundell also analyses the costs expected by dividing a single currency as well as the fact that the countries must meet certain economic criteria in order to range within the optimality area.

II. LITERATURE REVIEW

Starting from the idea that the European project of the single euro currency has its origins in the theory of optimal monetary areas (Mundell, 1961), the work on the Theory of Optimal Currency Zones being nicknamed by Munde De Grawe and Mongelli (2005) as Mundell I. The subsequent works (Mundell, 1973), (Mundell, 2002), have been assessed by De Grawe and Mongelli (2005) Mundell II or "the new Mundell" being opposed to the original contributions (assessed thusly as it abandons the vision of the exchange rate as absorbing the asymmetrical shocks). The author asserts that under the free movement of capital, the exchange rate becomes itself a target for disruptive speculative movements and thus a source of asymmetric shocks (Mundell, 1973). Mundell II emphasizes, within the context of free movement of capital, the particular role that the capital markets play in absorbing the asymmetric shocks that are specific to monetary union. A country within the Union is facing significant asymmetric shocks generated by the international instability of the Capital flows. In such case, the developed capital markets and fiscal transfers would be the ones susceptible to bringing back the internal and the external equilibrium.

The advantage of accessing the monetary union had the disadvantage of abandoning the exchange rate mechanism as an instrument for adjusting the monetary policy. The benefits were thus aiming at eliminating the foreign exchange-related costs, the import of the Union's central bank reliability (in our case the European Central Bank), the reduction of inflation expectations and, by default, the inflation stability. At the macroeconomic level, the benefits of the monetary union are macroeconomic stability, a favorable international position, the access to a more developed and transparent financial market, prices' stability and reduction of interest rates.

The costs are related to losing the independence of the monetary policy and of maneuvering the exchange rate mechanism as instrument for adjusting to asymmetric shocks, which are specific to monetary unions. However, the dimension of the costs resides within the differences among countries. The more appropriate the economic and institutional structures, the higher the benefits of the single currency. The lower the need to adjust the exchange rate, the lower the costs entailed by the monetary union accession.

Mundell also analyzes the macroeconomic adjustment mechanisms among the countries that may represent an optimum monetary area and concludes that the countries subject to ample asymmetric shocks will find the abandonment of their own currency in order to join a monetary



union as costly. Still, such costs may reduce significantly for the countries characterized by increased flexibility of wages and prices as well as by substantial labor mobility.

Mundell (1961) presents the materialization of the costs of currency union accession and the manner in which these costs may be reduced in three aspects:

- The rigidity of the prices and wages fixed in a national currency – the internal depreciation might compensate the need to adjust the exchange rate;
- The capital's lack of mobility allows for a pegged exchange rate regime, without hindering the independent monetary policy, in accordance with the impossible trilemma. We mention that in the last century's sixties (the period when the concept of the impossible trilemma was developed), the free movement of capital was restricted;
- The countries were subject to asymmetric shocks in what concerns the demand: amplitude shocks (impacting the consumption or investments volume) and structure shocks (impacting the demand ratio of domestic and imported products).

The optimality is defined according to the properties of optimum currency areas, which include: mobility of labor and other production factors, wages flexibility and economies opening, diversification of production and consumption, similarity of inflation rates, fiscal and political integration. The economies defined by these features are considered optimal to enter a currency union, as the need for adjustment through the nominal exchange rate in order to achieve internal and external balance equilibrium has been replaced by the previously mentioned factors.

Mundell (1961) has thus presented the theory of a monetary union between two open economies: Eastern and Western, specialized in producing tradable goods. Initially, these two economies were in internal and external equilibrium. Afterwards, the Eastern country faced a long-term structural shock (higher demand for its products). In East, such shock leads to production augmentation, inflation and current account surplus, while in West, the diminished demand leads to production decrease, unemployment and current account deficit. In lack of currency appreciation in East, the manpower mobility from West to East might restore the current account equilibrium. Mundell (1961) concludes that the group of countries with high cross-border mobility of the manpower might safely adopt pegged exchange rates, constituting a monetary union without the need for exchange rate flexibility. Nevertheless, in case such goal cannot be achieved, the single monetary policy of the East-West Union might face a dilemma: if Eastern stability were to be pursued, then Western recession would aggravate and vice versa. In such situation, the currency union would not be healthy for the two economies but only the use of the national currency and exchange rate flexibility.

McKinnon (1963) introduced a new element IN the analysis – the size and openness of an economy. The smaller and more open (integrated) the economy, the higher the Union's benefits. Assuming that the production of an economy is divided into tradable and non-tradable goods, McKinnon (1963) defines the degree of openness as the ratio of tradable to non-tradable goods. The non-tradable goods, including almost anything from restaurants and barbershops to the services provided by physicians and teachers, usually weigh around two-thirds of the GDP (Stiglitz, 2016, p.156) by contrast to manufactured or tradable goods (textiles, machines etc). He



argues that a more open economy is favored by the pegged exchange rate, while a less open economy by the variable one. As well, the fluctuation of the exchange rate in an open economy will instantly be absorbed by the internal prices and wages, therefore the exchange rate is not an adjustment instrument anymore. The optimizing element is thus the degree of openness.

McKinnon (1963) supports the loss of the flexible course's ability to rebalance the current account and the fact that it becomes disruptive for the internal prices. This position changes in case of less open economies, where non-tradable goods weigh more than the tradable ones. In this case, the exchange rate keeps its disruptive character, as its modification has little effect upon the internal prices. Consequently, highly open economies become sub-optimal, while the small and less large economies amplify the efficiency of the exchange rate as instrument for equilibrating the balance of payments. According to McKinnon (1963), the smaller countries that cannot afford to develop industries leading to large economies, should better promote the manpower mobility. In fact, McKinnon argues that exactly the small countries would benefit from a Monetary Union, as they could alleviate the shocks better than the large economies.

Kenen (1969) asserts that industrial diversity contributes to the optimality of a Monetary Union, due to the fact that it reduces the macroeconomic effects of structural shocks (change of ratio of local to imported goods), which are considered to be the greatest threat for the Monetary Union's viability. Every industry endures shocks, but insofar as it is diverse, the overall impact diminishes up to one or several sectors, so the real exchange rate is more stable, compared to a mono-industrial economy, where the economy will be affected in its whole.

As well, Kenen (1969) emphasizes the importance of the Fiscal Union by comparison with the taxation system in the USA, where the structural shocks are absorbed by transferring funds from prosperous to crisis areas and saying that such system does not lead, in fact, to significant changes in the government debt. Kenen (1969) also argues that if the regions follow a counter-cyclical fiscal policy, they may face the impossibility to borrow in case of long-term shocks. The higher the fiscal integration degree, the higher the capability to mitigate asymmetric shocks by fiscal transfers from an area with low unemployment to an area with higher unemployment level.

Hence, Mundell (1961), McKinnon (1963) and Kenen (1969), through a triad of influential works, aim at highlighting the advantages some countries may have when they peg their exchange rate and join a monetary union. Such benefits materialize in the cost of giving up their own currency and the autonomy of the monetary policy, given the free movement of capitals, which is specific to current economies.

Later, Fleming (1971) brings forward the idea of inflation rates convergence as paramount precondition for entering an optimum currency area. According to Fleming (1971) this is a long-term requirement in order to keep the current account balance, an equilibrium that is absolutely necessary for supporting the purchasing power relative party when the exchange rate is pegged. The similarity of inflation rates might as well diminish the shocks among countries as well as their impact. The subsequent theoretical research turned this criterion into a premise for the accession to Eurozone, by including countries with different inflation past, according to the Maastricht Treaty.

By drawing the attention upon the deficits, Dellas and Tavlas (2009) show that a country with high fiscal deficit and public debt to GDP ratios may negatively impact the whole union by the



upswing of the interest rates and the decrease of guarantees' values and, consequently, of the debts refunding costs. That is a fact, proven by the situation within the countries with important deficits during crisis periods (the rating agencies downgraded Greece's bonds, being considered valueless).

In lack of proper supporting mechanisms within the Eurozone, the countries of the monetary union may be exposed to burdensome situation on sovereign debt markets. Such tendency may aggravate the negative debt dynamics during recession periods, leading to procyclicality in national fiscal policies. Typically, the costs of sovereign loan should downfall during recession, but at that moment, the economies representing one third of the Eurozone's GDP recorded the positive correlation of costs of debt with risk aversion (Stiglitz, 2016). This resulted in lack of stabilization, which affected both fiscal growth and sustainability.

For long, the researchers have been interested in the theory of optimum monetary areas, which generated countless polemics, including the usefulness of the research itself. Hence, according to Krugman (1993), the leading importance of the optimum monetary area in what concerns the international monetary economy is arguable. Buitier (2000), after analyzing the affiliation of Great Britain and Scotland to the Eurozone, asserts that the theory of optimum monetary areas is, unfortunately, one of the weak points of the post-World War II monetary economy.

The theory of optimum monetary areas has been hosting, for long, debates related to the merits of the fixed exchange rates versus the floating ones (Ishiyama, 1975). This was the very departure point for the development of this theory. However, most of the participants in the assessment paid little attention to the differences among the economies in real life, leading to a general impression that the perspectives reached with respect to the floating or fixed exchange rate are equally applicable to all economies (Kawai, 2002).

Other authors, like Tavlas (1993), Mongelli (2002), De Grauwe and Schnabl(2008), have developed the contributions of Mundell, McKinnon and Kenen, adding to the series of relevant characteristics specific to the candidates to the integration of a single currency and brought detailed assessments of the costs and benefits of the single currency. There are some other research studies that discussed relevant issues on the topics, such as: Spulbar and Nițoi (2012), Spulbar, Nițoi and Stanciu (2012), Spulbar and Nițoi (2013), Spulbar and Birau (2019). Nevertheless, Bayoum iand Eichengreen (1997) estimated that the theory of optimum currency areas has progressed very little since the contributions of Mundell (1961), McKinnon (1963) and Kenen(1969).

The dedicated literature defines the optimum monetary area as an optimum geographic region that is using a single currency and the national currencies are irrevocably pegged to the common currency. If the national currencies are governed by the fixed currency regime, the regional currency will float. Mongelli (2002) also states that the single currency, or the pegged currencies, fluctuate jointly vis-à-vis other currencies. In other words, sovereign states are choosing to adopt a common currency and irrevocably peg their currencies to that common one. The fact that a region with several states is using a common currency also means the division of the monetary sovereignty, i.e. accepting a single formal interest rate throughout the entire union. Hence, according to Frankel (1999), an optimum monetary area may also be defined as a region for which a single currency and a single monetary policy are optimal.



III. DISCUSSIONS

If a country intends to increase the interest rates (due to high demand that leads to high inflation) and another country to decrease them (due to reduced demand that leads to inflation diminishing), tensions will occur among the members of the union who abandoned their national monetary policy.

The costs generated by these tensions or the by the asymmetric shocks recorded by the demand require a flexible labor market for the entire area, so that the manpower moves freely from a low-demand country to a high-demand country. That is why the specialized literature assessed that the optimum currency areas comprise countries or regions facing similar shocks and which have a single labor market and, even more, have the same attitude towards inflation.

In so far as the country has no internal substitutes for adjusting the imbalances, the costs of the union may be high. On these lines, according to Larosiere and Cahen (2018), in the USA in contrast with Europe, the private market flows are the ones financing almost 80% of the adjustment in case of asymmetric shocks, while fiscal federal transfers, very important as well, are limited to less than 20%. For that reason, the banking union must be optimized and the union's capital markets must develop so that the deficits can actually be adjusted.

If the exchange rate is not depreciating anymore, the adjustment will be carried out only by internal depreciations of prices and wages or, even more costly, by unemployment. The lack of the lender of last resort may be seen as a cost of adopting a single currency. According to De Grauwe and Schnabl (2008) The countries within the economic and monetary union are vulnerable to changing market sentiments.

In what concerns the economic growth level, the accession to a monetary union can be more costly in case of states with accelerated growth pace. (Stiglitz, 2016). The states with high economic growth are using this trump card as debt financing instrument, especially short-term debts: if the GDP upswings, the debt/GDP ratio drops, so their relative importance decreases. By joining a monetary union, this strategy cannot be used anymore. Given the previously mentioned aspects, it would be healthy for the high growth rate states to stimulate competitiveness by devaluation of the exchange rate, as higher exports mean higher imports and the developing countries may be privileged when keeping their own currency.

In case the costs of the single currency generally refer to the macroeconomic conditions, the benefits will show at microeconomic level. These imply the elimination of transaction costs related to foreign currency exchange, but also the elimination of the unsafety risk in what concerns the evolution of the exchange rate. And we refer to earnings resulted from the elimination of the transaction costs, which will disappear within the context of currency union— all the citizens of the union will enjoy crossing the borders without having to exchange currencies; welfare earning generated by the confidence in a strong currency. The elimination of the exchange rate exposure may generate a feeling of safety and confidence in the long run, so investors may engage durable trade relations.

These costs may also be considered from the viewpoint of the structural and institutional differences among countries, insofar as they exist, but the main issue is to what extent such differences are relevant when developing a monetary union.

The antipodal alternative, known as Krugman's Specialization Paradigm (1979) departing from USA experience, asserts that the economies of scale may generate agglomeration effect and



concentration of production may lead to their loss of advantage. In this vision, trade integration generates asymmetric shocks, being favored by the concentration of production in a certain country. In such case, the countries may prefer to use the flexible exchange rate in order to balance the economy and to exit the monetary union's optimality area.

IV. CONCLUSIONS

To conclude, we may state that Mundel's theory was an important theoretical foundation for choosing the exchange rate regime for a certain country. Although the theory's requirements are not easily applicable in practice, its pre-eminence therein has been emphasized in many studies. Moreover, the theory's criteria offer appreciable perspective in studying the monetary integration and represented a classical principle in designing the European Economic and Monetary Union (EMU).

Mundell II theory seems to be the closest theoretical framework for Romania and, generally, for the central and East-European states on their way to adopting the single currency. However, it does not mean that Mundell I become irrelevant, but there are still major risks related to the structure of these economies and their resilience to asymmetric shocks.

The above references to the specialized literature and the correlation of the theoretical elements might be the proper framework for an opinion according to which, for the central and East-European countries, the advantages of adhering the European Union would be more evident than those of adopting the Euro currency. The small size of ECE states and their lack of reputation generated divergent relationships with Mundell II theory. If the exchange rate could be regarded in a stabilizing manner, the evolutions on the currency market would rather indicate the situation where the exchange rate is a source of asymmetric shocks and destabilizing factor.

At the end of this study, we may agree with the assertion that a group of countries is looking to simplify its foreign exchange transactions by adopting a single currency under common political liability. The best example would be the Eurozone, component of the European Union, which currently comprises 19 of the 27 countries. The example of success would have been an Eurozone with 27 countries. However, the project continues and the European monetary experience of almost 20 years is definitely providing the base for assessing the criteria of optimum currency areas as well as of how they stood the test of time and practical applications.

REFERENCES

1. Bayoumi, T. and Eichengreen, B., 1992. Shocking aspects of European monetary unification. National Bureau of Economic Research.
2. Bayoumi, T. and Eichengreen, B., 1997. Ever closer to heaven? An optimum-currency-area index for European countries. *European Economic Review*, 41(3-5), pp.761-770.
3. Buiter, W.H., 2000. (5) (PDF) Optimal Currency Areas: Why Does the Exchange Rate Regime Matter? (With an Application to UK Membership in EMU). [online] ResearchGate. Available at: <<https://www.researchgate.net/publication/>



- 46447975Optimal_Currency_Areas_Why_Does_the_Exchange_Rate_Regime_Matter_Wi
th_an_Application_to_UK_Membership_in_EMU> [Accessed 28 Jan. 2019].
4. Buitier, W.H. and Grafe, C., 2002. Anchor, float or abandon ship: exchange rate regimes for the accession countries. *PSL Quarterly Review*, [online] 55(221). Available at: <[https://ojs.uniroma1.it/index.php/PSLQuarterlyReview /article /view/9906](https://ojs.uniroma1.it/index.php/PSLQuarterlyReview/article/view/9906)> [Accessed 1 Jan. 2019].
 5. De Grauwe, P. and Mongelli, F., 2005. Endogeneities of optimum currency areas: What brings countries sharing a single currency closer together?
 6. De Grauwe, P. and Schnabl, G., 2008. Exchange Rate Stability, Inflation, and Growth in (South) Eastern and Central Europe. *Review of Development Economics*, 12(3), pp.530-549.
 7. Dellas, H. and Tavlas, G.S., 2009. An optimum-currency-area odyssey. *Journal of International Money and Finance*, 28(7), pp.1117-1137.
 8. Fleming, J.M., 1971. On exchange rate unification. *the economic Journal*, 81(323), pp.467-488.
 9. Frankel, J.A., 1999. No single currency regime is right for all countries or at all times. *Essays in international finance*. Princeton, NJ: International Finance Section, Dept. of Economics, Princeton University.
 10. Ishiyama, Y., 1975. The Theory of Optimum Currency Areas: A Survey Staff Papers - *International Monetary Fund*, 22(2), p.344.
 11. Kawai, M., 2002. Exchange Rate Arrangements in East Asia: Lessons from the 1997-98 Currency Crisis. p.48.
 12. Kenen, P., 1969. The theory of optimum currency areas: an eclectic view. *Monetary problems of the international economy*, pp.41-60.
 13. Krugman, P., 1993. Lessons of Massachusetts for EMU. In: F. Torres and F. Giavazzi, eds., *Adjustment and growth in the European Monetary Union*. [online] Cambridge: Cambridge University Press, pp.241-266. Available at: <[https://www.cambridge.org/core/product/identifier/CBO9780511599231A099 /type/book_part](https://www.cambridge.org/core/product/identifier/CBO9780511599231A099/type/book_part)> [Accessed 16 Jan. 2019].
 14. Krugman, P.R., 1979. Increasing returns, monopolistic competition, and international trade. *Journal of international Economics*, 9(4), pp.469-479.
 15. McKinnon, R.I., 1963. Optimum Currency Areas. *The American Economic Review*, 53(4), pp.717-725.
 16. Mongelli, F.P., 2002. 'New' views on the optimum currency area theory: what is EMU telling us? p.54.
 17. Mundell, R.A., 1961. A Theory of Optimum Currency Areas. *The American Economic Review*, 51(4), pp.657-665.
 18. Mundell, R.A., 1973. Uncommon arguments for common currencies. *The economics of common currencies*, pp.114-132.
 19. Mundell, R.A., 2002a. A Plan for a European Currency. *Money, Markets, and Mobility: Celebrating the Ideas of Robert A. Mundell, Nobel Laureate in Economic Sciences*, p.295.
 20. Pomfret, R., 2005. Currency areas in theory and practice. *Economic Record*, 81(253), pp.166-176.



21. Spulbar, C., Birau, R. (2019). Emerging Research on Monetary Policy, Banking, and Financial Markets, IGI Global USA (formerly Idea Group Inc.), 322 pp., ISBN13: 9781522592693, ISBN10: 1522592695, EISBN13: 9781522592716, DOI: 10.4018/978-1-5225-9269-3.
22. Spulbar, C., Nițoi, M. (2012). Comparative analysis of banking systems (Sisteme bancare comparate), Sitech Publishing House Craiova, 526 pages, ISBN 978-606-11-1994-3.
23. Spulbar, C., Nițoi, M., Stanciu, C. (2012). Monetary policy analysis in Romania: A Bayesian VAR approach. African Journal of Business Management, 6(36), 9957-9968.
24. Spulbar, C., Nițoi, M. (2013). Monetary policy transmission mechanism in Romania over the period 2001 to 2012: a BVAR analysis. Scientific Annals of the "Alexandru Ioan Cuza" University of Iasi ~ Economic Sciences Section~, 60(2), 387-398.
25. Stiglitz, J., 2016. What is wrong with negative interest rates? Project Syndicate, 13.
26. Tavlas, G.S., 1993. The 'new' theory of optimum currency areas. World Economy, 16(6), pp.663-685.