THE EUROZONE VS. THE OPTIMAL CURRENCY AREA THEORY - SURVEY OF THEIR THEORETICAL FRAMEWORKS AND POLITICAL BACKGROUNDS

Mikhail Raev, University of Sofia "St. Kliment Ohridski"

Abstract: *The paper surveys the development of the Optimal Currency Area theory and the Economic and Monetary Union. After a close examination of how Robert Mundell arrived at the former theoretical framework and its further elaboration by several economists, the paper draws the attempts at European economic and monetary unification. Based on the report* One Market, One Money *(1990), the author concludes that the economists of the European Commission did not follow the OCA theory, but used several contemporary monetary and macroeconomic findings to construct the theoretical framework behind the EMU.*

Keywords: Optimal Currency Area theory, Economic and Monetary Union

JEL: E42; E62; N01; N14

1. Introduction

The present report will address the issue of whether the Optimal Currency Area (hereafter OCA) theory is used in the construction of the Eurozone.[*] Hence, we shall deal with the question of whether their theoretical frameworks overlap and if they match at some points whether it was due to a purposeful copying and borrowing, or whether these matches are of accidental provenance. Finally, we will touch upon the issue of the economic theory behind the European Economic Communities (hereafter EEC) and the Economic and Monetary Union (hereafter EMU).

2. Notes on methodology

In the paper, several research methods will be employed. We shall examine the historical background of the OCA theory as well as the theoretical discourse that precipitated its emergence. Next, we will explore the political circumstances and considerations over the twentieth century that led to the emergence of the EMU in 1999. Then, we will investigate the report *One Market, One Money* and will relate its conclusions to the OCA theory. Finally, we will present the theoretical advancements of the OCA theory in response to the theoretical discussions among economists, which in turn were following the political processes and decisions in the second half of the twentieth century.

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3. Development of the Optimal Currency Area theory.

The OCA theory which caused in-depth discussions among the economists between the 1970s and the 2020s was formulated by Robert Mundell in his seminal study published in 1961. Mundell aimed to assess the arguments of Tibor Scitovsky and George Meade on whether the established EEC would be a successful or unsuccessful economic experiment. In Scitovsky's view expressed already in 1956, a planned common currency would allow greater capital mobility, but more efforts should be placed to legally ease labour mobility within the geographic borders of the EEC. (Scitovsky, 1956, p. 71-91; Scitovsky, 1957, p. 18-44) In Meade's opinion, the post-WWII economic background does not facilitate the emergence of a common currency due to the lack of labour mobility. Hence, a system of flexible exchange rates would be much more appropriate to achieve an equilibrium in the balances of payments and internal economic stability. (Meade, 1957, p. 379-396)

Mundell decided to join this theoretical discussion and examine the economic background behind the optimal currency areas by comparing the economies of the USA and Canada. The future European EMU was foreseen to mirror them. In Mundell's view, optimal currency areas are geographically defined and encompass various states with a shared currency. The first theoretical construct of Mundell was about the OCA with stationary expectations. He defined three terms for its optimal functioning: labour mobility, capital mobility, and flexibility of prices and wages within it. (Mundell, 1961, p. 657-665) Towards the end of the 1960s, Mundell examined the positive aspects of the EEC and single community currency in a lecture given in New York in 1969. (Mundell, 1969) In his third piece of research, he extended the theoretical framework by assessing the terms of optimality in a currency area with international risk sharing. Mundell concluded that the wider zones would better absorb asymmetric shocks than individual countries since they share a common currency. (Mundell, 1973, p. 114-132)

For the present report, I would like to pay attention to Robert McKinnon and Peter Kenen. The former analysed the optimal currency areas in 1963 and proposed the areas' degree of openness and the economy's size are of importance as OCA criteria. He also pointed out that not only the geographic mobility of factors of production is crucial for the OCA functioning but also the industry-wise mobility of these factors. McKinnon argued that if exchange rate changes are used to offset the effects of domestic demand shocks on the current account, price instability is bound to increase in line with the degree of openness (or the share of tradable goods in production) under a floating rates regime. (McKinnon, 1963, p. 717-725) Peter Kenen offered in 1969, one further term an OCA should fulfil. In his opinion, the OCA needs a system for risk sharing and risk transmission such as a shared fiscal mechanism that would redistribute the fiscal transfers across those member-states of the OCA with stationary expectations that are affected by the deterioration of the terms identified by Mundell in 1961. (Kenen, 1969, p. 41-60) Kenen is important as an economist since he helped the European Commission in writing the report *One Market, One Money* in 1990, which was an evaluation of the potential benefits and costs of forming the EMU. The assessment report was a result of the Delors plan.

Many economists have added other terms of optimality such as flexibility of prices and wages, factors of production mobility, financial market integration, shared degree of openness of participating countries, production and consumption diversification, similar inflation rates, fiscal integration, political integration, and business cycles synchronization of composing states. Mongelli and Simeonov have described these upgrades of the OCA theoretical framework in detail. (Mongelli, 2008, p. 2-3; Симеонов, 2018, p. 116-147).

4. Emergence of the European Economic and Monetary Union

In 1929, Gustav Stresemann proposed the establishment of a European currency that would bring together the winners and losers of WWI as well as a plenitude of new states that emerged after the disintegration of the German, Astro-Hungarian, Ottoman, and Russian Empires. (James, 2012, p. 33) Given the Great Depression and the issues of the gold standard, this idea was left for better times by the League of Nations.

The next proposal for a single European currency was offered by Marius Holtrop, Governor of the De Nederlandsche Bank (1946-1967) in 1957, but the governors of the National Bank of Belgium, Bank of France, and Deutsche Bundesbank insisted that the EEC was not ready for this form of monetary integration. (James, 2012, p. 44) This proposal is contemporary to T. Scitovsky and G. Meade deliberations on the necessary terms for the viability of such a union.

In 1969, the European Commission offered to the member-states of the EEC to create among themselves a monetary union for *greater co-ordination of economic policies and monetary cooperation*. (Commission memorandum, 1969) This report most likely prompted the studies of Mundell and Kenen dated that year. The proposal was followed by the decision of the Heads of State at their meeting in Hague in 1969 to draft a plan in stages to establish it by the 1970s.

The groups of experts headed by Pierre Werner, Prime Minister and Financial Minister of Luxembourg, assessed all ideas and proposals put forward until 1970. In October 1970, the group offered the first tangible plan to lay down the foundations of the European EMU in three stages until 1978. The first stage aimed at the coordination of economic and monetary policies between the member–states, as well as a reduction of their currencies' fluctuations. Following the abolishment of the Bretton Woods system in August 1971, ten industrial countries, namely Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom, and the United States reached the Smithsonian Agreement in December 1971, which set bands of ±2.25% of their exchange rate fluctuations against the US dollar. Apart from Luxembourg, all European Economic Community member-states took part in this agreement. Since the imperfection of the established system, the EEC member states and three other European states reached the Basel Agreement in 1972, which established a system known in Economic history as *A snake in the tunnel* that limited bilaterally the exchange rate margins to 1.125% so that the maximum change of any two currency towards each other would be 2.25%. (Eichengreen, 2019, p. 146–149)

The oil shocks in the 1970s put the European economic and monetary unification project stemming from the Werner Report to a halt. The project was restarted in 1988 when the twelve governors of member-state central banks chaired by the President of the European Commission, Jacques Delors, formed the Committee for the Study of EMU. It aimed at proposing a new timetable and subsequent stages of economic and monetary integration. A year later, Delors submitted a report and outlined the three stages of the establishment of the organisational infrastructure. During each of them, new institutions and organisations were created starting with the European System of Central Banks, continuing with the European Monetary Institute, and ending with the European Central Bank. Stage one (1 July 1990 – 31 December 1993) included the abolishment of exchange rates and capital controls and liberalisation of capital movements within the EEC. The Treaty of Maastricht in 1992 put the establishment of the EMU as a formal aim and introduced several economic criteria for swift convergence of the European economies such as inflation rates, interest rates, and exchange rate stability.

Stage two was marked by the establishment of the European Monetary Institute in the beginning, i.e. 1994, and ended with its transformation into the European Central Bank. To

strengthen the convergence criteria, the European Council adopted the Stability and Growth Pact to align the fiscal policies of its member-states in 1997. Next was the calculation of the exchange rate between the euro and the national currencies of eleven countries that covered convergence criteria codified in the earlier strategic documents. Stage three started in January 1999. It is an ongoing process of inclusion of other European Union states into the EMU.

5. *One Market, One Money*'s critical notes on the OCA theory

A follow-up of the Delors report was a report entitled *One Market, One Money* prepared by the European Commission's General Directorates for economic and financial affairs, national economies, and economic evaluation of Community policies. It included their assessment of the benefits and negatives of the European monetary integration. The European Commission specialists received support from a plenitude of external experts working within the national central banks and at the International Monetary Fund. The authors consulted also a plethora of leading economists working in academia who contributed to the report such as Michel Aglietta, Richard Baldwin, Peter Bofinger, Anton Brender, Ralph Bryant, Jean-Michel Charpin, Alex Cukierman, Andrew Hughes-Hallet, Peter Kenen, Willem Molle, Manfred Neumann, Richard Portes, Andre Sapir, Niels Thygesen, Frederik van der Ploeg, Paul Van Rompuy and Charles Wyplosz.

The report made many observations regarding the OCA theory such as that no applicable theory for assessing the costs and benefits of the EMU exists. Despite its promising perspectives, the OCA theory offers a too narrow and anachronistic framework of analysis. The developments in micro- and macroeconomics in the 1970s and the 1980s have not led to a unified theory of monetary unions. Yet, the authors identify the building blocks for a comprehensive analysis of the EMU.

The report expects four major sets of permanent effects from the EMU: on the one hand, the microeconomic efficiency gains from the removal of exchange rate uncertainty and transaction costs would lead to a permanent increase in output; on the other hand, macroeconomic stability effects from the elimination of intra-Community exchange rates and the policy discipline in the monetary and fiscal fields would impact on the variability of output, prices, and other macroeconomic variables. In third place, the regional equity effects would arise from the EMU's distribution of costs and benefits among its member-states and their regions. Lastly, some external effects would come to light due to the wider international role of the European currency unit accompanied by tighter international policy coordination and likely changes in the international monetary regime. In addition to these, two important macroeconomic effects are expected in the transition to the EMU. Firstly, the lack of a unified theory and the diversity of effects involved imply that an attempt to make an overall quantitative assessment of the EMU would be meaningless. Secondly, in comparison to alternative benchmark exchange rate regimes, i.e. financial market autarky and free float exchange rate, the EMU is expected to yield significant benefits. Assessing the risks of instability in Stage I such as the monetary system reverting to some mix of capital controls or reintroduction of the crawling peg as in the early European monetary system, the report asserts that the net benefit of the EMU would only be greater. (One Market, One Money, 1990, p. 31)

Further on, the authors expand their comments on the OCA by pointing out that it is a theory that presumed an interchange between, on the one hand, the EMU benefits arising from monetary integration and, on the other hand, the costs incurred when the exchange rate is lost as an adjustment instrument. They also point out that an actual and complete outline of these costs and benefits is not present in the OCA theory, since some of the benefits are assumed

without any further investigation, while others are missing. Furthermore, the report insists that the theoretical framework of the cost analysis is fractional and old-fashioned. The economic theory has evolved substantially with many significant theoretical novelties since the early 1960s, but a revision of the OCA theory has not been performed. Therefore, the report concludes that the analysis of the EMU does not need to be limited to the rather narrow approach of the OCA theory.

The more detailed critical notes on the OCA theory are provided in box 2.3 which encapsulates the main points, as follows: Firstly, Mundell simply assumed the microeconomic benefits of a monetary union without further research being conducted. Secondly, while labour mobility was lower in the EEC than in the USA between the 1950s and the 1980s, physical and financial capital mobility intensified in this period. Hence, Ingram's argument is still valid that international financial integration is of utmost importance as an alternative adjustment channel for cross-country financing. (Ingram, 1959, 619-632; Ingram, 1973, 1-33) Thirdly, while Mundell's theoretical framework is based on the rigidity of prices and wages, and indeed they possess a feature of stickiness, markets do adjust which is missing in his theoretical construct. Next, inefficiencies are inherent in the flexible exchange rates because of the instability of exchange markets and the non-cooperative or suboptimal policies of individual countries. In fifth place, the OCA theory ignores the issues of policy credibility which are of material significance as emphasised in the macroeconomic theory developed in the 1970s and 1980s. Finally, the OCA theory regards the whole geographic area as a small country in a global world but omits the external effects of monetary integration. (One Market, One Money, 1990, p. 46)

The report reiterates McKinnon's argument that exchange rate changes offset the outcomes of domestic demand shocks on the current account. Price instability tends to increase with the degree of openness in a floating rates regime. Hence, this is why a number of countries with small economies introduced peg and crawling peg systems in the 1970s and 1980s. The Report also reiterates Krugman's argument built upon this observation that the costs of monetary union decrease while benefits increase with the intensity of trade within the geographic area. (Krugman, 1990) Next, it also repeats the main findings of Kenen that depending on the degree of product diversification one may argue that countries characterized by a low degree of diversification should retain exchange rate flexibility to offset product-specific shocks. However, those countries with a higher degree of product diversification, by averaging product-specific shocks, could compensate for low labour mobility. The report insists that in practice EEC countries typically had highly diversified industrial structures in the 1980s.

The report concludes that the OCA theory offers useful points to be critically assessed but it cannot be considered a complete theoretical framework to assess the costs and benefits of the EMU. When the authors of the report applied a number of statistical models borrowed from the International Monetary Fund, they found out that the empirical applications of the OCA theory are scarce and inconclusive. They admitted also that there is no ready-to-use theory for assessing the pros and cons of the EMU since the recent developments in the 1970s and 1980s in micro- and macroeconomics have not led to unified all-applicable theory. These theoretical advancements allow however to distinguish the above-mentioned four major categories of enduring positive effects of such unification. First, they are macroeconomic efficiency gains from the abolishment of exchange rates among the participating states and these will lead to a permanent increase in the output. Secondly, the removal of exchange rates within union member-states will result in macroeconomic stability effects since they have to be balanced by monetary and fiscal policy discipline. These will clearly impact the output, prices and other macroeconomic variables. Next, such a union will have regional equity effects since the costs and benefits of the EMU will be re-distributed among its member-states. Finally, the EMU will

have an external effect that will result in a wider international role of its currency in commerce and as a reserve currency.

6. Conclusions

So, we may agree with the analysis presented in the report *One Market, One Money* that the OCA theory is not applicable to the Eurozone since it has a number of flaws and shortcomings. The report also makes it clear that there is no comprehensive theory behind the EMU. The common features between the EEC and the OCA theory are the mobility of various forms of capital and labour, but they were already well articulated in the Schuman Declaration in 1950. The single currency was viewed as a vehicle towards a more complete economic integration.

Table 1. Timetable of European economic and monetary unification political process and the theoretical advancements of the OCA theory

Years	Political process	Theoretical discussion in the economy	OCA theory advancements
1951-1957 1957	From the Treaty of Rome to the Treaty of Paris Marius Holtrop, European Forum Alpbach	Scitovsky, T. (1957) "The Theory of the Balance of Payments and the Problem of a Common European Currency", Meade, J. (1957) "The Balance of Payments Problems of a European Free-Trade Area",	Mundell, R. (1961) "A Theory of Optimum Currency Areas". McKinnon R. (1963) "Optimum Currency Areas".
1969-1974	Werner Report	Mundell, R. (1969) "A Plan for a European Currency". Kenen, P. (1969) "The Theory of Optimum Currency Areas: An Eclectic View". Grubel H. (1970) "The Theory of Optimum Currency Areas". Fleming J. (1971) "On Exchange Rate Unification".	Mundell, R. (1973) "Uncommon Arguments for Common Currencies".
1989-1992	Delors Commission – Treaty of Maastricht	Eichengreen, B. (1990) "One Money for Europe? Lessons of the U.S. Currency Union". Krugman, P. (1990). "Increasing returns and economic geography".	European economy (1990) "One market, one money. An evaluation of the potential benefits and costs of forming an economic and monetary union".

I would like to point out that each time the policy-makers began discussing European Economic and Monetary Unification a number of scholars presented their expert opinions. Thus, Treaty of Rome established the EEC (1957) in a continuation of the Treaty of Paris (1951). It is this process that has inspired the Scitovsky-Meade discussion which in turn provoked Mundell's OCA theory. During the preparation and shortly after the Werner Report (1969-1974) – one finds that many economists such as Mundell, McKinnon, Kenen and others explored the OCA theory as a useful tool for the European Economic and Monetary Integration. When the third attempt at monetary unification was initiated with the Delors Commission, the arguments of Barry Eichengreen (1990) who insisted that EEC is not an OCA when compared with the USA were refuted by the authors of the *One Market, One Money* report who argued that that the OCA theory is irrelevant to the European EMU and did not engage with Eichengreen's arguments in detail.

Finally, the critical notes of the authors of *One Market, One Money* report serve a lesson as it is indeed an irony of life that Robert Mundell was awarded the Nobel Prize for Economics in 1999 for the OCA Theory rather than for the Mundell-Fleming Model of a small open economy and the Mundell-Tobin effect outlining that the nominal interest rates would rise less than the rate of inflation, despite their extensive outlines in macroeconomic lecture courses.

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