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THE THEORIES OF OPTIMUM CURRENCY AREA: A CRITICAL REVIEW*

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ABSTRACT

The subject matter of monetary unions has long attracted academics; yet the debate based on the theoretical grounds has commenced only after the publication of Mundell's Seminal Paper in 1961. The title of the article was, "A Theory of Optimum Currency Areas.", through which Mundell studied the optimal conditions or criteria required for countries to join a currency area with the others with the intention of linking their monetary policy that of other members of the monetary union. The theoretical argument continued after the publication of Mundell's article; the argument picked on a new flavor by the extensive views of M McKinnon (1963) and Kenen (1969). Each view respectively focuses on the likely costs and benefits of participation in an Economic and Monetary Union scheme. The theoretical debate started in 1960s incidentally paved way to discussion of the feasibility of Economic and Monetary Union in Europe as early as 1969 that marks the announcement of Werner Report. Werner Report (1969) focuses on the intention of gradual realization of a Monetary Union for EEC countries. Bretton Exchange Rate Regime came into existence immediately after Second World War. It is widely held that this regime has been instrumental in providing stability to the global economy from the time it came into force right until the late 1960s.

Key Words: Exchange Rate Mechanism, Optimum Currency Area, Economic and Monetary Union, European Union, Fixed Exchange Rate Regimes.

ÖZET

Parasal Birlik konusu akademisyenleri çok uzun bir süredir meşgul etmesine karşın bu alandaki teorik çalışma Mundell'in 1961'de yayınlanan ve çığır açan makalesiyle başlar. Mundell'in makalesinin başlığı, "Optimal Para Alanı Teorisi" olup; bu makalede Mundell bir ülkenin, para politikalarını birleştirme niyetiyle diğer ülkelerle bir Parasal Birlik oluşturulması için gerekli en uygun (optimal) koşulları ya da kriterleri incelemektedir. Bu alandaki teorik argüman Mundell'in makalesinin yayınlanmasından sonra da devam etti. Teorik çizgi, bu yaklaşımı geliştiren ve yenilik getiren düşünceleriyle McKinnon (1963) ve Kenen (1969) ile devam etti. Bu görüşlerin hepsi de sırasıyla, bir Parasal Birlik projesine katılımla elde edilmesi muhtemel fayda ve maliyetler üzerinde yoğunlaşmaktadır. 1960'larda başlayan teorik tartışmalar 1969'da Avrupa'da Parasal Birliği ele alan Werner Raporunun yayınlanmasından sonra, Avrupa'da Ekonomik ve Parasal Birliğin gerçekleşebilirliği tartışmasını da başlatmış

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oldu. Werner Rapor'u (1969), Avrupa Ekonomik Topluluğu içerisinde, Parasal Birliğin aşamalı olarak gerçekleşmesi niyeti temeline dayanmaktadır. İkinci Dünya Savaşı sonrasında hayata geçirilen Bretton Woods rejimi; kuruluşundan 1960'ların sonuna kadar olan zaman dilimi içinde küresel ekonomiye istikrar sağlama yolunda önemli bir araç olduğu gerçeği genel kabul görmektedir.

Anahtar Kelimeler: Döviz Kuru Mekanizması, Optimum Para Alanı, Ekonomik ve Parasal Birlik, Avrupa Birliği, Sabit Kur Rejimi

1-Introduction:

Although the general public conception is generally focused on rigid and more usual definition of Monetary Union in terms of single currency adopted by the member states; Economics also includes a rather broader definition of Monetary Union, that is currency union with irreversibly fixed Exchange rates where there is no option for flexibility for a realignment in bilateral Exchange rates; nor there is a room for flexibility that would allow the bilateral rates within certain bands. The theoretical arguments on optimum currency areas speak of such a theoretical premise to evaluate their applicability and supposedly hold Exchange rates constant between members of the currency union. However; sustainability of such regime in the long run seems to be difficult or even unlikely. The major Applications of the past can be brought forth as important evidences for the limitations of fixed Exchange rate regimes even though they mainly had some certain degree of flexibility. The crisis and difficulties emerged in such regimes were the events at times that limited their successes. Bretton Woods, Snake in the Tunnel and European Monetary system are the major regimes that had dominated certain monetary regions in the past with a label of fixed-exchange rate regimes; each had particular preferences for flexibility, given the circumstances of the time and the nature and applicability of the rules within which these regimes were set to operate.

On the other hand; uncoordinated policies with different directions and/or objectives are not conducive to the operations of successful monetary Union projects. On this ground, experiences of major monetary arrangements of the past explicitly in support of the above mentioned proposition. It has been proven that outright fixed Exchange rate regimes cannot be sustainable in the long-run; that is the main reasoning that inspires academics and politicians for moving forward to a Common Currency regime in expectations of reaping the full benefits of economic integration. In fact; there have been several semi-fixed Exchange rate applications of the past, such as Bretton Woods Monetary System, European Monetary System. At the times, there have been spells of stability and success; and at other times, instability and crisis; in fact non-of the likewise regimes have been transformed to a fully-fledge Exchange rate regime as a long-run application. The European Monetary System, given the 32 years of experimenting with the semi-fixity, has been able to capture stability towards the end of the process and transformed into an irrevocably fixed Exchange rate regime by the announcement of conversion rates prior to the commencement of Economic and Monetary Union (EMU) in Europe.

When it comes to the subject of modelling an ideal EMU, many advocate the redistributive system like that of USA. It is also supported that acquisition of such a

model for Europe would help to cope with wipe global crisis, or else-asymmetric shocks within its territory .
Such a radical reform within the system may not be as efficient as it is in the USA at the outset, but allowing metamorphoses to evolve as a successfully operating shock-absorber mechanism in the future. Yet, redistribution aspect is not something new in the EU agenda, in fact early Mac Dougall report (1979) covers this aspect as a policy option.

Mundell, has pioneered the theoretical Argument on optimum currency area; the debate continued about a decade on the search for appropriate criteria that constitute prerequisite or conditions for optimal application of Monetary Union; Mundell is followed by P. Kenen and McKinnon in this respect.

This paper is an attempt to study Optimum Currency Area Theories from critical and comparative perspective with which the limitations and shortcomings will also be highlighted. The fact that Europe has been undergoing a grand process of Economic and Monetary Union by forming what is known as Euro-Zone; the assessment of which can be measured, at least tentatively, by simple application of the approaches of the optimum currency areas. The Euro-Zone has been undergoing economic and financial crisis in the face of global fall down; this critical moment in time makes the incorporation of the theories of the optimum currency Areas into European Integration areas more and more relevant and worthwhile. It is hoped that some lessons can be drawn from the process where there exist large potential for public debate in the face of growing public resentment within the boundaries of EU.

The scepticism of the past over the issues must continue in the light of Euro-wide fiscal and economic crisis and I believe the argument of OCA must gather a new momentum at this stage, the EMU Project must be analysed in connection with the Mundelian paradigm as well as other approaches in this respect. In fact, it is crisis time where plenty of questions being raised about European Monetary stability and future of Euro, I believe it is time OPA theories are revitalized as a mirror for objective treatment of the Euro wide issues in academic circles.

Canadian economist Mundell, is renowned for the pioneering article optimum currency area with which he defends that factor mobility is key to qualification for a monetary union. However, implicit in his statement, factor mobility is only restricted to the currency region as a means of adjustment. Given that; in terms of the restraining demand shocks; the EU countries constrained by them will face the challenge of relying merely on intra-union labor mobility to fence off the destabilizing effects.

Theoretical argument on Optimum Currency Areas (OPA) starts with Mundell's (1961), widely known pioneering article on the issue. Mundell is followed by Mc Kinnon (1963) and Kenen (1969). The interest in the assessment of cost and benefits of currency unions were renewed in the realm of EMU. The question of what constitutes an Optimal Monetary Union and connected theoretical and political issues has received a great deal of attention in the academic circles. On this account, review of the subject can be found, among others, for example, McKinnon, Ronald I. (1963), McKinnon, R. I. (1969), Melitz, J. And Weber, A.(1997), Melitz, J. (1995), Mason, P. R. And Taylor M.P. (1993), Mason, P. R. And Taylor M.P. (1994), Lafrance R. and St-Amant, P. (1999).

Fundamentally, the contribution of OCA theories and further discussions and analysis helped the challenge of selecting appropriate Exchange rate regime and formation of Economic and Monetary Union in Europe.(Horwath, J.2003). On the issues of advantages and disadvantages of formation of EMU in Europe, among other themes, created a substantial literature; for example, Cohen, D. And Wyplosz, (1989); and Canzoneri, M.B., and Rogers, Carol Ann (1990); Eichengreen,B.(1990), Bayoumi, T. and Eichengreen, B. (1994), Bayoumi, T. And Eichengreen, B. (1996), Eichengreen,B.(1992), Bayoumi,T. And Eichengreen,B.(1997), the latter creates an Optimum Currency Index for European Region. On the same argument, Canzoneri, M.B. and Rogers, C. A. (1990), Challenges the optimality question for the European Community. The gain to be made from EMU examined by Bofinger , (Bofinger, P., 1994), who challenged that OCA theories must become theoretical ground for quantitative research in this field. The relevance and impact of OCA on disintegration has been studied by Fidrmuc, Howarth, and Fidrmuc (1999) and Aslund (Anders Aslund;2012), the former deals with disintegration of Czechoslovakia and the later focused on the case of disintegration in Eastern Europe and their adaptation process to EU. Jarko Fidrmuc, (2001), focuses his attention on intra industry trade and Monetary Union in Europe in relation with OCA.

The structure of this article is as follows:

Section I introduces the approaches on Optimum Currency Areas. Section II is an in-depth study of the Mundelian Criteria on Optimum Currency Areas. Section III examines other Criteria that followed Mundell's. Section IV attempts to link optimum Currency areas argument to the ongoing process of Economic and Monetary Union in Europe. The challenges of qualification for Optimum Currency Areas accounted for in the European context in this section. Conclusion section sums up the results.

2.Theoretical approach on Currency Areas

2.1. The Traditional Theory Of Optimum Currency Areas: A review of Mundelian Approach

From 1960s onwards; on the both part of the Atlantique, a question has become increasingly fashionable among the economics academics. The debate was to know whether there had been an opportunity to establish a fixed exchange rate regime among the West European Countries. in the USA, the problem was conceived as "the Optimum Currency Areas", which presumably was not accidental but an outcome of a progressive development in the sphere of world-wide integration movements.[2]

Optimum Currency area approaches have long been important tools to measure the pros and cons of the Monetary Union for the group of countries depending on the assumptions made on the circumstantial states of the constituent economies. Optimum Currency approaches try to establish under which circumstances it is appropriate to form Monetary Union among a group of countries.

[2] On this, see, Etudes et travaux de *Y* Insitut Universitaire de hautes etudes international, 1971

In a way; if the conditions prescribed are satisfied; the conclusion is to opt for Monetary Union among those countries in the group. The revival of interest in the analysis of monetary integration has occurred in the late 1950s and 1960s considered to be a by product of customs unions.[3] According to *Hitiris* (1988) the debate about the conditions for efficient monetary integration starts with the theory of optimum currency areas.

The theories of optimum currency areas try to explain which regions or countries would be linked optimally in a currency union. Another concern of the optimum currency area theory is that whether a single currency would be more advantageous for the members of the currency union than the application of the different forms of the exchange rate systems. Moreover, The aspect of the *'price stability'* has been regarded as crucial component in deciding to form currency areas especially from early 1980s onwards. It was viewed as a primary criterion in selecting suitable countries for the membership in the currency area.[4] Optimality is therefore believed to be measured mainly by fixed target of the price stability and therefore a prerequisite for membership in a currency area.[5] Nevertheless; sets of different criteria might have been adopted to define 'optimality' in a currency union those of which might reach to different theoretical conclusions and recommendations for the membership of a country in a currency area.[6]

For any discussion on optimum currency areas, it is necessary to give a definition of the term "currency area". *Mundell* defines it as 'the domain in which exchange rates are fixed' (Mundell, 1961: 657). However; upon reading his article attentively, it becomes apparent that 'a currency area' can not be considered in the same line as a fixed exchange rate system. Mundell was only concerned with irreversibly fixed exchange rates without any given flexibility which in that sense distinguishes Bretton Woods System and European Monetary system from his distinct definition. The interest in the Currency areas has been revived after the challenge of monetary integration in Europe. Among the most notable theoretical contributions are the papers by *Mundell* (1961), and *McKinnon* (1963). Their analysis mainly focused on asymmetric real shocks, because of the simplified assumption which considered that

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[3] See for example on this, *J,E. Meade* , *The Theory of Customs Unions* North Holland publishing co., Amsterdam 1956 and *T. Scitovsky*, Economic theory and Western Union integration, A. Urvin, London, 1955.

[4] See Maastricht Treaty for the relevant criterion for the qualifîcation for EMU.

[5] On this, see for example, *Eichengreen* (1992), *De Grauwe and W. Wanherbeke* (1993), *Bini Smaghi and Vori* (1993).

[s] For definition of such distinction on the type of the criteria see;

a-J.E., *Meade,* (1955), *The theory of international economic policy,* Oxford vol.2, Trade and Welfare b-*R.A.Mundell,* (1961), 'A theory of optimum currency areas', *American Economic Review* (September).

c-*R.A.Mundell,* (1961) [4]A theory of optimum currency areas', *American Economic Review* (September).

d- Ohlin, B., (1967), *Interregional and International Trade$_y$* rev, ed., Cambridge, Mass.: Harvard U.P.

each area produce only one product.

The starting point for *Mundell's* analysis is the consideration for an asymmetric shock that supposedly upsets the demand structure given in a two country comparison. The assumed disturbance created by a demand shift from region A to region B where countries assumed to have produced merely a single good. According to this setting; the outcome of the adjustment process is mainly determined by the assumption that the price level and nominal wages are inflexible. Another important assumption is that labor is completely immobile between the regions A and B, in a currency union such a demand shock has the initial impact of causing unemployment in region A and inflation in region B.

In *Mundell \s* formulation, as a mechanism to respond, everything depends on factor mobility concept. At the time of the asymmetric shocks, the factor mobility in general, labor in particular, viewed as a compensating mechanism. In the absence of exchange rate instrument being used as an adjustment mechanism, If there is a demand shift across the countries, unemployment will be observed where demand has been reduced. *Mundell* maintains that if there is sufficient labor mobility towards the country where demand has been increased; the unemployment problem in the other will be resolved. *Mundell* (1961) explains in his famous article:

"It is patently obvious that periodic balance of payments crises will remain an integral feature of the international economic system as long as fixed exchange rates and rigid wage and price levels prevent the international system from fulfilling a natural role in adjustment process."

In analysing the disequilibrium case, *Mundell* appears to have mainly focused on factor mobility as an entity to redress the balance. It is suggested that there exist similar grounds on the Mundelian assumptions on optimum currency areas and Ricardian international trade theory. On these similarities, *Magnifico* (1973) draws attention to the following points:

"...Thus what *Mundell* in fact does is to relax for monetary the assumption which *Ricardo* built the theory of International trade as a body distinct from the general theory of exchange: Namely, that productive factors are mobile internally but immobile "internationally."

In an attempt to clarify the integral features of the optimum domain of a currency area, *Mundell* place great significance on the global developments in this respect. *Mundell* (1961) maintains that "Certain part of the world are undergoing process of economic integration and disintegration, new experiments are being made, and a conception of what constitutes an optimum currency area can clarify the meaning of these experiments." His interest in a possible European Monetary integration goes back as far as the time this article was written. Furthermore; his interest and work on the optimum domains of currency areas linked him with the process of the progressive European Monetary integration.

Williams (1929), as regards the extent of the factor mobility, as early as I920s, quotes as follows:

"The question whether we have, have ever had, or ever likely to have the same mobility factors be same as within trading countries ceases to be the question on which the entire analysis must turn and takes its proper place as one, only, among a number... it is not Ricardo's immobility premise that stand most in need of defence, but rather his mobility premise, the assumed free movement of factors within countries..."

Mundell 's approach can be criticised on the same manner as the International Trade Theory assessed the Ricardo's stand on factor mobility. *Mundell* (1961) is notable on the considerations that optimum currency domain may not only be questioned across the countries but within the sub-region of a sovereign State. Therefore; his argument can rather be generalized as exclusively devoted to the regional consideration rather than solely international assuming that so long as the mobility is low between the sub-regions of a country, even such a country would not be regarded as an optimum currency area.[7] Regarding this argument, *Mundell* (1961) quotes as follows:

"The optimum currency area is the region... If factor mobility is high internally and low internationally a system of flexible exchange based on national currencies might work effectively enough. But if regions cut across national boundaries or if countries are multi regional, then the argument for flexible exchange rates is only valid if currencies are reorganised on a regional basis "

The main criterion supported by *Mundell* is labor mobility as an effective means of dealing with the asymmetric shocks. However, in the absence of such mobility, and those shocks emerges between the two sub-regions of the same currency area will face the problem of unemployment. Mundell (1961) further elaborates that: "Flexibility would be of no great avail for the purposes of domestic stabilisation policy, while on this basis, the world is not an optimum currency area. If it could be divided into regions within each of which there is factor mobility and between which there is factor immobility. Then each of these regions should have a separate currency which fluctuates relative to all other currencies."

3.Other approaches on the theory of Optimum Currency Areas

3.1.Openness and Diversification

Briefly; traditional Optimum Currency Area approaches suggested four criteria for measuring whether regions would be qualified for currency area. These are; mobility in factors of production, flexibility of prices and wages, openness to trade and, product diversification. It is thereby suggested that regions with relatively close economies, small product diversity, price and wage rigidity as well as regions with low international mobility in labor and capital should not participate in Monetary Union schemes. In that sense, it is believed that they should rather remain in the flexible exchange rate system where cost of disturbances may be leveled off by necessary adjustments. Such a leverage for fine-tuning might be a desirable goal at times. In the *Mundelian* sense; in order that exchange rates flexibility derives the expected advantages of the adjustment; internal factor mobility must be held at a sufficient degree.

According to the *McKinnon's* view 'optimum' is used to describe a single currency area in which monetary-fiscal policy and flexible exchange rates can be used to carry out three objectives (McKinnon, 1963): Maintenance of full employment, maintenance of balanced international payments, maintenance of average domestic price

[7] For the assessment of the Mundellian approach, see, Magnifico, M., (1973)

level. In the given framework; the domain of the concern is not only international focus but has domestic implications as well.

The criteria for defining the optimum currency area, offered by *McKinnon* (1963) and *Kenen* (1969) refer to elements of the economic structure. *McKinnon* classifies, for analytical purposes, the goods produced by a country into tradable and non-tradable. By tradable goods he referred to exportables and importables. He argues that if the ratio of non-tradables to tradables is high, reliance on monetary» fiscal policy defer reducing domestic demand will cause higher unemployment: "The optimal currency arrangements may be to peg the domestic currency to the body of the non tradable goods....and change the domestic price of tradable goods by altering the exchange rate to improve the trade balance... The desired effect of the relative price increase in the tradable good is to stimulate the production of tradable compared to non-tradable goods and thus improve the trade balance": For him volatility in exchange rates is inappropriate choice for open economies: External exchange-rate fluctuations, responding to shifts in demand for imports and exports, are not compatible with internal price-level stability for a highly open economy..." (McKinnon, 1963: 720).

In an highly open economy which is close to full employment, considerable improvements in the trade balance must be implemented through the domestic absorption, i.e. real expenditure... in the other extreme case in which the economy is entirely open, i.e. all goods produced and consumed are tradable with prices determined in the outside world, the only means by which the trade balance can be ameliorated is to decrease the level of domestic expenditures while maintaining output levels. Alterations in the exchange rate will be entirely compensated by domestic price-level repercussions with no indication of improvement in the trade balance. If one moves from the perspective of the close economies to open economies, as an adjustment mechanism flexible exchange rates become less effective and more harmful to domestic price-level stability (McKinnon, 1963: 719).

While McKinnon stresses the importance of the degree of openness, *Kenen* focuses on the point of diversification (Kenen, 1969: 49):

"In my view, diversity in a nation's product mix, the number of single product regions contained in a single country, may be more relevant than labor mobility...A well diversified national economy will not have to undergo changes in terms of trade as often as a single single-product national economy. Links between external and domestic demand, especially the link between exports and investment, will be weaker in diversified national economies, so that variations in domestic employment 'imported' from abroad will not be greatly aggravated by corresponding variations in capital formation".

Kenen himself evaluates his point of view in respective levels. He draws attention to the point that production and export diversification can by no means ensure domestic stability unless there exists labor mobility sufficient enough to offset labor and capital depressed by the external disturbances. He maintains that if shifts in export demand occur due to the fluctuations in business cycle, the whole group of the exportable goods is likely to be hit as a consequence. Under these circumstances, export diversification is less likely to drive away imported instability. His conclusion on exchange rate ,choice is related to the main argument, the more diversified an economy, the more appropriate the use of fixed exchange rates will become. Attempts at discretionary use of monetary-fiscal policy would imply corresponding domestic instability.

3.2.Another Perspective: The National Propensity to Inflation

The National Propensity to inflation (NPI) linked to the various factors. It can be used in order to evaluate and comprehend the complexity of inflationary phenomenon, This kind of reasoning were seen necessary in terms of its explanatory power. The case for NPI in forming a domain for currency area becomes stronger when it is being related to the present day conditions. inflation is as often as at the centre of the economic policy debate as conventionally was. In most industrialized countries it is generally thought that inflation is the most urgent problem since it would be disastrous when reaching to the point where it is likely to hamper the stable working of the market mechanism. The optimal expectations of resource allocation are to be sacrificed in this respect.

This issue has gained great momentum at the time of the pressing for Monetary integration in Europe and initiating EMS that devised to establish exchange rate and price stability within the given framework that enabled members make gains from German stability. The situation in the EU in connection with the price stability prior to the EMU in general terms was as follows: There were the countries which were capable of establishing and maintaining stable growth very close to the potential rate. Their NPI was very low; price level would not normally increase above the level of 2.5 percent per year. On the other hand, another group of countries would be likely to observe that growth is accompanied by economic and social tensions with higher NPI implications. Some argues that inflation by a large is irrelevant in measuring the success of growth pointing out the view that sufficient growth performance has been reached by both inflationary and non-inflationary countries. However,) another view relates the optimality to the consistency with NPI. Digressions from the optimum rate defined in the restraint of the NPI would slow down the process of growth.

It is suggested that a single monetary policy would be effective only if the countries made up of the currency area has the similar pattern of the inflation. In a case where divergence of inflation rates were a striking feature, stabilization policy that is selected whatever it may be expected to be inefficient. Not only the optimal choice of the high inflation country would be altered but also the higher inflation country could face the cost of inflating away. From the optimality point of view, it is suggested that condition for an optimum currency area is the close level of NPI. It can be concluded in its capacity in accounting for qualification for an optimum currency area NPI provides a useful tool for comparison of stabilization policy implications for the process of monetary integration that signals divergence in inflation rates.

National Propensity to Inflation (NPI) emphasizes the convergence of inflation rates at a stable level conducive to the acceptable and sustainable level of growth. The EMS started to operate from 1979 till 1999 to the start of EMU in Europe has become instrumental in attaining price stability across the EU; in fact by a large, inflation rates have converged through German rates along with the exchange rate stability. On this account; EU by a large qualifies as an optimum currency area.

4.European Integration Process and Optimum Currency Area Approaches:

4.1.Monetary Stability, Economic Integration and Currency Unions: A General Overview:

The Keynesian tradition defends that zero inflation targeting could have harmful implications on the economic growth. *Haberler* (1961), *Cooper* (1987) and *Fellner* (1966) appears to be the advocates of flexibility as an exchange rate choice as a better alternative to fixed exchange rate regime or single currency areas. *Haberler* (1961) defends that within a fixed exchange rate regime, inflation or deflation turns inward or "bottled-up". *McKinnon* (1963) succeeds *Mundell* and further develops the theory of the Optimum Currency Area inherited from him, respectively advocates fixed exchange rate regime in open economies as a superior regime.

McKinnon (1963) states that the countries that are major trading partners should maintain a single exchange rate system because constant exchange rate adjustments are costly and inefficient. According to him; those blocks with a relatively small connection between them should rely much more on some system of flexible, even freely floating exchange rates to secure external adjustment. He assumed that exchange rate flexibility can only be used efficiently if the relevant price elasticities are high for the countries with little dependence.

While it is widely agreed that an exchange rate union would reduce uncertainty; another approach is being that when a country ties its exchange rate in a currency union, it cannot use monetary policy as a means of achieving its desired mix between inflation and unemployment. The Union Members are forced to accept a common inflation-unemployment combination other than their own preferences. Therefore some members should end up with more inflation then they had simply desired[8]. Despite the propositions of some theoretical approaches that advocated that there is no established steady inflation-unemployment trade off relationship, this has been resisted on theoretical grounds with some evidence that relationship holds at least for the short run. This reasoning draws the attention to the proposition that the countries in the short run should be prepared to face the transitory costs. This finding implies erosion in competitiveness which in turn could be transformed into recession and unemployment. Similarly; the countries with insufficient fiscal systems which depend on large revenues from money creation, simply seignorage revenues, may observe the contracting impact of adopting a common inflation. Monetary integration with more developed countries that enforces lower level of domestic inflation would possibly call far increases in tax rates or face the risk of considerable increase in fiscal deficit.

[8].Nolling, Wilhelm (1993), shows the situation in a two country model in a graphical presentation whereas common inflation level would be adopted after the Monetary integration both in Philipsian and, Freidman and Phelps approach. Additionally, on this, see Corden (1972).

4.2.Linking European matters to the OCA criteria:

In attempting to find out how and how often the shocks would be likely to occur in EMU, studies in this direction have generally chosen to compare the prevailing situation in EU to that of USA. For example, studies by Bayoumi and Eichengreen (1992) and *Eichengreen* (1992) have concluded that asymmetric shocks tend to be more frequent in the EC than in the US. This findings suggest that the European Union may find it costly to become a *Currency Union* from a macroeconomic viewpoint. In contrast to the above findings of the above studies, *Bini Smaghi and Vori* (1993) conclude that EC economies, especially six founding members, are more diversified than US in their production structures and thus are less likely to be subjected to asymmetric shocks.

As for the case of monetary policy shocks prior to single currency, country specific shocks were largely caused by lack of *sufficient level of coordination of national monetary policies, currency substitution and exchange rate movements.* The source of asymmetries that caused such shocks is expected to disappear when EMU is implemented with the implication of establishing single monetary policy. Official estimates by the *European Commission* (1990) indicate that this effect is likely to be significant.

Another significant issue linked to the EMU process is to question whether such high level of integration will promote product diversification and specialization in EU. As *Kenen* defends, in his contribution to the argument on Optimum Currency Areas, the more diversified the industrial structure of a specific country becomes, the less likely that 'industry specific' shocks would be transformed into 'country specific' shocks. The strengthening market integration may raise two contrasting issues in this respect. Given the fact that most of the Community trade consisted in 'intra-industry', broader integration will likely to promote more diversified product range, hence the frequency of country specific shocks emerges would likely to be reduced considerably. Conversely, *Krugman* (1993) maintains that the higher level of integration that EU would reach at after EMU would likely to increase regional specialization.[9] Increased regional specialization in turn could convert 'industry specific shocks' into 'regional specific shocks'.

Labor mobility, as suggested by *Mundell* (1961) considered as an important means of formulating alternative mechanisms against the asymmetric shocks in EMU. However; studies found that intra-European labor mobility is not sufficient enough to counteract such shocks. For example, in support of this, *Eicheengreen* (1992a) states that labor mobility in EC was limited and substantially smalller than was in the US regions. This findings suggest that so long as the degree of the labor mobility is far from sufficient, the labor movements across the EU will remain inefficient means of dealing with the asymmetric shocks in EU, So long as the labor mobility is not fully feasible, in the Mundelian sense, the conclusion is that the Europe is not an optimum currency area.

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[9] As the integration theory suggests, the notion of the increasing return to scale is likely to be prevailing condition in the EU single market thus gives way to eminent regional specialization.

4.3.Europe measured by the Optimum Currency Area

There are number of Works highlight the fact that Euro has not been an optimum currency area, before and after the Economic and Monetary Union. Each author might dwell on different sets of criteria for their own application fort he qualification but there are similarities however. From Mundell to Kenen, to Krugman, the optimum currency area criteria has been evolved, but not exactly being cut off from each other but rather each making some addition or elaboration hinted for the qualification for a currency area . Factor mobility is underlining feature of all, started with the Mundell, hinting at the labor and capital mobility. Openness is the another crucial factor postulated after Mundell, more open a country in its trade, less costly the taking part in monetary union is going to become.

Another approach on OCA is formulated by Sir Mc. Dougall (1977), named after him as McDougall Criteria. The idea that underlines his concept is to some extent can be considered as the mirror image of fiscal federalism conceptualized by Krugman, However a deeper review would suggest that the former is more comprehensive when it comes to eliminate economic adversities spread unevenly across the regions. Mc Dougall spot the differences in economic development among the members, therefore he ex-ante treats such unequal distribution not short-run or cyclical matter but long run or permanent. His prescription of redistribution policy indeed must involve European wide intervention through fiscal policy if not through monetary policy. Thus; he implicated the vitality of fiscal union. In order that income differences fade away, according to Mc. Dougall, income must be redistributed by federal fiscal authority from high income countries through the low income countries. When his point of view is theoretically analysed, after a certain period of time, through transfer policies, inequalities be eliminated; not only income disparities would be done away with but also structural differences would vanish. Hence, monetary union that emerged would be able to function without additional cost of redistribution of income.

When it comes to the subject of modelling an ideal EMU, many advocate the redistributive system like that of USA. It is also supported that acquisition of such a model for Europe would help to cope wipe global crisis, or else-asymmetric shocks within its territory. Such a radical reform within the system may not be as efficient as it is in USA on the outset, but allowing metamorphoses to evolve as a successfully operating shock-absorber mechanism in the future. Yet, redistribution aspect is not something new in the EU agenda, in fact early Mac Dougall report covers this aspect as a policy option.

Even fixed exchange rate regimes that are with limited systemic support to remain as a credible regime may be prone to inflationary outcome as the expectations about the sustainability of the rates may reverse over the time. *Corden* (1972) uses the example of the Snake in the Tunnel exchange rate regime that preceded the ERM, and dismisses such regimes as pseudo-union where the maintenance of the exchange rates becomes unsustainable due to lack of systemic support and monetary policy coordination.

Conclusion

The discussion of the Theory of optimum Currency Areas whether Mundelian or other; sheds some light on for academics and/or politicians in the spheres linked to choice of optimal regimes. As pointed out by many, and practiced by a great deal of others, selection of a fixed –version of exchange rates might be substantially beneficial than floating regimes. However: moving from the crucial conditions described by the approaches of the optimum currency areas; the more the given criteria are being met; the more beneficial the rigid exchange rates likely to become for the economy in question. For example; a country with a substantially high degree of labor mobility; openness ; high range of product diversification and sustainable level of N..P.I. will qualify for the like of above regimes.

As an alternative to Mundelian way of traditional analysis, while shifting the ground of theoretical argument from fixed exchange rate regimes to the operational EMU with single currency; the picture portrayed above becomes more vivid. Countries that have proven substantially high performance within the traditional criteria underlined above, could well qualify as a successful candidate for a prospective EMU membership and would be able to exploit full benefits after the accession.

The Europe has gradually achieved Economic and Monetary Union in 1999. The studies conducted in pre-EMU period marks the lack of labor mobility across the European Community countries; labor mobility is viewed as a vital aspect of Mundelian approach. It is still understood that the degree of present day labor mobility across the EU is far from satisfactory. In fact; the occurrence of the rapid spells of enlargement in EU has slowed down the process of efficient integration of European labor markets.

On the other hand; positive progress can be observed on other scores: Relative convergence of inflation rates; highly rated degree of openness in trade and acceptable degree of product diversification in many member economies of EU. Despite the fact that the countries joined the EU lately are still feeling the impulses of transition; the EMU process as a whole have helped to integrate the European Markets. This increased interest seems to prevail for more years to come in Europe in view of increased global competition and ongoing disturbances within the Euro Area in Europe.

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