

## **Reconsidering the theories of optimum currency area – a critique**

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### *1. Does optimum currency area theory still hold true?*

When Robert Mundell wrote his pathbreaking eight-page-essay on “A theory of optimum currency areas” in 1961, he triggered a never-ending wave of publications on this theme (cp. the overviews in Kawai 1987 and Demirbas 2002). He invented both a theory and a question, in fact more than one. His main interest seems to have been to pinpoint the conditions as to when fixed exchange rates are justified, when the intention is to conduct an effective common monetary policy for all parts of the ‘region’. The second question concerned the applicability to different economies using only one currency. He not only contributed to the long-standing debate about flexible and fixed exchange rates but also to the ‘optimal’ size of a currency area comprising several economies and states. His early answer was clear – optimum currency areas are small; there is seldom a case for monetary unions. Many followers found the questions he posed interesting, but by adjusting them slightly, different answers implied strong contrasts. Many found his early theory flawed and considered it a failure (cp. an early review: Feldsieper 1988); for others it became the conventional wisdom of international economics. Quite a few of Mundell’s successors called for the possibility of wider currency areas, as did the creator himself in the 1970s and later. Over the years,

the many twists and turns have culminated in a variety of contrasting theories.

It was mainly the progressing European integration that kept the interest in the old theory, but the failure of the Werner Plan (1970), the early attempt towards a European monetary union, made the theory appear ostensibly dead. Ironically, when the European monetary union finally did materialise, most observers regarded it as a non-optimum currency area according to Mundell's (1961) criteria. Furthermore, in structural terms the architecture of the European Union even stipulates the entry of strongly divergent economies to the EMU contradicting the 1961 criteria.

Alongside European monetary integration, the vagaries of the unstable global currency system, based on more or less floating exchange rates after the demise of the Bretton-Woods system, renewed the interest of developing countries in regional monetary cooperation, in currency boards and in dollarisation. The alternatives to an optimum currency area (OCA) are the use of exchange rates, but what is the appropriate exchange rate regime (cp. Driver et al. 2005)? Floating exchange rates implicate numerous problems, especially for small open economies severely indebted in hard currency. Flexible exchange rates have turned out to be much more volatile as compared to what most pro-flexible-rates economists believed at that time.

Today, after the experience of volatile exchange rates and so many currency crises in emerging economies, Mundell's early questions are still valid and more acute than ever before. Indeed, it seems that the issues are more relevant now than Mundell's first answer, which in retrospect proves to be a much too narrow approach. The need for a robust OCA theory as a guideline for monetary cooperation (cp. as a primer on this subject Prieue 2006) has not yet been satisfied.

In the following, I will take stock of the old theory, its rise and fall and its various turns. I attempt to track down tentative answers to four questions: (i) Can we draw on a robust modern theory of OCA when talking about regional integration? (ii) What is an OCA as compared to a currency (or monetary) union? What is an 'area' in this context? (iii) How much real convergence does a monetary union require? (iv) Does an OCA, even more so a monetary union, need a common state and thus political unification?

This paper proceeds as follows: Part 2 analyses the evolution of OCA theories by discussing some representative contributions; part 3 summarises the criticisms in five points; part 4 concludes.

## 2. *The evolution of the theory*

*Mundell* (1961) developed his theory as a response to *Friedman* (1953) and others who advocated flexible exchange rates when there is little price/wage flexibility in an economy and, conversely, fixed exchange rates only if wages and prices are flexible. *Mundell* widened the issue to a ‘currency area’ which is not necessarily congruent with the geography of a nation. Therefore, the domain for a common currency or tightly fixed exchange rates is the region or ‘area’, not the nation. Intra-regional factor mobility (he addressed mainly labour) can substitute for price and wage flexibility which he saw at least limited in the short run. Otherwise an asymmetric demand shock – increase in demand in one region of the currency area, decrease in another – thwarts the stabilisation task of monetary and fiscal policies as the shock leads either to more inflation or to more unemployment. *Mundell* did not, however, contend explicitly that an OCA should be characterised by few asymmetric shocks if wage-price flexibility and factor mobility are limited. In principle, he followed the Ricardian assumption of limited or absent factor mobility between currency areas and full factor mobility within. But he overlooked many cases that do not fit this model, with some inter-regional and limited intra-regional factor mobility. There is no clear answer from *Mundell* to these sub-optimal constellations.

*Mundell* mentioned four important caveats which were often ignored in later debates. First, with regard to the costs of a currency area he mentioned that the functions of money are enhanced the larger the currency area is, with a maximum at a world scale. Thus, there is a trade-off between the currency area with a high factor mobility, though sometimes very small, and the ‘convenience of money’ as he called it. Read with hindsight, this can be understood as an invitation for broad dollarisation or large OCAs if the quality of money is poor and the area of its use is strongly limited as compared to the benefits of factor mobility. Second, he warned against the notion of many small currency areas: The foreign

exchange markets might be too thin and therefore subject to single speculators which could distort the exchange rates. In small areas, the money illusion of workers might be less pronounced, so that the depreciation of the currency would trigger immediate wage increases to offset the increased costs for imported goods. Third, he mentioned seven conditions for the effectiveness and efficiency of flexible exchange rates, *inter alia* “an international price system ... is dynamically stable after taking speculative demands into account” (Mundell 1961, 663) based on flexible rates; exchange rate risks can be covered by forward markets; the protection of debtors and creditors is possible as to maintain long-term capital movements. Overall, he seemed to believe in the absence of strong exchange rate fluctuations under a regime of flexible exchange rates. Fourth, as

“currencies are ... an expression of national sovereignty ... currency reorganizations would be feasible only in areas where political organization is in a state of flux such as in ex-colonial areas and in Western Europe.” (Mundell 1961, 661)

This in essence stipulates that currency areas that comprise several nations should include a supra-national state or the merging of states. But is this a necessary precondition or a compelling result, or only desirable? Why didn't Mundell pay more attention to these obviously crucial points (apart from just one brief sentence)?

Although these remarks were only notes on the periphery, they paved the way to later concepts of broader and even very large OCAs. Later, Mundell (1973, 1997) became a fervent spokesman of fixed exchange rates, emphasising the role of financial integration and the benefits of reducing currency risk premia, and an enthusiastic early advocator of European monetary integration, although the sceptics put forward the arguments of Mundell's classical article. As McKinnon (2000, 6) wrote, “he is the intellectual father to both sides of the debate”, in favour of both small and large currency areas. There are two Mundells, an early and a late version. The later scholar highlights the role of a stable currency despite strong diversity of the countries involved; common money could allow risk-sharing with the other economies in the currency area. This could also apply to countries of the South.

*McKinnon* (1963) relativised Mundell's focus on factor mobility within an OCA. Instead, he used the trade openness of a region (or an area) – measured as the share of tradeables to output – as the decisive criterion, and this is equivalent to size. Small economies are very open, large are more integrated through internal trade relations and therefore normally more closed to other areas. The exchange rate mechanism under a flexible exchange rate regime will not work effectively in small open economies as the inflationary effects of periods of depreciation which leave real wages unaffected cannot be avoided. Hence, very open economies – due to their smallness – are candidates for establishing currency areas with other economies. Geographical factor mobility within a currency area is only necessary if inter-industry mobility within a region cannot work or is not feasible. Besides, factor mobility can be greater *ex post*, after establishing a common currency, and policy may also promote inter-regional labour mobility if it becomes necessary for adjustment. For these reasons, McKinnon's OCA is large and in conspicuous contrast to Mundell (1961). Whether or not developing countries or other countries with strong real divergent structures should join currency unions with developed ones remains open, but the case is not excluded in McKinnon's concept.

For *Kenen* (1969) it is not so much factor mobility that is constitutive for an OCA, but the degree of diversification of the production structure. Well-diversified economies have fewer problems coping with asymmetric shocks since the problems can be averaged out, allowing them to reap the benefits of fixed exchange rates as long as they can tame inflationary pressures relative to the economies to which they are linked, mainly by a "close control over money wage rates" (Kenen 1969, 54). It can be inferred that well-diversified economies have similar output structures and therefore converge in real terms, e.g. in productivity or per-capita income. Kenen endorsed the Bretton-Woods system of that time with fixed but potentially adjustable exchange rates, and called for more flexible exchange rates mainly for developing countries with a low degree of output diversification. The latter have a greater need to adjust to external shocks via exchange rates. Kenen contends that imperfect labour mobility can in principle be offset by regional and fiscal policies within a currency area. The domain of fiscal policy should coincide with the currency area. Thus Kenen emphasises the role of the state in a currency zone. His understanding of an OCA is not – at least implicitly – a monetary union with a

single currency or irrevocably fixed exchange rates, but a Bretton-Woods-like system of adjustable pegs. Kenen's concept is not only in strong contrast to the present global financial architecture – with floating exchange rates between the big well-diversified OECD countries and a strong tendency of exchange rate pegs of developing countries to leading currencies; it also contradicts McKinnon's view since well-diversified economies are less open than single-product economies which require fixed rates according to McKinnon. There is clearly more dissent than consensus among the early OCA theorists.

After the demise of the Bretton-Woods system and the advent of floating exchange rates, advocates of OCA turned mute. A revival occurred in the early 1990s, parallel to the nascency of the Maastricht Treaty in Europe, when a new synthetic approach was launched, summarised by *Tavlas* (1993, 1993a) (see also De Grauwe 2003, and several contributors to Masson/Taylor 1993). Although the existing OCA theories were diverse and contradictory, a set of criteria emanating from the previous theories was enumerated and a cost-benefit-analysis called for. The need for separate monetary policy adjusted to specific problems of the economy was considered nonessential. This is because monetary policy is now seen as more or less neutral following the policy-ineffectiveness ideas of New Classical economists, including a vertical Phillips curve especially in small, open economies. And the loss of exchange rates as adjustment tools bears low costs if only corner solutions are available, either fixed or full-fledged floating as Fischer (2001) and many other mainstream economists suspect. If there is flexibility of prices and wages as a substitute, exchange rates can be spared with little sacrifice.

Tavlas' (1993, 1993a) 'criteria approach', labelled 'New Theory of OCA', comprises nine criteria which have to be gauged against each other: similarity of inflation rates, factor mobility, openness/size of the economy, commodity diversification, price and wage flexibility and goods market integration, fiscal integration, little need for real exchange rate variability, as well as political will. A low prevalence of asymmetric shocks is likely under these conditions. It remains open which weights are attached to the criteria, which criteria are necessary or only desirable, and which are endogenous in the sense of logical results of a monetary union. The baseline is that larger currency zones are feasible even if not (yet) fully optimal because the main costs – loss of exchange rate and monetary policy – count less than previously believed, and the benefit of

having low-inflation money and a central bank of high credibility counts more. The theoretical base of this concept is hybrid, it pairs off contradicting approaches, taking something from everything. Tavlas offers a menu for all tastes of users – almost anything goes – except for a clear-cut theory.

*Frankel/Rose* (1998) and others emphasise the endogeneity of many preconditions mentioned in other concepts: After a currency zone is established, trade cycle harmonisation, reduction of asymmetric shocks, increased factor mobility, increased inter-regional exchange and lastly, a convergence will materialise although the duration of these adjustments remains unclear. This can be understood as an invitation to wide OCAs comprising strongly divergent countries. The role of political unity, fiscal federalism, etc. is not mentioned.

*Krugman* (1991) returns more or less to the early Mundell because he points out that strong trade integration between countries can contradict the precondition of low asymmetric shocks. Trade integration tends to lead to regional specialisation which increases the risk of asymmetric shocks. Therefore, factor mobility is an indispensable criterion for an OCA. *Krugman/Obstfeld* (2003) emphasise ‘economic integration’ as a precondition for a country to join a currency zone which includes trade integration, structural similarity, factor mobility and fiscal integration. This is implicitly a commitment to rather small OCAs which require at least some elements of political unification.

*De Grauwe* (2003) questions the effectiveness of exchange rate adjustments as they can be costly and elicit asymmetric shocks, so that the loss costs of this tool are less than anticipated in first generation OCA theories. In contrast with later authors, he regards a political union as a necessary property (though not precondition) of a monetary union (*De Grauwe* 2006). With regard to the European monetary union he maintains:

“There can be little doubt that the absence of a political union is a serious design flaw in the European monetary union that will have to be remedied to guarantee the long-run survival of the eurozone.”(*De Grauwe* 2006, 139)

Although all textbooks on international economics contain a chapter on OCA, there is no sound, robust and widely accepted sagacity. There are

many diverse approaches, more contradictory than complementary, either calling for very small OCAs or very large ones. But everyone knows that the motto ‘anything goes’ is dangerous because the costs of failures are grave. If the economics profession has little on offer for a more coherent concept, it is likely that politicians with a preference for non-economic criteria dominate the arena, disregarding costs and benefits.

### *3. Criticisms*

In the following I will focus on six severe pitfalls of OCA theories with the last one – the unclear role of the state – as the most severe and pervasive. If political unity is required for a currency area to be classified as optimal, it would not make much sense to speak of an area or a zone. It might be a new state, a federation, confederation or a political union, but not just an ‘area’. This plea comes close to Goodhart’s vocal objection to all OCA theories with the proposition that currency and state have always been tightly linked in history so that currency area and nation compellingly coincide (Goodhart 1998). I will elucidate this argument one step at a time.

#### *3.1 Varieties of currency cooperation and currency areas*

As already mentioned, Mundell’s starting point was the debate about fixed and flexible exchange rates. This is a much broader debate than the one on currency unions or areas. The two debates must not be confused. Fixed exchange rates in the OCA context are always irrevocably fixed rates or a common currency, and the only alternative are fully-fledged floating rates. Obviously, a corner-solution bias is involved. All intermediate exchange rate regimes including the Bretton-Woods system or similar ones which warrant stable but not necessarily immutably fixed rates are excluded. For this reason all forms of monetary cooperation below the level of either fixed rates or a single currency are masked out, and the various forms of OCAs are not differentiated.

The intermediate regimes encompass all sorts of pegs, with unilateral or multilateral intervention opportunities or obligations; strong managed floats of exchange rates could be added. Among the latter, there can also be regional exchange rate cooperation by the pooling of reserves and coordinated interventions. The European Exchange Rate Mechanism (early ERM and ERM II) are another form of intermediate regime. Corden (1972) coined the then European Monetary System as a ‘pseudo-exchange-rate union’, but of course it was not a flexible regime. The same would apply to the Bretton-Woods system. Looking at non-OECD countries, restrictions on cross-border capital flows or limited convertibility of the currency also have to be taken into account which can contribute to exchange rate stabilisation. Currency cooperation below the level of irrevocably fixed exchange rates, although of great relevance in history and presently in Asia, Africa and Latin America (South-South cooperation), are simply ignored by standard OCA theories (cp. Fritz/Mühlich 2006; cp. also Williamson 2000 as a proponent of intermediate regimes). Lastly, currency blocs (like the former Sterling bloc) in which a group of currencies is pegged but not permanently tied to a leading currency are forms of intermediate regimes.

Therefore, one should distinguish theories and concepts of *currency cooperation* and theories of *currency areas*. The latter comprise five types: regions (or zones) with different currencies which are linked by tightly fixed exchange rates, either (i) currency boards, (ii) unions with different currencies with irrevocably fixed rates, without a common central bank, although there may be a hierarchy with a leading national authority,<sup>1</sup> (iii) monetary unions with a single money and a single central bank, (iv) as (iii) but embedded in a political unity (e.g. USA), or (v) countries that have unilaterally dollarised officially such as Panama or Montenegro (or using another leading regional currency as legal tender like Namibia which uses the Rand). There is no doubt that all of the five currency areas have conspicuously different properties and can not be measured by the same yardstick. Any theory that does not discriminate these types provides little value.

<sup>1</sup> Tight pegs like Austria-Germany until 1999 (or Denmark-EMU) come close to this form, although the peg was (is, respectively) legally subject to change.

### 3.2 *Too narrow a view on asymmetric shocks*

From the beginning, OCA theories have focused on exogenous demand shocks. Mundell's famous example addresses a sudden shift in demand preferences for the goods in region B towards the goods in region A. But sector specific demand changes that coincide with regional shocks are only one form of asymmetric shocks, and probably not the most important.

There can be supply-side shocks induced by idiosyncratic changes in the institutions and the policies of a region or country. Think of tax laws, fiscal policy, labour market rules and customs, and other regulations which are typical for the political and institutional setting of a nation-state. If several nation-states form a currency area, such changes – often more gradual and continuous than shock-like – are asymmetric as compared to changes in a unified political system. For the functioning of a currency union, national diversity in fiscal policy and wage formation in particular can play an important role as a generator of asymmetric shocks. To avoid such asymmetric shocks, policies and institutions have to be harmonised or coordinated, which requires a minimum degree of political cooperation which often proves to be difficult.

Other types of asymmetric shock are financial and exchange rate shocks in economies with flexible exchange rates. Of course, financial shocks such as banking crises, or the like, can also occur within a currency area as an asymmetric shock to specific countries or regions. OCA theories are preoccupied with trade shocks and neglect monetary and financial shocks. This problem pertains mainly to developing countries faced with boom-and-bust cycles of capital inflows and sudden outflows which trigger financial crises. One of the root causes of such crises are currency mismatch due to 'original sin' – the systemic inability to issue external debt in local currency – in the balance sheets of banks, non-banks, enterprises, governments and even private households. Here it is the desire to avoid such asymmetric shocks which makes entry to a currency zone with hard currency attractive. Not the absence of asymmetric shocks, but, adversely, the *prevalence* of the latter can cause an interest in currency unions (or perhaps also currency cooperation with other countries with similar risks, e.g. South-South-cooperation). Think of the countries that ponder on unilateral dollarisation or early entry to the Euro

zone to avoid risks of a currency and financial crisis. If this works out, in the end such asymmetric shocks are overcome, hence their absence can be regarded as endogenous.

When Mundell (1961) mentioned the ‘convenience of money’ which increases alongside the scale of its use, he might have sensed the public good-property of a broadly-used currency. The benefit of using a common currency to avoid or mitigate currency mismatch and alleviate risk-sharing gains preponderance as compared to the disadvantages (low factor mobility, susceptibility to asymmetric trade shocks, loss of monetary policy, etc.) is addressed by Mundell and others. Put differently, if faced with currency mismatch and original sin, one of the biggest advantages of a common money in a currency union, i.e. the use of high-quality money which better fulfils its functions than the local money of weak countries, had been ignored in standard OCA theories. However, the other side of the coin is that such countries hardly fulfil the other criteria mentioned which prepare a country to participate in a currency union. This is clearly a strong trade-off which has to be discussed when North-South currency cooperation – or North-South currency unions, or the entry of Eastern European countries to the EMU – is considered.

### *3.3 How much real convergence is necessary in a currency union?*

OCA theories seem to have attempted to circumvent the issue as to whether strong real divergence is compatible with optimality conditions. Real divergence or convergence could best be measured by the productivity spread, per-capita income differentials, similarity of the output structure, institutional similarity, etc. It can be assumed that most proponents of first generation theories only thought of small real divergence, especially Mundell and Kenen, McKinnon to a lesser degree, Tavlas and others being more open to wider unions, Mundell (1973) even more so. Hardly anyone has envisaged North-South unions or East-West unions in Europe.

Following Mundell (1961), labour mobility could possibly be even higher the more diverse the currency area is in terms of the wage differential; at least this could apply to one-way mobility if legal restrictions are lifted. From this angle, Mexico and the U.S. could be a close-to-

optimum currency area with reference to the early Mundell, and the conjecture that negative asymmetric shocks apply mainly to the weaker part of the area sounds realistic. However, it is likely that other criteria put forward in the debate cast doubt on the optimality of such a union. Following Kenen (1969), the degree of diversification and the similarity of the output structure are likely to go along with a similar development stage of the participating economies, so it implies a bias for real convergence as a precondition. The need for fiscal and political integration underlines this proposition. The same applies to Krugman (1991) and Krugman/Obstfeld (2003). Some may believe that real convergence is endogenous, a result of a long-run process of development and therefore not a necessary precondition.

In the context of more recent (second-generation) OCA theories, wage and price flexibility is perceived as a sufficient adjustment mechanism substituting missing factor mobility. This is a return to Friedman's 1953 proposition which Mundell did not (fully) endorse. In this view, strong real divergence is tenable in a currency area, if exchange rates *and* limited factor mobility can be replaced by wage/price flexibility. This essentially neoclassical notion has to warrant general equilibrium for the real economy while the central bank controls the money supply. The logic of the argument either counts on real balance effects and/or on capital movement towards the asserted higher marginal productivity of capital in labour intensive areas/countries and sectors. This view allows divergent changes of the price level, including simultaneous deflation and inflation in different countries of the currency union in the case of adjustments to asymmetric shocks. There are strong arguments that question the efficiency of such adjustment mechanisms. The later OCA theories have simply resorted to the old neoclassical remedies as a panacea for all kinds of disequilibria. It may suffice here to allude to Keynes' chapter 19 of the "General Theory" in which he cast doubt on money-wage flexibility as a means to return to full employment (Keynes 1973). The problem is not only that wages and prices tend to be rigid for good reasons as asserted by the Neo-Keynesians, but more fundamentally that even fully flexible wages and prices simply cannot restore equilibrium, especially if the money supply is endogenous. From the macro viewpoint, the price level should be stable, not flexible, and this requires a nominal wage anchor (more precise: a nominal unit-labour-costs anchor) across all countries of the currency union.

In political practice, the problem of real convergence has been downplayed. The convergence criteria of the Maastricht Treaty as entry criteria for the EMU focus on monetary and fiscal criteria without any reference to the state of the real economy. It is likely that the architects of Maastricht prior to 1992 did not imagine that once countries like Estonia, Romania or Turkey – strongly divergent from the first EMU-applicants – knock at the EMU doors, but there are presently quite a number of economists who believe that real convergence is simply irrelevant for the EMU-enlargement as a case in point (cp. Steinherr 2003, Buitter 2004, Dauderstädt 2006). Indeed, for the fulfilment of the Maastricht criteria the backwardness (in terms of the real economy) of some members of a currency union is irrelevant. Many of Tavlas' criteria are close to being fulfilled for a number of low-income Central Eastern European countries (CEE-10). And most importantly, the economic significance of these countries in terms of GDP is so small that they do not impact the EMU's average inflation rate even if their inflation exceeds the ECB's target inflation due to the Balassa-Samuelson effect or other reasons. Hence, the EMU should be open for the poor Europeans as well, better sooner than later as the Maastricht hurdles are seen as too restrictive for them. This is consequential if further economic deepening towards a political unity is considered unnecessary for the EMU. Only the Copenhagen criteria, i.e. entry conditions to the EU, guarantee perhaps a minimum of real convergence concerning the institutional setting. But even these criteria are compatible with strong divergence in income and productivity conditions. For Buitter (2004), the accession countries are too small, too open and too vulnerable to successfully maintain their own currency, and the only criterion necessary is fiscal sustainability. The GDP weight of EEC-10 is not more than 6.6 per cent of the EMU-12, and with the exception of Poland each of them has a GDP of less than 1 per cent of the GDP of the EMU-12 (2001).

In the same vein it could be argued that all of Sub-Saharan Africa should have a chance to join the EMU given that these countries attain fiscal discipline and meet the Copenhagen criteria. One could also consider a monetary union stretching farther than the EU (e.g. similar to the CFA Franc zone in Central and West Africa which is tied to the euro). Sub-Saharan Africa GDP is almost the same as that of the CEE-10, namely 5.5 per cent of the EMU-12 (2004), the size of the Netherlands. Excluding South Africa, it is only slightly bigger than Austria's GDP. Is

this a case for broad-based North-South currency unions? In the Americas, the situation is similar: except for Brazil and Mexico, Latin America (including the Caribbean) accounts for 6.1 per cent of the U.S.-GDP; with the two countries it would be 17.1 per cent (all data calculated with WDI 2006).

If indeed the loss of autonomous monetary policy and the exchange rate were close to negligible,<sup>2</sup> benefits from a heterogeneous monetary union seem to override the losses from the perspective of the poorer accession country. However, if it came to the issue of political unification, the balance of costs and benefits would change. If a political union is necessary and requires a minimum degree of similarity of the real economies of its members, the countries are caught in a dilemma. We should search for better alternatives than two bad ones. I leave the issue open here and re-address it in the context of the need for political unification in currency unions (section 3.5).

### *3.4 Are preconditions for currency unions really endogenous?*

Many of the asserted preconditions for optimum currency areas, as mentioned in the first generation of theories, are said to be endogenous by several second generation theorists; it is claimed that once established, they follow as a result of a currency union, including free trade and full factor mobility. In which fields is this true? If so, how long will the adjustment take, and what adjustment costs are to be expected? In which fields is adjustment unlikely, and which are the consequences for the cur-

<sup>2</sup> Buitter describes the loss of the exchange rate as a blessing for EMU-accession countries: „With unrestricted cross-border mobility of financial capital, the exchange rate is more likely to be a source of unnecessary shocks, noise, volatility and misalignment than a buffer or adjustment mechanism for achieving, with less transitional pain, international price and cost adjustments warranted by fundamental asymmetric shocks. The foreign exchange market is rather like a rogue elephant: unpredictable, powerful and dangerous. The best way to deal with it is to put it out of its misery.”(Buitter 2004, 31). If he is right, autonomous monetary policy is also impossible. For this reason I argue elsewhere that developing countries cannot dismiss capital controls (Priewe 2007); this, of course, would be against the rules of the EU which stipulates free factor mobility within the union.

rency area? My criticism is that the alleged endogeneity of the preconditions is limited.

Certainly, most monetary variables converge after a currency union is established, especially short-term nominal interest rates. With a common money and a single central bank, long-term interest rates are also likely to converge as the law of one price applies and currency risk is abandoned. But *real* interest rates only converge if inflation converges, and exemplified by the EMU experience, this occurs incompletely so that a significant variance of real interest rates may sustain. Despite free intra-zone trade, inflation convergence is somewhat limited by possibly divergent costs performances, due to prices of nontradeables only exposed to local competition and influences from national policies. However, the fading currency risks of the abandoned, less valuable currencies (in the case of a common currency) elicit an amazing nominal interest rate convergence, not only amongst EMU members but also in countries that have dollarised officially. This is a positive asymmetric shock to the newcomers in a monetary union, but only a one-time effect. Being in the union, negative asymmetric shocks stemming from national monetary policies vanish. The bonus from interest rate convergence is higher, the weaker the accession country is with regard to inflation and currency risk premia, and the higher ‘original sin’ is with external hard currency debt. This establishes a strong motive for such countries, normally with an inferior real economy, to enter the club of more advanced economies.

It is also likely that trade integration increases and business cycles become more synchronised. Trade relations intensify for various reasons: lifting of trade barriers whereas barriers to countries outside the currency area remain; mobility of capital increases, especially for transnational enterprises; competition on goods markets is likely to tighten. For the weaker economies and sectors, this involves the downsizing of less competitive sectors, the restructuring and purgation of industrial structures, especially in labour-intensive agriculture. The downside of the subsequent productivity increases is vast labour-shedding.

However, the restructuring may lead to regional specialisation which lowers both the diversity of output and the similarity of output structures. This seems more likely for small economies, but less advanced economies *are* small with regard to GDP, despite possibly large population or geographical size. In these cases, the susceptibility to asymmetric de-

mand and technology shocks, peculiar to the predominating industry, tends to increase.

It is also likely that the financial sectors of the weaker countries in a currency area improve under conditions of stronger competition. Financial institutions have to adjust or are compelled to exit the market. But much depends on financial regulations which are still governed by domestic laws and institutions unless a harmonisation led by central institutions of the currency zone takes place.

If trade relations and competition in the tradable sector intensify, it is likely that those factors of production that are not sufficiently competitive do not exit the markets but become marginalised, pushed into the informal or even the subsistence economy, thus deepening the economic dualism typical for less developed countries.

Asymmetric shocks could be mitigated in a currency area, as Mundell proposed, by labour mobility. The latter rises proportional to the wage differential but falls with increasing cultural and political diversity, which are barriers to migration. However, as immigration is normally a critical issue in most societies, reaching certain thresholds of immigration can pose severe social, economic and political problems that are highly unwelcome. So, labour mobility is not the panacea that makes heterogeneous currency areas seem homogeneous, at least beyond a certain magnitude of migration. It should be borne in mind that asymmetric shocks in structurally weak economies tend to cause outward labour mobility in one direction for longer periods. The problems are reinforced by brain drain out of the weaker regions or nations which severely hinders structural renovation. The experiences of numerous developing countries which in some cases even actively promoted the 'export of labour' to better cope with adverse shocks, is telling.

Business cycles tend to adjust due to trade integration and monetary integration. But this does not imply that output growth converges, as exemplified by EMU countries.

Although asymmetric demand shocks tend to fade away in a currency area, except when regional specialisation occurs, idiosyncratic policy shocks and peculiar institutional performances are maintained as long as the countries remain nation-states. Institutions are path-dependent and change slowly, so they are a source of divergence in a currency area. Both generations of OCA theories have ignored such centrifugal forces. The latter require institutional and political unification, although this is a

cumbersome and long-winded process. This pertains not only to countries at different stages of development but also to those of similar income per capita but different institutional patterns (e.g. France and the UK).

Whether or not real convergence happens in a heterogeneous currency area is open. Tendencies to diverge and to converge compete, and the outcome is open. Even if convergence prevails, in most cases it takes a long time during which the currency area is incomplete and sub-optimal.

It is often contended that it is one of the decisive advantages of a currency area that competitive pressures of markets are made strong by abolishing the opportunity for exchange rate realignments which had averted through restructuring. Hence there is less room for national policy, and competition is unleashed. Yet this is only half of the story: financial integration in a currency area enables member states to easily finance big and even increasing current account deficits with external finance. There is no longer a hard budget constraint in the balance of payments as compared to former times. Deteriorating current account deficits may harm output growth and employment, but market mechanisms to cure these problems via wage and price flexibility work slowly and involve enormous problems.

Finally, some characteristics of optimal currency areas, if not given at the outset, materialise automatically soon after the currency zone is established, especially the convergence of interest rates; some need a very long time and some never occur unless political unification is realised. There is no vast endogeneity of the conditions of an optimum currency area.

### *3.5 Does a monetary union require a political union?*

Most OCA theories leave the question open as to whether it is necessary or only desirable to have political unity in order to render currency areas optimal. Sometimes a common will to have a political unification is mentioned, sometimes it is envisaged only for the long term, sometimes even downplayed or ignored. It seems to be an ambiguous issue not clarified by Mundell and the other key authors. Political unification is understood here as a common state and a common government, elected in democ-

ratic societies by majority rule in general and free elections. In this sense, a confederation with unanimity rule is below the level of a common state, but a gradual transition to a new federal state may be feasible.

Discriminating the various forms of currency areas gives different answers. Official dollarisation does not require political unity, not even cooperation. But it involves so many downsides that it can hardly be advised except for small quasi-independent states (cp. Priewe/Herr 2005, 159-182). The same applies to currency boards which can only be implemented as permanent currency regimes in rare cases (take Hong Kong as an example). Countries that peg their currency tightly to a leading regional currency – such as Austria vis à vis Germany until 1999 – can also remain politically independent but they have to practice followership in many regards towards the country with the leading currency. This concerns inflation rates, wage performance, fiscal policy, etc. Otherwise the peg cannot be sustained in critical situations as can be seen in the ERM performance in the early 1990s when Germany experienced a strong asymmetric shock in the form of a unification policy which jeopardised the narrow exchange rate band in the ERM. Monetary unions with irrevocably fixed exchange rates, but local currencies and national central banks require very close cooperation of the central banks and measures to avoid asymmetric shocks which would blow up the pegs by speculators.

All the currency areas mentioned are rather fragile and at risk in situations of stress. For this reason a more stable currency area embraces a common currency and a single central bank. The core question is whether a political union is necessary in this case, if so, when and in which form. My proposition is that political unity is compelling for a currency union with a common money – the sooner the better – and it is otherwise at risk of being sub-optimal, to implode and fail, leaving high costs in its path through time. The key reasons for this, not or not clearly elaborated in the OCA theories, are as follows: (i) monetary policy requirements; (ii) necessary convergence of inflation and rates of change of unit labour costs; (iii) the need for fiscal policy and fiscal federalism; (iv) prevention of asymmetric shocks stemming from divergent national institutions and policies; (v) political economy considerations.

First and foremost, it is the efficiency of the common monetary policy which requires a minimum of political unification. Establishing a common central bank with majority rule in its decision-making body is one of the cornerstones of a common state. Assigning the goals price stability

and output growth, employment or similar goals to the central bank is part of a common economic policy. This requires the need for coordination with national economic policies and a minimum degree of harmonisation of national economic policies. Even if priority is given to price stability, the goal should be achieved with a minimum of sacrifice costs in terms of output and employment. To enable efficient monetary policy requires some similarity of the national financial systems including their regulatory rules. Otherwise neither the function of the central bank as a lender of last resort nor the financial system stability can be fully guaranteed. Also, the transmission mechanisms of monetary policy should be similar or should adjust to enable an efficient conduct of monetary policy if the aim is for divergent effects to be minimised.

Second, wages and public finance should be compatible with price stability, in all member states alike. Monetary policy is embedded in an institutional and political setting which has a strong influence on price stability, in particular the wage formation system and fiscal policy. If this framework is inflation-prone in some or all member countries, monetary policy has to be tighter. Misconduct in one country affects the others. Thus countries that support price stability are punished with tighter monetary policy and higher real interest rates than those which are inflationary. If in a monetary union one size of monetary policy *has* to fit all, in order to avoid an uneven distribution of costs and benefits all have to converge. Although countries with less inflation gain competitiveness and keep inflationary countries in check, this channel of inflation control works slowly and distorts the functioning of the union. Real devaluations, due to wage competition within the union, would still be maintained despite the abolition of exchange rates.

Third, a minimum common fiscal policy and respective rules for the member states are also needed. A common counter-cyclical fiscal policy is advantageous to better cope with symmetric shocks for the currency union and to complement monetary policy. This would require a central budget of a certain magnitude with debt options and independent tax revenues. Insofar as asymmetric shocks cannot be prevented, members should be allowed to use fiscal policy on their own or a union-wide system of fiscal federalism has to be established as is typical for all nation-states. The bigger regional disparities and regional unemployment differentials with limited labour mobility are, the more inter-regional transfers will be necessary. If labour mobility is limited (and it should be limited!)

across the member states and even within the member states, other policies have to substitute this, such as regional policy, social security policy, etc. Common rules to effectively avoid inflationary and deflationary (hence procyclical) fiscal policy are as necessary as rules that avoid wage and tax dumping by ex ante coordination.

Fourth, those asymmetric supply shocks which originate in nation-state policies or institutions have to be prevented or mitigated as they spill over to the other members of the union. To a certain degree, this necessitates the harmonisation of rules, laws, institutions and national policies.

There is also no doubt that within traditional nation-states adverse conditions for a monetary union exist to some extent. However, nation-states have, in the historic course of their institutional development, established mechanisms to cope with shortcomings, some more, some less. A flexible political system has the task of searching for solutions. In a monetary union, the conditions between member states, being traditional nation-states, are markedly more adverse and diverse than within these states. Effective union-wide political institutions are required to harmonise them.

Fifth, money creation involves political power consigned to a monopolistic central bank by the political powers backing it. Even a highly independent bank is embedded in political institutions and civil society. Without a political counterpart at the same centralised level, an imbalance of power occurs which is at risk of losing general acceptance. In all nation-states, even in federal ones, the centre of fiscal power has moved to the central government and is its counterpart and in the same ball park as the central bank. As Goodhart (1998) has shown, history has almost no examples where the borders of state and currency do not coincide, and in many cases the geography of states contradicts the OCA criteria. Sudden changes in history are unlikely. History is clearly against all OCA theories:

“The standard theory of optimum currency areas is falsified by empirical evidence.” (Cesarino 1997, 57)

In general, political considerations have overridden OCA criteria; the German-German currency union (1990) is an extreme example, but in the Maastricht Treaty and the EMU we have another. In no way is this meant

to vindicate political wishes over economic concerns; a congruence of economics and politics is necessary.

How much political unification is necessary remains an open question. But a minimum which relates first and foremost to macroeconomic policies, and other policies with a macro impact which are now largely centralised, *is* necessary. Other policies not related to economics may also be centralised but they are not important in this context. The loss of an independent monetary policy, of national money and its exchange rate, and the necessity to adjust fiscal policy with other economic policies, dismantle constitutive parts of nation-states. The vacuum has to be filled by a new state. Following a Keynesian macro policy conception with an active, discretionary monetary and fiscal policy complemented by income policies, requires even more urgently a common government. But even a policy type with laissez-faire tendencies requires some degree of political unification.

If this is not given, the economic performance of the union is likely to be impaired. Besides, some countries may gain at the expense of others. Divergence increases, shocks can contest the cohesion of the union. The balance of advantages and shortcomings of the currency union becomes critical, dissatisfaction increases. The notion that money can be singled out from the real economy and its nation-states and transferred to a stand-alone central bank above the nation-states without creating a union-wide government is a fatal error.

Having said this, the concept of establishing a heterogeneous currency union with strongly divergent members in terms of the real economy reappears in a new light. Countries with a per-capita income of, say, 3,000 and 30,000 euros can hardly be merged into a common state. The same applies to countries at a similar stage of development, albeit with strongly divergent institutions and policies. Divergence of interests and values of the citizens are likely to be too strong and solidarity among them limited. Democratic decision-making in a union is extremely difficult if not impossible. Although a currency union grants immediate benefits to weak countries with weak currencies as they are quickly supplanted by a strong one, long-term pain overrides the gains. Weak economies with strong currencies that lose the central functions of a nation-state are led down a rocky path. Hence, political unions are bound to be small, combining countries with strong real convergence and similarity in structures, institutions, and the values of their citizens. If political

unification is put off, the currency union is likely to be gravely sub-optimal and fragile. Waiting for political unification in the long run leaves a long-run vacuum, adding to the sub-optimality of the currency area.

#### 4. Conclusions

There is no robust, widely accepted theory of optimum currency areas which can be used as a compass for policy-makers. Instead, there are numerous approaches with strong contrasts and contradictions, both among the early theorists (Mundell, McKinnon, Kenen) and the ‘second generation’ theories summarised in the criteria-approach put forward by Tavlas and others. The latter is a hybrid approach, paving the way for large and heterogeneous unions, albeit with strong shortcomings.

The most important criticism regards the meaning of an ‘area’. On the one hand, the creators of OCA theories neglected to distinguish *currency cooperation*, involving different forms of intermediate exchange rate regimes and economic cooperation of independent states, and true *currency unions* with irrevocably fixed exchange rates or common money. Debates on fixed versus flexible exchange rates must not be confused with concepts of currency unions.

As Mundell and many followers stated, the domain of an OCA is a region, a geographical unit, not a country or a state. History does not endorse this view: currency areas coincide with the borders of independent states, with only few exceptional cases. But OCA theories have not clearly elucidated whether or not a currency area requires political unification to be optimal. This issue is more or less treated as a minor factor by most authors. Hence a currency area is demarcated in these theories on purely economic grounds. In fact, OCA theory seems to be a normative theory rather than a positive one, as Cesarino (1997) mentioned.

As proposed here, it is crucial for currency unions to be anchored in a common state and a common government, i.e. a political unification, a federation of states or something similar. If this is not the case or only true in the long run, inefficiency, divergence and sub-optimality can be expected. Money not only has economic functions which unfold best in larger currency areas. Instead, money is an essential part of a monetary

economy, embedded in the institutions of the society and reflecting them. Money, money creation and monetary policy involve enormous power. Central banks are emanations of states and their political power. Currency unions, by abandoning national currencies, domestic monetary policies and exchange rate adjustments, dismantle classical nation-states. The resulting vacuum has to be filled by new forms of governance.

The more heterogeneous a currency union is in terms of the real economy and with regard to institutions, the more unfavourable is the balance of costs and benefits in the long run. The benefits have been mentioned many times: fewer transaction costs, high-quality money with a low risk premium, lower interest rates, redemption of original sin for countries suffering from this prior to access, average price stability in the union though not necessarily for all members, less speculative currency turmoil, sharing of precious central bank reserves. Many of these benefits can be harvested quickly. As concerns the costs, monetary policy may not fit all members alike, thus impaired efficiency of the monetary policy mean higher costs of price stability. This may be either an unwanted loss of the nation-state leading to followership with regard to hegemonic members or, even worse, the dismantling of nation-states without the emergence of a federal state, hence broad-based risks of state-failure. Additional outcomes include fewer opportunities to cope with asymmetric shocks, and the likelihood that such shocks are generated if political unification or at least coordination cannot be advanced. If fiscal federalism is promoted, high and unexpected fiscal transfers burden the richer members and the risks of tax and wage competition get caught in a downward spiral. A highly heterogeneous union could create uniform institutions and policies that do not fit all alike, hence risking widespread governance misfit.

Economic growth and employment are likely to suffer from heterogeneous currency areas. Instead of creating large, overstretched currency areas at any price it is prudent to have a close look at the political fit of the partners sharing the same money. It would be a misalliance if the partners do not wish to share a new, common government and a new, common type of governance. It is not money alone, it is money *and* policy!

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